PDF hosted at the Radboud Repository of the Radboud University Nijmegen

The following full text is a publisher’s version.

For additional information about this publication click this link.
http://hdl.handle.net/2066/210392

Please be advised that this information was generated on 2020-01-11 and may be subject to change.
Second language and ICT-support in early education
Activity report September 1998 - September 1999

Ton Mooij and Clara Woldringh
ITS, University of Nijmegen
September 1999

Contents
1. Introduction
2. Theoretical considerations and decisions
   2.1. School improvement and integration of second language pupils
   2.2. Second language and first language
3. Research and development in educational practice
   3.1. School improvement and integration of second language pupils
   3.2. Extra instructional lines on first language for second language pupils
   3.3. Development in educational practice: experiences and intermediate effects
   3.4. Management and pedagogical assistance by a computer program
   3.5. Conclusions with respect to assistance of second language pupils
4. Next steps in September 1999 - September 2000
References

1. Introduction

In the period September 1997 - September 1998, the first year of the project, attention was given to descriptive and empirical survey aspects of second language acquisition in the Netherlands (see the first year report of the project).

In the second year practical and potential improvement aspects of second language acquisition in early and elementary education were concentrated upon. A main problem in educational practice is the adequate didactic support of pupils differing in many respects, including language and cultural differences. Yet the pedagogical and educational objectives emphasise integration of pupils within heterogeneous classes.

Our goal in this second year was to find out how this differentiation paradox could be tackled in innovative but practical ways, for teachers and pupils in everyday schooling. In this report we will present information on relevant theorising, development and intermediate effects of a computer program meant to clarify didactic and management processes in daily practice. That is: to facilitate second language learning and teaching for teachers, pupils, and school management.

2. Theoretical considerations and decisions

2.1. School improvement and integration of second language pupils

In the Netherlands a main assumption is that positive integration of second language pupils
within regular Dutch education and society is supported by differentiating pedagogical and curricular characteristics and activities according to pupils’ potentialities and characteristics in regular education (cf. Bakker, Pannebakker, & Snijders, 1999; Schuyt, 1995). This assumption is based on general research evidence which clarifies that characteristics of the home environment, the school, and the general neighbourhood, differently interact with and affect each pupil’s educational experiences and behaviour. Within these interactional processes specific curricular, didactic, organisational, and assessment characteristics in kindergarten and school affect different motivation and selection effects with different categories of pupils.

Within-class processes and effects play an important role in this respect. For example, a pupil whose family background, social, emotional, or cognitive abilities, or linguistic and cultural characteristics, deviate much from these of the other pupils in class, runs a high risk in experiencing negative motivation and selection effects (see for example Mooij, 1999a, 1999b). Within each class, in particular deviating or marginal pupils need therefore specific or extra pedagogic, didactic, instructional, or organisational support from the beginning of their kindergarten career (cf. Jewett, Tertell, King-Taylor, Parker, Tertell, & Orr, 1998). Within class, however, second language pupils are only one kind of pupils who may need specific or extra support.

Therefore, the main problem is the potential improvement of the functioning of kindergarten and school from a differentiating point of view. Several general design aspects are at stake:

* involvement of parents, as early as possible;
* didactic clarification of regular procedures and activities within kindergarten and school;
* continuous positive stimulation within the different developmental areas;
* specific attention for language and other relevant background differences of children;
* continuous attention for positive social integration activities between children.

2.2. Second language and first language

Recent research (Droop, 1999) indicates that, for both first and second language pupils, oral skills in Dutch language determine reading comprehension skills in both first and second language pupils. Number of words known is an important variable for second language pupils. Both groups profit from background information concerning a specific text, but the use of background information is dependent on language skills. Preparatory activities by the teacher like discussing the content of the text, giving background information, building a common experience, and explanation of difficult words, help pupils to activate or develop language skills.

In Dutch educational practice, therefore, an important pupil variable concerns oral skills in Dutch or first language. A first objective should be to raise each pupil’s oral language skills in the interaction between pupil and teacher, in particular if the pupil uses Dutch language as a second language. The pupil’s beginning level, however, remains a crucial variable in determining where to start or how to do this. In this respect number of words known is one of the indicators of oral language skills in first language. Teacher and curricular attention in kindergarten and further on in education should therefore first concentrate on oral language skills and number of words, within daily common experiences and within heterogeneous cultural contexts. The language support needed by a pupil depends on the
pupil's beginning level in first language.

