CARMA

Non-formal learning for student motivation

WP 6.5 Evaluation Report for Teachers, Students and Stakeholders

Coordinator WP6 : University College Leuven-Limburg (Belgium)

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CARMA

RMA and other non formal learning methods for student motivation

WP6 Lead Partner UCLL (Belgium)

WP6.5 Evaluation Report for Teachers, Students and Stakeholders

The CARMA project has been designed in the form of 8 Work Packages and 4 main project phases which have been structured to improve and assess project implementation and to give to partner's milestones and performance indicators to ensure good overall management of the project and each WP from start to finish.

This report summarizes task 2 developed in Phase 3 Evaluation: collection of data on effect of CARMA approach on ESL and low achievement. Evaluate impact on target groups and ensure evidence base results for transferring to Policy Makers.

Task 2 – Monitoring of the Activities and Products evaluation by the Target Groups.

This final evaluation report assesses the outcomes, impact and results with all target groups of the project. The report highlights key achievements and the impact on direct and indirect target groups and beneficiaries strengthening the evidence base, and sharing lessons learnt in order to effectively transfer results to policy making level.

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Needs and Target Groups

The CARMA project addresses many of the recent concerns raised in European policies concerning school education in particular the challenge to reduce the rate of early school leaving in the EU to less than 10% and reducing the share of 15-year-olds under-skilled in reading, mathematics and science to less than 15% by the year 2020 across member states, as outlined in the Education and Training Strategic Framework (ET 2020). It also addresses the need to support continuing professional development of teachers with reforms of teaching and learning approaches that can promote effective teaching – and teachers' learning as highlighted in Rethinking Education (2012).

The need to support schools to help tackle early school leaving and support disadvantaged groups of learners (while having the potential to benefit all learners, from low to high achievers) is one of the key goals of the project. CARMA understands and recognises that Member States should therefore recognise and promote collaborative practice among teachers as a powerful tool for change within the school education system, as outlined in the main findings from the Teaching and Learning International Survey (TALIS) 2013 and Supporting teacher competence development for better learning outcomes Paper (2013).

Furthermore, needs of the consortium countries have been taken into account based on the 2014 EU country specific recommendations for school education which outlines specific policy measures for some member states in which have been included in the consortium (P1 Italy, P3 France, P5 Belgium, P2 Spain, and P5 Portugal), to implement at national level in order to address challenges concerning ESL and continuing professional development of school teachers.

With these urgent needs identified, the project will meet Priority 3 - Promoting innovative collaborative teaching and learning, and will address the following target groups:

- **Direct Target Group 1 (DTG1):** 28 Teachers of reading, mathematics and science including teachers on an entry level across 7 partner countries

- **Direct Target Group 2 (DTG2):** students aged 11 to 15 identified as disadvantaged, low achieving and at risk of early school leaving, 20 school classes across Europe (of more than 500 students altogether) across 7 partner countries. All partners work with the target group selected, with the exception of P2 Universidad de Murcia, whose target group age is slightly different 12-16 years, due to differences in the education system.

- **Indirect Target Groups:** teaching staff and professionals within school education, community of stakeholders in the policy making process i.e. parents, school service providers, civil society organisations and policy makers in school education.

WP6 Task 2

Task 2 – Monitoring of the Activities and Products evaluation with the Target Groups.

Evaluation with the target groups involved the following:

Evaluation with Teachers and Students - Collecting feedback and case study evaluation during the piloting phase from the group of 28 Teachers who attend the European Workshop, the 28 teachers who deliver the test pilot in their classroom and the 7 Non Formal Experts who will act as support guides for the teachers at local level. Evaluation will be carried out through questionnaires, online and face to face meetings. Monitoring of progress and results will include the evaluation of impact on teachers – teacher competences gained in collaborative practices, impact on student's motivation and attainment and the evaluation of the materials used during the pilot phase.

Evaluation with Non Formal Experts – Collecting feedback and case study evaluation during the piloting phase of the 7 Non Formal Experts who will act as support guides for the DTG1 of teachers at local level. Evaluation will be carried out through questionnaires, online and face to face meetings. Monitoring of progress and results will include the evaluation of the pilot process, collaborative relationships with the teachers and feedback on the competences by teachers, the impact on student's motivation and attainment and the tools, materials and methods used during the pilot phase.

Evaluation with the Teaching Staff, Professionals, Communities of Stakeholders in policy making – Conducting evaluation with target groups (using qualitative and quantitative methods) including feedback questionnaires and interviews to analyze the impact on the wider school community.

This report is part of WP6.5 and will summarize the evaluation findings of the teachers, students, teaching staff, professionals and communities of stakeholders in policy making as part of WP6 Task 2. Evaluation with non-formal learning experts will be delivered in a separate report as part of WP6.7 of WP6 Task 2.

WP4 Task 3

Task 3 – Delivery of the non-formal learning practices in school environment

The pilot phase included 3 important stages:

1. Collaborative learning and assessment sessions with students – At least 7 sessions in total of the school academic year to test the range of non-formal learning techniques and RMA assessment tool to monitor learners progress. It is expected that these sessions will last for 2 class periods 1.5 hours but will depend on the specific durations within each school involved in the pilot.

2. Demonstration workshops – Led by the non-formal learning experts with direct targets of teachers and involving the students and community of stakeholders in school policy making. The workshops will take place within the school at key milestones of the piloting phase showing the progress in learning made by the DTG2 of students who have participated in the piloting. The workshops will take place during the last months of the 2 school semesters within the piloting phase i.e. workshop 1 by M14 and workshop 2 by M20. These workshops will encourage the older students (who have taken part in the piloting to share their learning with the younger students. Student peer learning activities between the older students (13 years and above) and the younger students (12 years old and below) will be fostered. Workshops will be open to parents and the wider school community and feature interactive non formal learning activities. Each workshop will have duration of between 2-3 hours depending on the school programme and will include common activities including presentations of the activities tested, peer learning activities between older and younger students and evaluation and feedback with school stakeholders i.e. parents, civil society organizations. The planning and delivery of the demonstration workshop activities will be a moment of collaborative practice between the teachers by the non-formal learning Experts.

3. Collaborative assessment with students - Assessment with students using the RMA as an assessment method and tool will be implemented by the teachers in the pilot. RMA sessions will allow a formative approach assessment to understand and measure the impact on learner's motivation and engagement as a result of participating in the pilot activities As part of this assessment process of, the wider school community will also be involved in the formative process of feedback.

Collaborative learning and assessment sessions with students is part of WP4.2. Demonstration workshops is part of WP4.3. Both workpackages are part of WP4 Piloting of the CARMA approach – RMA and other non-formal learning methods- Lead partner

P4 DOGA Schools Turkey. Detailed information on the Piloting phase can be found in the "Overall Piloting Report" as part of WP4.5.

This report will make use of some of the materials produced in WP4. Overall planning of the piloting phase in addition to the pilot session distribution among the different partner countries. These materials will be used in order to set a clear picture of the piloting activities that took place to better understand the evaluation criteria and outcomes of the different direct an indirect target groups.

Figure 1 Teacher Calender for the Piloting of CARMA Techniques (WP4)

MONTH	WEEK	European Workshop for Collaborative Competencies for Teachers	Sharing of Experiences Webinars	Collaborative learning and assessment sessions with students	Demonstration Workshops
OCTOBER 2016	Week 1 3- 7 October 2016	European Workshop for Collaborative Competencies for Teachers			
	Week 2 10- 14 October 2016				
	Week 3 17- 21 October 2016				
	Week 4 24-28 October 2016				
NOVEMBER 2016	Week 1 1-4 November 2016				
	Week 2 7-11 November 2016				
	Week 3 14-18 November 2016				
	Week 4 21-30 November2016				
DECEMBER 2016	Week 1 1-9 December 2016			Collaborative learning and assessment sessions with students	
	Week 2 12-16 December 2016		Sharing of Experiences Webinars		
	Week 3 19-23 December 2016				
	Week 4 26-30 December 2016				
JANUARY 2017	Week 1 2-6 January 2017				
	Week 2 9-13 January 2017				Demonstration Workshops
	Week 3 16-20 January 2017				
	Week 4 23-31 January 2017				

MONTH	WEEK		Sharing of Experiences Webinars	Collaborative learning and assessment sessions with students	Demonstration Workshops
FEBRUARY 2017	Week 1 1-10 February 2017				
	Week 2 13-17 February 2017		Sharing of Experiences Webinars		
	Week 3 20-28 February 2017				
MARCH 2017	Week 1 1-10 March 2017				
	Week 2 13-17 March2016				
	Week 3 20-24 March 2016				
	Week 4 27-31 March2016				
APRIL 2017	Week 1 3-7 April 2016			Collaborative learning and assessment sessions with students	
	Week 2 10-14 April 2016				
	Week 3 17- 21 April 2016				
	Week 4 24-28 April 2016				
MAY 2017	Week 1 1-5 May 2016				
	Week 2 8-12 May 2016				
	Week 3 15-19 May 2016				
	Week 4 22-31 May 2016				
JUNE 2017	Week 1 1-9 June 2017				
	Week 2 12-16 June 2017		Sharing of Experiences Webinars		Demonstration Workshops
	Week 3 19-23 June 2017				
	Week 4 26-30 June 2017				

For more information on collaborative learning and assessment sessions with the students, please refere to WP4.2. The workpackage describes in detail the non-formal methods implemented, the number of implementations, the age and number of the students receiving the learning in the different methods.

1. Introduction

As part of WP6.4 – Evaluation Tools for the Target Groups - different evaluation tools were developed to allow the effective evaluation of the impact on the target groups of teachers in basic skills, students, teaching staff, professionals, and communities of stakeholders in policy making.

The different tools were developed by WP6 lead UCLL. The tools covered the following areas for evaluation:

- Impact on teachers
- Impact on students
- Impact on wider school community
- Impact on stakeholders and professionals in policy making

As part of WP6.3 – Piloting Guidelines – A document was created to outline the codes of practice by the non-formal experts and teachers. The document defined the monitoring responsibilities and ensured the use of the standardized evaluation tools and non-formal learning materials.

Figure 2 Piloting Guidelines (WP6.3)

2. Evaluation Tools And Data Collection Instruments For The Target Groups

For each of the four target groups, data collection instruments were developed.

2.1. Evaluation with DTG1 of Teachers

In order to ensure a flexible way to collect data from the teachers without adding extra workload on their heavy schedule, it was agreed upon by the consortium to make use of the 'Teacher Diary' instrument. Teacher diary is a diary where a teacher records what happens in their classes and their thoughts about it. There are several positive aspects of diary keeping and diary studies; "indeed, the theme of change over time and the sense of writing about a process is one that resonates directly with the use of diaries in educational research"[1] (McDonough and McDonough, 1997, p. 121). Furthermore, the process of writing allows for reflection, and "reflection is itself an instrument for change"[2] (Thornbury, 1991, p. 146). Keeping in mind that diaries are time-consuming and could be overwhelming for teachers to fill in their reflections and experiences; a set format was developed to guide the teachers into the indicators the project is measuring.

Figure 3 Evaluation with DTG1 of Teachers: Eight Indicators

Key Evaluation Questions	Monitoring Questions	Indicators	Data Source
Evaluation with Teachers			
What is the impact on DTG1 of teachers?	Did the teacher gain new competencies in collaborative practices?	• Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning	Teacher Diary
	Did the teacher gain competencies regarding RMA as an assessment tool?	• Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress	
	Did the teacher gain more confidence in leading collaborative learning?	• Increased confidence in leading collaborative methods within own school environment	
	Did the teacher make use of peer learning?*	• Increased peer learning and collaboration via co-working with non-formal learning Experts and other teachers*	
Where the materials used of value (Draft toolkit, NFL catalogue, lesson plans, etc.)?	Where the materials regularly used, referred too, consulted?	• Usefulness of the materials	Teacher Diary
Does the teachers see an added value to the collaborative methods?	Is the interaction better in class? Are the students more engaged? Did they learn better using this method?	• Increase interaction in the classroom • Increase motivation and engagement of the students • Increase learning outcomes in the classroom	Teacher Diary

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[1] McDonough, J. and McDonough, S. (1997). Research Methods for English Language Teachers. London: Arnold

[2] Thornbury, S. (1991). Watching the whites of their eyes: the use of teaching-practice logs. ELT Journal, 45/2, 140-146.

2.1.1.Data Collection Instrument Design

A set of eight indicators were defined that refer to the 'Monitoring Questions' found in WP6.4. The eight indicators refer to evaluating the impact of the non-formal methods and RMA as an assessment tool on the DTG1 of teachers, the usefulness of the materials and the added value this target group finds in collaborative methods.

The eight indicators:
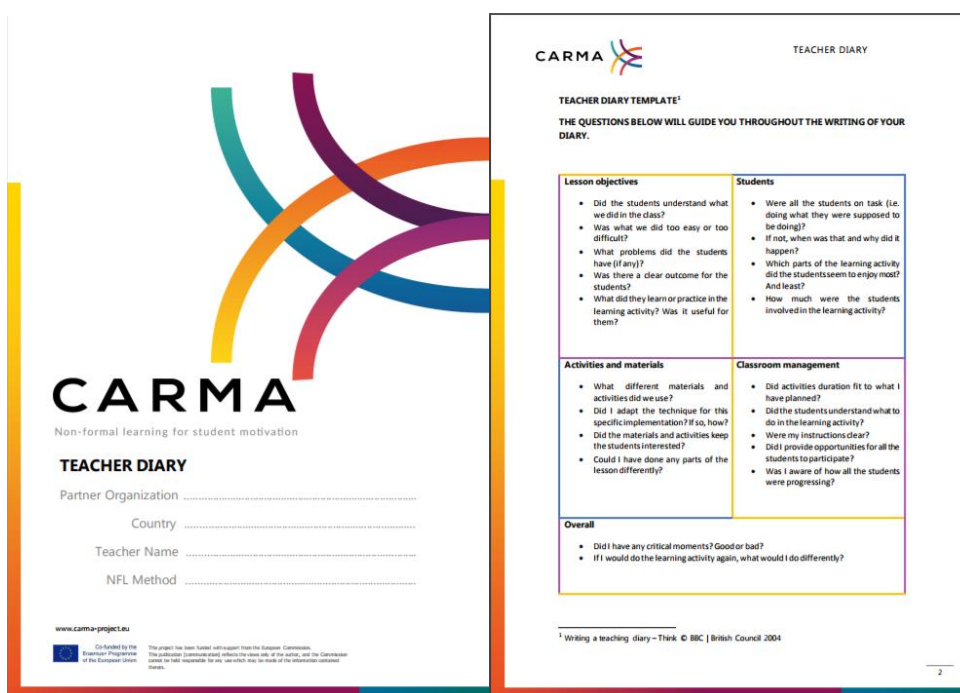
1. Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning
2. Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress
3. Increased confidence in leading collaborative methods within own school environment
4. Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers
5. Usefulness of the materials
6. Increase interaction in the classroom
7. Increase motivation and engagement of the students
8. Increase learning outcomes in the classroom

Figure 4 Teacher Diary Guided Questions

Above questions refer to the following indicator:	Above questions refer to the following indicator:
• Usefulness of the materials	• Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning • Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress • Increased confidence in leading collaborative methods within own school environment • Increased peer learning and collaboration via co-working with non-formal learning Experts and other teachers*

Overall

- Did I have any critical moments? Good or bad?
- If I would do the learning activity again, what would I do differently?

All 8 indicators could be assessed here.

Figure 5 Teacher Diary

2.2. Evaluation with DTG2 of Students

2.2.1. Data Collection Instrument Design

The Reciprocal Maieutic Approach (RMA) was used as an assessment tool to measure the learners progress and impact of the collaborative learning methods on the students. Because of the age difference among this target group, no fixed questionnaire was implemented. The teacher alone or together with the non-formal learning expert evaluated the impact of collaborative learning on the students through the use of RMA.

The teachers where provided with guiding questions in order to facilitate the assessment and to direct their RMA session in line with the monitoring questions found in WP6.4. Evaluation with the students included the impact of non-formal learning methods on their learning, motivation, interest and enthusiasm towards the new learning materials.

Figure 6 Evaluation with DTG2 of Students

Key Evaluation Questions	Monitoring Questions	Indicators	Data Source
What is the impact on students?	Did the students feel comfortable during collaborative practices?	Feedback from students	Evaluation During and Post pilot. During: Student reflection (Qualitative Questions) Because of the age difference among the students. No fixed questionnaire will be implemented. The teacher, together with the expert (if possible) will evaluate the impact on the students by addressing the monitoring questions found on the left column. It could be done in small group discussions, flipchart might be used, post it notes, drawings, etc. Post: RMA (Qualitative Data)
	Did they like learning in this way and why?		
	What did they like best about the collaborative practices? What was the most useful thing they learnt?		
	Was there anything the students would like to change during the activities?		
Where the students motivated during collaborative practices?	Did the students engage with the teacher? Did they participate in the activities?		
Is it interesting for the students	Did the students skip the collaborative learning pilot sessions?		
Where the new materials of value?	Did the students show enthusiasm to the new materials being used?		

2.3. Evaluation with Teaching Staff

Evaluation with the teaching staff is aimed at having feedback from the wider teaching and school staff, everyone that is involved in education within the school environment. It is not limited to teachers only, but to librarians, faculty and staff. The evaluation incorporates how they see collaborative methods as useful and of an added value, the challenges and areas for improvement. For this indirect target group evaluation, a questionnaire was developed with qualitative and quantitative aspects to be collected after the demonstration workshop events in the schools taking part in the pilot study.

Figure 7 Evaluation with Teaching Staff

Key Evaluation Questions	Monitoring Questions	Indicators	Data Source
What is the impact on the teaching staff?	Does the teaching staff see collaborative methods useful?	Feedback from the wider teaching staff	Post Demonstration Workshop Quantitative & Qualitative Questionnaire
	Does the teaching staff see/predict challenges?		
	Does the teaching staff foresee areas for improvement in collaborative methods?		

2.3.1. Data Collection Instrument Design

Likert scale of 5 points in addition to some open ended questions. The questions included in the questionnaire were principally about:

The sessions,

- The workshop was relevant to me
- The workshop was interesting
- The workshop helped me gain new competencies in RMA as an assessment tool, collaborative teaching and learning practices
- The workshop motivated me to take action in my classroom
- What action/s were you motivated to try out in your classroom
- I want to tell others about RMA and the non-formal learning methods used in the CARMA project
- The tools and the materials used during the workshop were useful
- I have the confidence to try some of the methods in my teaching

About student engagement,

- The interaction between the students was good
- The students were enthusiastic about the workshop
- The students showed high levels of engagement
- What was the best aspect of the workshop

Non-formal learning and RMA in the school environment,

- Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?

The questionnaire was designed in collaboration with a group of researchers in education and validated by an expert panel of educationalist and collaborative learning specialists. The questionnaire was uploaded to Google Forms in English, to be translated by the partners in their respective languages.

Figure 8 Post-Demonstration Workshop Questionnaire for Impact on Target Groups: Teaching Staff

Post-Demonstration Workshop Questionnaire for Impact on Target Groups: Teaching Staff

We invite you to provide feedback on the demonstration workshop you have attended in order to assist us in measuring the impact of the results. We value your honest opinion.

The questionnaire will take five minutes to complete.

* Required

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1. **Country** *
   Mark only one oval.
   - Austria
   - Belgium
   - France
   - Italy
   - Portugal
   - Spain
   - Turkey

2. **Date of demonstration workshop** *
   Example: December 15, 2012

State the extent to which you agree or disagree with the following statements.
About the sessions

3. **The workshop was relevant to me.** *
   Mark only one oval.

	1	2	3	4	5	
Strongly agree	◯	◯	◯	◯	◯	Strongly disagree

2.4. Evaluation with Professionals and Stakeholders

Evaluation with professionals and stakeholders is aimed at collecting feedback from professionals and communities of stakeholders in policy making. This includes, parents and families, local residents and organizations that have a stake in the school's success, such as school-board members, city officials, and elected representatives; businesses, organizations, and cultural institutions; and related organizations and groups such as parent-teacher associations, charitable foundations, and volunteer school-improvement committees. The evaluation incorporates how they see collaborative teaching methods as useful, if they see a future in investing in these methods, if they see a possibility of integrating collaborative methods in formal teaching school curricula, and finally their advice on areas for improvement. For this target group evaluation, a questionnaire was developed with qualitative and quantitative aspects to be collected after the demonstration workshop events in the schools taking part in the pilot study.

Figure 9 Evaluation with Professionals and Stakeholders

Key Evaluation Questions	Monitoring Questions	Indicators	Data Source
What is the impact on the wider school community?	Does the community of stakeholders and professionals see collaborative methods as useful?	Feedback from professionals and communities of stakeholders in policy making	Post Demonstration Workshop Quantitative & Qualitative Questionnaire
	does they see a future in investing in collaborative methods?		
	Do they see a possibility of integrating collaborative methods in formal teaching school curricula?		
	Do they foresee areas for improvement in collaborative methods		

2.4.1. Data Collection Instrument Design

Likert scale of 5 points in addition to some open ended questions. The questions included in the questionnaire were principally about:

The sessions,

- The workshop was relevant to me
- The workshop was interesting and interactive
- The non-formal learning methods and RMA can help teachers gain new competencies in collaborative teaching and learning practices
- The non-formal learning methods and RMA to facilitate collaborative teaching and learning can be of added value in teaching
- I want to tell others about the non-formal methods used in the CARMA project
- The tools and the materials used during the workshop were useful

Student engagement,

- The interaction among the students was good
- The students were enthusiastic about the workshop
- The students showed high levels of engagement
- What was the best aspect of the workshop

Non-formal learning and RMA in the school environment

- Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?
- In what ways do you think the non-formal learning methods and RMA as an assessment tool can be adopted to the school curriculum?
- What support do you think is needed to ensure their adoption to the school curriculum?

The questionnaire was designed in collaboration with a group of researchers in education and validated by an expert panel of educationalist and collaborative learning specialists. The questionnaire was uploaded to Google Forms in English, to be translated by the partners in their respective languages.

Figure 10 Post-Demonstration Workshop Questionnaire for Impact on Target Groups: Professionals & Stakeholders

3. Data Collection Process

Data was collected during the school year 2016-2017 in seven partner countries, Italy, Turkey, Portugal, France, Belgium, Spain and Austria.

3.1. Data Collection Process for Impact on DTG1 of Teachers

Partner	NFL Method	Number of pilots	Number of RMA pilots	Number of students	Number of teachers
P1 Italy	Petal Debate Six Thinking Hats Cooperative Learning Problem Solving Box of Emotions Group Investigation	18	4	332	4
P2 Spain	Petal Debate Six Thinking Hats Cross-over Learning Box of Emotions Learning by Coding	46	4	510	4
P3 France	Petal Debate Six Thinking Hats Learning by Coding Box of Emotions	44	1	337	4
P4 Turkey	Six Thinking Hats Constructive Controversy Mind Map Digital Storytelling Learning by Coding Petal Debate Storytelling	30	6	678	4
P5 Belgium	Six Thinking Hats Storytelling Petal Debate Cross-over Learning	19	14	529	3
P6 Portugal	Cross-over Learning Philosophy with Children Box of Emotions Six Thinking Hats	18	6	544	3
P7 Austria	Box of Emotions Storytelling Embodied Learning	21	4	108	4

The teacher diaries have been manually filled by the different teachers involved in the piloting phase. The teachers filled the diaries according to the guidelines and leading questions that were provided to them (see *figure 4: Teacher Diary Guided Questions*) and corresponding to the assigned indicators.

The non-formal learning experts received training and explanation on the manner of coding during the 3rd partnership meeting in Pau, France on 27th – 28th April 2017. Due

to the fact that the diaries were written in seven different languages, it was agreed upon by the consortium that the non-formal learning experts would code the diaries for the eight assigned indicators, and translate the codes into the English language. In addition to that, the non-formal learning experts would translate outstanding quotes that correspond to the different Indicators. Two documents have been created for this purpose, to be filled by the non-formal learning expert with the translated codes and quotes.

