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Professional development schools and early childhood education: interactive skills of students, playgroup and kindergarten teachers

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ABSTRACT: This study examines professional development activities for students and teachers in two Dutch professional development schools (PDSs). The PDSs consist of a partnership between the kindergarten classes of the elementary school and accompanying playgroup (with children aged 4–6 and 2.6–4, respectively), a teacher's training college and a research group and educational service agency attempting to improve the effects of early childhood education programmes. The professional development activities encompass the quality of adult–child interaction during instruction and daily routines. All participants learn from each other how to support and challenge children's language and reasoning skills by attending joint courses, observing each other and giving feedback. Rating scales of interactive skills were completed twice during one year by the participants themselves, colleagues and an observer. Also, the participants evaluated the interventions used. Findings indicate that although the subjects became more aware of the importance of adult–child interaction, only kindergarten teachers grew in interactive skills.

RÉSUMÉ: Cette étude porte sur des activités de développement professionnel concernant étudiants et enseignants de deux écoles néerlandaises de développement professionnel (PDS). Les PDS reposent sur un partenariat entre les classes de jardin d'enfants de l'école élémentaire et les groupes de jeu (pour les enfants âgés, respectivement, de 4 à 6 ans et de 2.6 à 4 ans), une école de formation d'enseignants, un groupe de recherche et une agence de service éducatif, dans le but d'améliorer les effets des structures éducatives de la petite enfance. Les activités de développement professionnel concernent la qualité de l'interaction adulte–enfant pendant les temps d'enseignement et les routines quotidiennes. Tous les participants apprennent les uns des autres comment soutenir et promouvoir les aptitudes de langage et de raisonnement des enfants, en participant ensemble aux cours, en s'observant mutuellement et en réagissant. Une échelle des compétences interactives a été remplie deux fois en un an par les participants eux-mêmes, des collègues et un observateur. Les participants ont aussi évalué les interventions utilisées. Bien que les sujets soient devenus plus conscients de l'importance de l'interaction adulte–enfant, les résultats indiquent seuls les instituteurs de jardins d'enfants ont amélioré leurs compétences interactives.

ZUSAMMENFASSUNG: Diese Studie betrachtet die professionellen Entwicklungsaktivitäten für Studenten und Lehrer in zwei niederländischen Schulen für professionelle Entwicklung (PE). Diese PE-Schulen bestehen aus einer Partnerschaft zwischen den Kindergartenklassen der Grundschulen und der mit ihnen verbundenen Spielgruppe (mit Kindern im Alter von 4 bis 6 Jahren bzw. von 2.6 bis 4 Jahren), einer Hochschule für Lehrerausbildung, einer

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Forschungsgruppe und einem Bildungsberatungsbüro und bezwecken, die Auswirkungen von Bildungsprogrammen im frühen Kindesalter zu verbessern. Die professionellen Entwicklungsaktivitäten befassen sich mit der Qualität der Erwachsenen-Kinder-Interaktion während des Unterrichts und bei den täglichen Routinearbeiten. Alle Teilnehmer lernen von einander, wie sie die Fähigkeiten der Kinder im Hinblick auf Sprache und logisches Denken fördern und herausfordern können, indem sie gemeinsam an Kursen teilnehmen, sich gegenseitig beobachten und Feedback geben. Beurteilungsskalen der interaktiven Kompetenzen wurden zweimal im Laufe eines Jahres von den Teilnehmern selbst, von Kollegen und einem Beobachter gegeben. Auch bewerteten die Teilnehmer die Interventionen. Die Ergebnisse weisen darauf hin, dass obwohl die teilnehmenden Personen sich der Wichtigkeit der Erwachsenen-Kinder-Interaktion bewusster wurden, sich nur die Kindergartenlehrer bezüglich der interaktiven Kompetenzen weiterentwickelten.

