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EVALOE-DSS as a Self-Assessment and Decision-Making Tool on the Teaching of Oral Language in a School Context: Results of a Pilot Study[1]

Abstract: School is a natural context for development in which the communicative strategies used by teachers when interacting with students are essential for the development of communicative and linguistic competence. The objective of this study was to construct, implement and validate the first version of a self-assessment and decision-making tool on the teaching of oral language at school. It is an adaptation of the Oral Language Assessment in the School Context Scale (*Escala de Valoración de la enseñanza de la Lengua Oral en contexto Escolar-EVALOE)* (Gràcia et al., 2015) based on the

Marta Gràcia, Laura Amado, Sonia Jarque,
Daniela Bitencourt, Fàtima Vega, Carles Riba

use of the Conversational Methodology. This is a multiple case study focusing on four teachers (1 from an ordinary school, 2 from a rural school and 1 from a special education school). For six months, the teachers self-assessed their teaching practices with the tool, made decisions to improve it, and introduced changes in their classes. The researchers observed five class sessions of each teacher, assessed them with the same tool and each teacher-researcher pair conversed and reflected on the classes in five meetings throughout the semester. The results show that, in spite of the fact that there were important differences between teachers, the EVALOE – Decision Support System (EVALOE-SSD) is a useful tool that facilitates self-assessment, decision-making and the introduction of changes in the classes in order to promote the development of communicative and linguistic competence in the students. The analysis identified elements that can be improved and that will be considered during the review of the tool.

Keywords: self-assessment; communicative and linguistic competence; Decision Support System (DSS); school; reflection; decision-making.

Introduction

Although computers have been integrated into fields related to educational management in many countries since the 1970s, the integration of Decision Support Systems (DSS) is still recent (Kalay, Chen, 2002) and during the last 35 years, these systems have become a key element in information and decision-making processes (Kivijärvi, 1997). A DSS is an interactive and dialogic system based on computers which helps and supports management and decision-making, especially by making semi-structured or semi-intelligent decisions (Silver, 1991). The emphasis lies in the functionality of decisions and the widening of the decision-making capacities of those who take them. The present study analyses the implementation of a first version of a DSS in the teaching and learning oral language skills by four teachers.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

57

Interaction in natural contexts and language development

The socio-historical (Vigotsky, 1981), socio-interactionist (Bruner, 1983) and ecological (Bronfenbrenner, 1987) approaches to psychological development defend the importance of the characteristics of the context and the social interactions in which the child participates during his/her early years, as well as the relations which are established between those contexts (Bornstein, 1989; Gràcia, 2003; Gràcia, Ausenjo, Porras, 2010) in the development both in general and in particular of language.

Children develop communicative and linguistic competence in natural contexts and with significant adults through the use of language in appropriate situations, which occurs through help and the process of accompaniment (Gràcia, Galván-Bovaira, Vilaseca, Rivero, Sánchez-Cano, 2012).

Schools represent a microcosm of interpersonal relations in which communicative and linguistic development is based on numerous situations between peers and adults. The adult communicates with the child through oral language and, thus, the child changes his or her way of seeing the world, of speaking and behaving (del Rio, Gràcia, 1996). In the classroom, the teacher uses certain educational strategies in order to foster the acquisition and development of language (Gràcia, Galván-Bovaira, Sánchez-Cano, 2017; Jones, 2017; Marinac, Woodyatt, Ozanne, 2008).

Catalan legislation on education (Generalitat de Catalunya, 2007, 2009) places special emphasis on linguistic competence (speaking, listening, reading and writing). Specifically, it stresses the need to teach children to produce oral texts that are appropriate to particular situations, and the need to organize the course content in a way that allows children to express their thoughts and opinions, to respond to those of others, and to expand their knowledge. These oral texts must be constructed in a context that encourages interaction and dialogue. Although since the 1990s a succession of laws had aimed to develop linguistic competence, the inclusion of these aims in everyday teaching practice has been an arduous process.

Gràcia, Galván-Bovaira, Sánchez-Cano (2017) have descriptively reviewed a total of eight study perspectives which address this topic. They identified the strategies and activities that each one of those perspectives prioritizes for teaching and learning the use of oral language in the classroom. As a result of the study, they highlight that teaching strategies are diverse and that the most frequent activities in classrooms are oral presentations and debates. They provide a comprehensive overview of the current situation and state that a programming and definition of the systematized teaching-learning objectives of oral language is needed.