Figure 11 Coding of Teacher Diairies Interactive Workshop

Piloting Evaluation: Coding of Diaries
Dima.boumosleh@ucll.be

3rd partnership meeting PAU France 27 April 2017

Interactive Workshop: 14:30-16:00

Teacher Diaries

Indicators	Color	Coding
Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning		Highlight with YELLOW all the words and phrases that fall under this indicator
Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress		Highlight with ORANGE all the words and phrases that fall under this indicator
Increased confidence in leading collaborative methods within own school environment		Highlight with GREEN all the words and phrases that fall under this indicator
Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers		Highlight with GREY all the words and phrases that fall under this indicator
Usefulness of the materials		Highlight with RED all the words and phrases that fall under this indicator
Increase interaction in the classroom		Highlight with PURPLE all the words and phrases that fall under this indicator
Increase motivation and engagement of the students		Highlight with PINK all the words and phrases that fall under this indicator
Increase learning outcomes in the classroom		Highlight with BLUE all the words and phrases that fall under this indicator

Figure 12 Diary Codes and Diary Quotes Documents

3.2. Data collection Process for Impact on DTG2 of Students

Data on the impact on DTG2 of students was collected by the teachers and some non-formal learning experts who took part or attended the RMA and non-formal learning sessions. The Reciprocal Maieutic Approach was used as an assessment tool for monitoring the learners progress and for monitoring the impact of the non-formal methods on the students. The teachers included the data on their students well-being, learning, motivation, engagement, class participation, attendance and enthusiasm in their diaries. That was later, coded and translated by the non-formal learning experts. Data was collected from the feedback and interaction of 3,038 students from the seven partner countries (P1 Italy=332, P2 Spain=510, P3 France=337, P4 Turkey=678, P5 Belgium=529, P6 Portugal=544, P7 Austria=108).

3.3. Data collection Process for Impact on Teaching Staff

Data was collected from the indirect target group 'Teaching Staff' on the impact of non-formal learning methods and RMA after attendance of the two assigned demonstration workshops that the schools and teachers had to organize to show case some non-formal learning methods, in addition to demonstrating some of the methods together with the students. The google form prepared for data collection (see *figure 8: Post-Demonstration Workshop Questionnaire for Impact on Target Groups: Teaching Staff*) was translated by the partners into their languages, and filled by the teaching staff after attending the demonstration workshop.

3.4. Data collection Process for Impact on Professionals and Stakeholders

Data was collected from the indirect target group 'Professionals and Stakeholders' on the impact of non-formal learning methods and RMA after attendance of the two assigned demonstration workshops that the schools and teachers had to organize to show case some non-formal learning techniques, in addition to demonstrating some of the methods together with the students. The google form prepared for data collection (see *figure 10: Post-Demonstration Workshop Questionnaire for Impact on Target Groups: Professionals and Stakeholders*) was translated by the partners into their languages, and filled by the professionals and stakeholders after attending the demonstration workshop.

4. Results Of The Data Analysis

4.1. Impact on DTG1 of Teachers: Partner Diaries

To assist with the data analysis, NVivo 11 was used. Nvivo is a software that supports qualitative and mixed methods research[3].

P1 CESIE –Italy-

Indicator 1: Increase knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

It was difficult for the teachers to explain the tasks to the students. The process of collaborative teaching and learning was more important for them than the content of what they were teaching. The teaching topics can affect the presence or absence of collaboration. Some topics were too scholastic and this lead to dispersed attention from the students.

> *"For me, in fact, it has always been more important to work on processes rather than on the content, because the latter, thanks to the internet, has become easily accessible to us, while the capacity to critically assess the information still has to be developed. For this reason, my aim is to support students to acquire or refine such capacities with the support of non-formal methods."*

Indicator 2: Increase knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress

The RMA sessions were very significant to some teachers and interesting to the students. It took some several trials in order to manage the activities. Even after explaining the origins of the method, the history and values behind it, the message was not easy to transfer. One teacher found it a valuable method because it allowed her/him to learn about some aspects of the students that do not emerge during regular classroom activities. Another teacher believed that the use of this technique has contributed to the success of some class interventions. According to them, they understood RMA as an educational tool used to manage learning units, it follows a structure that includes a sequence of steps. Accordingly, practice is needed but it is a valuable didactical method.

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[3] http://www.qsrinternational.com/nvivo/what-is-nvivo

> *"This experience undoubtedly helped me to understand the potential of the RMA method. At the same time I understood that I would need some more time and support to be able to conduct a meeting on my own. I would need to look into some fundamental aspects and try it again."*
>
> *"It takes a bit of practice, but I think the results can be very interesting."*
>
> *"I'm very happy with how the RMA session worked. It was a very positive experience. All the students thanked me for giving them this opportunity to learn in a non-formal way."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

For one teacher leading collaborative methods was very satisfactory, he/she realized that one can learn a lot from the pupils. The classroom environment changes into an interesting setting to observe. One teacher felt confident enough to react firmly when interrupted by other colleagues. Furthermore, to give suggestions on ways to improve and manage vocabulary. However, it was not easy to implement the collaborative methods when the school sets high emphasis on the content rather than on the method.

> *"When the colleague interuppted, I stopped her firmly."*
>
> *"It is not easy to implement activities in a school where knowledge is more and more sectorial and linked to the content."*

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers.

Most of the teachers worked in close collaboration with some of their colleagues and with the non-formal learning expert. Some colleagues took the role of observing, others assisted by taking notes on the blackboard. The colleagues reacted well to the non-formal methods that were implemented in their presence or together with them. One teacher was concerned if he/she can use non-formal methods next school year. They believe that the entire class council need to implement these methods throughout the whole school year. They believe that the weak point is the lack of participation of the entire school council.

> *"My colleague started writing on the black board the observations and reflections of the students."*
>
> *"I am with my colleague who stays in distance, is attentive but doesn't participate."*

> *"Ruta has participated in the session and supported me with the implemantation of the lesson."*

Indicator 5: Usefulness of the materials

Blank in the teacher diaries.

Indicator 6: Increase interaction in the classroom

The teachers expressed high levels of classroom interaction among the pupils, among them and the pupils, and vice versa. The pupils had a respectful attitude throughout the discussions, respected each other's turn. The pupils felt at ease while discussing their different points of view. They took an active part in the lesson even though their level of engagement might vary they all contributed individually to the activity. The teachers expressed increased dynamics in the classroom with the use of non-formal methods.

> *"In the final phase I ask what the students thought of the activity and why. Everyone gives positive answers, but for different reasons: there are those who are happy to know something more about their colleagues; there are those who have managed to open up themselves, even if little; there are those who feel that they have lessened distances with people who they thought were not easily approachable; there are those who feel "light", but I have to think why."*
>
> *"Eventually I was asked: "Professor, it was an interesting session. When will we repeat it"?"*

Indicator 7: Increase motivation and engagement of the students

The motivation and engagement of the students in non-formal teaching and learning was in general divergent. To some it was positive and to others was less impressive. Some were curious to participate and repeatedly asked to repeat the learning experience while others demonstrated less interest and did not ask further about more participation in these classes. For this, the class showed irregular attendance and difficulties in translating their emotions. Hence, group reflection was impossible to implement because of the lack of interest and superficiality. On the other hand, another group of students demonstrated high levels of enthusiasm and motivation, they even took the initiative to prepare some materials that were used during the lesson. They were involved in the preparation and were motivated to learn in this way. They verbalized interest of future use of non-formal methods during the school year. Consequently, the experience was positive and different

from traditional formal teaching, it triggered the attention of the students and increased their motivation to attend and participate in collaborative learning.

Regarding the motivation and engagement of the students during the RMA sessions. The students showed high levels of motivation and interest, the participation level was high. The method fascinated and stimulated them and they were satisfied with the learning outcomes. They all took part in the session and asked for chances to repeat the experience. Their answers were positive and individual participation was evident. Accordingly, RMA received unanimous interest and participation from all the students.

"When the bell rings at 13.45, the class shows disappointment: "No! Already!" and they ask me to repeat this experience. Some do not want to get up. I see that they would prefer to continue the activity. I do not force them and remain seated."

"One of them tells me to understand the usefulness of "... the meetings that you see in American movies ..." (I assume he refers to meetings for therapeutic support, where you see people sitting in the circle speaking about themselves). He says that for him it is not easy to talk to others because he is shy and is afraid to make mistakes, and that people think he is stupid. He adds that during this activity he felt as if everybody was stupid and no one could make fun of anyone. Another student confirmed that in those two hours she felt free."

"Then the security guard came who reminded us that we have to leave the premises of the school. For me these two hours were very satisfying."

Indicator 8: Increase learning outcomes in the classroom

At the beginning, the students did not understand what they have to do, but as the session went by they became aware of what is expected from them and the learning outcomes became clear. It took the students some time but at the end, it was not needed to give instructions on what and how the activity will be because they knew the structure. Students learned how to respect each other, listen to each other and take turns.

"From the external observer's point of view, the emotions that were flowing from the experiences described during the activity were those of anger, impotence, and dissatisfaction. It is worth noting that among the positive "emotions" was the presence, indeed limited to a few meetings, of Ruta. This lead to further reflection: if there is no trace of positive experience every day throughout the school year (some students mentioned that most of the "negative emotions" were created by all teachers of the class!). This indicates that formal didactics cannot, in some problematic classes like this, leave a mark on education".

CARMA

P2 UM –Spain-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

One teacher stressed the fact that knowledge is needed to be able to manage NFL methods. By practicing several times, he/she gained more experience about the timeframe and implementation became easier. Depending on the characteristics of the method and the content of the lesson, the teacher was able to switch between the different methods. It was difficult to work with NFL methods when some students were absent, therefore more opportunities were provided to the students who attended. In addition to that, the teacher was able to adapt some methods to suite students with special needs. The teacher proposed implementing NFL methods at the end of every semester.

For another teacher, she was able to adapt the method according to her group of students, i.e. if the group was small or big. In addition to that, the teacher was able to modify one technique (in 6 thinking hats, the teacher changed the order of the hats. Yellow came before black) in order to increase the motivation of the students. This teacher realized too, that the use of some techniques (The box of emotions) can enhance collaborative learning in the class through providing opportunities for shy students to become more verbal. Furthermore, the teacher was able to adapt the space to fit the requirements of the learning activity and was aware of previous needed preparation to some activities (Learning by coding).

> *"NFL methods are an excellent way to promote the work in groups in the class. Some techniques require previous preparation and adaptation to the current dynamics of the class. Classroom organization would be challenging."*

Indicator 2: Increase knowledge and competences regarding RMA as an assessment tool for monitoring learners progress

The teachers agreed that RMA is an excellent way to promote student reflection. Though it was difficult to find an opportunity to conduct the sessions because of the fixed curriculum that has to be followed. One teacher suggested using more visual materials to improve the implementation of the technique. Another teacher suggested using simple short questions to fit her students age group. The data that was provided in the

diaries was more concentrating on the added value of the technique, and the positive class and student dynamics. The experience by all teachers reflected a positive atmosphere of sharing knowledge and learning about and from each other. One teacher would like to apply RMA even though the pilot phase has ended. All teachers agreed on the effectiveness of the method in observing the progress of their students.

> *"RMA is an excellent solution to promote student reflection and to observe student progress, although this is the most difficult part. RMA could be improved by making the activity more visual."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

It appeared that the school timetable is not flexible enough to allow a smooth implementation of NFL methods. One teacher proposed having five extra minutes at the start so she/he could arrange the class furniture and materials. The same teacher noticed too that the implementation went smoother when the students got used to and comfortable with the NFL methods. The teacher was confident enough to encourage the students to decide on a topic for a petal debate. And felt empowered by leading the sessions, that even when she/he made a mistake during the implementation (forgot to mention some cooperative skills that the students have to keep in mind), it was easy to adjust and correct oneself. Another teacher was confident enough to put in practice "The six thinking hats" with her students of the 1st Bachelor year, who are not the target group for the pilot study.

> *"Timetables at the school are not flexible enough to implement some new activities like CARMA methods. So, it is a bit difficult. But now teachers are more confident to develop these methodologies and they want to try them next course."*

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers

The teachers think that collaboration among teachers and with the non-formal learning expert as important for spreading the techniques and their benefits on learning and student motivation. One teacher reflected the interest of her colleague teachers in NFL methods after she introduced CARMA project and the methods involved in it.

> *"Collaboration among teachers is important to spread the use of NFL methods. It is difficult to extend these practices in the school. The support of experts has been useful and interesting to learn."*

Indicator 5: Usefulness of the materials

Concerning the usefulness of the materials, one teacher found them useful to enhance learning and the students found them interesting and were happy with them. Another teacher did not have the time to translate the different definitions into the cardboard flower that she prepared at home in advance to show her students how the final product might look like. Nevertheless, the students found it useful for the development of their task. Another teacher had some problems with the software used for "Learning by coding" which lead to lack of motivation by the students. The software was not easy to work with for some students, some needed more time than others and the advanced options were difficult to manage by some. The teacher found that the students were more skilled with the software and related materials during their last coding session.

"The materials and methods have been useful to learn. Students found materials useful for the development of the task."

"Teachers need more time to prepare materials and more time to work with this type of activities. The classes are 50 minutes and sometimes it is not enough."

"Using a software to complete a task and apply the classroom content is interesting for students. It is a way for understanding the connections between reality and academic world."

Indicator 6: Increase interaction in the classroom

All teachers agree that the interaction in their classrooms has increased massively. One teacher emphasized that the participation of some students who are less proficient in speaking in English has improved, they feel happy to explain their ideas. The activities enhanced collaboration among the students. They liked the NFL methods used, the freedom that it gave them, moving around the classroom, sharing their ideas and reaching agreements among each other. They were engaged in listening attentively to each other's presentations and had useful questions and remarks. They were able to learn from each other and guide each other when needed. In the teacher's opinion, the students were happy with the opportunity to share their thoughts and the comradeship has increased immensely. Another teacher decided to form the members of the student groups, allowing a mix of shy and outspoken students to work together. Accordingly, the groups were able to work perfectly. All members had the opportunity to share their ideas and they worked collaboratively to reach agreements on their final outcome. For another teacher, the participation was scarce at the beginning of the activity, but as the activity continued, the participation increased. Students where helping each other and the

interaction became very good. According to this teacher, the NFL methods promoted participation and collaboration among all the students.

> *"NFL activities promote participation and interaction among students."*
>
> *"Students like to discuss about a topic and try to reach an agreement. They are always interested in the opinions of their peers."*
>
> *"Some difficulties are related to the management of everybody trying to participate at the same time."*
>
> *"Students were very motivated to participate and share their opinions."*
>
> *"Students developed competences to communicate in an efficient way (talk and listen)."*

Indicator 7: Increase motivation and engagement of the students

All teachers agreed that the level of participation and motivation of the students especially the ones who are shy and normally do not participate has massively increased. For one teacher, it was motivating for the students to be learning in the classroom (formal setting) but with a non-formal method and classroom arrangement (moving chairs and tables). For another teacher, the students were motivated because it was something different than what they are familiar to. They enjoyed the activities because of the relaxed atmosphere that was created. They even congratulated the teacher at the end of the session. Another teacher implemented collaborative learning outside the classroom. Accordingly, this lead to increased motivation and more collaboration among the classmates. They were helping each other and the teacher to solve technical problems that came up in the computer lab. According to this teacher, the remarks from the students reflect motivation and increased group cohesion.

> *"Students have been very motivated. To them, it was really interesting to work in the same class but with a different environment. Some of them said that the sense of motivation in the class group has improved."*

Indicator 8: Increase learning outcomes in the classroom

All teachers agreed that they were able to observe the learning process and progress of their students. The attention and sense of organization of most of the students has increased. One teacher noticed that the students in the class became aware of their mistakes and of their strengths. One group asked the teacher if they could move to another group to help its members because they were not strong enough in the English language. In addition to that, the students became aware and can link formal learning

with learning in a non-formal context. Another teacher was able to observe the learning process of the students by listening to their reflections. The teacher gave them an apparent negative situation which they need to find positive aspects in and to give a creative solution for (Six thinking hats). The exercise helped them express their feelings and emotions, something they are not accustomed to do at this age. The only difficulty was control over the whole group since it was in the English language. For another teacher, the increase in vocabulary knowledge and use was remarkable. The students were able to express themselves in an appropriate way, they were honest about their feelings, and their concentration has improved during the activities. The teacher discovered that her students know a lot about certain topics, and that they are more mature than they look. One of these students told the teacher that because of these NFL methods, he is thinking of things that he would normally not thought of in a regular formal lesson.

"Students are aware of their mistakes."

"It is very interesting to observe how students can appreciate more the usefulness of the lesson content through the use of a non-formal method."

"Students show their satisfaction for applying their knowledge in their day-to-day life activities."

"Students have been able to:

- o *express themselves in an appropriate way,*
- o *be honest about their feelings,*
- o *improve their concentration during the implementation of the activity."*

P3 PISTES –France-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

The teachers started by getting to know and master the techniques. They invested time in understanding the methods and the theory that exists behind them. They had no problem in finding resources and asking for assistance from the NFL expert. This approach has enabled them to develop technical knowledge and proactivity to master the methods that they did not know before and adapt them to the needs of their students for a better impact. All teachers identified potential modifications to the methods to fit

their students' needs. They were able to analyze and reinforce their own needs and skills. They were all able to develop their own learning plan. Three teachers took part in a MOOC about neuroscience to exploit better the complementarity between collaborative methods and the CARMA techniques. All teachers trained students (future teachers), colleagues and/or teachers from other schools, this shows high levels of increased knowledge and competencies regarding NFL methods in collaborative learning and teaching.

> *"I have really liked the coding activity we had during the training in Palermo. However, it seemed to me highly improbable that I could use this method taking into consideration the objectives I have as a librarian in a school. Thus, I have done some research on the Internet (code.org) and I realised that I could really adapt this method to the learning objectives I had. I decided to launch myself into it. I am really satisfied with the results I have   obtained.*
> *I have facilitated this session for each class of 6ème (11-12 year-old students), 10 times in total! I have been able to bring some changes between the first and the tenth session to improve and adapt it to my needs and the ones of the students."*
>
> *"I have understood the importance and the impact it has to be well organised and to plan the activities with a real plan regarding the time. It helps to keep a real dynamic and a rhythm that are essential when you are using non-formal education methods."*

The four teachers became aware of the students need to be listened to and the possibility to express themselves. They have understood that their role as to facilitate, set boundaries for the students and valorize what they say. One of the teachers worked a lot on two topics: rules of privacy and respect of the ideas of the others in order to create an environment in which it is easier for the students to talk about themselves. The teacher noticed how his position has changed through looking for a balance between benevolence and rigor when expressing the expectations. Furthermore, the teachers did some changes to the way they work by sharing their knowledge and by providing documents to the students so that they can work on them. All teachers were acting as facilitators rather than just delivering their knowledge.

> *"I have noticed how important it is to find the right attitude towards the students. I have found the balance between being benevolent enough and keeping the attitude of the teacher (firmness when needed and really clear expectations and explanations)."*

In addition to that, all teachers gained several other skills; they understood the importance of the preparation phase before the session in order to fit with the learning objectives to facilitate the learning process of the students. They were able to describe what collaborative methods are and were able to teach these methods to others, they published articles about this topic for one website of the regional education authority.

Two of the teachers mentioned how they improved in setting frames for the group activities and in managing time. Moreover, one of them stressed on her ability to intervene, grasp the opportunity and go deeper into some topics and the ability to adapt spontaneously. Furthermore, active listening was mentioned as an objective from the start of the CARMA piloting, all teachers mentioned how attentive they were to this in each pilot session. All teachers mentioned that they increased their skills in analyzing their own work and activities. They were able to evaluate results regarding the impact of the methods they used at both short-term and long-term on the students and on the school in general. The teachers became more proactive and some of them have developed new methods inspired from the ones proposed within the CARMA project.

> *"I have tried to adapt the petal debate, making the students work on different corpus documents. However, I have noticed that they remembered better what was discussed inside the petals rather than in the heart of the flower. I will have to pay attention to create situations when they all have the supporting documents".*

Indicator 2: Increase knowledge and competences regarding RMA as an assessment tool for monitoring learners progress

All teachers discovered the RMA method during the training in Palermo in September 2016. However, since the training and during the pilot period, this tool has not been so clear and easy to use for the teachers, despite the support from the NFL expert.

The teachers tried to use it as much as possible to evaluate the sessions they had led to see if there was any added value from the point of view of the students. The students gave a very positive feedback about the occasion they had to express themselves, to be listened to and that what they had to say had been heard.

One of the teachers took more time to explore the RMA method, and the feedback from the students showed how much they felt free to talk within the group. This created space to share facts and emotions that were never expressed before. This teacher underlined with the students the importance of listening to the other and valorized quite a lot of mutual understanding. The students integrated RMA really quickly and it brought a lot regarding their expression, how to share about themselves, and how to be more benevolent within the classroom.

> *"The students were really surprised that we let them express their thoughts and in the beginning, it was not easy for some of them to talk in front of the others".*
>
> *"I have found really interesting the fact that the students hear the other students express the same fears and feelings as the ones they have, the same disappointment... The more the lessons were passing, the more they were at ease".*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

All teachers expressed increase in confidence throughout the pilot period. After conducting several sessions and after noticing that there was a real impact, they started talking more about their work in collaborative methods. They even proposed to introduce and train some of their colleagues and/or members of some networks that they are part of about the different methods. All this shows that they consider themselves legitimate and competent enough to train about collaborative methods.

One of the teachers faced a difficult period at her school and among her colleagues. The latter did not accept the change she was creating in the school. However, the teacher has gained enough confidence to face the problem and confront her colleagues about the methods she was using. The teacher explained why she used these methods in addition to presenting the initial positive impact on her students that she noticed at that time. The teacher explained that it was not easy but in the end several colleagues who were reluctant asked her to teach more about the project and about collaborative methods.

> *"I had to face a complex situation with some colleagues. They were reluctant and really not convinced by what I was trying to implement. I took the decision to contact all of them explaining what I was doing since I was really convinced and motivated by non-formal learning activities. In the end, most of them came back to me and decided to join the adventure and they are now using several methods!"*

During the open days of the school (to present the school to the future students and parents), the same teacher decided to present her work through a petal debate activity to both students and parents. The reaction of the parents and students was really positive and the teacher is now seen as "the teacher trying things" and not as "the strange teacher anymore". She mentioned that she was able to do this during the open days thanks to the reinforced confidence she gained from project.

> *"The vision the students and the parents had about me changed. After having been the "strange teacher", I have become the "one who tries new things".*

Other elements such as the ability to appropriate the methods and the creation of new activities were mentioned by all teachers. This reflects their ease in working with collaborative methods and confidence in owning these methods by making them adjustable to their class and students' needs.

> *"To implement the coding sessions, I have worked and validated the algorithm with the maths teachers. It was helpful also to feel more confident".*

CARMA

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers

The CARMA project enabled the creation of several links inside and outside the school among different stakeholders in the field of education. Two of the four teachers initiated peer-to-peer training sessions with the support and participation of the headmasters and supervisors of the schools, they trained 30 participants in total. This lead to the chief education advisor wanting to use the collaborative methods to manage problems dealing with the school environment. In addition to that, numerous teachers in these schools started using the different methods such as Petal Debate, the Box of Emotions, the Six Thinking Hats and graphic facilitation. A group of teachers asked one participant of the CARMA project to check how collaborative methods could help them manage conflict outside the classroom with the students. The four teachers noticed that the impact is much more positive when the stakeholders are involved and are participating in the different activities. One headmaster of a school participated in the first pilot session after Palermo, she was surprised by the ability of some students to be creative forces. During the afternoon of the same day, the headmaster was testing the method herself. She even proposed to valorise the emergence of the ideas from the students; such as a motivating sentence from a student that could be valorised daily in the playground.

> *"We created a real collaboration with some colleagues we were not used to work with, such as Chief education advisers. We discovered that they had a lot to bring in the fields of collaborative methods, the attitudes of the teachers, how to support the students..."*
>
> *"Several teachers have found interesting to work on the emotions of the students. Some of them are using the method to make an assessment at the end of the lesson while others such as the English teacher has translated it to work both on emotions and vocabulary with the students".*

One teacher was officially designated as an advisor in her school for the use of collaborative teaching methods and for the implementation of new projects. According to the teacher many project ideas have been proposed for implementation starting September 2017.

> *"I have been designated as the referent person for collaborative methods and innovative projects inside the school. In September 2017, we will start a project related to theatre with the hosting of a drama group inside the school. In order to prepare this project, I will work closely with Spanish teachers about storytelling".*

One of the teachers is in charge of managing a class that hosts early school leavers. For that reason, the teacher works in collaboration with several external organizations to help re-motivate the students. The collaboration with the organizations and the piloting of

the collaborative methods worked well and were successful since both ends are trying to find innovative methods and solutions to tackle the issue of early school leaving.