RESUMEN: Este estudio analiza las actividades de desarrollo personal para estudiantes y profesores en dos institutos de desarrollo profesional de los Países Bajos (PDSs). Los institutos de desarrollo profesional consisten en una asociación entre las clases infantiles de la escuela primaria, y un grupo de juegos colaborador (con niños de 4 a 6 años y de 2.6 a 4 años, respectivamente), el colegio de formación de profesores, el grupo de investigación y la agencia de servicios educacionales, e intentan mejorar los efectos de los programas educacionales en la infancia temprana. Las actividades de desarrollo profesional abarcan la calidad de la interacción adulto-niño durante la enseñanza y las actividades diarias. Todos los participantes aprenden, mutuamente, cómo apoyar y estimular el lenguaje de los niños y las aptitudes de razonamiento siguiendo cursos conjuntos, observándose mutuamente y ofreciendo el feedback. Los mismos participantes, compañeros de trabajo y un observador cumplieron escalas de valoración de competencias interactivas, dos veces durante un año. Los participantes también evaluaron las intervenciones utilizadas. Los estudios indican que, si bien los sujetos tomaron mayor conciencia sobre la importancia de la interacción adulto-niño, sólo los profesores de guarderías mejoraron en competencias interactivas.

Keywords: interactive skills; teachers' professional development; professional development schools and early childhood education; interactive skills of students; playgroup and kindergarten teachers

Introduction

In the past decade, an increasing number of Dutch teacher training colleges (for primary education including kindergarten, ages 4–12) have engaged in teacher education collaborative reform through professional development school (PDS) partnerships (Kiewiet-Kester 2006). In PDSs many historically separate people and institutions are becoming committed to working together to achieve simultaneous renewal (cf. Simmons et al. 1999, 31). In the Netherlands, in many cases the professional development school partnerships consists of teacher training colleges and elementary schools. In the present study, a third and fourth organisation are involved in the PDS, i.e., an educational service agency and a research group. Furthermore, we focus on early childhood education, examining elementary schools that work together with playgroups. The goal for the PDSs is to jointly improve the education environment for students, teachers, college faculty and educational service agency, leading to higher teacher efficacy and better achievements of the children (Gorter 2007). Competencies of students and teachers and learning from and with each other are crucial in such PDS settings. Since 1990, research on PDSs has

increased significantly in the USA (Byrd and McIntyre 1999; Neapolitan and Berkeley 2006), but is still scarce in the Netherlands (Deinum et al. 2005; Schepens 2006).

This paper offers a description of research on professional development activities in two Dutch PDSs, activities attempting to improve the effects of early childhood education programmes. The two PDSs use the *Kaleidoscoop* (cf. High/Scope) and *Piramide* approach for early childhood learning in which students and teachers of playgroups (children aged 2.6–4 years of age) and kindergarten classes (4–6 years) collaborate. In both approaches young (disadvantaged) children can gain access to quality education and appropriate care providing them a good start in life (High/Scope Educational Research Foundation 2008; Hohmann and Weikart 2002; van Kuyk 2003).

To enhance a sustainable impact, professional development activities are planned and executed during three periods in the year and encompass the quality of adult–child interaction during instruction and daily routines. It is generally agreed that the quality of teacher–child interaction contributes substantially to effects that early group care and pre-school education have on children (Bowman, Donovan, and Burns 2001; Howes and Smith 1995). Interaction is defined here as a mutual or reciprocal conversation or exchange between two or more persons (here teacher and children). In studying the quality of teacher–child interaction we concentrate on the teacher’s competencies in promoting children’s language and thought processes by giving proper language input, providing the children with opportunities for active involvement in conversation and thought processes, fostering the quality of language and reasoning, and giving feedback (cf. Damhuis, De Blauw, and Brandenburg 2004). Components of teachers’ interactive competencies are knowledge, perceptions and ideas (beliefs) about teacher–child interaction, interactive skills (behaviours), and professional attitude referring to teachers’ approach to teacher–child interaction (cf. Tigelaar et al. 2008). Although the professional development activities in the present research covered all elements of teachers’ interactive competencies, the central focus is on interactive skills, how teachers are actually interacting with young children. Researchers have discussed that asking teachers what they know and believe about interaction with young children and intend to do with them may not represent their actual interactions in the classroom (cf. Wilcox-Herzog 2004). Therefore, in our study teachers’ interactive competencies are assessed at the behavioural level directly.