Evaluation of communicative and linguistic competence at school

The need to evaluate language competence has led to the development of different types of tools. Some of them have been designed in order to evaluate general aspects of the classroom context, essentially focusing on the skills, knowledge and experience of the teaching staff and the atmosphere at school (Marshall, Lewis, 2014). However, other scales have been designed in order to evaluate the emotional and interactive support in the classroom (Harms, Clifford, Cryer, 1998), the quality of the classroom, taking into consideration variables such as space, activities, interaction, the teaching program and syllabus, the learning environment, safety and health. There are also some key elements in the classroom which promote the development of oral language, such as the organisation of activities, the type of reasoning and the strategies used by educators. Nevertheless, most of the above-mentioned tools do not focus on the interaction between educators and students, understood as the way in which teachers involve students in activities, the strategies used in order to encourage them to self-regulate their participation in conversations or other important elements of the instructional design of linguistic content.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

59

Assessment of the Teaching of Oral Language in the School context Scale (EVALOE)

The Oral Language Assessment in the School Context Scale (*Escala de Valoración de la Lengua Oral en contexto Escolar*, EVALOE) (Gràcia et al., 2015; Gràcia, Vega, Galván-Bovaira, 2015) was created on the basis of the great importance of linguistic interactions in the school context and the need for teacher awareness in the pragmatics of language. It was designed with the aim of providing language development professionals (speech therapists, counsellors…) with a tool so that they could assess the skills and strategies used by teachers in order to promote the development of oral competence in the classroom.

EVALOE is a tool that allows professionals to explore the interaction between the teacher and students and between students in the classroom and has been developed from a socio-pragmatic and eco-functional perspective of language acquisition. It consists of two parts. The first is an observation scale of a total of 30 items grouped in three dimensions (Context and Management of Communication, Instructional Design and Communicative and Strategic Functions). The second includes a set of questions to develop a semi-structured interview for teachers, with the purpose of evaluating their teaching practice, taking into account aspects which are included more thoroughly in the first part. EVALOE has been adapted to be used in the context of special education schools (Gràcia, Benítez, Vega, Domeniconi, 2015) and has also been translated into Portuguese (Vega, Gràcia, Domeniconi, Benítez, 2017). The methodological proposal at the core of the creation of EVALOE is the Conversational Method (CM), which sees classrooms as communicative spaces in which teaching and reflection on oral language takes place, as well as providing a tool to help students learn content related to all subjects (Gràcia et al., 2015, 2017).

Decision Support Systems (DSS)

Currently, the figure of a professional who reflects on and/or questions their practice is emerging as a part of curriculum competence in any discipline and especially in education (Shön, 1983). Reflection with other professionals and individual reflection allow teachers to build knowledge of their practice, which promotes a better understanding of their practice and transforms it and their environment at the same time (Farrell, 2007). Through reflection, teachers will be able to make many subjective and implicit aspects visible, as they are not always aware of them even though they have a great influence on professional conduct (Korthagen, 2011).

With the purpose of establishing new paths to solve the already-mentioned difficulties, the use of technology and DSSs raises a new challenge in the world of education. In recent years, DSSs have gained importance as a supplementary measure to traditional assessment provided by professionals, aimed at improving their empowerment and, thus, helping to define and clarify which decisions are most important and their consequences (Arnott, Pervan, 2016; Eom, Kim, 2006).

The use of DSSs in education is still at an early stage and recent research has highlighted the advantages and potential of their use for the planning of teaching processes and content learning (Kalay, Chen, 2002) and decisions related to structural and organisational changes in the school (Sadahiro, Sadahiro, 2012). Nevertheless, some studies already point out that it is possible to use them to help the decision-making process in the field of special education (Gregg, 2009) or in the context of virtual learning (Xu, Wang, 2006).

This article highlights the usefulness of DSSs in education and, more precisely, the intention of empowering teachers and helping them in their decision-making regarding their educational practice, their communication management as well as their adaptation to the environment, with the purpose of contributing to the development of the linguistic competence of students. In this context, the research purpose was, firstly, to assess the efficacy of a first version of a DSS, based on EVALOE, in helping

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

61

four teachers to self-assess their teaching practice and decision-making with the purpose of introducing changes, thereby contributing to the progress of the communicative and linguistic competence of their students. Our second purpose was to detect elements to improve this first version of the instrument in order to develop a more effective one.