Furthermore, two librarians who participated in the project have trained all the librarians from the regional academy on the Petal Debate, in total 30 participants. Two teachers led trainings in ESPE, the training centers for future teachers, in total 35 participants. One teacher has been selected at the regional level to support secondary schools who aim to implement innovative projects.

According to the teacher, it seemed more difficult to spread the word and to practice collaborative methods inside rather than outside the school. Even if the schools know about the methods that have been piloted, the colleagues are afraid of not having enough time to test new methods. In addition to that, some teachers are convinced that the methods they use and have always used are the best and that collaborative methods would not bring any solutions to the problem of early school leaving. Many are not convinced that it could be useful to work on the emotions of the students. In addition to that, the teachers are often isolated with their classes and it is not easy to share and develop a transversal approach inside the schools. Accordingly, the success of the pilot sessions depended on the motivation and proactivity of the teachers to launch real and innovative dynamics in their classes and among their students.

> *"I have trained future teachers in the training centre about the petal debate. When I came back a few months later, they were all remembering what I had taught them and they were really curious to discover other methods".*

According to the teachers, the NFL expert played an important role in supporting and guiding them. The expert went to all the schools to give support especially in the first few months. The teachers were in touch with the NFL expert: for preparing the sessions, setting the learning objectives, checking on how to use the methods from a practical point of view, analyzing the sessions, impact on the students, attitude of the teachers, etc. the teachers considered the expert as real resource person, they asked regularly for complementary trainings such as training in graphic facilitation.

According to the teachers, each has been supported according to his/her needs and skills. For example, a required support was for one teacher who is managing a class of early school leavers. The teacher, in addition to working with a very difficult target group, has to manage his class alone and is quite isolated from the rest of the school. As a consequence, the NFL expert spent three days in the school to work together with the teacher on the collaborative methods and also to explain and promote the methods that are being tested to the other teachers and colleagues.

> *"The fact that I was supported by an expert helped me a lot to keep the motivation and feel more confident, since I was the only one to try to implement non-formal activities inside the school".*
>
> *"Without working with an expert, I would not have been able to achieve all what I have done, since I would not have known how to adapt the activities so that they can fit with my needs and the ones of the students".*

Indicator 5: Usefulness of the materials

In the diaries, nothing was mentioned regarding the usefulness of the materials. Rather the teachers preferred to talk about the efficiency of the methods instead.

For one teacher of History and Geography, the Petal Debate enabled her to gain some time. She could lead a session of three hours using this method instead of the usual five hours. Thus, she considers the method very efficient and time saving. Furthermore, she considers the method very relevant since the Petal Debate was much more constructive and the students were listening actively.

> *"The debate was much more constructive than when I was using a classical method. The students listen more to each other and do not try just to share their opinion without listening to the others."*
>
> *"Thanks to the method, I could do the lesson in 3 hours, thought it would have taken 5 hours without any doubt with a classical method."*

Depending on the needs and the ongoing evaluation, the teachers adapted some methods but kept the essence of each. For example for the Box of Emotions, culturally, in France it is very difficult to share one's emotions in public or in this case in a classroom. So, the teachers looked for alternatives and found a solution that allowed the students to participate fully in the activity. Hence, the methods are very well organized and could be adapted when needed.

According to the teachers, the most important indicator to confirm the efficiency of the methods is that all the teachers who took part in the piloting phase as well as their colleagues who participated in the training have decided to integrate these methods as often as they can even after the pilot phase within the framework of CARMA project.

> *"The Six Thinking hats method has been really useful to deal with problems regarding the school atmosphere and the school environment."*
>
> *"Having a tool to work on the emotions of the students is really essential, especially when you work with early school leavers. It is complicated to talk about what we feel, especially*

Indicator 6: Increase interaction in the classroom

The use of collaborative methods gave space to tackle new and different topics with the students. Such as emotions, events that took place in the class or in the school, transversal topics, etc. They had the possibility to express themselves, listen to each other and be proactive.

According to the teachers, the students became aware of their abilities. They became aware of what collective thinking is and how it can be more important and beneficial within a group. They were able to discover a new space that is safe to reflect and to exchange feelings and personal reflections. Somehow seen as unusual and usually kept quiet. This space was created by the use of RMA. It gave the students the possibility to listen to both emotions and provocations, but also the teachers highlight the fact that this took place with no argumentation.

According to the teachers, the collaborative methods have highly facilitated the communication inside the classroom and gave space to opportunities for students to speak and to get involved in their learning process. The students have become aware of how important it is to listen to the other, to share and to exchange in order to learn.

"The students were proud to put in their notebooks the results of the collective work. Most of the students found the method quite fun and asked that we use it more often."

"The majority of the students really liked this way of working. They had already done group work in other subjects but they underlined the fact that debates were taking place was a real asset and brining a lot."

"The students really appreciate listening to the others."

"Really soon, I have noticed that some students did not participate in the activity to prepare the algorithm, leaning on the rest of the group. I have therefore decided to erase the blackboard on which we had created collectively the algorithm. I had told them it in advance. I think this idea contributed to create peer cooperation."

"In the class, there were three students who were really reserved. During the activity, one completely changed and participated both in the petal and in the heart during the activity."

"The students were really asking to use collaborative methods, especially when they had to solve a conflict for example. Indeed, they understood the importance of taking collective decisions and of all being involved in the process."

"The students seemed to discover they could share and interact with the teachers. It is as if they felt listened to for the first time."

Indicator 7: Increase motivation and engagement of the students

The teachers have noticed that the students who were facing the most difficulties were really involved when participating in collaborative learning activities and were recognized by the group as persons who could bring an added value to the group. The engagement of the students could be seen as a result of empowerment. The students in one school explained that they have been given the chance to express themselves and they asked to reuse the methods to learn better and maybe to change some school rules, for example the school attire. One group of students used the Six Thinking Hats method during a teachers' conference to talk about their class. The teachers noticed that during these sessions the student's ability to make introspection has increased, they tried to understand themselves better. The moment that the activity started, the students were involved and motivated to go further and to learn more. One teacher noticed that the students were working at a faster rate than they would during classical teaching. She thinks that this has to do with the fact that they needed to prepare a work that will be presented to the rest of the group/class. The teacher who is managing a class for early school leavers noticed that working on emotions was really useful and evidently essential in enabling their engagement and participation.

In all the schools, the students expressed their surprise regarding the fact that their thoughts and opinions were taken into consideration by the teachers. They want to continue learning through collaborative methods with all their teachers (not only the ones conducting the piloting). In one school, at the end of the school year they proposed topics which they would like to work on in September 2017. They have identified the teachers as persons who can support them and provide answers to their needs. This vision was non-existent before the CARMA piloting.

> *"Some students came spontaneously to see me during the break the same day as the one when I did the session to tell me they really appreciated the method and to know if we would do other ones"*
>
> *"At the end of the session, one student came and asked me if I would take into consideration what they had proposed and she was really surprised when I said I would. She thought it was an exercise like the other ones".*
>
> *"During the teachers' conference, the students have presented the analysis of their class using each hat of the "Six thinking hats". The method surprised the colleagues and the parents who were present but they really liked the fact that the students were proactive and that they proposed solutions."*
>
> *"I used the petal debate with one class. Later during the day, when other students from the same group age entered the class, they asked me if we would also do a petal debate. I said that yes, but later since we were not advanced enough in the lesson. They were really disappointed".*
>
> *"The more we were using the methods, the more the students were receptive. They were starting to work really fast and there were not childish behaviours anymore".*
>
> *"As for me, I have noticed that the students were much more involved right from the first session. They knew that they would have to express themselves alone after the work in the petal, so they understood by themselves that it was really important to work seriously in group".*
>
> *"After two sessions using collaborative methods to talk about the class atmosphere and the behaviour of the students, the latter's have really changed their attitude and started to work seriously".*
>
> *"They all want that the petal debate is used by the other teachers".*

Indicator 8: Increase learning outcomes in the classroom

Teachers saw an increase in learning outcomes on two levels. The first level, a better understanding of the material being taught; and on the second level, a better understanding of themselves and of the other.

The analysis from the teachers was that when collaborative methods were used, the results of what the students produced were much better than usual. Working in a

collective way has had a positive impact on the quality of the work produced and they remember better what was taught. The students shared with the teachers the fact that the dynamics in the classroom secondary to the use of collaborative methods facilitates their concentration, hence they can learn and remember better. The teachers agreed that the students got better results when they were evaluated on the lessons. Some teachers admitted that the lessons were fully completed in less time than usual. One of the librarians used the activity of Coding to explain how to organize the library, where and how to put the returned books back on the shelves. After the sessions, she noticed a huge impact on how the students have understood the organization of the library.

> *"The written work the students produced, even if they did not have the same quality were almost all complete. For many students, the written work was longer and better documented than what they would have been able to do alone."*
>
> *"The students realised that this activity enabled them to remember better the facts and notions tackled during the lessons and that they got better results when they had to make tests."*
>
> *"Once we have worked on the emotions and how the students feel, they are much more productive during the lessons. They have the feeling that someone pays attention to them and understands them."*
>
> *"The objectives have been really well understood and reached much more efficiently thanks to the creation of the algorithm. Create an algorithm is a complex task that requires a lot of concentration. After the activity, almost all the students are able to find a book completely independently while before, we had to remind them the process many times."*

According to the teachers, the students became more receptive. What they were sharing became richer and richer, their thinking was more and more organized and they were more and more benevolent regarding the rest of the group. The non-formal methods has not enabled the students to gain theoretical knowledge, but rather it had a greater impact on their behavior. They acquired and/or reinforced many soft skills such as: conflict resolution, ability to express themselves in front of a group, active listening, and team work. The students started to see their teachers as supportive persons and not only persons of authority.

P4 DOGA –Turkey-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

All four teachers described that their competencies and knowledge regarding NFL methods to facilitate collaborative teaching has increased. One teacher noted an increase in his teaching competencies by implementing NFL techniques in his lessons. According to him these techniques reinforce communication among the students and make them more involved and engaged in the lesson. Hence, reaching the same learning objectives but with more collaboration and student involvement, indirectly leading to an increase and improvement of the teachers teaching competencies. Another teacher learned how to push her boundaries and integrate new skills and new learning methods. The teacher described interest and hunger to learn about new teaching methods. Another teacher believes that NFL methods need to be more integrated in the different subjects to allow better internalization by the teachers. One teacher believed that he improved his professional competences because of the implementation of NFL techniques.

"I learned how to push my boundaries and integrate new skills and new learning methods. This is a new journey for me. For 17 years, I was good at teaching physics but now it is not only my concern to teach, I feel hunger to learn new things."

"I think at least one topic in each theme should be presented by NFL techniques to internalize these techniques and to make teaching more attractive."

"When I implement the new techniques, not only my students have new learning experiences but also I improve my teaching competences."

I believe that I could improve my professional competences thanks to the implementation of NFL techniques. I was so nervous to test the new techniques first in my class but I was convinced that the implementations had a great impact on the students when I saw the gleam in their eyes."

Indicator 2: Increase knowledge and competences regarding RMA as an assessment tool for monitoring learners progress

All four teachers did not mention in their diaries how their knowledge and competences have increased regarding RMA as an assessment tool for monitoring their students' progress. It was more of a description of the student reactions and engagement. One teacher mentioned that it was fun to implement RMA with the young learners. Another teacher mentioned that after finalizing the RMA session, he could monitor and evaluate his students learning process. Another teacher mentioned that RMA is the best tool to be able to monitor the learners progress.

"It was fun to implement RMA techniques with the young learners. They were so active and each student had something to say."

> *"I finalized my RMA implementation and I could monitor and evaluate my students' whole learning process."*
>
> *"The students understood that they can observe their learning through self-assessment as an evaluation and monitoring tool for their learning. RMA is the best tool to be able to do this."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

All four teachers described ways of collaborating and sharing knowledge on NFL methods with their colleagues. One teacher shared her lesson plans and taught her students together with another teacher using NFL methods. On another occasion, the same teacher gave a lesson in the presence of another teacher who was interested in learning and using NFL methods with the students. One teacher explained that he used his break time to collaborate with his colleagues on ways to integrate NFL methods into their different classes, he assisted them in matching their learning outcomes and topics with what he was doing in such a way to integrate his lessons with other lessons. Another teacher reflected his confidence in leading collaborative methods within his school by introducing the teaching staff on some of the methods he was using. The teacher made use of the 'Teachers Meeting' that takes place regularly on Wednesdays to share his experiences and some good practices that he had encountered while using NFL methods in teaching his students. After less than a month, his colleagues tried some of these methods and shared with him the strengths and the weaknesses they have faced. Another teacher described that the parents of some students became interested about the different methods he was using that they verbalized their appreciation to the school management. Because of this, the teacher was asked to share his knowledge and some good practices that he has encountered about the different methods that he used. The teacher described his surprise to see enthusiasm and potential future collaboration with his colleagues, this gave him satisfaction and comfort to what he was doing.

> *"I shared my lesson plans of the NFL techniques with my colleagues and we did dome of the classroom implementations together."*
>
> *"Instead of taking break time, I prefer to collaborate with my colleagues and propose to them to implement some of the methods with me, by matching their learning outcomes and topics, I could integrate my lessons with theirs and they became aware of the different methods and able to implement in their classes."*
>
> *"On Wednesdays we had the Teachers' Meeting to inform about innovations in our teaching and I had the opportunity to share my implementations and good practices of the NFL methods I am using. Apart from this, we had 20 minutes presentations to talk*

about the new techniques and how to implement in our classes. Thanks to these meetings, I could share all techniques and my lesson plans with our teachers and I have invited them to test in their classes. After three weeks, my colleagues shared their weaknesses and strengths in their classroom implementations to get support and improve their teaching."

"During the second term, the parents were so curious about my implementations and they expressed their appreciation to the school management. The school management and head of my department asked me to share my experience and good practices with my colleagues. I was surprised when I saw the enthusiasm and passion in my colleagues to learn new things. They were keen on trying the methods in their classes and open for collaboration with me. It makes me feel that I am on the right track."

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers

The four teachers described some of the collaboration they did with their colleague teachers. They did not describe explicitly increase in collaboration and co-working with their colleagues or the non-formal learning expert. One teacher mentioned working together with another colleague of the same age group of students to prepare and implement the Six Thinking Hats. Another teacher mentioned that the principal wanted the teachers to be informed and aware of the NFL methods after he heard positive comments and satisfaction from the parents. Another teacher described how he collaborated and co-worked with another teacher by transferring his activities to the other teachers teaching hours.

"I worked with my other colleagues of the same age group to apply the lessons we prepared together for the Six Thinking Hats technique."

"My students talked about what we have done in the lesson to their parents. At the parents meeting, the parents conveyed their satisfaction. So, the school principal asked what we could do about it and talked with other teachers about the NFL methods."

"I ensured that the content of the next lesson is suitable to work in cooperation with the teacher so that I could transfer the activity to that hour."

"We talked about NFL techniques with teachers who are interested in the subject."

Indicator 5: Usefulness of the materials

The teachers did not mention using the CARMA toolkit or the catalogue. They did not mention consulting with the lesson plans of the different NFL methods and the PowerPoints on the RMA as an assessment tool. The teachers prepared their own

materials for each activity or method. Therefore, not much information was found in their diaries concerning the usefulness of the materials but from their description of their preparation, one can conclude that they were inspired by the lesson plan examples found on the google group and shared through the webinar (sharing of experiences webinar).

"During the implementations, I used mostly the board and activity cards. For the Constructive Controversy, I prepared the instruction cards and additional useful information to give some hints on the topics. The learners are young and sometimes they need hints to go on their discussions. In addition to that, small sticky notes were helpful to use during the RMA session in order to remember some of the words that were used".

"When we applied the Six Thinking Hats method, we made hats from cards and we drew pictures of the different senses on them. The colourful cards and hats were very useful to give the messages and to make the learning more enjoyable for the pupils".

"I have tought on cyber bullying and digital citizenship concepts. Students used their scratch program to code their own stories. Coding was a perfect online tool to creat their digital stories and to publicize their social problem. Supporting their algorithmic thinking makes them more creative".

Indicator 6: Increase interaction in the classroom

From the teachers descriptions in their diaries, it appeared that the level of interaction was high during the sessions. One teacher mentioned that all his students were actively involved in the activities. Even the shy students took part. To another teacher, the interaction among the students have improved. Some students who do not agree tried to explain their different point of views in order to reach an agreement. Another teacher described the interaction in her class while setting the students to work in groups. From the teachers description, each group member had a task to fulfill and a workload complementary for the end result, so cooperation was very important in achieving the final result.

"All students are actively involved in the activities. Even students who were shy in the classroom were eager to express themselves."

"Even students who do not normally agree, defended their ideas to reach a common goal within the group."

"Story scenarios created using the Scratch program were shared with the class. Other groups studied the codes of the stories and gave feedback on whether the same story could be written using fewer code steps."

"The students explain the different types of energy in addition to work and power in systems. Each group draws these systems on a large piece of paper and writes the energy

> *conversion statements. The papers were exchanged between groups. Each group member was assigned a task and each group was assigned a leader. The members and leader need to discuss among themselves and reach an agreement. A student missing from the group was easily noticed, since each group member was assigned a task."*

Indicator 7: Increase motivation and engagement of the students

According to the teachers, the level of motivation and engagement of the students has increased. For one teacher, the students had a great time that they were learning without realizing that. The same teacher conducted RMA in the school gardens and noticed that being outdoors motivated her students. Another teacher noticed that his students are very enthusiastic and become impatient to put on the hats they prepared for the Six Thinking Hats session. Students seem to like group work, all four teachers mentioned an increased level of engagement of the students when they work in groups. To one teacher, they were excited and cheerful while contributing to each other's work. To another, they were attentive and listening carefully to each other.

> *"The students had a great time, rather than elaborating in my explanations, they were trying to learn for themselves. I did the RMA activity in the school gardens, and being outdoor for the students was a great motivation."*
>
> *"The students were particularly impatient to put on their colourful hats that I use during the Six Thinking Hats session. Even the students who are normally hesitant to speak agreed to participate and wear the hat."*
> *"They watched carefully what other groups did to be able to give feedback."*
>
> *"Using their own systems and created visuals was encouraging for the students. It increased the quality of their work, they own their work. They were excited and cheerful while contributing to the work of each other in the classroom activities."*

Indicator 8: Increase learning outcomes in the classroom

According to the teachers, the students learned how to work in groups to achieve their tasks, how to be creative and create their own stories/ learning experiences, and how to regulate their learning. Their learning outcomes increased too by examining the work of their fellow students and giving feedback to them, they need to prepare, understand the theory very well in order to evaluate their fellow students. It appeared the group work facilitated learning and collaboration the classroom leading to increased learning

outcomes among all the students, even the reserved shy ones. Collaborative methods helped increase the ability of the students to express themselves; thoughts and feelings.

> *" My students acquired new skills, they learned how to work in groups in order to finish their tasks, they learned how to be creative to develop their own stories."*
>
> *"I have observed how much the students understood the process with these products, and the students have seen their position by examining their own products and those of their classmates."*
>
> *"Even my students who do not like group work and prefer to be individuals have participated in all activities and learned to be a group without any problems."*
>
> *"There was a noticeable increase in the ability of the students to express themselves during collaborative sessions. They were eager to express their feelings and thoughts."*

P5 UCLL – Belgium-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

The teachers learned about new non-formal learning methods during the training in Palermo in September 2016. They were introduced to new methods and strengthened their existing knowledge about methods that they were aware of. One teacher found it interesting to learn about the meaning of non-formal learning as opposed to formal and informal learning. The teachers did not explain explicitly how their knowledge and competencies in NFL methods to facilitate collaborative teaching and learning have increased, but throughout the description in their diaries, one can presume that they were aware of what they were doing, and that they have a deep understanding and can apply the methods very well. For example, one teacher used the Petal Debate method in an innovative way. She started by explaining the concept of debating by a movie which was crucial for her to make the pupils feel comfortable, her pupils were allowed to choose the topic and they together with the teacher tried to link the debate to a real life situation or a council at school. The teacher stressed on the importance of moderating and too on discussing with the pupils the criteria of a good debate. One teacher observed that working together with two or more teachers (team teaching) facilitates collaborative teaching and learning a lot. The teachers in their diaries described the importance of setting the classroom ahead of time, so that when the class starts they are on time and the students are not distracted by the moving of furniture, etc.

> *"collaborative teaching and learning takes more time but the learning outcomes are more guaranteed afterwards: it is a strong method to acquire content."*

Indicator 2: Increase knowledge and competences regarding RMA as an assessment tool for monitoring learners progress

All the teachers were introduced to RMA during the training in Palermo in September 2016. The method was new and all of them had some doubts regarding its implementation and effectiveness as an assessment tool for monitoring their pupils progress. In the beginning, the teachers were doubting their abilities in implementing RMA, but it appears in their diaries that their doubts where not in place.

> *"I was rather sceptical about RMA in the beginning. It didn't seem that new to me. I was surprised that the outcome was better than expected. I'm planning to use the method more frequently and to show it to my colleagues."*

In their diaries they did not mention any difficulties or obstacles. Furthermore, they did not mention any increase in knowledge or competence regarding RMA as an assessment tool. But, they described what they did, and how they ran the session. The reaction of the pupils, and their own evaluation of how their pupils participated and collaborated. The description from all teachers was positive. One teacher conducted the session with another teacher (co-teaching), according to her co-teaching is very important for the success of the session, in that sense, the teacher can focus on the students participation and input and not on class management issues. The same teacher believed that taking good minutes of the session would help the teacher on reflecting upon what the pupils have said after the RMA session. Here again, the stress on the importance of a second teacher during RMA sessions was highlighted. Another teacher, noticed that drawing during the RMA is helpful but at certain moments it can become difficult and need to be stopped, this might disrupt the smooth flow of the technique and distract the pupils. Though drawing is of an added value to pupils with weaker language skills. It was agreed upon by the teachers that the choice of a clear topic is very important, according to them it is not easy to elaborate on ideas and opinions, hence a good question and a meaningful topic need to be addressed. This makes it easier too for the teachers to evaluate the and assess the students learning progress.

> *"Drawing during the RMA helps, but sometimes it is too difficult and then they have to stop. Drawing supports pupils with weaker language skills."*
>
> *"The choice of brief and clear topic is important."*
> *"It is not easy to elaborate on ideas and opinions: you need good questions."*

> *" Conduct RMA using co-teaching as much as possible, that way the teacher can focus only on what the pupils are saying and not on class management."*
>
> *"A second teacher could help by taking notes, these are valuable since the RMA is used as an assessment method."*
>
> *"Good minutes help teachers to observe what the pupils say and think after the NFL session is over."*

From the description the sessions and from the points of attention and recommendations that the teachers wrote in their diaries, one can see that the teachers learned from their own sessions, and were able to identify better ways to conduct the sessions efficiently. One teacher said that she was surprised that the outcome was better than expected, she plans to use RMA and to introduce it to her colleagues.

> *"I was surprised that the outcome was better than expected. I am planning to use RMA more frequently and to show it to my colleagues."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

The three teachers did not have any problems in conducting the NFL methods in their schools. The schools were supportive and enthusiastic about the piloting of the methods with their pupils. The colleagues were not resistant to the methods and did not verbalize or portray any negative feelings. This allowed the teachers to pilot the methods in a comfortable and confident way. In addition to that, the school environment (as in infrastructure) was not a hindrance. The teachers had some difficulty at the beginning in planning the sessions within their heavy schedules, but as the first sessions were over, the teachers gained more confidence and got the grip on the how, what and who. One teacher conducted some sessions with another teacher (co-teaching), another teacher conducted a method in two classes at the same time.

> *"Conduct RMA using co-teaching as much as possible, that way the teacher can focus only on what the pupils are saying and not on class management."*
>
> *"It helped to be obliged in a way to actually try the methods systematically."*

Indicator 4: Increased peer learning and collaboration via co-working with non-formal experts and other teachers

All teachers did not participate on the CARMA Google Groups as a peer learning tool on a regular basis. It appeared that they did not have the time to take part in the discussions

but they made use of the lesson plans and explanations that were posted by their colleague teachers. One teacher clarified the fact that she did not share any experiences was the heavy paperwork that she needs to do for her school in addition to writing the CARMA diary. The same teacher elaborated that her peer learning increased through direct contact and communication with her direct colleagues at school, some of them were co-teaching with her and assisting in the lesson plans and delivery. In addition to the regular contact with the NFL expert.