Given this theoretical main approach in individual language acquisition, the main design aspects referred to above are all relevant. For this reason we turn towards the consequences of this reasoning in educational practice. Because we concentrate on a rather fundamental differentiation approach within regular education as the main opportunity to integrate second language pupils, we start with early education and elementary education. Research and development in practice were therefore first concentrated on the two kindergarten years for pupils aged 4 - 6 and on the first two years of elementary school for pupils aged 6 - 8, within 14 developing schools (see Mooij, 1997).

3. Research and development in educational practice

3.1. School improvement and integration of second language pupils

It was decided to relate the activities in the project to school development processes carried out in Dutch kindergartens cum elementary schools for pupils aged 4 till 12 (cf. Mooij, 1997). The general design aspects mentioned in section 2.1 are being developed within that project. First, involvement of parents is stimulated by having parents and teachers inform each other about relevant entry-level behaviours of a child, to ensure a smooth transition into kindergarten at the age of four. If desired, use can be made of an intake procedure in which parents and teachers communicate about entry behaviours in a structured way. In this procedure, a psychometrically checked questionnaire operationalises different cognitive, social, emotional, creative, athletic or sensorimotor, and motivational characteristics, in which a child's developmental levels are compared to those of peers. The parents complete the questionnaire and, one month later, the kindergarten teacher answers all items. The teacher's first impressions of the pupil can then be compared with the parents' information. Relevant differences can be discussed between parents and teacher. If necessary, additional diagnostic tests can be used.

Second, didactic clarification of regular procedures and activities within kindergarten and school is realised by developing explicit 'instructional lines' to support the stimulation and integration of pupils in kindergarten throughout elementary school. An 'instructional line' denotes a hierarchical arrangement of educational concepts and subconcepts corresponding with specific play or instructional learning materials. The curricular activities within early education and later on can be sketched within such a set of lines. It has to be noted that the usual situations of free play, either alone or in small groups of pupils, do not change. The relevance of using instructional lines, however, is that behavioural characteristics of the pupils in a kindergarten class can be used as basics to part of the curricular play and didactic learning characteristics in class. In other terms, the variation between developmental levels of the pupils can now correspond to the diversity in play and learning materials and social-didactic procedures in a small group or class.

Third, continuous positive stimulation within the different developmental areas can now become possible because, in relevant areas chosen by the teacher and parents, a pupil can make progress regardless of beginning level. Moreover, depending on situational conditions and facilities, more attention and support can be given to pupils who relatively need this most.

Fourth, specific attention for language and other relevant background differences of
children can now didactically be based upon the information resulting from level and progress within specific instructional lines, for example. If possible or necessary, this can also occur within small groups of pupils.

Fifth, continuous attention for positive social integration activities between children is stimulated because teachers and parents can look more towards the progress of an individual pupil or small group of pupils. In particular second language pupils can profit from the educational differentiation approach sketched above because the usual evaluation, judgement and selection strategies in traditional education have a negative impact on their results (Collier, 1994).

3.2. Extra instructional lines on first language for second language pupils

Within the educational differentiation project sketched in section 3.1, extra instructional language lines for second language pupils can result in the desired positive integration of second language pupils in Dutch regular education and society. Within the context of a more general architecture of first language lines, specific instructional lines for second language pupils can be made to have explicit pedagogic, didactic, and diagnostic values.

Within the set of instructional language lines, different kinds of diagnostic and achievement indicators are therefore necessary to point out and evaluate the quality of the developmental language processes of every pupil, from the beginning at kindergarten level onwards. Though a discussion sometimes exists about the ‘pedagogical’ values of screening developmental levels of pupils, in particular pupils at risk will clearly profit from more didactic clarity on both individual development and expected curricular effects. Normed indicators should also be available, to compare the development of an individual pupil with his or her age mates.

With respect to the development within the framework of the second language project it was therefore decided to concentrate on the development of instructional language lines thought to be essential in early educational practice. Within the integrated approach, first language lines and second language lines in particular should get more and more attention over the course of time.