Methods

This is a multiple case study with a number of components of action-research due to the fully participative role of the teachers (Latorre, 2003; Riba, 2009). The strategy used can be placed within an approach of mixed methods in that the study gathers and analyses qualitative and quantitative data (Burke-Johnson, Onwuegbuzie, Turner, 2007).

Participants

Four teachers and their students participated in the pilot study. The Case 1 consisted of a teacher and 26 students from the third course of the second cycle of kindergarten education (3-6 years old) at an ordinary school, whose mother tongue was Arabic, except for one whose first language was Spanish. Case 2 consisted of a teacher and 8 students from the first (3 students) and second course (5) of the second cycle of kindergarten education at a rural school. Case 3 consisted of a teacher and 9 students from the first (4 students) and second course (5 students) of the third cycle of primary school education, at the same rural school as in Case 2. Finally, Case 4 consisted of a teacher and 9 students from an adapted secondary level in a special education school. The families of all the schools were of a medium-low socio-economic status. The vehicular language used at all schools was Catalan. All teachers were female.

Four researchers -females- participated in observing and assessing the classes and discussing with the teachers during the meetings.

Instruments

The tool used was the first version in digital format of the Oral Language Assessment in the School Context Scale – Decision Support System (EVALOE-SSD). It allows teachers to self-assess their teaching practice in relation to the students' communicative and language development. The first part of the tool consists of 30 items that can be evaluated according to a scale comprised of three levels (0-1-2) (0 means that the action does not occur during class; 1 means that the action occurs, but not in the expected form or frequency; and 2 indicates what is expected). The 30 items are grouped into 5 dimensions: Instructional Design (6 items); Conversation Management by the Teacher (6 items); Conversation Management by the Students (3 items); Communicative Functions and Strategies of the Teacher (8 items); and Communicative Functions of Students (7 items). For each item, there is the possibility of adding a written comment or reflection. In the second part of the tool, the teacher is encouraged to make 3 decisions for improvement, that is, to select three of the 30 items of the first part that were evaluated as 0 or 1. Table 1 shows one example of an item from each dimension.

The version used in special education schools has the same 30 items of the original tool and 10 additional items: five items in the Communicative Functions and Strategies of the Teacher dimension and five in the Conversation Management by the Students dimension.

Table 1. Example of an item of each one of the 5 dimensions of the EVALOE-DSS.

Dimension	Item
Student communication management	During the conversation, discussion and/or debate activities, we adopt a format of networking interaction.
Teacher communication management	I give the students time to take their turn.
Functions of the students	The students self-regulate their communication activity.
Functions and strategies of the teacher	I try to clarify the unintelligible linguistic interventions of the students.
Instructional Design	I propose activities that allow us to work on objectives of oral language.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

63

Classical Vision and New Methods of Enhancing Student Engagement in Education

THEMATIC ARTICLES

Procedure

Once the families and the teachers signed the informed consent, each researcher carried out one observation of one of the teacher's class sessions with her students and assessed it with the EVALOE-DSS tool. Later, each researcher sent the recording of the class session to the teacher so that the teacher could also self-assess it with the same tool. The researcher created a comparative table with the scores of the teacher and the researcher for each item. They met in order to compare the scores and so that the teacher could share her doubts regarding the tool, the changes she could start to introduce in her classes according to the content of the items and her perception of the tool. They agreed that the teacher would self-assess one class session each week, trying to vary the type of class (maths, language, arts and craft…) and, once a month, the researcher would observe one of the class sessions and that class would be assessed by both. After that session, they would meet and compare the scores, following the same procedure that they had used during their first meeting. After 17 (Case 1), 6 (Case 2), 6 (Case 3) and 12 (Case 4) self-assessments by the teachers and 5 observations and assessments by the researchers, they met one last time to evaluate the use of the tool and the participation of the teachers, as well as the progress that the teachers had detected in the students. All the meetings were audio-recorded and the class sessions observed by the researchers were video-recorded.