The main subject of professional development in one PDS is on the stimulation of reasoning skills, i.e., discovering children’s ideas and thought processes, extending children’s ideas, enhancing the use of different problem solving strategies, etc. The other PDS mainly addresses interactive reading, vocabulary and communication skills. In recent research of the national Dutch educational inspectorate on the quality of early childhood education in the four biggest Dutch cities, adult–child interaction and the support of using different thought strategies have been found important factors to be improved (Inspectie van het Onderwijs 2008).

In the two PDSs, students and teachers are expected to learn from and with each other how to support and challenge children’s language and reasoning skills by attending joint courses, reflecting on their interactive competencies, and observing each other in the classroom and giving feedback to each other, and by being coached by people other than colleagues. Our research question is whether the students, playgroup and kindergarten teachers of the two PDSs grow in their

interactive skills over time. In addition, participants' evaluation of the interventions used are explored.

Method

Subjects

Playgroup teachers, kindergarten teachers and students of two Dutch urban elementary schools (including playgroups) participated in the research project. The children of both schools predominantly come from lower-income and ethnic minority families. The two schools are located in the cities of The Hague ('Van Ostadeschool') and Eindhoven ('Beppino Sarto') and use the *Piramide* and *Kaleidoscoop* (cf. High/Scope) approach for early childhood education, respectively. At the Van Ostadeschool, four students, eight playgroup teachers and eight kindergarten teachers were involved in the study. At Beppino Sarto, five students, four playgroup teachers and seven kindergarten participated in the research.

Both schools were chosen on the basis of their wish to become a PDS and their willingness to participate in our educational research. They already supplied traineeships for students. Both schools also had contacts with an educational service agency and with some of the members of the research group. One of the spearheads in school development was the focus on early childhood education and becoming a learning community which fitted in well with one of the main subjects of the research group. For the Van Ostadeschool, the implementation process of the PDS started in October 2006, and for Beppino Sarto in May 2007. At both schools 'PDS' students started their traineeship in September 2007. The students at the Van Ostadeschool gain practical teaching experience at school during one year in one group, whereas the students of Beppino Sarto were in one group for half a year.

Measures and procedures

Overview

In the project, data were gathered regarding the first year of the implementation process of the PDSs. These included measures of aspects of school organisation, problems and successes experienced by the partners, students' and teachers' competencies, participants' evaluation of training sessions, and cognitive achievements of children. The present study concentrates on students' and teachers' interactive skills and the evaluation of the training sessions. The trainings were designed by educational advisers, in collaboration with the researchers and college teachers, and given by educational advisers of the local educational service centres.

Videotapes of adult-child interactions during instruction and daily routine were produced in November 2007, February 2008 and June 2008. These were used for coaching by an educational adviser, internal coach from the school or college teacher. The coaching took place soon after the tapes were made. Somewhat later, the tapes were also used as training material for the training sessions.

For the Van Ostadeschool, two observers viewed the videos of the students' and teachers' lessons given in February (t0) and June (t1), and rated their interactive skills (based on consensus). The participants rated their own skills as well. Teachers visited each other once after each training, watching each others and students' lessons and giving feedback using the checklist on interactive skills. The colleagues did not

return the checklists, mostly due to the fact that many of them only scored the maximum (4).

For Beppino Sarto, some data on colleagues' ratings of interactive skills were available, but only at one data wave (generally at t1). Also, self ratings were made at one time only, generally at t0.