> *"I did not use the CARMA Google Group as a peer learning tool that often. I used it to download the lesson plans and explanations for RMA. I think the reason is that as a teacher, I already have a lot of paper work to do. Writing down the diaries was an extra task. That didn't give me much motivation to –in addition- write even more on the group."*
>
> *"I had some extensive conversations –over mail or phone- with my NFL expert before the planned lessons. In addition to that, I always organize my CARMA lessons with a co-teacher. Sometimes it was an external teacher but mostly it was one of my direct colleagues."*

Indicator 5: Usefulness of the materials

The teachers did not use the CARMA toolkit or the catalogue, they did consult the lesson plans on the different NFL methods and the PowerPoints on the RMA as an assessment tool. The teachers prepared their own materials for each activity or method. Therefore, not much information was found in their diaries concerning the usefulness of the materials but they included that the lesson plan examples were very helpful to start planning their own lessons and for inspiration. In addition to that, the RMA PowerPoints and explanations were very helpful for better understanding and implementing the technique.

> *"I used the lesson plans and PowerPoints for RMA and the NFL methods, but not the catalogues and toolkit."*
>
> *"I didn't use the materials."*

Indicator 6: Increase interaction in the classroom

For all the teachers, the interaction in the classroom has increased. One teacher was surprised how well her pupils can express themselves. One teacher remarked that her students developed more respect for each other since they simply get to know each other's opinions. With this increased interaction, the teachers noticed that pupils have more space to talk about common, regular issues. The teachers were able to compare

the difference in the level of collaboration and participation among the students during regular classes and the NFL classes. One teacher modified the petal debate to fit her pupils better and to increase their participation. Another teacher allowed some pupils to draw in order to provide extra support for the ones who are visual thinkers and /or with weaker language skills.

"I was surprised how well they express their own thinking."

"More respect towards each other and each other's opinions because they simply get to know better the opinion of the other."

"I added techniques during the Petal Debate to increase the participation of every student during the interaction (e.g. a card or matches or to let a student be a visual moderator)."

"Six Thinking Hats: children coach each other spontaneously. Some of their expressions: 'put off your black hat now. You can do it. Put your yellow hat on!' 'I give you the green hat: order the numbers first from small to big.' 'Now you have your green hat on!', 'I started too late studying for my test yesterday and I only studied the frameworks without making any exercises." – response from another pupil: 'Then you had to long your yellow hat on but yesterday evening the green one in order to make the best of !'."

Indicator 7: Increase motivation and engagement of the students

According to the teachers, the pupils were more involved during the sessions because they were engaged with the content in different ways and because they were able to process the content by themselves. They were learning without realizing that they were actually learning. One teacher, said that she will let her pupils choose more the topics in order to increase their engagement. The pupils were spontaneously using the Six Thinking Hats. It was evident that they were more active during the NFL sessions. According to the teachers, the NFL methods and the RMA technique created a space for richer input by each and every student to what is happening around them, and that motivates them a lot. One teacher noticed that if the motivation was not high during the NFL sessions, it was due to external factors. One teacher noticed that in her class increase in motivation and engagement was like a domino effect, for some it was not easy to express their opinions, but when few pupils started to do so, others just followed.

"Involvement is stronger because they are engaged with the content in different ways (content, images, fantasies) and because they process the content by themselves. They learnt without realizing that they are learning."

"RMA: the pupils really like this technique and they asked me immediately to have more of this kind of discussions supported by drawings. They like that they really know what

other pupils think and that they can talk without being interrupted while everyone listens. They like to think further about what other students said (their arguments) and what they haven't considered before."

"The NFL methods and the RMA technique created more space for more input by each student in what is happening in the school. This motivates the pupils a lot."

Indicator 8: Increase learning outcomes in the classroom

All the teachers agreed that there is an increase in the learning outcomes on different levels: the thinking process, expressing their thoughts, phrasing intelligent arguments, thinking about the content deeply, use their imagination, think in a structured way, respect each other and listen to each other. A common reason among the teachers was that, the pupils are more self-conscious and conscious of the other because they collaborate more.

" They learn new arguments from each other that they haven't considered before."

"They re-assess their opinions and ideas."

"They get to know each other better."

"They elaborate content profoundly."

"They learn to learn."

"They learn to express their thoughts."

"They learn to consider the content from different points of views."

"Storytelling makes them able to translate their fantasies into a clear and logical story, it increases their confidence to talk before the group."

"Six Thinking Hats: they learn to express very well things that they have experienced as difficult and their mistakes in class. 'Now I know that I can think for myself in choosing my secondary school and that I don't need simply to follow my brother'. They learn to coach each other in the learning processes. In coaching each other, they take more into account how the other is (his profile). When they help each other, they give better suggestions. They learn to give less the solution but support each other in strategy/process."

P6 INOVA+ – Portugal-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

All three teachers appear to have knowledge and competencies to facilitate collaborative teaching and learning. From the diaries they had a good structure and an organized plan to conduct their sessions. The teachers prepared the materials needed ahead of time and tried as much as possible to start and finish within their planned activity time. The diaries have a step by step description of what took place in the classroom. That shows reflects the competence regarding NFL methods. One teacher adapted the technique for a specific implementation to fit better her student group distribution. The same teacher used different methods of explaining the task so that the students could understand better the aim of the activity. For another teacher, some students had difficulty in understanding what they had to do although the instructions where delivered in a document ahead of time. Hence, the teacher gave them a roadmap to the activity with all the required steps. The teachers plan fit the timeframe and eventually all the students understood what they had to do.

> *"This activity lasted for 50 minutes, exactly what the teacher had planned. The instructions were clearly understood. The students accomplished what was supposed to be done."*
>
> *"I showed the explanation of the hats on the board again to help the students remember the purpose of them."*
>
> *"I've started to give them a roadmap of the activity, with the pairs and group, and all the steps of the activity."*

Indicator 2: Increase knowledge and competences regarding RMA as an assessment tool for monitoring learners progress

For this indicator, the teachers did not specify how their knowledge and competence increased regarding the use of RMA as an assessment tool for monitoring the progress of the students. All three teachers described how they conducted RMA and how the class atmosphere was and how the students interacted. Through the teachers description of setting up the classroom, forming the circle, and setting the rules; one can perceive that the teachers knew what they were doing. Furthermore, they were able to conduct RMA within the time limit of a regular class (50 minutes). One teacher had some concerns about conducting RMA within a big group, the teacher had to intervene several times because of some disruptive behavior.

> *"To create a democratic, non-hierarchical environment in the class using the RMA technique."*
>
> *"A circle where all students could see the faces of all the others and this was something new for them. A note book to record the conclusions of the session."*
>
> *"This activity lasted for 50 minutes, exactly what the teacher had planned. The teacher, functioning as the RMA coordinator."*
>
> *"This discussion was very well organized. The students spoke in their turn and presented the reasons as to why this activity was helpful to link formal learning with learning in an informal context."*
>
> *"This wasn't the first time that I used RMA session with this class, so they were familiar with the technique. Like the first time I used RMA in class, I told them that this was a safe zone, where they could express themselves."*
>
> *"In spite that, in general, it went well, I think there are some issues that need to be improved: with a class like mine, doing something like this in a big group has some issues, because of disruptive behaviours – not only the mocking (and for that I had to intervene several times), but also because I think that some of the things that were said in the circle would be used outside the class in order to mock the colleagues that some find more fragile."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

All three teachers described how they conducted their pilot sessions and the problems that they faced at the beginning and how this became better at the end after they redid some methods. The teachers did not mention anything related to the school environment (colleague teachers, director, class setting, school infrastructure, etc.). One teacher described the difficulties faced at the start of the piloting, these included a large number of students, the duration of the activity, re-explaining to the students, equal participation of all the students; and how the teacher gained confidence and experience as the pilot phase progressed. It was possible to start and finish the activity on time, and had less critical moments in the classroom. Another teacher said that he/she will continue to use these methods next school year.

> *"The number of students made the activity a bit difficult. It is required to organize the spontaneous participation of the students."*

> *"I tried to provide opportunities for all the students to participate, but it is very difficult because they are too many (28)!"*
>
> *"The activities duration fit what I have planned, one lesson of 45 minutes. The students already know what they had to do. All the students participated."*
>
> *"I need it more time. I would like to do it like in other sessions, with a written evaluation, but I didn't have the time."*
>
> *"Since I'm having this class next year, I will continue to apply this technique, since they have been so receptive."*

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers

The teachers did not mention in their diaries how working together with the non-formal learning expert and other teachers in their schools has affected their peer learning. For this part of the diary, the teachers' focus was on how the students were working together and how the peer learning increased amongst them. This is not relevant to this indicator.

Indicator 5: Usefulness of the materials

The teacher diaries did not reflect if the materials were useful or not. In their diaries, all teachers described how they used the materials. It is evident that from their material utilization description that the materials were important for the success of their lessons.

> *"I made six little hats for each group."*
>
> *"I showed the explanation of the hats on the board again to help the students remember the purpose of them."*
>
> *"The material about the contents of the activity was given in previous classes. For this one, I've given to all the students a roadmap of the activity, with the pairs and group, and all the steps of the activity."*

Indicator 6: Increase interaction in the classroom

All three teachers saw an increase in interaction in their classrooms while conducting the pilot sessions. The teachers piloted different methods in addition to RMA, but that did not play a role, because the level of interaction among the different classes and different methods piloted in the different classrooms had the same effect. The students where

interacting better with each other, sharing their thoughts, knowledge, and opinion about the topics that were covered. Only one teacher noticed that some of the students took advantage of these sessions to interact on matters outside the lesson content. One teacher described how the students loved to talk about their feelings and how comfortable they felt while doing that. For another teacher, the participation of the students was very emotional and believes that the impact on them is positive because the activity helped them to deal cooperatively in problematic situations. Furthermore, the teacher described the students as motivated and the development of their communication skills was noticeable. They respected each other's opinion.

"Not all the students were doing what they were supposed to do. Some of them took the opportunity to chat."

" They loved to talk about feelings and emotions. Some of the student showed they feel comfortable expressing their feelings. The most reluctant were also capable of showing some of their inner emotions."

"The students showed communicative skills, like active listening and capacity for clear expression, and presentation of their feelings and emotions."

"Each student expressed her/himself about the question, with his / her own personality and opinion. All paid attention to the different interventions."

"The students participated in a very emotional way and gave many suggestions to help solving the established situation."

"I think the impact on the students is positive because the activity helped them dealing better with problems and crises in a cooperative way."

"The students were really motivated and the session was very interesting. The development of the communication was quite noticeable because the indication of the problem encouraged the suggestion of solutions."

"The students respected each other so everybody felt comfortable to talk, some more than others. They shared comments, feelings and opinions.

"I think the students increased their ability to understand their own opinions but also the others' opinions."

Indicator 7: Increase motivation and engagement of the students

Two from the three teachers commented on this section in their diaries. For both teachers, there was an increase in the level of motivation and engagement among the students. One teacher said that the students showed their motivation to use a new

strategy while learning English. And that they were really engaged with the technique. Another teacher said that the students were motivated and that the sessions were very interesting, this lead to increase in communication in the class. Consequently, the involvement between the classroom and home got stronger. For this teacher, the collaborative methods seem to have a positive influence on the students aspirations for further similar experiences. According to his/her students, they stated that they find group work the most interesting, they stated that it increased their motivation in learning.

> *"They showed their motivation to use a new strategy, while learning English. At the same time, they said they could easily recognize and manage their emotions."*
>
> *"The students were really motivated and the session was very interesting. The development of the communication was quite noticeable because the indication of the problem encouraged the suggestion of solutions."*
>
> *"The involvement between the classroom and home got stronger."*
>
> *"This activity seemed to have a positive influence to the students' desire for further experiences."*
>
> *"The part they have seemed to enjoy the most was when they had to present their arguments in favour of the international conventions."*
>
> *"Some of the students said that in the beginning they find the discipline very difficult, but they started to like the classes, especially when we used constructive controversy."*
>
> *"Most of the students stated that they find group work the most interesting thing about the classes. They've stated that it increased the motivation in learning."*

Indicator 8: Increase learning outcomes in the classroom

The three teachers were positive in their diaries towards increase in learning outcomes in the classroom. For one teacher, the students learned how to look at a certain situation in different points of view and how to organize their learning experiences. According to the students, they can learn better with these methods. Another teacher pointed out that some students said that the method was very positive because they got to understand better the content of their previous lessons.

> *"They learnt how to think outside of their head and how to look to the same subject with different views."*

> *"This activity supported the students during the discovery of new ways to organize their learning experiences."*
>
> *"The students said this experience allowed them to a better learning."*
>
> *"This lesson made the students understand the electricity's importance in the day to day life and they also realised the electric characteristics of several household appliances."*
>
> *"Some students pointed that the method was very positive because they got to understand better the contents that they have been studying in the previous lessons."*

P7 VM – Austria-

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

The teachers were not very clear in their descriptions of how their knowledge and competencies have increased regarding the NFL methods. They described more the contribution of these methods to the learners' capacities and motivation. One teacher mentioned that now she is more aware of the needs of her students. Another teacher mentioned that these methods provided him with different settings and approaches in order to work with students from different backgrounds and with different needs and skills. According to this teacher, it is an organized educational process that helps teachers in fulfilling the needs of the students.

> *"It became clearer, we can do the activities better and I understand why I need these activities."*

Indicator 2: Increase knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress

All four teachers seem to have increased knowledge regarding RMA. One teacher sees it as a method that can be used for lifelong learning. For another teacher RMA helped her to recognize the different skills and competences of the students. Another teacher saw after implementation that the method provides positive solutions that can be acknowledged. For another teacher, the more implementations are done the better he

understood why RMA is used as an assessment method for monitoring the progress of the students.

> *"It surprised me how because of RMA, the students can show effective and flexible ways of expressing themselves."*

Indicator 3: Increased confidence in leading collaborative methods within own school environment

The diaries did not describe if the teachers confidence has increased in leading collaborative methods in their schools. The description was mainly concerned with the confidence of the students. For one teacher the process enabled her to identify certain goals for better implementation. For another teacher, the process enabled him to think that in the first place he needs to be open for the learning process in order to become a good teacher and be able to keep the students interested and motivated during the learning process.

> *"The process enabled me and other teachers to identify and set goals for improving daily implementations, which we will transfer to our peers."*

Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers.

All four teachers have collaborated with other teachers and the expert. The process enabled them to better identify and set goals for their implementations. Furthermore, it increased their awareness of certain competences and it brought them together since they share the same educational mission in their work and have similar set objectives. For one teacher, peer learning and collaboration, helped her to connect and cooperate better among other colleagues, they came together and learned and enriched each other through the implementation of certain methods.

> *"With the help of the expert, I could implement the methods easily."*
>
> *"Many teachers from my school have shown interest. The methods are very well-founded and I assume they can be implemented by the whole school."*
>
> *"I am aware that I alone cannot do much as a teacher."*

Indicator 5: Usefulness of the materials

The teachers did not mention using the CARMA toolkit or the catalogue. They did not mention consulting with the lesson plans of the different NFL methods and the

PowerPoints on the RMA as an assessment tool. It appears that the teachers prepared their own materials for each activity or method. Therefore, not much information was found in their diaries concerning the usefulness of the materials. One teacher mentioned that the materials were designed to keep the learners motivated throughout the sessions. Some teachers mentioned the usefulness of the methods rather than the materials.

> *"According to my experience, I can say that the materials were designed to keep the learners motivated throughout the sessions."*
>
> *"Many of the methods were very useful to takle issues related to problems in the school and among the students."*

Indicator 6: Increase interaction in the classroom

All four teachers agreed that the interaction in the classroom has increased when they were implementing NFL methods. According to them, in the beginning many students were not very enthusiastic, but when the class commenced they did work together and collaborated in groups. Nevertheless, few students remained less motivated but the most appreciated the lessons. The students progressed after several sessions, even the ones who communicate less in the class have taken part and shown increase in their communication.

> *"They were stimulated and became active participants while working in a group. They had the opportunity to learn about each other."*
>
> *"They learned how to communicate better with their peers."*

Indicator 7: Increase motivation and engagement of the students

For all four teachers, during the sessions some students had no interest in the methods, but when they saw how the class was having fun and contributing to the implementation of the different methods, they got involved. Even some had friends in other classes who heard about the methods and wanted to join too. For the teachers it was nice how they saw the interest of the students growing day after day. The students were motivated and engaged because there was a lot of focus on the emotions.

> *"Experience and knowledge sharing enriched the sessions, this lead to increased engagement and learning among the students."*
>
> *"Considering my observations on all sessions, students' motivation and engagement has increased."*

"Students were engaged in the process by taking up the responsibilities and tasks throughout the working sessions. They took initiative in own learning and development."

Indicator 8: Increase learning outcomes in the classroom

For all four teachers, the students were much more productive and got very well with each other. They have less quarrels and have been more communicative and understanding. According to the teachers, recognizing the challenges and overcoming them was the most important outcome in their classrooms. The sessions provided many learning outcomes such as, solidarity, cooperation, respect for different perspectives, communication skills, taking responsibility, the ability to work independently and in a group, conflict management, etc. new competencies and skills that they acquired out of the different collaborative sessions.

"They were able to develop their understanding on becoming active learners."

"The students gained competences on many important aspects such as, communication skills, being aware of the feelings of the other, intercultural issues, etc. all of this were learning outcomes which I have determined as learning objectives and results."

In my opinion, recognizing the challenges and overcoming them was the most effective outcome in the classroom."

"I can say that the sessions provided many learning outcomes. Such as, solidarity, cooperation, respect for different perspectives, communication skills, taking responsibility, the ability to work independently and in a group, conflict management, etc."

This shows how a particular indicator is used in coding the diaries. It displays which diaries are most or least coded at a certain indicator.

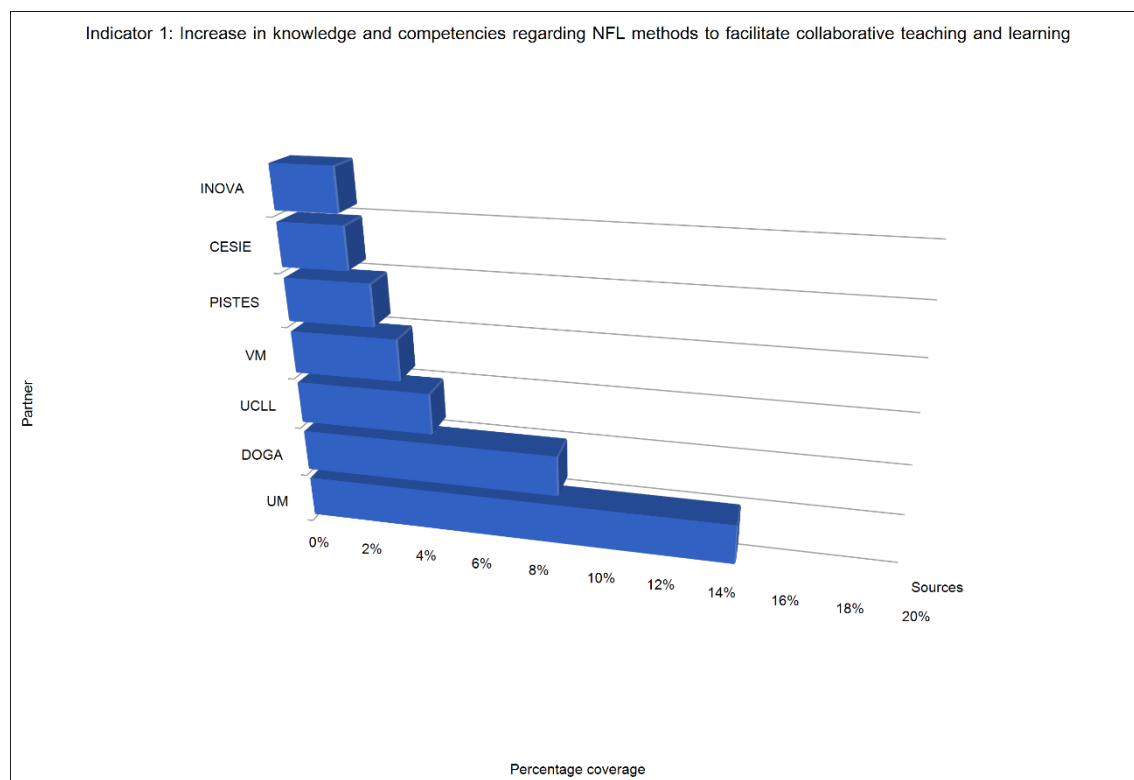*Figure 13 Percentage coverage of indicator 1 in partner Teacher Diaries*

Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning

Figure 14 Percentage coverage of indicator 2 in partner Teacher Diaries

Indicator 2: Increase in knowledge and competencies rearding RMA as an assessment tool for monitoring learners progress
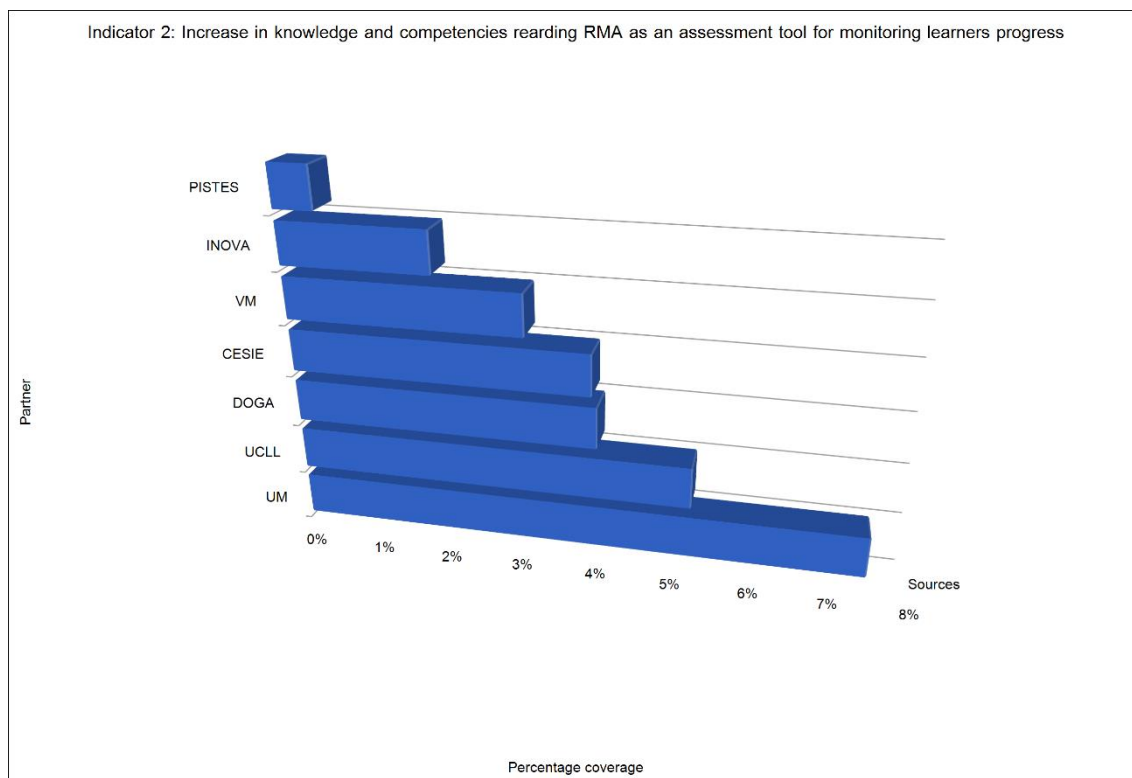
Figure 15 Percentage coverage of indicator 3 in partner Teacher Diaries