Results

Figures 1, 2, 3 and 4 show the evolution of the scores for both the self-assessments of the teachers and the assessments of the researchers obtained with EVALOE-DSS.
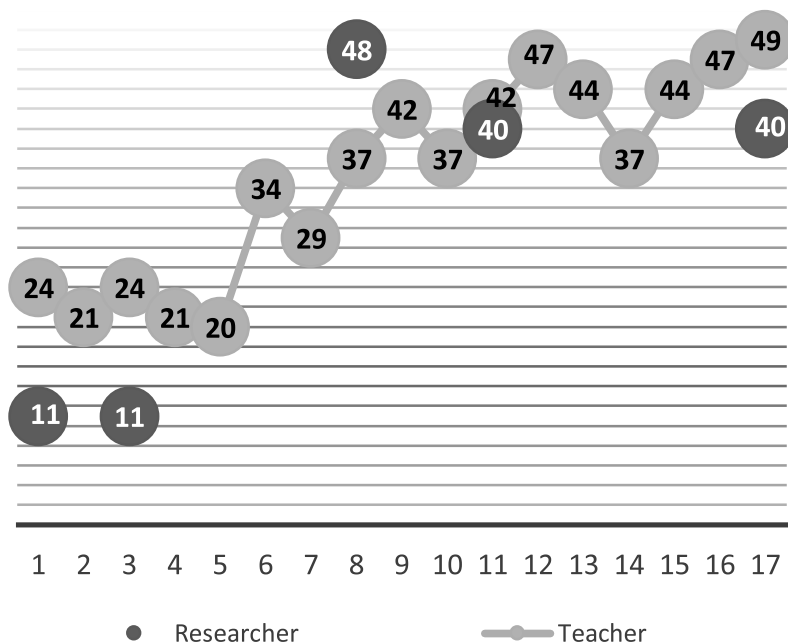
Marta Gràcia, Laura Amado, Sonia Jarque,
Daniela Bitencourt, Fàtima Vega, Carles Riba

**Figure 1. Evolution of the scores of the teacher (17 self-assessments)
and the researcher from Case 1 using EVALOE-DSS,
from November to May.**

**Figure 2. Evolution of the scores of the teacher (6 self-assessments)
and the researcher from Case 2 using EVALOE-DSS,
from November to May.**

*EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study*

65

Classical Vision and New Methods of Enhancing Student Engagement in Education
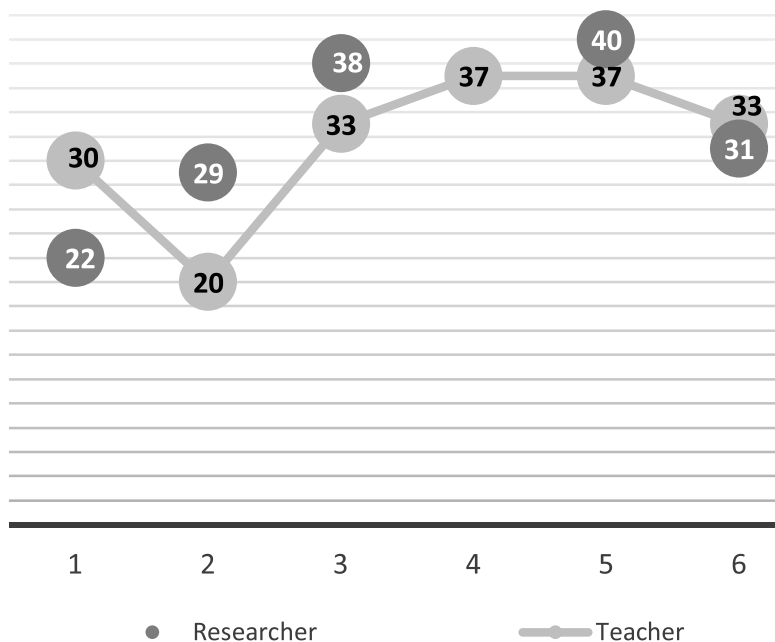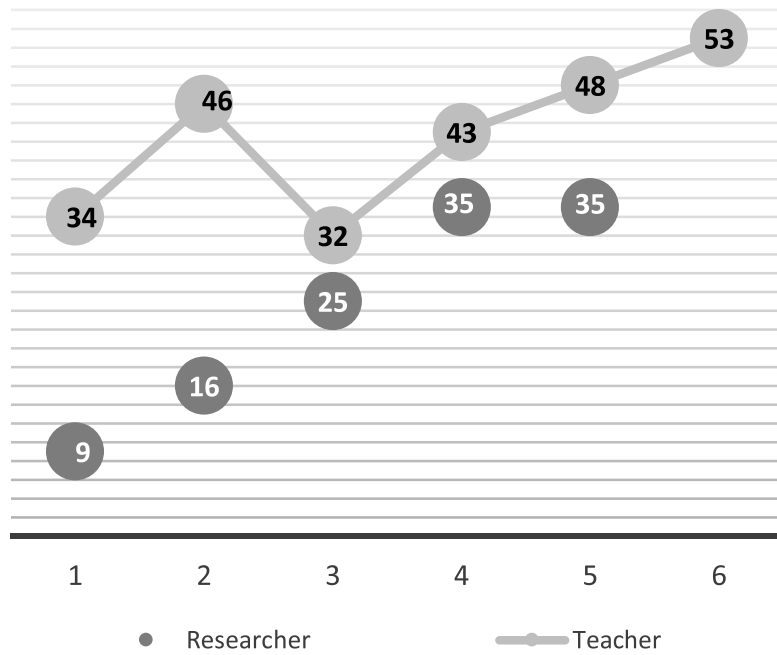THEMATIC ARTICLES