3.3. Development in educational practice: experiences and intermediate effects

From September 1998 - September 1999 early education teachers of some of the 14 schools developed instructional lines on the most important developmental areas, including language (see Mooij, 1997). A first finding concerned the way teachers and staff used to get along with pupils. Teachers usually recognised within a month after entrance that a pupil was, or could become, at risk vis-à-vis one or more characteristics. However, their work load in class and their pedagogical-didactic procedures prevented them from putting all required efforts into the stimulation or guidance of these pupils. Also, the social and pedagogical abilities of teachers to cope with deviating or ‘difficult’ children varied greatly, even within the same kindergarten or school.

Second, teachers seemed to adjust themselves to situational characteristics that reflected lacks in pedagogical or instructional structure and clarity. Problems or conflicts with parents were stimulated then, in particular if the pupil was blamed for antisocial or bad
behaviour. In such cases the research input was to clarify what was going on since the start at kindergarten, to explicate the potential use and meanings of the intake procedure, to emphasise subsequent and adequate pedagogical and instructional changes, and to look after their effects.

Third, development and research were concentrated more and more on pedagogical, social, didactic, cognitive, and organisational aspects of the early education system. In doing this, teachers and staff discovered that concentrating on pupils at risk was focussing on symptoms instead of on the cause. In particular within kindergarten much observation used to be done and logged by teachers, but adequate developmental or didactic consequences were relatively rare.

Fourth, because more and more instruction and observation had to be done and logged by the teachers within class, they more and more lacked time to do this. Therefore a computer program was developed to help teachers in clarifying and managing the social and didactic class processes. The computer program was developed and tried out in some of the classes over the course of the school-year.

3.4. Management and pedagogical assistance by a computer program

The computer program was designed to assist the didactic management of the teacher and the pupils. The software allows flexible construction and integration of instructional lines by teachers within kindergarten and elementary school. It can be handled interactively, which includes that instructional lines can be changed by teachers. The lines refer to different structured learning contents for example, motor behaviour, social-emotional development, projects, language, (preliminary) arithmetic, (preliminary) reading, and (preliminary) writing. To manage pupils' developmental processes as required, pupils themselves can also work with this software. Each instructional line is therefore characterised by a specific logo, a specific colour, and corresponding text. Activities or tasks within each line are represented by for example a photograph of the object as present in class, because even four-year-olds must be able to work with the program.

To stimulate pupils adequately, variations of the same lines were made available, referring to different developmental levels. To concretise what is meant a screen shot of didactic variants and activities in an instructional language line is presented in Figure 1. In this example three identical variants are presented, symbolising that in this case differentiation is not yet used.

The systemising of these activities allows the integration of an indicator which means that a pupil is obliged to contact the teacher before continuing. For the teacher this may include getting a small group of pupils together to practice oral telling and instruction, for example. Another program facility is the specification of individual or small group activities for specific pupils: see the screen shot in Figure 2.

More detailed descriptions of the program and experiences with its use are presented elsewhere (cf. Mooij, 1999c, 1999d).
3.5. Conclusions with respect to assistance of second language pupils

A first general experience with the program is that it really helps teachers to order and organise their didactic materials and activities. Also, pupils learn to use the program over the course of time, which allows teachers to spend more time to pupils who need their assistance. Therefore, the first conclusion is that, in general, this computer support benefits both teachers and pupils.

After having realised this conditional first step, however, the next step should be to concentrate on the general instructional language lines used so far and focus specific attention on the support of second language pupils (cf. for example Appel, Kuiken, & Vermeer, 1995). This means that second language learning should be worked out within the context of the general architecture of instructional language lines, to facilitate positive integration of second language pupils within regular education.

Based on their experiences within the school-year 1998-1999, two of the kindergartens cum elementary schools are in September 1999 in the final stage of internal decision making about developing parts of their second language instructional lines into the computer program. In doing this, within a school several problems have to be provided with an integrated solution. These problems are:
1. Clarification of instructional language lines since the beginning in kindergarten;
2. Clarification of relevant instructional second language lines and their integration within the
curriculum and play situations of the school as such;
3. Clarification of the relation of the beginning characteristics of incoming pupils to indicators within the language lines (including second language lines);
4. Supplying early education teachers with enough materials and time to prepare practical requirements and facilities;
5. Start a try-out and developmental process with pupils within the school.

4. Next steps in September 1999 - September 2000

It is expected that development and implementation of first exemplars of second language instructional lines in early educational practice will start in September 1999. The goal is to try out whether this way of integrating second language pupils within regular education seems promising enough to be continued in next years.

The most actual information and state of affairs will be demonstrated and discussed on the Comenius-workshop in September 1999.
References