Indicator 3: Increased confidence in leading collaborative methods within own school environment
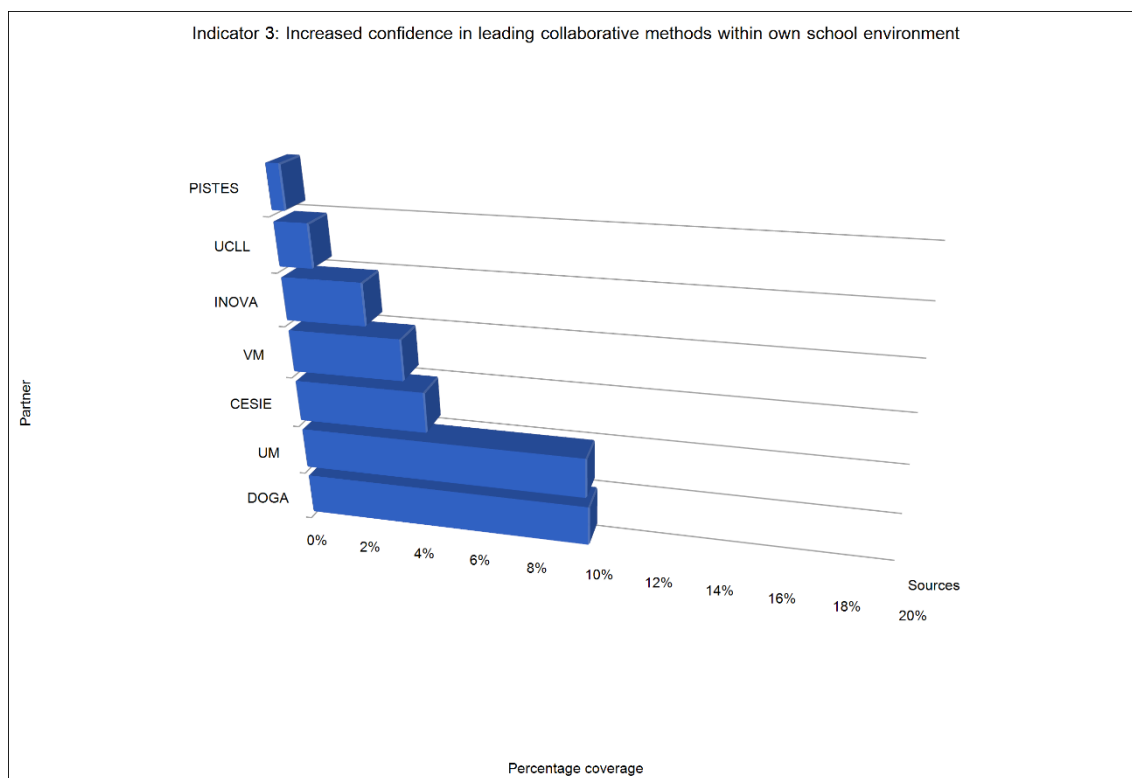
Figure 16 Percentage coverage of indicator 4 in partner Teacher Diaries
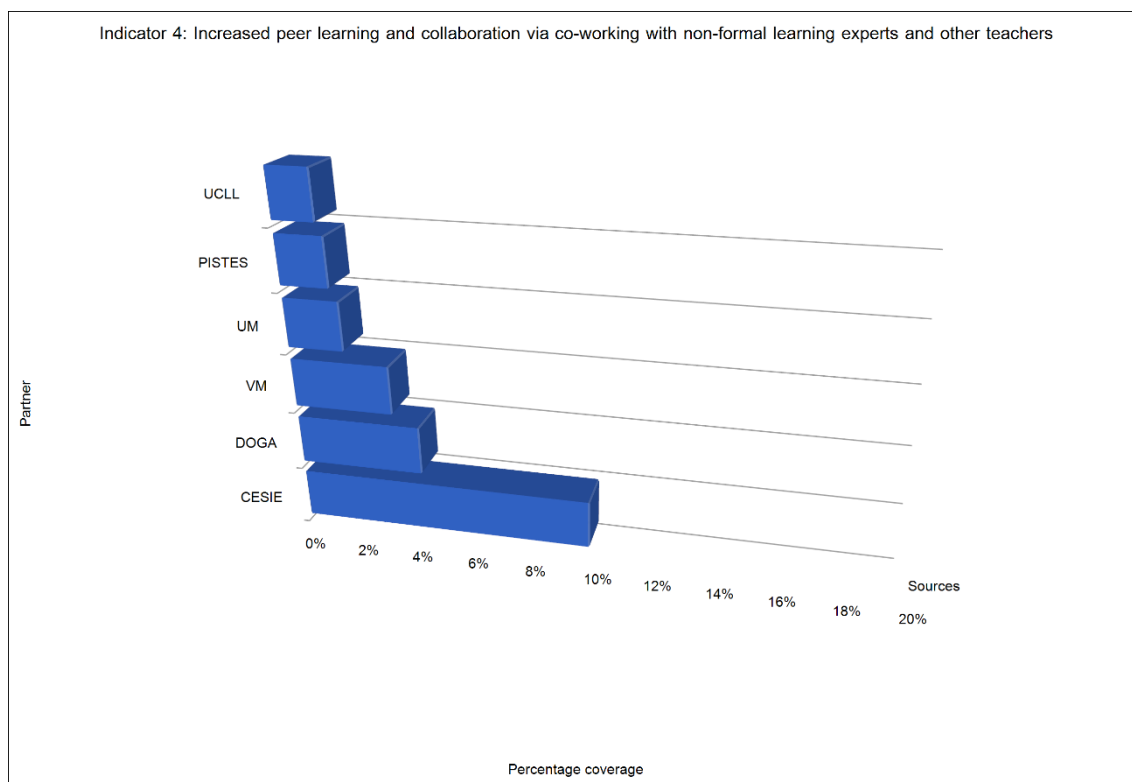

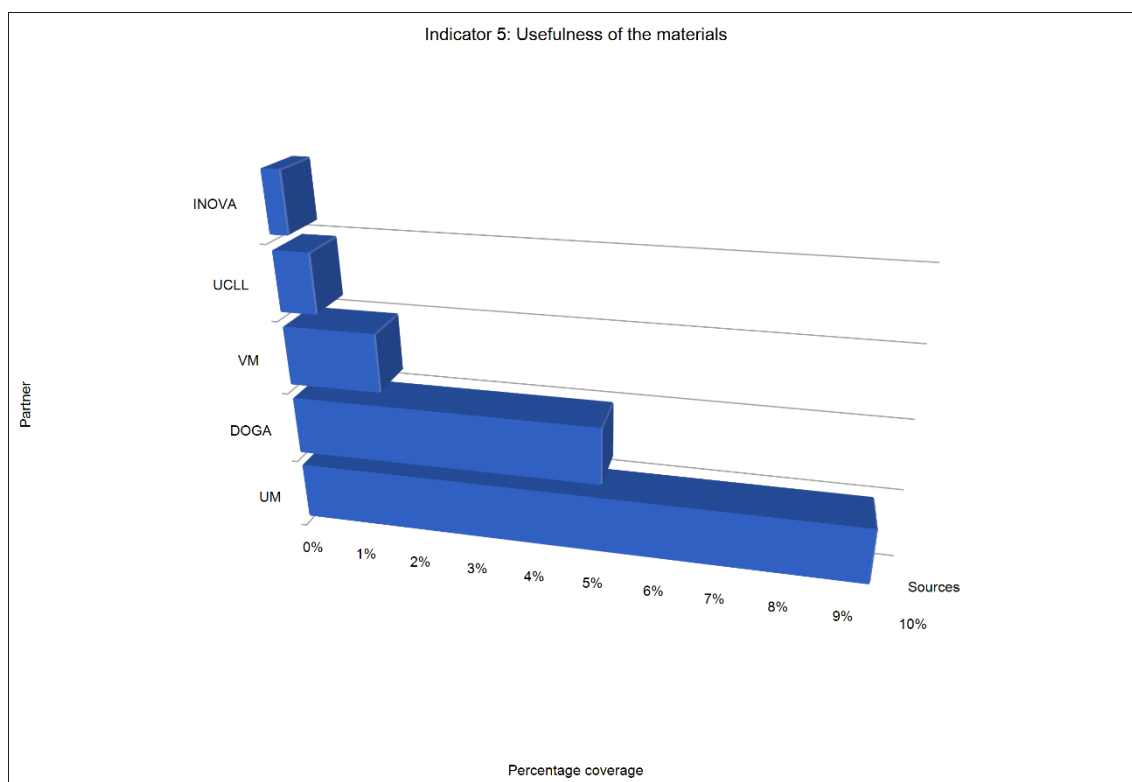*Figure 17 Percentage coverage of indicator 5 in partner Teacher Diaries*

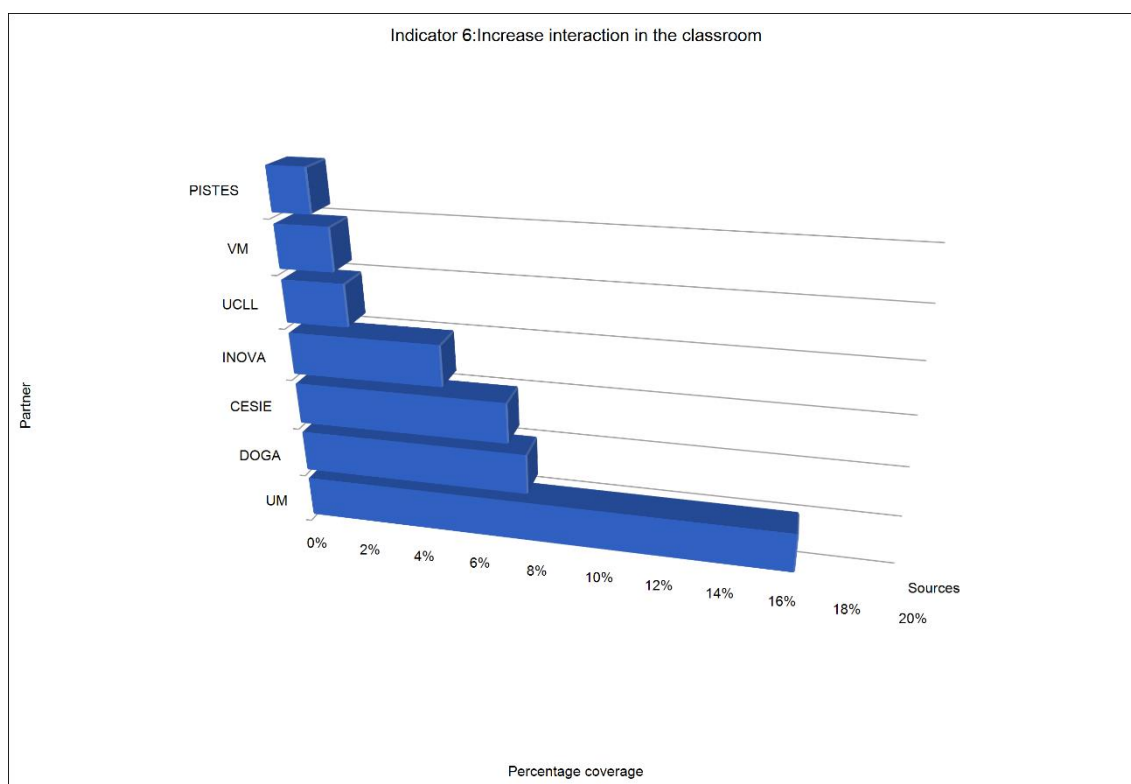*Figure 18 Percentage coverage of indicator 6 in partner Teacher Diaries*

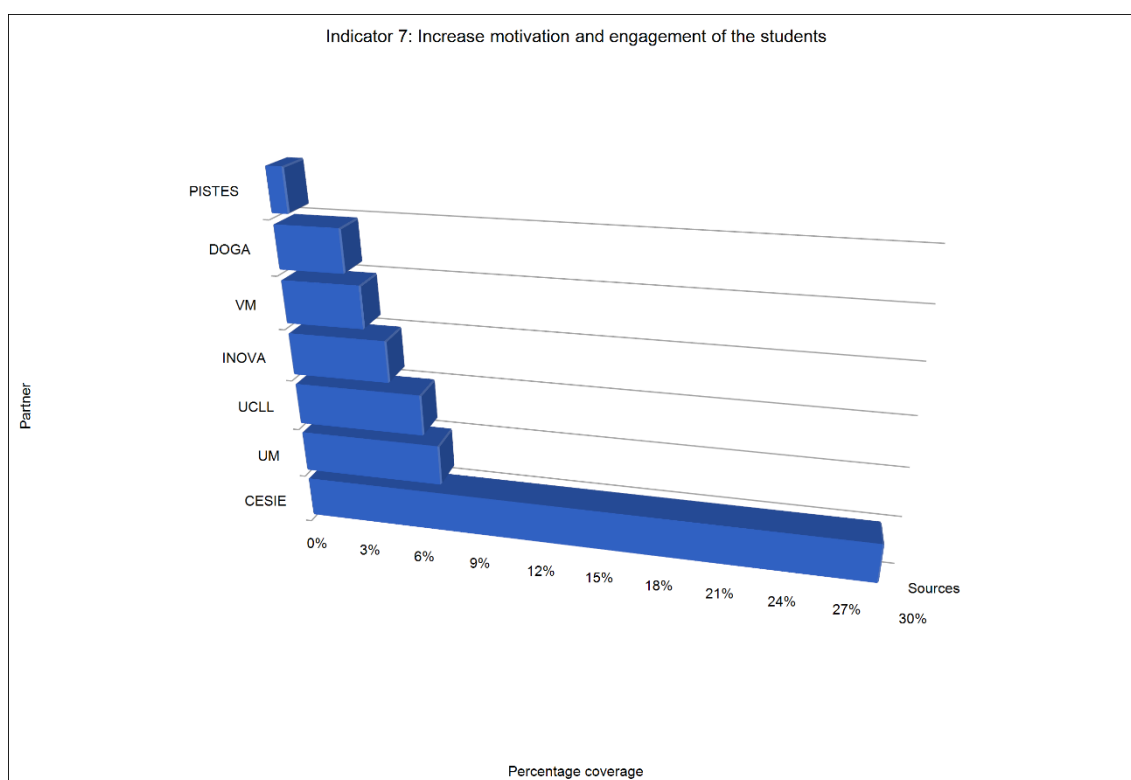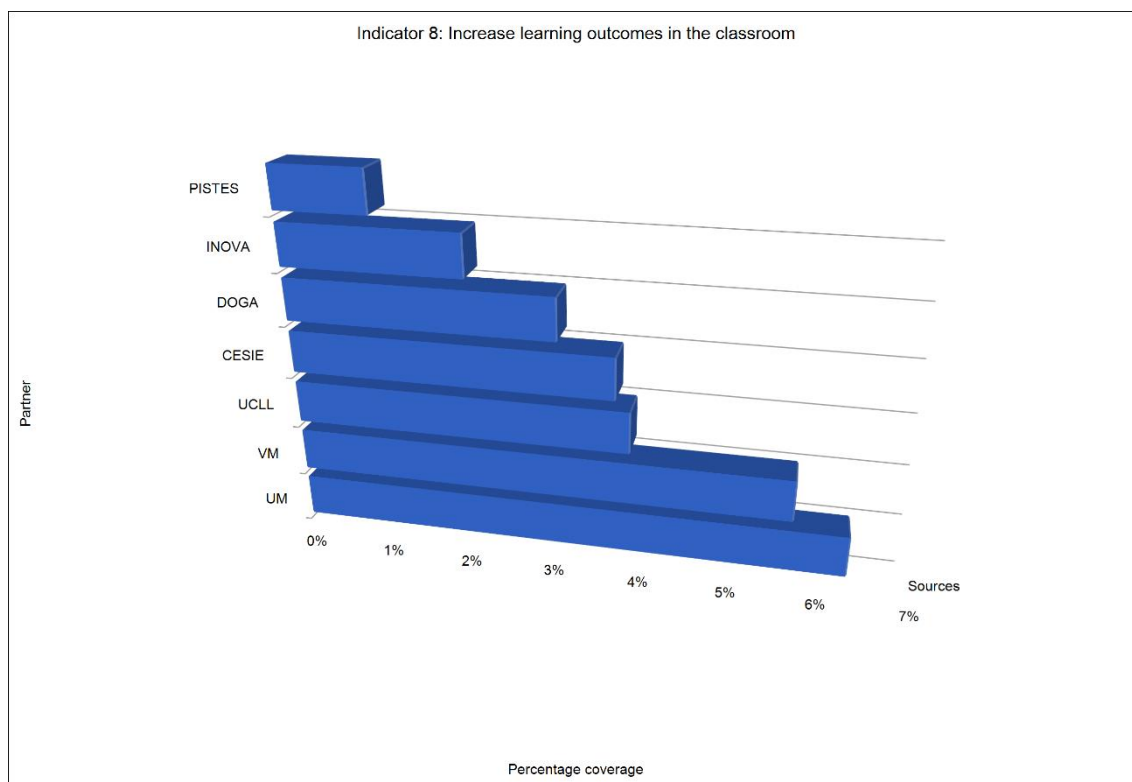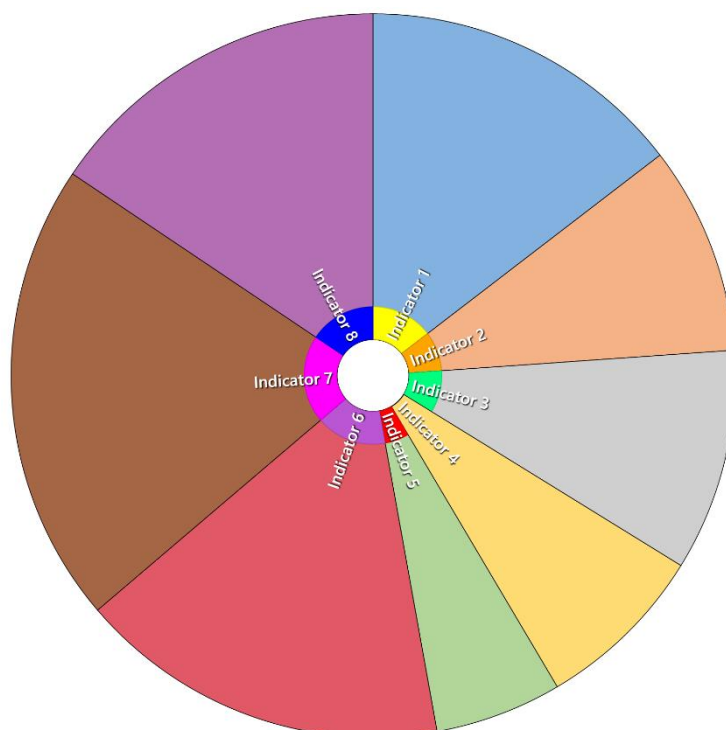*Figure 19 Percentage coverage of indicator 7 in partner Teacher Diaries*

Figure 20 Percentage coverage of indicator 8 in partner Teacher Diaries

Total Number of Codes per Indicator

Figure 21 Total codes distribution among the seven partners and across the eight indicators

Total number of codes among all partners: 494 codes

Total number of codes among all partners per indicator:

- ⚸ Indicator 1: Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning.

72 codes from all coded fragments refer to15% of the total codes.

- ⚸ Indicator 2: Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress.

46 codes from all coded fragments refer to 9% of the total codes.

- ⚸ Indicator 3: Increased confidence in leading collaborative methods within own school environment.

49 codes from all coded fragments refer to 10% of the total codes.

- ⚸ Indicator 4: Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers.

38 codes from all coded fragments refer to 7.6% of the total codes.

⚡ Indicator 5: Usefulness of the materials.

28 codes from all coded fragments refer to 5.6% of the total codes.

⚡ Indicator 6: Increase interaction in the classroom.

82 codes from all coded fragments refer to 16.6% of the total codes.

⚡ Indicator 7: Increase motivation and engagement of the students.

102 codes from all coded fragments refer to 20.6% of the total codes.

⚡ Indicator 8: Increase learning outcomes in the classroom.

77 codes from all coded fragments refer to 15.6% of the total codes.

Summary of Findings and Concluding Notes

The teacher diaries from the different partners revealed the strength of four indicators in particular. Indicators 7 – 6 – 8 – 1 with a total coverage of 67.8%.

Indicator 7 **Increase motivation and engagement of the students** with 20.6% coverage in total among all partners and across the eight indicators. It is evident that collaborative learning was a positive experience and different from traditional formal learning and teaching. This triggered the attention of the students and increased their motivation to attend and participate. All teachers agreed that the level of participation and motivation of their students especially the ones who are shy and normally do not participate has massively increased. The involvement between the classroom environment and the home environment got stronger leading to a positive influence on the students aspirations for further learning. The engagement of the students was seen as a result of empowerment. The students were given a voice to express their feelings and to learn from and with each other through collaborative approaches. A strong catalyst to the increased motivation and engagement of the students was the fact that the students were allowed to express themselves. Furthermore, the students were more involved during the sessions because they were engaged with the content in different ways and because they were able to process the content by themselves. They were learning without actually realizing that they were learning.

Weaknesses:

The motivation and engagement of the students in non-formal teaching and learning to one partner (CESIE) was in general divergent; to some students it was positive and to

others it was less impressive. Some were curious to participate while others demonstrated less interest. For this reason, irregular attendance was seen. This created difficulties in implementing group reflections because of the demonstrated lack of interest and superficiality among some students.

It was noticed by one partner (UCLL) that if the motivation was not high during the NFL sessions, it was due to external factors. The external factors were not elaborated upon in the teacher diary.

Indicator 6 **Increase interaction in the classroom** with 16.6% coverage in total among all partners and across the eight indicators. The teachers across all partners expressed high levels of classroom interaction among their students. They felt at ease while interacting and working together. Collaborative methods provided them with some freedom in the classroom, like moving around which had an indirect effect on their motivation and a direct effect on their interaction. They felt happy to collaborate and help each other, listen attentively and respect each other's turn. The level of interaction among the different classes and the different methods being piloted had the same positive effect in interaction among the students. The participation and interaction of the students to some teachers was very emotional. Collaborative methods provided the students with a platform to resolve problematic situations cooperatively. The students became aware of their abilities, they became aware of what collective thinking means and how it can be important and beneficial within a group. They were able to discover a new space that is safe to reflect and to exchange feelings and personal reflections. Accordingly, collaborative methods have highly facilitated the communication inside the classroom and gave space to opportunities for students to speak and to get involved in their learning process.

Weaknesses:

One teacher from one partner (INOVA+) noticed that some of the students took advantage of these sessions to interact on matters outside the lesson content.

Indicator 1 **Increase in knowledge and competencies regarding NFL methods to facilitate collaborative teaching and learning** with 15% coverage in total among all partners and across the eight indicators. According to most of the diaries, the teachers were able to switch between the different methods and adapt them according to their students' needs (or even students with special needs) depending on the characteristics of the method and the content of the lessons. Furthermore, the teachers were able to adapt the classroom space to fit the requirements of the learning activities. According to all diaries, the teachers had a good structure and an organized lesson plan for conducting their sessions. They had their materials prepared ahead of time and were able to start and finish on time. They were able to analyze and reinforce their own needs and skills,

and develop their own learning plan. For one partner (PISTES) three teachers took part in a MOOC about neuroscience in order to exploit the complementarity between collaborative methods and the CARMA techniques. The teachers understood the importance of the preparation phase before the sessions in order to fit with the learning objectives and to facilitate the learning process of the students. They were able to describe what collaborative methods are and were able to teach these methods to other colleagues. They became aware that their role as facilitators can be of great importance, rather than only a teacher delivering the knowledge. By facilitating, the teachers provided opportunities for their students to explore their own learning.

Weaknesses:

For one partner (CESIE) it was difficult for the teachers to explain the tasks to the students. The process of collaborative teaching and learning was more important for them than the content of what they were teaching. The lesson topics can affect the presence or absence of collaboration. Some topics were too scholastic and this lead to dispersed attention from the students.

For one partner (UM) it was difficult to work with NFL methods when some students were absent.

Indicator 8 **Increase learning outcomes in the classroom** with 15.6% coverage in total among all partners and across the eight indicators. All partner diaries reflected a positive increase in the learning outcomes in the classroom on several levels: the thinking process of the students and their analysis of the topics/situations; thought and idea expression, intelligent argument phrasing, deep thinking about the content of the lessons. What was evident too by all partners is that the students were using their imagination and creativity in their thinking and problem solving process. In addition to all this, the students showed respect for each other and listened patiently to the opinions of their classmates. They became more self-conscious and more conscious of the other.

Weaknesses:

Non was mentioned in the teacher diaries.