**Figure 3. Evolution of scores of the teacher (6 self-assessments)
and the researcher from Case 3 using EVALOE-DSS,
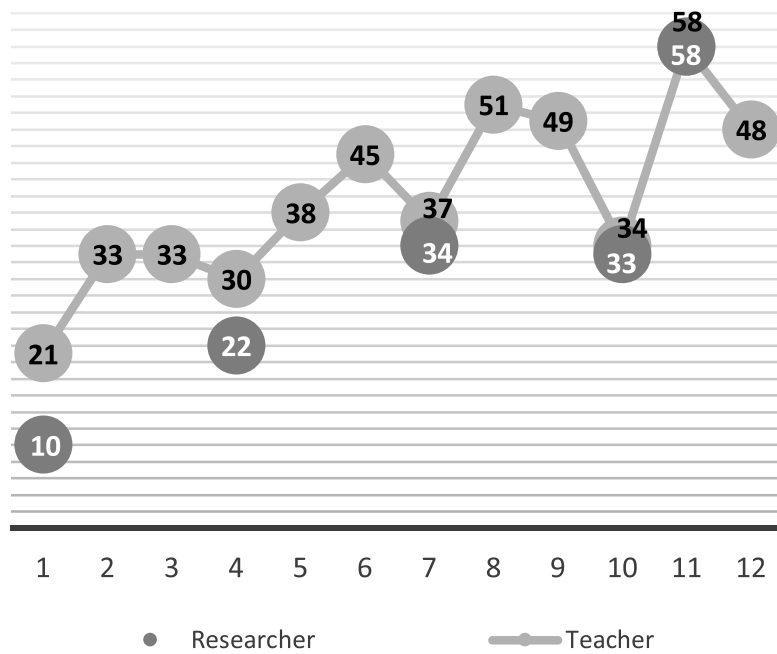from November to May.**

**Figure 4. Evolution of scores of the teacher (12 self-assessments)
and the researcher from Case 4 using EVALOE-DSS,
from November to May.**

Tables 2, 3, 4 and 5 present the decisions made during the self-assessed sessions by the teachers. In all cases, the choice was made between the 30 possible actions of the tool. The items chosen by the teacher throughout the self-assessed sessions were different in each case. In Case 1, the three items most chosen by the teacher were item 1 (*to propose activities allowing the children to work on the objectives of the oral language*), item 26 (*to give the students the time to take turns*) and item 30 (*students adopt an active role during the activities of the oral language*).

**Table 2. Items linked to the decisions of the teacher and evolution
of the scores of the items more frequently selected (1, 26, 30)
in an ordinary school.**

					Scores	
Session	**Decisions**			**1**	**26**	**30**
1	29	22	**26**	2	1	0
2	**1**	3	6	1	0	0
3	**30**	25	27	1	0	1
4	**30**	0	**1**	2	1	0
5	**30**	**26**	**1**	1	1	0
6	**30**	**1**	8	1	2	0
7	29	**26**	28	2	0	0
8	**30**	**1**	5	2	2	1
9	**1**	**26**	0	2	2	1
10	**1**	**26**	0	2	2	1
11	6	**1**	22	2	2	1
12	22	**1**	6	2	2	1
13	25	15-16	**1**	2	2	1
14	**30**	14	16	2	1	1
15	14	15-16	17	2	2	1
16	7	8	22	2	2	1
17	29	**1**	2	2	2	1

Note: The "Case 1" header spans the entire table.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

67

Classical Vision and New Methods of Enhancing Student Engagement in Education

THEMATIC ARTICLES

In Case 2, the three items most chosen by the teacher were item 1 (*to propose activities allowing the children to work on the objectives of the oral language*), item 4 (*the students and I refer explicitly to the communication rules to regulate the intervention*) and item 6 (*students self-evaluate their communicative behavior during oral language activities).*

In Case 3, the three items most chosen by the teacher were item 2 (*to explain the oral language aims*), item 6 (*students self-evaluate their communicative behaviour during oral language activities)* and item 19 (*Students use social formulas for interaction*).