Interactive skills

To measure interactive skills of students and teachers, an 18-item questionnaire was used employing a four-point Likert scale ('1' = hardly ever, '2' = sometimes, '3' = frequently, '4' = very often). The questionnaire was filled in twice during the year by the persons involved, a colleague and two observers. Items were based on a Dutch scale for teacher skills at stimulating children's language development ('Combilist', Damhuis, De Blauw, and Brandenburg 2004). Items were added measuring teachers' support of children's reasoning skills. The items were intended to involve language input, providing the children with opportunities for active involvement in conversations and thought processes, fostering the quality of language and reasoning, and giving feedback. Four scales were constructed by averaging the subjects' scores on the constituent items. The first scale consisted of one item. Internal consistencies of the second, third and fourth scale at both waves of data collection were measured by Cronbach's alpha (internal consistency of a scale is sufficient when alpha is above .60). The scales were called *Language input* (one item, putting own and children's actions into words); *Opportunity* (using silences during conversations, e.g., wait patiently for children to form thoughts, non-verbally responding to the child's utterances, asking questions sparingly, e.g., not directing all the learning and sharing control of conversations with children, making provoking remarks, challenging children to find their own solutions, and asking open-ended questions; six items, alpha = .82 and .88 for wave 1 and 2, respectively); *Quality* (extending children's utterances by making comments; seeking what the child means and understands in a give-and-take manner; encouraging children's use of higher levels of oral language – like reasoning, concluding; staying within the child's phase of thought process – gathering and analysing information and producing output; helping children to use different thought strategies like comparing, classifying and making links – i.e., between cause and effects, etc; adding new content to children's contributions, using spontaneous moments for encouraging children's learning – for example during eating time; eight items, alpha = .93 and .96); and *Feedback* (implicitly improving the child's language, summarising and sorting out children's thoughts, passing the child's contribution on to other children; three items, alpha = .83 and .73).

Evaluation of training

To determine students' and teachers' reactions to the interventions used (trainings) and reflections on what they had learned they were asked to fill in two evaluation forms, one directly after (A), and one six to eight weeks after the training (B). Questions of Evaluation Form A were:

- (1) Was the content of the training in agreement with your expectation?
- (2) Did the content of the training fit your needs?

- (3) What is the effect of the training for your knowledge?
- (4) What is the effect of the training for your skills?

Questions in Form B were:

- (1) What is the effect of the training session on your current knowledge and skills?
- (2) Did you speak with colleagues and/or managers about the content and effect of the training. If yes: With whom and what did you talk about?
- (3) What is according to you and based on your experiences with the training the next step at school in the professional development activities?

The answers given on the questions were placed in different categories. Answers on questions A1 and A2 were yes, no, no needs/expectation, or 'other'. The other questions yielded more different remarks with respect to content. The number in each category for each question was counted.

In addition, the educational adviser and internal coach were asked to write on an intervention form what the effects of the trainings were on the participants' knowledge and skills.

Results

Interactive skills

To assess possible effects of the course, a *MANOVA* (Multivariate Analysis of Variance) with a repeated measure for time was employed (cf. Winer, Brown, and Michels 1991). The purpose of (*M*)*ANOVA* is to test for significant differences between means by comparing variances. More specifically, by partitioning the total variation into different sources (associated with the different effects in the design), we are able to compare the variance due to 'between-groups variability' with that due to the 'within-group variability'. Dependent variables were the participants' scores on the four interaction scales. The within subjects factor was time (t0 and t1) and between subjects factors were type of teacher (student, playgroup or kindergarten teacher) and judge (self or observer ratings). In one school (Beppino) there were not enough respondents with scores at both times (usually self ratings at time 0 and colleague ratings at time 1). So school could not be included as a between subjects factor in the repeated measures analysis, and, therefore, we mainly report data of the Van Ostadeschool.

Data analysis revealed significant multivariate main effects of judge, $F(4, 15) = 6.47, p < 0.01$, and type of teacher $F(8, 30) = 2.48, p < 0.05$, on participants' scores on the interaction scales. As can be seen in Figure 1, self-ratings of all interactive skills were higher than observer ratings. As shown in Figure 2, ratings are lowest for students, intermediate for playgroup teachers, and highest for kindergarten teachers, respectively. Generally, kindergarten teachers score significantly higher than students on the interactive scales, whereas playgroup teachers do not significantly differ from the other two types of teachers.