The remaining indicators of the partner teacher diaries summed up to 32.2% coverage. These were indicators 2 – 3 – 4 – 5.

Indicator 2 **Increase in knowledge and competencies regarding RMA as an assessment tool for monitoring learners progress** with 9% coverage in total among all partners and across the eight indicators. The RMA sessions were very significant to some teachers. It took all teachers several trials in order to manage the activity. Some

suggested using visual materials to improve the implementation, others suggested using simple short questions to fit the students age group. All teachers described setting up the classroom, forming the circle, and setting the rules. For some teachers, co-teaching was important for the success of the session, in such a way, the teacher can focus on the students participation and input and not on class management issues. Furthermore, taking good minutes of the session was mentioned in aiding the teacher to reflect properly on the students input. Another important aspect that was mentioned in several diaries and reflects the increase in competencies regarding RMA was the choice of topic. According to them it was not easy to elaborate on ideas and opinions, hence, a good question and a meaningful topic need to be chosen and addressed.

Weaknesses:

For one partner (CESIE) the method was not really clear, even after explaining the origins of the method, the history and values behind it, the message was not easy to transfer.

For one partner (UM) it was difficult to find an opportunity to conduct the sessions because of the fixed curriculum that has to be followed.

For one partner (INOVA+) one teacher had some concerns about conducting RMA with a big group of students, the teacher had to intervene several times because of some disruptive behavior.

For one partner (PISTES) this method has not been clear and easy to use for the teachers, despite the support from the NFL expert and the training in Palermo.

Indicator 3 **Increased confidence in leading collaborative methods within own school environment** with 10% coverage in total among all partners and across the eight indicators. All teachers expressed increase in confidence throughout the pilot period. After conducting several sessions and after noticing the impact these methods have on their students they started talking more about their work with these methods. Some teachers trained other teachers, some co-taught with other colleagues, some used collaborative methods during student/parent events and during teacher meetings, some shared their lesson plans. Other elements such as appropriating the methods and creating new activities that matches with their students where mentioned by all teachers across all partners. This reflects their ease in working with the methods and the confidence they gained after trying and learning from their own experiences.

Weaknesses:

For one partner (CESIE) it was not easy to implement the collaborative methods when the school sets high emphasis on content rather than on method.

For one partner (UM) the school timetable was not flexible enough to allow a smooth implementation of the NFL methods.

For one partner (INOVA+) some difficulties at the start of the pilot, this included the large number of students, the duration of the activity, re-explaining to students, and equal participation of all students. This problem was resolved as the teacher practiced more on the methods and developed extra confidence.

For one partner (PISTES) one teacher faced a difficult period at her school and among her colleagues because of the change she was bringing.

For one partner (UCLL) the teachers had some difficulty at the beginning in planning the sessions within their heavy schedules.

Indicator 4 **Increased peer learning and collaboration via co-working with non-formal learning experts and other teachers** with 7.6% coverage in total among all partners and across the eight indicators. Most of the teachers worked in close collaboration with some of their colleagues and with the non-formal learning expert. Some colleagues took the role of observing, others assisted by taking notes, some did co-teaching, some trained other teachers and school personnel, and some shared lesson plans. For one partner (PISTES) they were able to create several links inside and outside the school among different stakeholders in the field of education. Two of the four teachers initiated peer-to-peer training sessions with the support and participation of the headmasters and supervisors of the schools, they trained 30 participants in total. This lead the chief education advisor wanting to use the collaborative methods to manage problems dealing with the school environment. In addition to that, numerous teachers in these schools started using the different methods. One teacher was officially assigned as an expert on collaborative methods in her school. In addition to that, and from the same partner (PSTES) two librarians who participated in the project have trained all the librarians from the regional academy on one NFL method.

Weaknesses:

For one partner (CESIE) they believe that the weak point is the lack of participation of the entire school council. And the concern regarding the possibility of implementing NFL methods next school year.

For one partner (UCLL) the teachers did not have time to participate on a regular basis on the CARMA Google Groups to share their experiences and learn from their colleagues experiences from other partners.

For one partner (PISTES) it seemed more difficult to inform and teach in collaborative methods inside the school rather than outside. some teachers are convinced that the methods they use and have always used are the best and that collaborative methods would not bring any solutions to the problem of early school leaving. Many are not convinced that it could be useful to work on the emotions of the students. In addition to that, the teachers are often isolated in their classes and it is not easy to share and develop a transversal approach inside the schools. Accordingly, the success of the pilot sessions depended on the motivation and proactivity of the teachers to launch real and innovative dynamics in their classes and among their students.

Indicator 5 **Usefulness of the materials** with 5.6% coverage in total among all partners and across the eight indicators. In the diaries across all partners the teachers did not mention using the CARMA toolkit or the catalogue, they did consult the lesson plans on the different NFL methods and the PowerPoints on the RMA. Almost all of the teachers prepared their own materials for each activity or method. Therefore, not much information was found in their diaries about the usefulness of the materials. But from the description of their preparations one can conclude that they were inspired by the lesson plan examples on the Google group and through the sharing of experiences webinar.

Weaknesses:

For one partner (UM) one teacher had some problems with the software 'Learning by Coding' which lead to lack of motivation among the students. The software was not easy to work with for some students, some needed more time and the advanced options were difficult to manage by some.

4.2. Impact on DTG2 of Students: RMA

The Reciprocal Maieutic Approach (RMA) is used as an assessment tool to measure the learners progress and impact of the collaborative learning methods on the students. Because of the age difference among this target group, no fixed questionnaire was implemented. The teacher alone or together with the non-formal learning expert evaluated the impact of collaborative learning on the students through the use of RMA. The teachers where provided with guiding questions in order to facilitate the assessment and to direct their RMA session in line with the monitoring questions found in WP6.4. Evaluation with the students included the impact of non-formal learning methods on their learning, motivation, interest and enthusiasm towards the new learning materials.

WP6.4 Evaluation with Students

Key Evaluation Questions	Monitoring Questions
What is the impact on students?	Did the students feel comfortable during collaborative practices? Did they like learning in this way and why? What did they like best about the collaborative practices? What was the most useful thing they learnt? Was there anything the students would like to change during the activities?
Where the students motivated during collaborative practices?	Did the students engage with the teacher? Did they participate in the activities?
Is it interesting for the students?	Did the students skip the collaborative learning pilot sessions?
Where the new materials of value?	Did the students show enthusiasm to the new materials being used?

P1 CESIE –Italy-

The students expressed their interest and the team work dynamics was very good.They were comfortable enough to talk about how they feel and what they think. One teacher said that she got the chance to learn more about her students, aspects that normally do not emerge through typical classroom activities. Another teacher said that all the students thanked her for giving them this opportunity to learn in a non-formal way. They were very glad to know more about their classmates and that brought them closer to each other. They had a respectful attitude towards each other and all the students took an active part in the lessons, even if they contributed with different levels of engagemnet. The choice of the NFL methods were intriguing for the students, they even asked for some methods to be repeated in the future.

"The class shouts from joy and starts clapping."

"In the final phase I ask what the students thought of the activity and why. Everyone gives positive answers, but for different reasons: there are those who are happy to know something more about their colleagues; there are those who have managed to open up themselves, even if little; there are those who feel that they have lessened distances with people who they thought were not easily approachable; there are those who feel "light", but I have to think why."

"Eventually I was asked: 'Professor, it was an interesting session. When will we repeat it'?"

For one teacher, all her students were involved in the RMA session, showing interest and without complaints of being tired. After the session, the teacher noticed participation growth among the students. They expressed positive emotions in their participation in the session. To another teacher, the students participated with enthusiasm; throughout the whole RMA session they had propositional thoughts and participated effectively.

> "when the bell rang at 13.45, the students showed disappointment: 'No! Already!' and they ask me to repeat this experience. Some do not want to get up. I see that they would prefer to continue the activity. I did not force them and remained seated."
>
> "The security guard came and reminded us that we have to leave the school premises. For me these two hours were very satisfying."

To another teacher the students demonstrated less interest and motivation towards non-formal methods. This class showed modest, inadequate and generalized interest with irregular attendance. Some students had difficulties in connecting with their emotions. A small group followed with intrest, but the rest did not aacknowledge the importance of the topic. Because of this lack of interest, it was impossible to implement group reflections. This group of students attended the sessions with a certain feel of superficiality.

> "If there is no trace of positive experience everyday throughout the school year (some students mentioned that most of the 'negative emotions' were created by all teachers of the class!). This indicates that formal didactics cannot, in certain problematic classes like this, but leave a mark on education."

P2 UM –Spain-

To one teacher, the students understood the methodology used and would like to use more of the NFL methods, they said that it allowed them to develop collaborative learning. They developed different skills, like having an agreement after a discussion. The same teacher pointed out how much her students enjoyed the RMA session. The teacher points out that the students love the activity, thy congratulated her when the class was over. Even those who are a bit shy were talking easily and this created a relaxed atmosphere.

> "Students say that these non-formal techniques have allowed them to develop collaborative learning and develop their competences to work in groups. They have learned in another way so it is motivating for them. Students think that these techniques could be used in other subjects."
>
> "Answers gathered in the RMA session were very positive, this points out how much they enjoyed this experience."

To another teacher, the students were happy to explain in class the information they gathered, and the participation of the students has increased. They were happy with the idea of being part of an international project, even those who participate less were eager and showed enthusiasm. According to the teacher, the students liked the NFL methods because they were able to talk and walk around the class and to prepare questions to other classmates. They put a lot of attention when their classmates present their work. Comradship has increased because of these non-formal methods.

> "NFL methods promote participation and interaction among the students."
>
> "Students like to discuss topics and try to reach an agreement. They are interested in the opinions of their peers."
>
> "students were so motivated to participate and share their opinions."
>
> "students developed competences to communicate with efficacy (talk and listen)."

All teachers agreed that they observed progress in their students performance, their attention has increased and they became more aware of their own mistakes.

> "Students have been able to: express themselves in an appropriate way, be honest about their feelings, and their concentration has improved during the implementation of the activities."
>
> "I discovered that my students know more about some topics than I thought."
>
> "One of my students said that thanks to some activities, he thinks in things that he never thought about."

P3 PISTES –France-

The piloting of the methods enabled the students to become aware of their abilities, to think for and by themselves. It provided a new space to exchange feelings and personal reflections, usually kept quiet. The collaborative methods have highly facilitated the communication inside the classroom and provided opportunities for the students to speak and to get involved in their learning process, or in order to solve problems and resolve conflicts. It was noticed too that the ones who were reluctant at the beginning of the sessions were finally quite active. The students have become aware of how important it is to listen to the other, to share and to exchange ideas in order to learn better. The students were thankful to the non-formal learning methods, such as Petal Debate, since the evolution of the collective thinking was made visible.

"The students were proud to put in their notebooks the results of the collective work. Most of the students found the method quite fun and asked that we use it more often."

"The majority of the students really liked this way of working. They had already done group work in other subjects but they underlined the fact that debates were taking place was a real asset and brining a lot."

"The students really appreciate listening to the others."

"Really soon, I have noticed that some students did not participate in the activity to prepare the algorithm, leaning on the rest of the group. I have therefore decided to erase the blackboard on which we had created collectively the algorithm. I had told them it in advance. I think this idea contributed to create peer cooperation."

"In the class, there were three students who were really reserved. During the activity, one completely changed and participated both in the petal and in the heart during the activity."

"The students were really asking to use collaborative methods, especially when they had to solve a conflict for example. Indeed, they understood the importance of taking collective decisions and of all being involved in the process."

"The students seemed to discover they could share and interact with the teachers. It is as if they felt listened to for the first time."

RMA- The students have given a very positive feedback about the occasion they had to express themselves, to be listened to and that what they had to say had been heard. One teacher has taken more time to explore the RMA method and the feedback from the students show how much they felt free to talk within the group, this created space to share some issues and emotions that have never been expressed before. The students have integrated RMA quickly and it brought a lot regarding their expression, how to share about themselves and how to be more benevolent within the classroom.

"The students were really surprised that we let them express their thoughts, in the beginning it was not easy for some of them to talk in front of the other."

"I found interesting the fact that the students hear the other students express the same fears as the ones they have, the same disappointment… The more the lessons were passing, the more they were at ease."

The motivation of the students is linked to the meaning they give to the activity that is proposed to them, and if they will be taken into consideration seriously.

Once some students were convinced by the used methods, they have spread the word in the school. The fact that the methods are used with one group of students motivates others to participate also in a collaborative teaching lesson. They were asking and suggesting to other teachers to change their teaching methods.

What was also noticed during the use of collaborative methods is the increase of the ability of the students to make introspection, to try to understand themselves better. As soon as the activities started, the students were involved really quickly and motivated to go further and learn more.

The engagement of the students that was observed can be seen as a result of empowerment. The students explain that they have been free to express themselves and they ask to reuse the methods to learn better and maybe to make some rules evolve within the schools (regarding the clothing in the school for example). One group of students has even used the "Six thinking hats" methods during a teachers' conference to talk about their class.

The teachers have noticed that the students who were facing the highest difficulties were really involved when they were participating in collaborative activities and were then recognized by the group as persons who could bring something.

One teacher noticed that the students were starting to work much more faster than when she was using classical methods. She thinks that it is due to the fact that the students have to prepare a work that will be presented to the rest of the group.

The teacher who is managing a class for early school leavers noticed that working on the emotions was really useful and finally essential to enable the engagement and the participation of these students.

In all the schools, the students have expressed their surprise regarding the fact that their thoughts and opinions were taken into consideration by the teachers. They are convinced by the used methods and they want to keep working with them with different teachers. At the end of the school year the students have proposed topics on which they would like to work in September 2017, at the beginning of the next school year. They have identified the teachers as persons who can support them and answer to their needs. This vision was really not existing before the CARMA experimentation.

"Some students came spontaneously to see me during the break the same day as the one when I did the session to tell me they really appreciated the method and to know if we would do other ones."

"At the end of the session, one student came and asked me if I would take into consideration what they had proposed and she was really surprised when I said I would. She thought it was an exercise like the other ones."

"During the teachers' conference, the students have presented the analysis of their class using each hat of the "Six thinking hats". The method surprised the colleagues and the parents who were present but they really liked the fact that the students were proactive and that they proposed solutions."

"I used the petal debate with one class. Later during the day, when other students from the same group age entered the class, they asked me if we would also do a petal debate. I said that yes, but later since we were not advanced enough in the lesson. They were really disappointed."

"The more we were using the methods, the more the students were receptive. They were starting to work really fast and there were not childish behaviors anymore."

"As for me, I have noticed that the students were much more involved right from the first session. They knew that they would have to express themselves alone after the work in the petal, so they understood by themselves that it was really important to work seriously in group."

"After two sessions using collaborative methods to talk about the class atmosphere and the behavior of the students, the latter's have really changed their attitude and started to work seriously."

"They all want that the petal debate is used by the other teachers."

For one teacher, the students learned how to work in groups to achieve their tasks and feed their creativity. They felt encouraged and this increased the quality of their work. They were excited and cheerful while contributing to the work of each other.

"It was an enjoyable activity, it enabled the students to internalize the concepts and to link it with the real world."

"Using their own chosen systems and visuals was encouraging to them, it increased the quality of their work. They were excited and cheerful while contributing to the work of each other in the classroom activities."

For another teacher, it was evident how much the students understood the process and how much they enjoyed the activities. Even non-participating students did not hesitate to express themselves. The students learned how to work in groups and understood the importance of collaboration.

"My students enjoyed the lessons I taught using NFL methods and wanted other teachers to use them."

For another teacher, the students who do not like group work and prefer to work individually participated in all activities and learned to work within a group without any problems. They were even impatient to wear the colorful hats prepared for the Six Thinking Hats activity. These students were very enthusiastic about the NFL methods that they shared this with their parents, who in turn shared it with the school principal.

"My students talked about what we have done in the lesson to their parents and at the parents' meeting, the parents conveyed their satisfaction."

"The students were impatient to wear the colorful hats that I use in The Six Thinking Hats technique, and even the students who are normally hesitant to speak participated in the activity and wore their hats."

For another teacher, the collaboration level evolved immensly among the students, even for students who normally do not agree easily did work together to reach a common agreement within the group. As for the RMA sessions, all teachers observed that the

student enjoyed the sessions. They were very active and had fun. Each student had an opportunity to express their opinon freely and it contributed to the improvement of their thinking skills.

> "It was fun to implement RMA technique with the young learners. They were so active and each student had something to say."
>
> "The students told me that they love physics more when they play games and have fun."
>
> "Each student had an opportunity to express their opinion freely and it contributed to the improvement of their thinking skills."

P5 UCLL – Belgium-

According to all teachers, the motivation of the pupils and their level of engagement throughout the activities was high. The pupils learned to express very well things that they have experienced, as well as expressing their mistakes. They learned to coach each other and be patient with each other, giving less solutions but more strategy. For some it was not easy to express their opinion, but when some pupils started doing so the rest followed. According to the teachers, the NFL methods and the RMA created more space for richer input by each pupil and this motivated them a lot. The teachers noticed that during these sessions the pupils were more active and enthusiastic, they ask immediatly for more similar sessions. Furthermore, the teachers noticed that the level of involvement is stronger because they are engaged with the content in different ways (images, fantasies) and because they process the content by themselves. They learn without realizing that they are actually learning.

> "Children with a lot of fantasies were more motivated to make up stories."
>
> "RMA: children really like this technique and they asked immediately to have more of this kind of discussion, supported by drawings."
>
> "Pupils spontaneously use the Six Thinking Hats."
>
> "During NFL techniques, they are more active."
>
> "They get to learn themselves better."

According to all teachers the students were really motivated and the sessions were very interesting. The communication skills among the students grew tremendously. They enjoyed taking part in the NFL activities, they werked well in a group, most of the students said that they find group work the most interesting thing about their classes. They respected and listened to their classmates and the atmosphere in general was vey comfortable. According to one teacher, some students took the opportunity of using NFL methods to chat in class, sometimes it became chaotic because everyone wants to speak at the same time. But, all in all the sessions were very dynamic due to the increased student interest.

"I think the impact on the students is positive because the activity helped them in dealing better with problems and crises in a cooperative way."

"The students did the homework and seemed to enjoy learning about the electrical characteristics of the household appliances they use every day."

"They participated eagerly."

"The RMA activity was a positive experience for the students because they shared their emotions and insecurities but also learnt to analyze different points of view in the same situation. They gave creative and different suggestions to solve the problems we faced."

"I noticed two students from this class with learning difficulties were able to get better at linking realities and they even remembered the concepts learnt in class."

"I think that most of the students have shown interest in the activity and find it difficult but challenging. Others simply didn't care to do it right."

"In the reports, most of the students said that it was very interesting and that they liked the work. They hoped that they can do it in other classes."

"The students showed communicative skills, like active listening and capacity for clear expression, and presentation of their feelings and emotions."

"Most of the students stated that they find group work the most interesting thing about the classes."

"The students participated in a very emotional way and gave many suggestions to help solve the established situation."

According to all teachers, the students were engaged and involved during the sessions. They developed self-confidence and were curious to learn more about themselves and about the other especially in classes with high diversity. The NFL sessions stimulated active participation and collaboration in group tasks. The students enjoyed getting to know and making friends with students from different cultural backgrounds. They took initiative in their own learning process. They gained competencies in several aspects; according to their teachers, the students improved their communication skills, became more aware of their feelings, can handle intercultural issues and are more conscious of their identities. One teacher said that the sessions provided many learning outcomes for the students such as solidarity with the other, respect for different perspectives and better conflict management. For one teacher, some of the students found the methods no easy.

"It surprised me how the students were able to express themselves."

"I found it very interesting how the students show empathy."

"Students became conscious of their identities and realized ways to enhance this. They realized their potentials, values and behavioral patterns."

"The sessions ensured that students communicate better and this enhanced their self-confidence."

"With these activities the students were highly motivated. We could work for a long time even without a break."

"In the beginning, many students were not enthusiastic. But, when we started with the NFL methods they worked in groups. Of course few remained less motivated, but many appreciated it."

"Some students had no interest, but when they saw the whole class having fun they got involved."

"It is nice to see that many students show interest day after day."

"The students were more productive and got very well with each other."

Summary of Findings and Concluding Notes

The students had a very positive experience with the NFL methods and RMA across all partners. In general, the students felt comfortable during collaborative practices. They were able to work in groups, respect their group members, listen to each other and express their thoughts and feelings freely. They became more open towards their teachers and that played a huge role in the teacher – student relation. Their opinions were listened to with respect and without judgment, especially during the RMA sessions, they felt safe. Very few students (1 class from 1 partner) showed feelings of resistance and behaved lightly towards the methods.

The students expressed positive feelings towards learning with NFL methods. They thought that it was more fun, they could be more creative and they learnt without feeling that they had to put efforts. The activities made the lessons interesting and that motivated the students to look forward for these classes and even ask their teachers for more of these non-formal learning lessons. They even proposed these methods to be implemented by other teachers. They liked learning in this way because they felt that they are present and that their opinion counts, they felt empowered to voice out their thoughts, fears, and aspirations.

They liked the fact that they can express their ideas, feelings, and dreams without being afraid of being laughed at or judged. They appreciated the teachers acknowledging them as individuals with potential, talents, and own opinion/voice. Furthermore, the students liked to be challenged to reach consensus and resolve problems within the group. They became excited about their efforts in group work and look forward to present to the class and prove that their (their group's) point of view/solution/etc. are good. For this the students without realizing were preparing very hard and collaborating to the utmost with each other. In addition to that the students liked the idea of a fun class, in a sense they can walk around, sit in a different place other than their daily seats, talk during the class while discussing in groups, present to the class, and sometimes (for some teachers) having the class outside the premises of the classroom. This made the weight of a structured formal setting tolerable and it became fun for many students to come to school.

The students engaged well with the teachers, at first (during the first pilot sessions) it was difficult for them to understand the aim of the methods and some teachers had to explain and re-explain, one teacher prepared a roadmap to guide the students. But as the pilot sessions progressed the students understood what was expected from them and their level of engagement was elevated. These classes became the favorite ones to most of the students. They engaged in class discussions, group work, activity preparation and

presentations. Only 1 class from 1 partner demonstrated some difficult attitude towards the NFL methods and the engagement of some of those students was very low.

It was not mentioned directly if the students skipped some sessions, but one teacher mentioned the difficulty of performing a class evaluation because of the absence of some students.

They showed enthusiasm to the materials, but this was limited to the Six Thinking Hats. The teachers prepared these hats themselves and the students liked the fact that they can use them not only during the sessions but throughout the school year, to some students these hats represented a safety net for free expression of their opinions and feelings. Or a means to send a message by showing the different arguments that this message can portray. Other materials were not mentioned.

Student Recommendations

The students would like to change some things during the activities. For example: the Six Thinking Hats, some students want to omit some colors because they feel they are useless. Some students who can draw well, would like to use more drawings and visuals during the RMA. For others, the software used for Learning by Coding was a bit difficult and advanced and that made the session boring and this affected their motivation.

4.3. Impact on Teaching Staff

The teaching staff is an indirect target group in the CARMA project. To measure the impact on this indirect target group, a questionnaire was developed on Google Forms that was filled by the teaching staff in the different schools across the partner countries after the delivery of the Demonstration Workshops by the teachers conducting the piloting. The questionnaire had a set of four sections.

Section 1: Demographic data

Section 2: About the sessions

Section 3*: About student engagement in the sessions of the demonstration workshop

Section 4: Non-formal learning and RMA in the school environment

*This section was optional to fill-in in the questionnaire. It depended on the partners ability to organize the workshop with or without the students.