Table 3. Items linked to the decisions of the teacher and evolution of the scores of the items more frequently selected (1, 4, 6) in a rural school.

Case 2						
Session	Decisions			Scores		
				1	4	6
1				2	0	0
2	4	8	11	2	1	0
3	1	6	0	1	2	0
4	4	6	0	2	1	0
5	4	6	0	1	1	0
6				1	2	2

Table 4. Items linked to the decisions of the teacher and evolution of the scores of the items more frequently selected (2, 6, 19) in a rural school.

Case 3						
Session	Decisions			Scores		
				2	6	19
1	2	29	22	0	0	1
2	2	29	14	1	2	2
3	22	6	19	1	2	0
4	2	6	14	1	2	1
5	5	6	19	2	2	1
6	6	19	18	2	2	2

In Case 4, the three items most chosen by the teacher were item 24 (*to propose activities allowing the children to work on the objectives of the oral language*), item 25 (*to facilitate students to initiate communicative interactions*) and item 26 (*to give the students the time to take turns*).

Table 5. Items linked to the decisions of the teacher and evolution of the scores of the items more frequently selected (24, 25 26) in a special education school.

Case 4						
Session	Decisions			Scores		
				24	25	26
1	24	26	25	0	0	1
2				1	1	2
3				1	0	1
4	26	13	27	0	0	0
5	24	26	25	1	0	2
6				1	1	2
7				2	1	2
8				2	2	2
9				1	1	2
10				1	1	2
11				1	2	2
12				2	2	2

The second part of Tables 2, 3, 4, 5 also show the evolution of scores of those items chosen by the teachers during the different sessions in the three types of participating schools. An increase in the scores of those items throughout the data-gathering process can be observed.

Table 6 presents some of the teachers' opinions and reflections during the fifth meeting between each teacher and researcher.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

69

Table 6. Reflections of the teachers on the use and usefulness
of EVALOE-DSS, during the fifth meeting between
each teacher and researcher.

Case 1	Case 2	Case 3	Case 4
But I see that it is really working, I see the difference when they talk to each other. They have started to make more structured questions when they address me. I see that they are applying everything we have been working on, in their own way, as far as they are able to, within their level or within the level that they can achieve.	*Many times, I thought the instrument was not adapted for kindergarten level. Sometimes it uses a very complex vocabulary.*	*I have seen improvements in the students, after starting the process of reflection with the instrument. They are more open and participative, and it has helped me think of the classes differently.*	*It has helped me to be less directive and to facilitate the students in initiating the interaction.*
I am also enjoying being able to work in a different way in this school. Everything was on paper and, based on this study, I am able to work more on the oral language.	*One difficulty is the time you have to invest . . . It's a lot and we do not have time to do it . . .*		*It has helped me to teach students to ask more questions, more varied, at different times, and not just the weekend.*
We did not do that here before, and I like it, the children like it too, they see it as something they enjoy, the moment in which they can talk.	*I do not like to observe myself and self-evaluate in a planned way, nor that children do so, so aware. Learning takes place through imitation. I do not think this should be done like this in kindergarten.*		*It has helped me to give more importance to oral language in all activities, and not only in oral language.*
New challenges like this one where they have to self-manage and self-regulate, I like that, they gradually do it. It is hard because they are used to the opposite of this, but well, they gradually do it.			*It has motivated me a lot that while I was using the questionnaire, I was being trained to teach the oral language in the class more adequately.*
I am happy to have participated in this study. I was scared at first, but I've enjoyed it a lot. I have learned, and that is something I like, and I am very happy.			*I have already used some of the strategies that the instrument contains but much less. Now I have them in mind all the time.*

Table 7 presents some of the reflections of the teachers during the final meeting and their evaluation of the process and their own participation in it.