The partners delivered the following Demonstration Workshops:

Figure 22 Count of Date of Demonstration Workshop

Count of Date of demonstration workshop
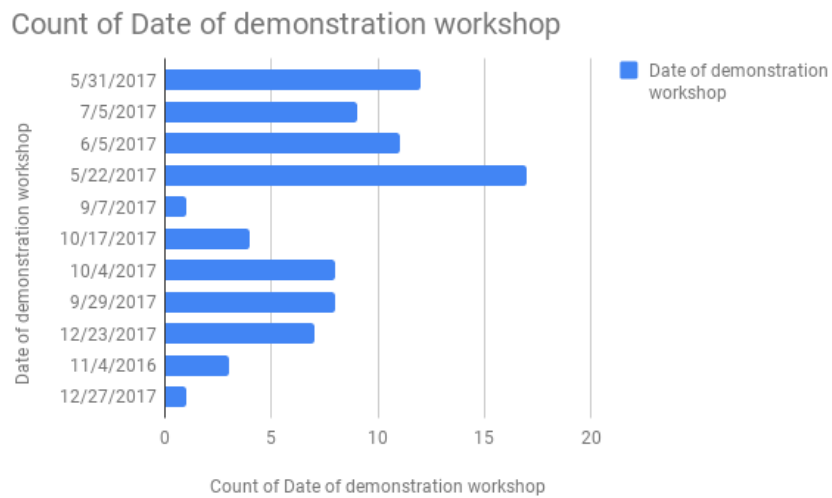
Figure 23 Count of Country of Demonstration Workshop
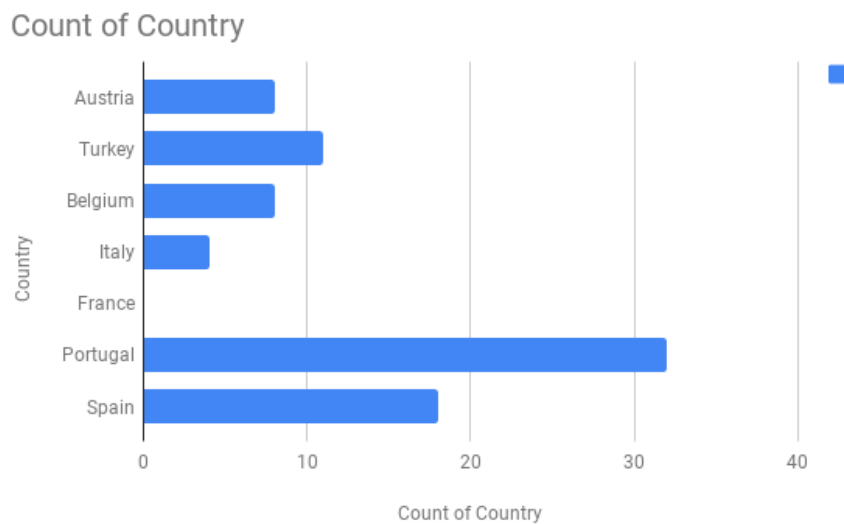
Count of Country

The Questionnaire

5 Point Likert Scale : 1 Strongly Agree – 2 Agree – 3 Neither Agree nor Disagree – 4- Disagree – 5 Strongly Disagree

The workshop was relevant to me.
81 responses
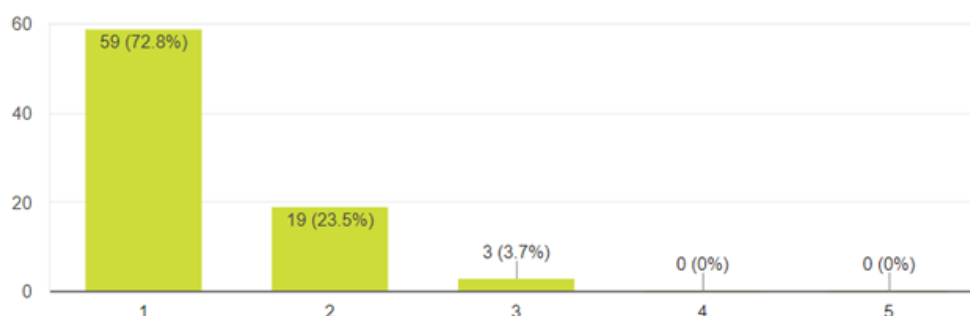
Figure 24 Impact on Target Group Teaching Staff Questionaire: Q1 The workshop was relevant to me

Concerning the relevancy of the workshop to the teaching staff, almost 73% strongly agreed that the workshop was relevant to them, while 23.5% agreed, and almost 4% were neutral in their response.

The workshop was interesting.
81 responses
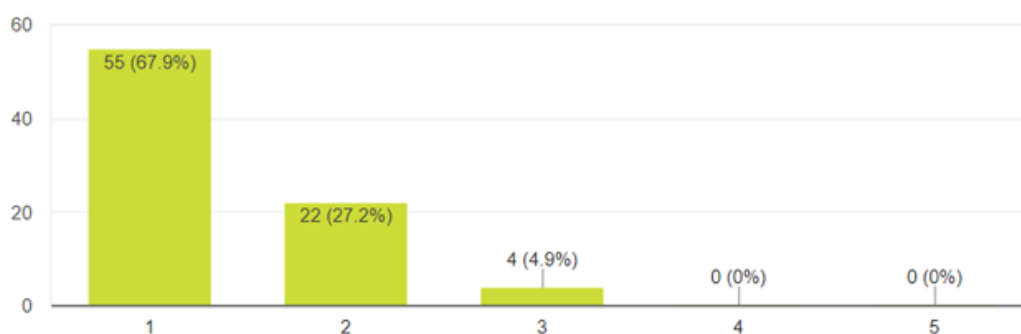
Figure 25 Impact on Target Group Teaching Staff Questionnaire Q2 The workshop was interesting

Regarding whether the workshop was interesting for the teaching staff, almost 68% strongly agreed and 27.2% agreed that it was interesting for them, while 4.9% remained neutral in their response.

The workshop helped me gain new competencies in RMA as an assessment tool, collaborative teaching and learning practices.

81 responses
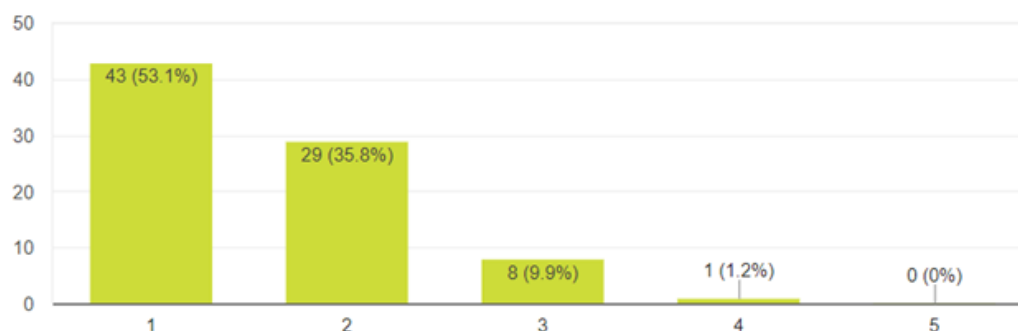
Figure 26 Impact on Target Group Teaching Staff Questionnaire Q3 The workshop helped me gain competencies in RMA as an assessment tool, collaborative teaching and learning practices

As for whether the workshop helped the teaching staff gain new competencies in RMA as an assessment tool, collaborative teaching and learning; 53.1% strongly agreed that the workshop did provide new competencies and 35.8% agreed. While 9.9% remained neutral in their responses and 1.2% disagreed that the workshop provided them with new competencies.

The workshop motivated me to take action in my classroom.

81 responses
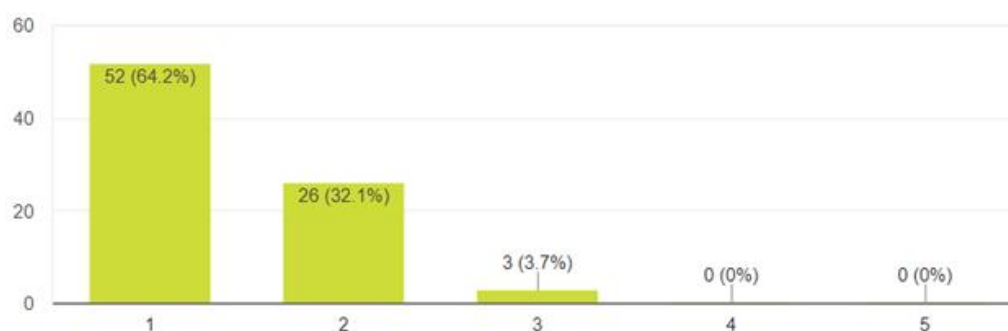
Figure 27 Impact on Target Group Teaching Staff Questionnaire: Q4 The workshop motivated me to take action in my classroom

Concerning the question if the workshop motivated the teaching staff to take action in their classrooms, 64.2% strongly agreed that they were motivated by the workshop, 32.1% agreed and 3.7% remained neutral in their response.

What action/s were you motivated to try out in your classroom?

Concerning the question for examples about actions that the teaching staff were motivated to try out in the classroom. Several teachers wanted to try some of the NFL methods with their students.

24 teachers would like to try the Six Thinking Hats, 15 teachers would like to try the Box of Emotions, 11 teachers would like to try Constructive Controversy, 10 teachers would like to try the RMA, 8 teachers would like to try Storytelling, 6 teachers would like to try P4C, 4 teachers would like to try Petal Debate, and 4 teachers would like to try Cross-over Learning.

9 questionnaires had no answer to this question and 3 teachers would not try any of the methods.

One teacher responded in trying all the methods except RMA.
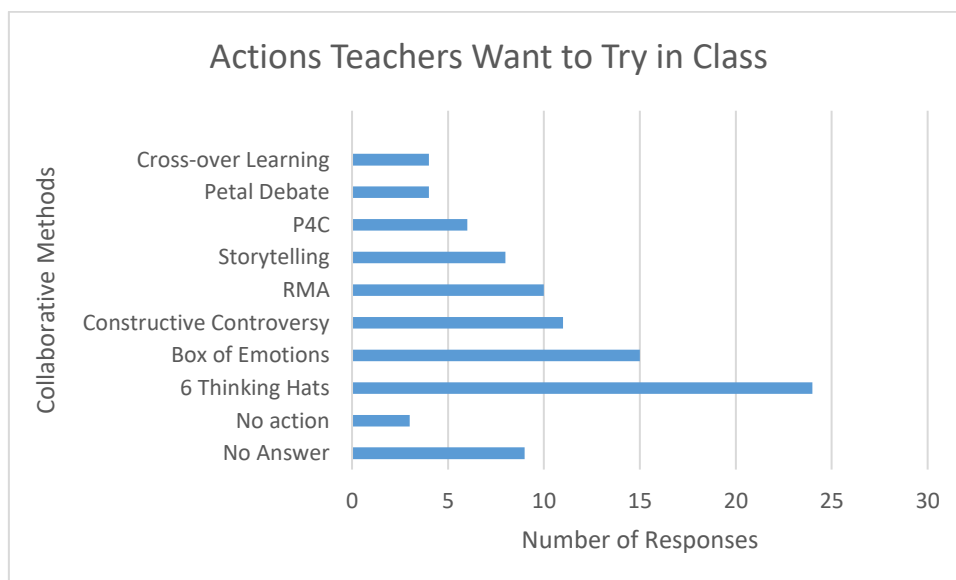
Figure 28 Impact on Target Group Teaching Staff Questionnaire: Q5 What actions were you motivated to try out in your classroom

Other relevant responses to this question from the teachers:

- Limited evidence that these methods can effectively work

- RMA is complicated to implement in a classroom with more than 20 students and just one teacher
- I would like to examine the method in depths
- Try new methods with a group of migrant pupils
- Reflection moments with my students
- Project work days
- One fixed exam week
- New skills for personal development
- Class tasks for the students
- Better communication between teacher and student
- New learning methods
- New skills for personal development
- Group work
- The formation of individual and group consciousness
- Learning to learn
- Teacher assessment became more objective
- Strengthen institutions
- Communicate with students in a more friendly way
- Implement the questioning method to allow students to think creatively
- Adopting innovative approaches

I want to tell others about the RMA and the non-formal learning methods used in the CARMA project.

81 responses
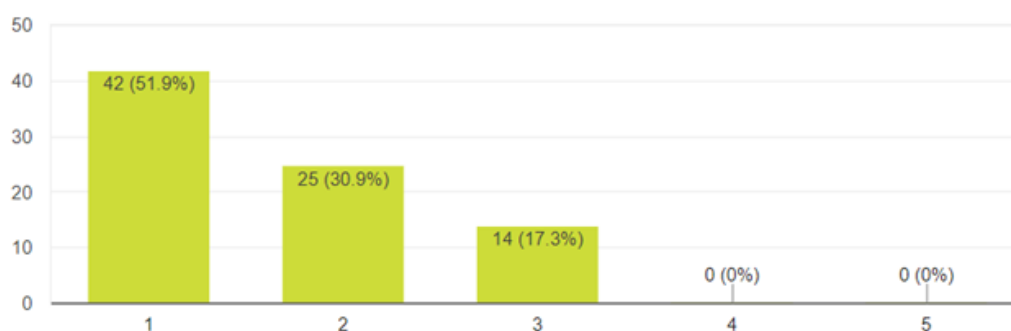
Figure 29 Impact on Target Group Teaching Staff Questionnaire: Q6 I want to tell others about RMA and non-formal learning methods used in the CARMA project

Regarding the question if the teachers would want to tell others about the RMA and the non-formal learning methods used in the CARMA project, 51.9% strongly agreed, 30.9% agreed, while 17.3% remained neutral in their response.

The tools and the materials used during the workshop were useful.

81 responses
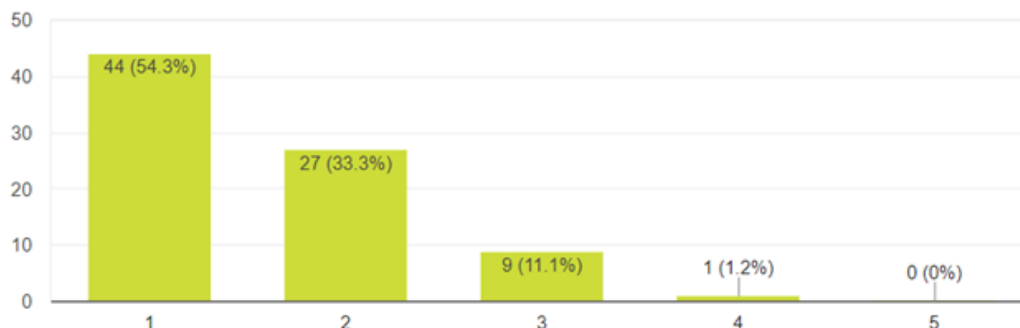
Figure 30 Impact on Target Group Teaching Staff Questionnaire: Q7 The tools and the materials used during the workshop were useful

Concerning the question about the usefulness of the materials used during the workshop. 54.3% of the teachers strongly agreed that the materials were useful, 33.3% agreed, while 11.1% remained neutral in their response and1.2% disagreed about the usefulness of the materials.

I have the confidence to try some of the methods in my teaching.

81 responses
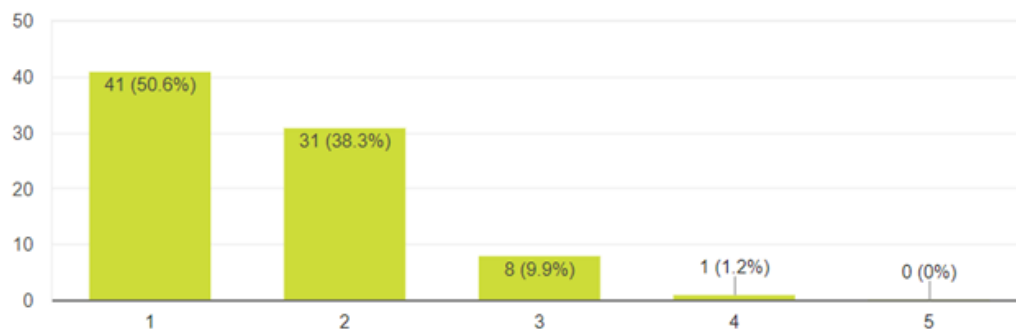
Figure 31 Impact on Target Group Teaching Staff Questionnaire: Q8 I have the confidence to try some of the methods in my teaching

Concerning the question if the teachers have enough confidence to try some of the methods in their teaching, 50.6% of the teachers strongly agreed in being confident to try the methods and 38.3% agreed, while 9.9% remained neutral in their response and 1.2% disagreed on being confident to try the methods in their teaching.

Some partners conducted activities with students during the Demonstration Workshop. The questions below refer to these activities.

The interaction between the students was good.

39 responses
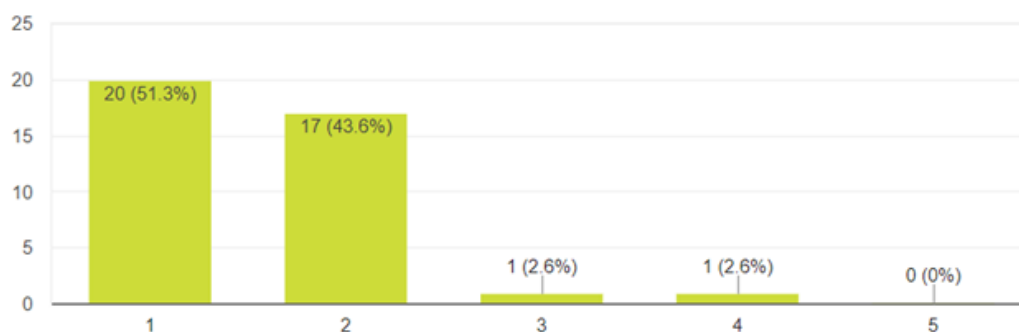
Figure 32 Impact on Target Group Teaching Staff Questionnaire: Q9 The interaction between the students was good

Concerning the interaction between the students throughout the activity sessions of the demonstration workshop, 51.3% of the teaching staff strongly agreed that the interaction was good and 43.6% agreed that it was good, while 2.6% remained neutral in their response and 2.6% disagreed.

The students were enthusiastic about the workshop.

40 responses
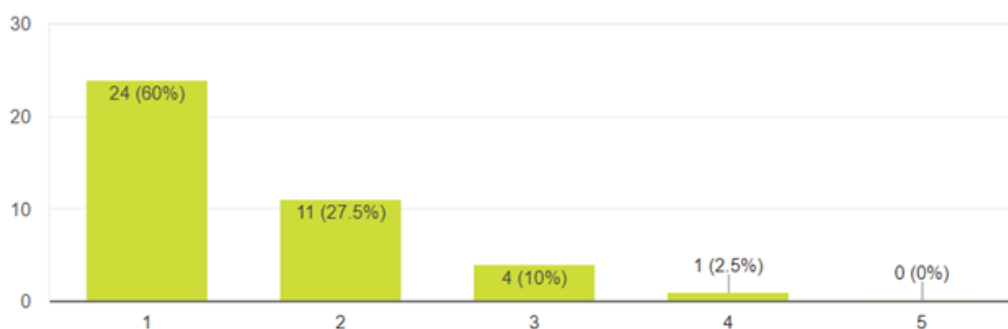
Figure 33 Impact on Target Group Teaching Staff Questionnaire: Q10 The students were enthusiastic about the workshop

Regarding the question if the students were enthusiastic about the workshop, 60% of the teaching staff strongly agreed, 27.5% agreed that they were enthusiastic about the workshop. While 10% remained neutral and 2.5% disagreed regarding the students enthusiasm.

The students showed high levels of engagement.

40 responses
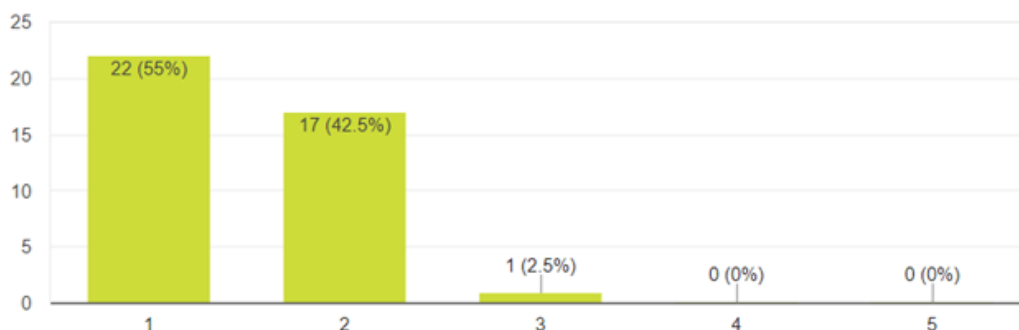
Figure 34 Impact on Target Group Teaching Staff Questionnaire: Q11 The students showed high levels of engagement

For this question, 55% of the teaching staff strongly agreed that the students showed high levels of engagement and 42.5% agreed on that too, while 2.5% remained neutral in their responses.

What was the best aspect of the workshop?

For this question the teaching staff shared several things as best aspects of the workshop. Their responses are in the table below:

Active listening	Collaborative skills	Collaborative techniques
Content of the workshop	Flexibility to adapt techniques to different subjects	New methodologies to implement in the classroom
Everything	New techniques very well explained	The speakers
Share opinions with colleagues	Sharing experiences	Talking about learning methods
Examples of methodologies	Framework of activities	Instructions were clear
Theory was very clear	First theory and then practice	Practical aspects
To know teachers from other schools	Listening to the experiences from teachers who tested the methods	To practice some techniques
Communication and involvement of the students	Cooperation and communication between the students	It made possible for students to express themselves
Communication	Everyone learned new techniques	Allows teachers to reinforce their personal experiences
Mutual interaction	It was educative and exhilarating	It was totally new for many students
Created a more friendly environment with the students	It motivated teachers teach in effective ways	Learning to learn practices to motivate students
Innovative and encouraging to take new steps to improve education		

Figure 35 Impact on Target Group Teaching Staff Questionnaire: Q12 What was the best aspect of the workshop?

Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?

- For this question, 33 empty responses out of the 81 filled questionnaires
- 12 responded with 'No'

The challenges that the teaching staff sees in delivring non-formal learning methods and RMA in the school environment:

- The number of students per class ca be a problem
- I do not see challenges because all the methods are different from the traditional ones used in classroom, will always of added value for teachers
- Students are more and more less motivated for the classes and teachers need to use other methods that can change this situation
- It will be challenging to introduce new approaches to the students. But it will be depending on the type of group
- Everything that is "novelty" faces some resistance
- To control students that usually tend to have bad behaviors in classroom
- It will be difficult to keep the order in the classroom using non-formal approaches and at the same time to have active participation of all
- I might have difficulties in using the methods for the first time, going from theory to practice
- To use any of the methods it is necessary to know very well the group in advance in order to reach the objectives. I see difficulties that will be transformed into challenges to achieve
- One problem/challenge can be the fact that students might not be to open to use new methods; short time to prepare the new approaches, exercises, etc; some topics will be very difficult to approach using these types of methods
- In fact these methods can be used in topics that I teach, more related to arts
- Challenges at the beginning, but then students will be more engaged and it might be easier to use them
- I have never studied non-formal methods before
- I find it very difficult to apply these methods with students who have absolutely no interest and no respect.
- Make the students responsible for their work/tasks.
- Theme-based working as in primary schools.
- Convincing other colleagues.
- The infrastructure
- Support from the school board team
- Curriculum and time
- Students may not find enough courage to ensure participation
- The parents may have difficulties to understand
- Students may need a lot of support for self-expression
- Students may find participation in all NFL methods a bit challenging, or it might break new ground for them
- It may cause the reaction of families to adapt to a new educational method for their children

Figure 36 Impact on Target Group Teaching Staff Questionnaire: Q13 Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?

We asked the teachers if they would like to add any other comments about the workshop experience.

We got the following responses, they included:

- It was positive (2)
- It was too short (2)
- I could not understand what methods we need to use and how to use them (2)
- Let the students talk about this experience. What do they find difficult? How is it goining for them? How do they feel when they use them?
- More variety of techniques
- I am very satisfied with the workshop and i am enthusiastic to use them (2)
- It is important to provide training for teachers, the workshop is not enough
- It is necessary to understand the real impact in the school
- Important to be aware of the need of using this type of methods in daily classes
- More training hours to learn more methods
- To have more informal discussions with other teachers and parents as well (2)
- I enjoyed it a lot
- It was encouraging
- It improved my personal development
- Importance of workshop materials
- Highly productive
- Students enjoyed it a lot
- Interesting and innovative

Summary of Findings and Concluding Notes

The post-demonstration workshop questionnaire to measure the impact on the teaching staff revealed that the workshop was interesting and relevant to almost all the participating teachers across the partner countries. 88.9% of the teaching staff gained competencies in RMA as an assessment tool and collaborative teaching and learning practices. Furthermore, 96.3% felt motivated to take action in their class and 82.8% want to inform others about RMA and the non-formal learning methods used in the CARMA project. Almost 87.6% of the teaching staff found the tools and materials that were used during the workshop as useful and 88.9% of the teaching staff gained some confidence to try some of these methods in their teaching. The teachers named several non-formal learning methods that they would like to try out with their students; including, the Six Thinking Hats -24 teachers out of the total 81 participants wants to try this method-, the Box of Emotions -15 teachers want to try this method-, Constructive Controversy – 11

teachers want to try this method-, RMA – 10 teachers want to try this evaluation method, etc. (see figure 28).