Marta Gràcia, Laura Amado, Sonia Jarque,
Daniela Bitencourt, Fàtima Vega, Carles Riba

**Table 7. Reflections of the teachers regarding EVALOE-DSS
during the closing meeting with each researcher.**

Case 1	Case 2	Case 3	Case 4
As you use the instrument, you remember the items. For instance, this last self-assessment, I do not even have to read the instrument and I remember that. I finish it in twenty minutes…	*EVALOE-SSD has too many items.*	*An idea would be to put examples with short videos and see other performances of other classrooms.*	*I did not have time to complete it and I left it for the weekend, so I did not remember so well how the class had developed. The aims of the improvement proposals were almost impossible to reach in a week.*
At the beginning you get somewhat scared, because the explanations are very long. You get the information all at once and the explanations are very long, but I believe that long explanations are necessary. Because, of course, you do not understand it only based on the statements. You have to read it and read it all over again, and again.	*The examples go well but I think you would have to adjust to the stage of the students with whom you work.*		*Sometimes it was a little long. Sometimes it seemed to me that I was evaluating the same thing. Of course, I also realized later that some items were the same, but some of them from the point of view of the teacher and others from the point of view of the students.*
When you read the explanation for each item, you understood it, but it was really important the explanation of the researcher during the meetings to help me to fully clarify the concepts.	*All the items may not appear at the beginning, for instance, sequence their appearance by levels.*		*It would be good to fill the questionnaire in several moments, and it should be allowed to be saved.It would be good if it could be completed in blocks or that you could choose which set of items you respond to at each moment.*
For instance, I get the feeling that I have already incorporated one item, and most times I write 100%, maybe that item could be eliminated from my questionnaire.			*When I fill the questionnaire the weekend after that class, I did not remember so well how the class had developed.*
I was scared at first that I would not achieve the objective…or not achieve it properly, or that it would go wrong, I was paying attention…but as you feel more and more comfortable…you move on to the next step and now I focus more on the activity and on improving, …it is not something that worried me too much.			*It is much better to answer the instrument by analysing the class recorded on video.*
You have to be consistent in filling out the instrument every week. It is true that sometimes it is very hard to find a moment and some weeks you forget…it is always best to do it that very moment or the next day at the latest.			

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

71

Classical Vision and New Methods of Enhancing Student Engagement in Education   **THEMATIC ARTICLES**

Discussion

The analysis of the data has allowed us to know in greater depth the process experienced by four teachers in three different schools who have actively participated in the gathering of data for this study, as well as their students. The first goal of the study was to try out a first version of EVALOE-DSS with the purpose of determining its usefulness as a tool to help teachers self-assess their teaching practice linked to oral language teaching, make decisions and introduce changes into their classes to improve them, and to contribute to fostering language development in the students. A second goal was to detect some aspects to improve the tool in order to build a more useful version.

The results regarding the number of self-assessments, decisions and the progress in the scores shown in Figures 1, 2, 3 and 4 highlight important differences between the samples. While the teacher in the ordinary school carried out 17 self-assessments, the two rural school teachers carried out 6 each, and the special education teacher, 12. This is probably due to individual differences among the teachers in terms of their involvement in the study, the meaning they give to their participation, and the instrument itself. If the comments made by the teachers in the last follow-up meeting and at the closing meeting are reviewed, it is evident that the teachers who carried out most self-assessments are those who reflected the most. In addition, from these reflections, comments and assessments, we can observe a particular perception of the instrument as something that can be useful in improving their practice and the development of the linguistic skills of their students. While the teacher from the ordinary school (Case 1) commented that the tool was useful for her, that she saw progress in her students, for example in the ability to self-regulate, and also progress in her understanding of the instrument, the comments of the teacher from the rural kindergarten school (Case 2) show that this teacher did not incorporate the instrument, probably because she considered it to be unsuitable for kindergarten level and because it uses language that is too complex. In addition, it seemed to her that the use and knowledge of the instrument required a lot of time that she did

not have. The teacher from the same school who taught primary educa-
tion level (Case 3) seemed to value the instrument better and the changes
its use produced in her students; however, she did not use it very much.
Although the small number of students per class in the rural school may
seem to favour the use of strategies to foster the use of oral language in
class, the results do not confirm it. Although the initial scores assigned
by the researchers were a little higher than those of the other two teach-
ers, progress was less. Finally, the special education teacher (Case 4) used
the instrument quite frequently and made specific comments on impor-
tant issues on which those she found useful, such as helping her not to
be so directive, to give more importance to oral language and, in general,
to motivate her to improve her practice. Undoubtedly, these are very dif-
ferent experiences with regard to the perception of the instrument, in
what it meant for them to understand and use it, and in the changes that
they themselves introduced and the progress they saw in their students.
All these reflections seem to indicate that some of the teachers started
a reflection process about her practice, focusing their attention on the
way oral language is taught in the classroom and the way in which their
interaction helps their students interact verbally in day-to-day activities
in the class. The results are in agreement with those of a similar research
based on the original EVALOE (Gràcia et al., 2012), as well as the EVALOE
adapted to special education schools (Gràcia et al., 2015).