In addition to that, the teaching staff were asked to evaluate the interaction among the students who participated in the workshop session. 94.9% of the teaching staff saw that the students interacted in a good way and 87.5% saw that the students were enthusiastic about the workshop, more than 97.5% of the teaching staff noticed that the students showed high levels of engagement throughout the workshop session.

When we asked the teachers about the best aspect of the workshop, they mentioned several including, the added value of listening to the experiences of other teachers who has tested the methods, the information they got from the different methods, the content of the workshop, and from the examples of the different methodologies. The teachers liked too the cooperation and communication between the students and their involvement with the sessions (see figure 35).

The teaching staff saw several challenges in delivering the non-formal learning methods and RMA in the school environment. This included the difficulties in using these methods at the beginning, the ability to integrate them within their curriculum and lessons, the ability to apply them with large groups of students and the ability to control the students. Furthermore the fear that the students might not be open to use new methods but at the same time, could be a solution to the students lack of motivation, different methods that might increase the motivation and participation of the students (see figure 36).

In a general sense, the teaching staff felt positive about the demonstration workshop, they got to experience a few methods in a limited timeframe, they would prefer if the workshop was longer, that they can understand better the different methods and their implementations. Furthermore the teaching staff would like to have more training sessions on these methods and would like to get the opinions of the students on how they experience these methods and if they are up to their levels of development and finally how do they feel when they use them.

4.4. Impact on Professionals and Stakeholders in Policy Making

Professionals and stakeholders in policy making are an indirect target group in the CARMA project. To measure the impact on this indirect target group, a questionnaire was developed on Google Forms that was filled by the professionals and stakeholders in the different schools across the partner countries after the delivery of the Demonstration Workshops by the teachers conducting the piloting. The questionnaire had a set of four sections.

Section 1: Demographic data

Section 2: About the sessions

Section 3*: About student engagement in the sessions of the demonstration workshop

Section 4: Non-formal learning and RMA in the school environment

*This section was optional to fill-in in the questionnaire. It depended on the partners ability to organize the workshop with or without the students.

The partners delivered the following Demonstration Workshops:
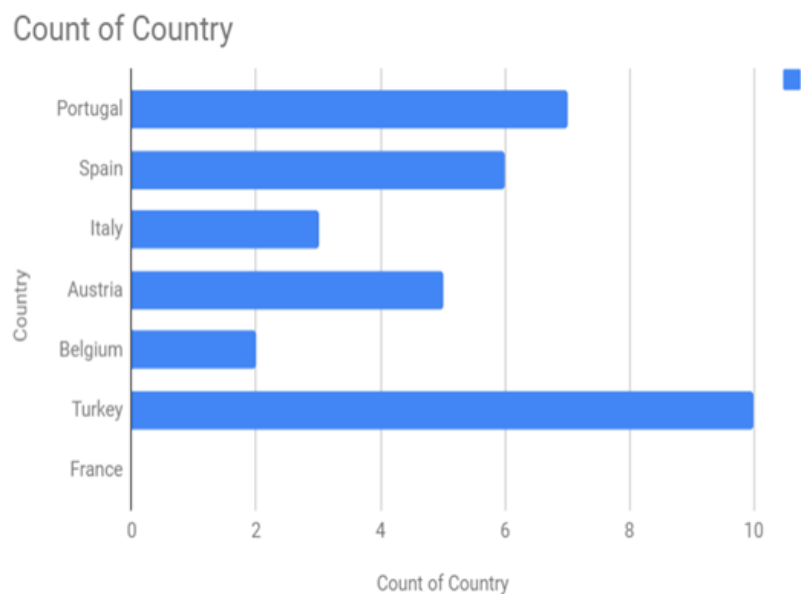
Count of Date of demonstration workshop
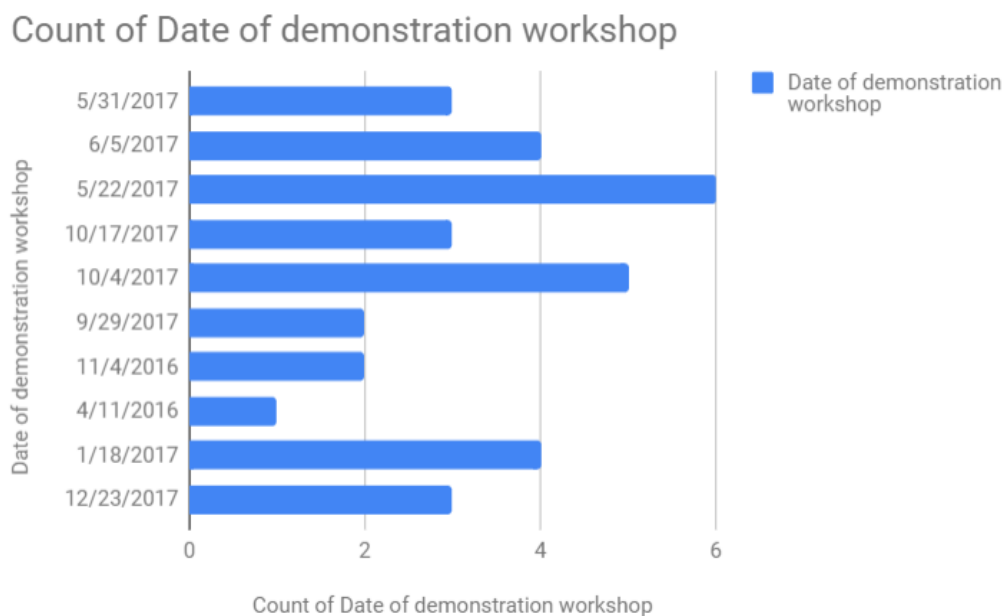
Figure 37 Count of Date of Demonstration Workshop

Count of Country

Figure 38 Count of Country of Demonstration Workshop

The Questionnaire

5 Point Likert Scale : 1 Strongly Agree – 2 Agree – 3 Neither Agree nor Disagree – 4-Disagree – 5 Strongly Disagree
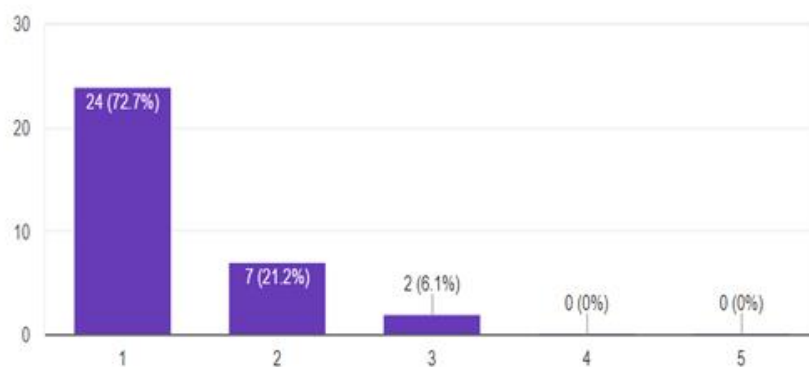

The workshop was relevant to me.

33 responses

Figure 39 Impact on Target Group Professionals & Stakeholders Questionnaire: Q1 The workshop was relevant to me

Concerning the relevancy of the workshop to professionals & stakeholders, 72.7% strongly agreed that the workshop was relevant to them and 21.2% agreed on its relevancy, while 6.1% remained neutral in their response.

The workshop was interesting and interactive.
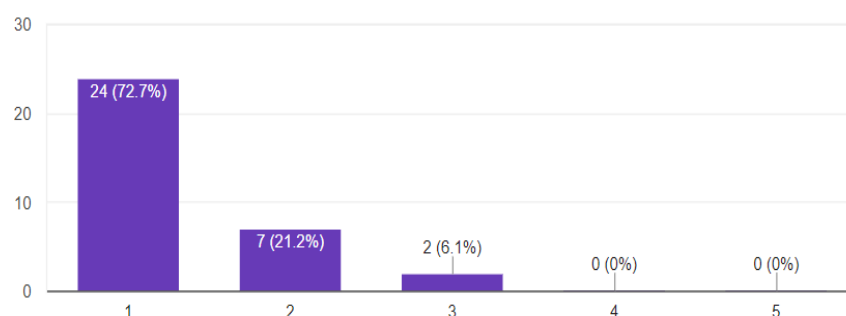33 responses

Figure 40 Impact on Target Group Professionals & Stakeholders Questionnaire: Q2 The workshop was interesting and interactive

Regarding whether the workshop was interesting and interactive for professionals and stakeholders, 72.7% strongly agreed and 21.2% agreed that it was interesting to them, while 6.1% remained neutral in their response.

The non-formal learning methods and RMA can help teachers gain new competencies in collaborative teaching and learning practices.
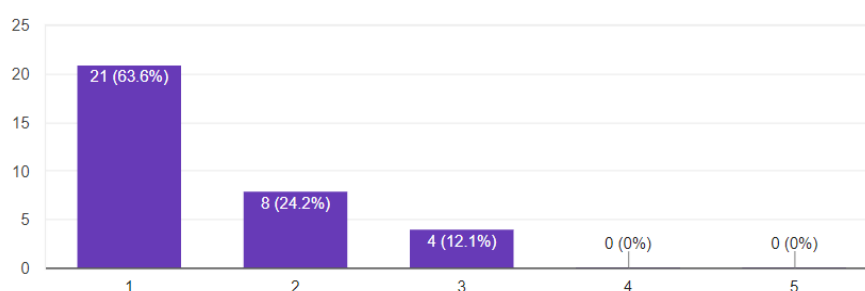33 responses

Figure 41 Impact on Target Group Professionals & Stakeholders Questionnaire: Q3 The non-formal learning methods and RMA can help teachers gain new competencies in collaborative teaching and learning practices

Regarding to the question if non-formal learning methods and RMA can help teachers gain new competencies in collaborative teaching and learning practices, 63.6% of the professionals and stakeholders strongly agreed and 24.2% agreed to that, while 12.1% remained neutral in their response.

The non-formal learning methods and RMA to facilitate collaborative teaching and learning can be of added value in teaching.
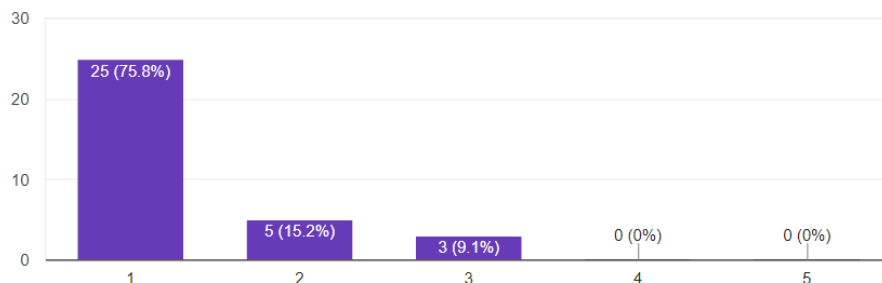
33 responses

Figure 42 Impact on Target Group Professionals & Stakeholders Questionnaire: Q4 The non-formal learning methods and RMA to facilitate collaborative teaching and learning can be of added value in teaching

When asked if the non-formal learning methods and RMA to facilitate collaborative teaching and learning can be of an added value to teaching, 75.8% of the professionals and stakeholder strongly agreed and 15.2% agreed while 9.1% remained neutral in their response.

I want to tell others about the non-formal methods used in the CARMA project.
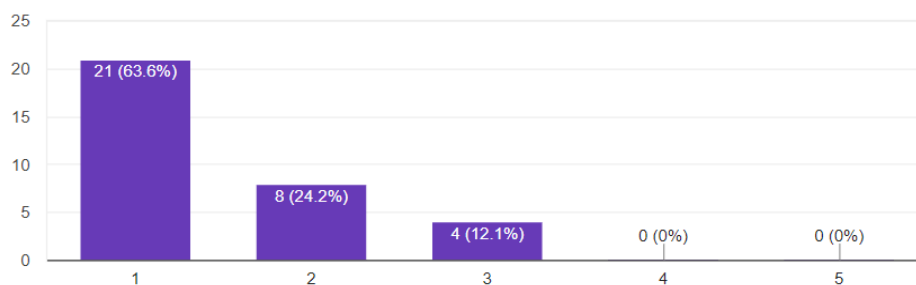
33 responses

Figure 43 Impact on Target Group Professionals & Stakeholders Questionnaire: Q5 I want to tell others about the non-formal methods used in the CARMA project

When asked if the professionals and stakeholders would want to tell others about the non-formal methods used in the CARMA project, 63.6% strongly agreed and 24.2% agreed while 12.1% remained neutral in their response.

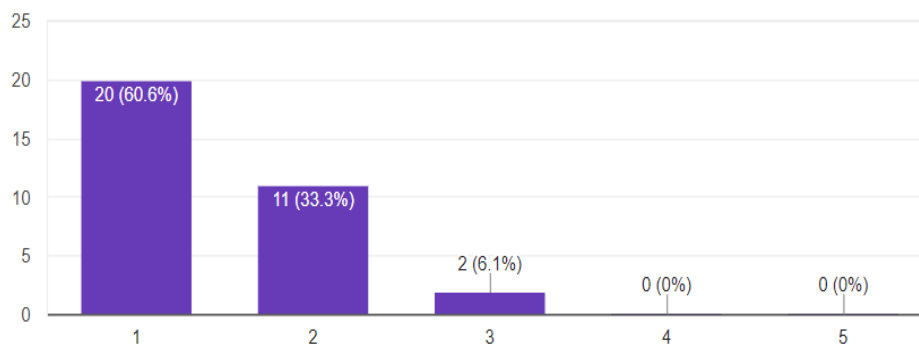**The tools and the materials used during the workshop were useful.**

33 responses

Figure 44 Impact on Target Group Professionals & Stakeholders Questionnaire: Q6 The tools and materials used during the workshop were useful

Concerning the question about the usefulness of the materials used during the workshop. 60.6% of the professionals and stakeholders strongly agreed that the materials were useful and 33.3% agreed. While 6.1% remained neutral in their response.

Some partners conducted activities with students during the Demonstration Workshop. The questions below refer to these activities.

The interaction among the students was good.
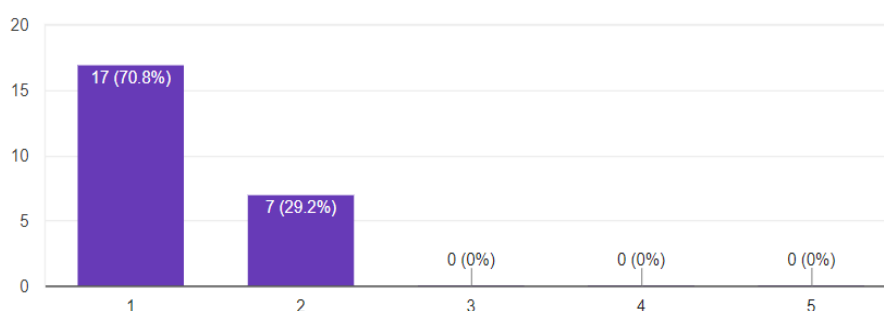
24 responses

Figure 45 Impact on Target Group Professionals & Stakeholder Questionnaire: Q7 The interaction among the students was good

When asked if the interaction among the students during the sessions of the demonstration workshop was good, 70.8% of the professionals and stakeholders strongly agreed and 29.2% agreed that the interaction among the students was good.

The students were enthusiastic about the workshop.
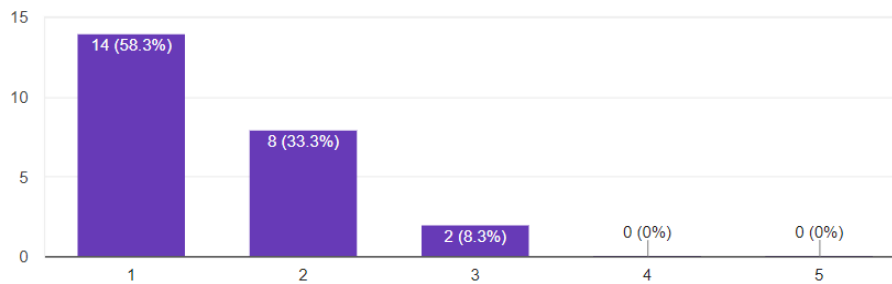
24 responses

Figure 46 Impact on Target Group Professionals & Stakeholders Questionnaire: Q8 The students were enthusiastic about the workshop

When asked, 58.3% of the professionals and stakeholders strongly agreed that the students were enthusiastic about the workshop and 33.3% agreed while 8.3% remained neutral.

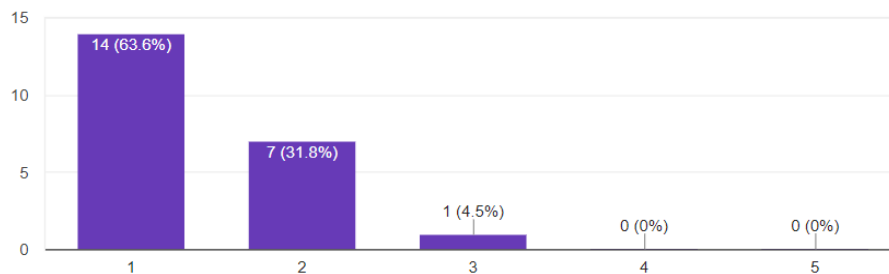The students showed high levels of engagement.

22 responses

Figure 47 Impact on Target Group Professionals & Stakeholders Questionnaire: Q9 The students showed high levels of engagement

Regarding this question, 63.6% of the professionals and stakeholders strongly agreed and 31.8% agreed that the students showed high levels of engagement, while 4.5% remained neutral in their response.

What was the best aspect of the workshop?

For this question the professionals and stakeholders shared some things as best aspects of the workshop. Their responses are in the table below:

The explanations
You can choose among different techniques depending on the topic
The interaction between the students
Knowledge of the techniques
Being part of the group
The student workshops. The students showed high levels of motivation
The possiblity of self-improvement
The non-formal learning methods
Education and communication
Active and motivated students
The added value to the teachers

Figure 48 Impact on Target Group Professionals & Stakeholders Questionnaire: Q10 What was the best aspect of the workshop?

Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?

- For this question, 22 empty responses out of the 33 filled questionnaires
- 7 responded with 'No'

The challenges that the professionals and stakeholders see in delivring non-formal learning methods and RMA in the school environment:

- Yes because of bad behavior of some students in the classroom
- Yes, because some of the students refereed, they are teenagers and sometimes cannot understand well all the topics presented and often do not have "social consciousness". Thus, for some students these methods might not be useful
- Methodology and content
- The methods used at the moment are fine
- Currently, many different methods are available
- Support from the school principal/directors
- Support

- To keep the motivation of the students on a higher level
- Students may not understand the real aim of playing games
- Students may not find enough courage to express themselves
- Teachers need to be supportive
- Students should have more courage to attend NFL sessions
- NFL and RMA may take too long to implement.

Figure 49 Impact on Target Group Professionals & Stakeholders Questionnaire: Q11 Do you see some challenges in delivering non-formal learning methods and RMA in the school environment?

In what ways do you think the non-formal learning methods and RMA as an assessment tool can be adopted to the school curriculum?

- For this question, 17 empty responses out of the 33 filled questionnaires

According to the professionals and stakeholders, non-formal learning methods and RMA as an assessment tool can be adopted to the school curriculum in the following ways:

- It is necessary to train the teachers
- To develop team work skills but also some "social skills"
- The methods are relevant to develop the students "social skills", team work skills, interrelation skills, that are important for the development of other soft skills with impact on the individuals (for personal life and work life).
- It is a long process
- Individually, by interested teachers, this is the easiest and best way
- In free time activities
- The students learn how to use the concepts they have been taught in situations in real life
- CARMA project provides effective listening area and I strongly believe that this feature will help increase student concentration
- It can put forward constructive ideas and suggestions
- It might change the level of understanding
- Increase socialization
- As a new lesson, it can be added to the curriculum and it can highly motivate participation of students in classroom activities
- It might change the course of the lesson in the sense of active participation and high motivation
- Other subjects in the curriculum may adapt to NFL methods and RMA. In this way, NFL and RMA and the traditional curriculum can work cooperatively
- Cognitive learning.

Figure 50 Impact on Target Group Professionals & Stakeholders Questionnaire: Q12 In what ways do you think the non-formal learning methods and RMA as an assessment tool can be adopted to the school curriculum?

What support do you think is needed to ensure their adoption to the school curriculum?

- For this question, 15 empty responses out of the 33 filled questionnaires

According to this target group, the support needed encompasses the following:

- It is necessary to train the teachers
- Predisposition from teachers to innovate in the classroom
- We would need more help from teachers and that they want to be active and motivated to innovate
- Positive attitude from teachers
- It needs courage to try new and different methods
- Decision from the ministry of education
- RMA as an evaluation tool. To support the metacognitive skills of the learners.
- NFL and RMA education for teachers
- Several hours of lessons on NFL and RMA may be included in the curriculum
- Parental handbook
- Pedagogical support for children to get over their shyness
- More workshops for teachers for effective NFL and RMA implementation
- Parental workshops to give primary education to children in families
- More information, workshops, activities, and practical learning

Figure 51 Impact on Target Group Professionals & Stakeholders Questionnaire: Q13 What support do you think is needed to ensure their adoption to the school curriculum?

We asked the professionals and stakeholders if they would like to add any other comments about the workshop experience.

We got very few responses, they included:

- As some students have said during the workshop, some of the techniques are difficult to implement; however they are very enriching.
- It was a nice experience.
- The workshop was very useful both for the students and for the parents. Also, using some of these methods it is possible to identify problems often hidden such as bullying.
- Students should get involved more with similar activities
- The workshop period could be longer
- It was educative and instructive
- Teachers and students are happy to communicate while learning through the techniques offered by the CARMA project.

Summary of Findings and Concluding Notes

The post demonstration workshop questionnaire to measure the impact on the professional and stakeholders in policy making revealed that almost 94% of the participants from this group found the workshop relevant, interesting and interactive. Almost 88% found the non-formal learning methods and RMA helpful for teachers to gain competencies in collaborative teaching and learning practices. Furthermore, 91% of professionals and stakeholders think that the non-formal learning methods and RMA are of an added value to facilitate collaborative teaching and learning. Almost 88% of the this target group would want to inform and tell other persons in the field of education about the non-formal methods used in the CARMA project. Almost 94% of this target group found the tools and materials used during the workshop as useful.

In addition to that, the professionals and policy makers were asked to evaluate the interaction among the students during the workshop; 100% of this target group found that the interaction was good and almost 92% found that the students were enthusiastic during the workshop and 95% thought that they showed high levels of engagement.

When asked about the best aspect of the workshop, few responses were provided (11 responses out of 33 participants). The professionals and stakeholders found the explanation of the different methods good and the fact that they were introduced to them. Furthermore one mentioned that as best aspect the fact that you can choose among the different methods depending on the subject or topic that you need to address. Another liked best the feeling of being part of the group and the enthusiastic interaction among the students.

Some of the challenges that they see in delivering non-formal learning methods and RMA in the school environment were related to bad student behavior in the classroom, according to them this might play a role in the delivery of collaborative lessons. According to one professional, some of the students are teenagers and cannot understand all the different topics because of lack of social consciousness, thus these methods could be a challenge or could be useful at the same time in channeling the students. Another challenge that was mentioned was the methodology of the non-formal methods and the content. Another challenge is that the methods available at the moment in schools are fine. In addition to that, currently many methods are available (it was not well understood what the participant meant by this). Important too is the support from the school principals and directors to the implementation of these methods.

The professionals and stakeholders think that these methods can be adopted to the school curriculum if the teachers are well trained to use them. But, it is a long process. One professional mentioned that they can be adopted individually by interested teachers, according to this professional this is the easiest and best way. As for the support

that is needed to ensure their adoption to the school curriculum, the responses were mainly in two directions, one related to policy making and the support from the ministry of education and the other is related to the teacher, they need to be trained, they need to have a predisposition for innovation, they need to be motivated and active with a positive attitude.

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