Regardless of the individual differences, the improvement observed
in some of the teachers, especially in Cases 1 and 4, is probably linked to
the process of self-assessment and reflection by the teacher regarding
her practice (Gómez, 2008; Jones, 2017). The aim we proposed was that
the use of the EVALOE-SSD would help the teachers to incorporate the
Conversational Method (CM) into their classes. Thus, they would pro-
mote a more propitious context for the development of communica-
tive and linguistic competence through the use of language in specific
situations both in terms of help and the accompaniment of the learn-
ing process (Gràcia et al., 2012). The results seem to indicate that the
teachers incorporated some of the elements of CM, with differences be-
tween them.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

73

On the other hand, Figures 1, 2, 3 and 4 also show differences between the scores in the sessions that were assessed by the teacher and the researcher. Although the score of the teacher from the ordinary school (Case 1) initially differed clearly with respect to the researcher's scores, they gradually grew closer until reaching a point where they coincided, despite a slight distancing later. The same occurred in the case of the special education teacher (Case 4). In both cases this coincidence occurred in the fourth observation made by the researcher, which can be interpreted as indicating that teachers, even those who were deeply involved in learning and understanding of the use of the tool, needed time to know it and to understand the indicators in the same way as the researchers. The differences between the initial scores of the rural school teachers and the researchers are also evident at the beginning in both cases. Nevertheless, while the primary school teacher (Case 3) continued to show poorly adjusted assessments throughout the entire data collection period, although with a degree of closing between the scores in the third and fourth session observed by the teacher, in the case of the kindergarten teacher (Case 2) the differences between her scores and those of the researcher decreased as the teacher became more familiar with the instrument, especially in the last two sessions.

The scores obtained by the teachers over these six months show that changes in educational practice require time and a resolute dedication of the educator. As Saviani (2009) points out, in order to begin any process of change, professionals must respect some basic conditions: to show a predisposition to change and a motivation for continuous training work, to want to improve certain pedagogical aspects, to find themselves in a relaxed situation and to have time to assimilate all the knowledge and teaching tools. In this sense, some of the comments of the teachers highlight the need for time to try out and reflect, to keep gaining confidence, as well as the positive disposition of the particular teacher to overcome new challenges.

With regards to the decisions made, it is evident that there is no unified trend among the teachers. It seems that each teacher took decisions based on different criteria that were not always clear. The teacher from

the ordinary school (Case 1), who took decisions in a systematic way, tended to prioritize certain aspects for improvement, mainly in relation to instructional design and the management of students, and sometimes in relation to teaching management. It should also be noted that the teachers did not make any decision linked to educational strategies or the communicative functions of students, which seems to contradict the final values recognized in the tool, namely that the teachers emphasised the importance of basic items such as those that refer to the distribution of furniture, those promoting communicative functions and those that get the students to accept an active role in networking interaction. In spite of the increase in the scores as the teacher became more familiarised with the tool and the methodology, it probably reflects the long road still ahead of us with regard to understanding the role played in the interaction by each and every one of the actions and strategies that the tool involves, as well as the general aspect in which they are included. These results are in agreement with results obtained in studies in which changes in practice were proposed to teachers (Gómez, 2008), which highlights a need to give teachers time for reflection regarding the change.

The second objective of our study was to detect aspects to improve the tool. As pointed out at the beginning, DSSs are in general considered as resources to empower people, both in everyday life and in the professional world (Arnott, Pervan, 2016; Gregg, 2009; Kalay, Chen, 2002; Xu, Wang, 2006). The results obtained from the use of the first version of EVALOE-DSS, provided by four teachers, would probably not have been possible without their meetings with the researchers. The challenge we face, based on the results obtained in this multiple case study, is introducing modifications to the tool so that it incorporates the advisory role of researchers, especially their assistance during the meetings. This means that it must be transformed into a semi-intelligent tool which provides adapted assistance to teachers according to their initial scores.

EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

75

Classical Vision and New Methods of Enhancing Student Engagement in Education

THEMATIC ARTICLES

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EVALOE-DSS as a Self-assessment and Decision-Making Tool
on the Teaching of Oral Language in a School Context:
Results of a Pilot Study

77

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