For time no significant multivariate main effect was found, $F(4, 15) = 1.17, n. s.$ The multivariate interaction between time and type of teacher was not significant, $F(8, 30) = 1.67, n. s.$ Nevertheless, univariate interaction effects between time and type of teacher were found for the dependent variables opportunity and quality (see Figure 3).

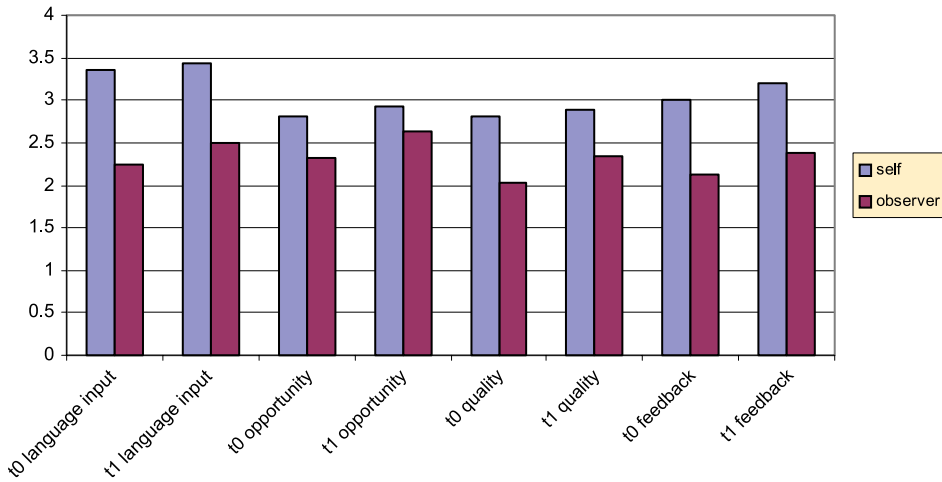


Figure 1. Mean scores on the four scales of interactive skills at two waves (t0 and t1) as a function of kind of judge (self or observer).

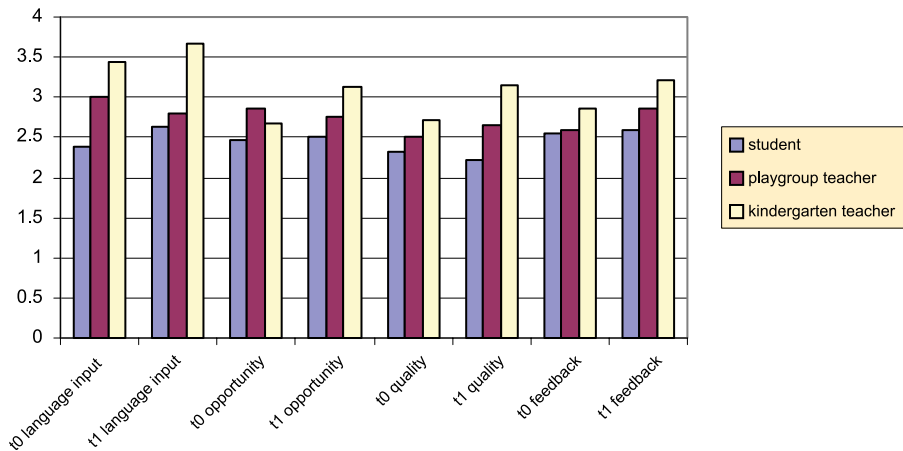


Figure 2. Mean scores on the four scales of interactive skills at two waves (t0 and t1) as a function of type of teacher (student, playgroup teacher or kindergarten teacher).

Only for kindergarten teachers ratings increase over time, for opportunity: $F(2, 18) = 3.84, p < .05$; and quality: $F(2, 18) = 4.49, p < .05$. Thus, kindergarten teachers grew in providing opportunities for children’s own language and thought contribution, and in fostering the quality of children’s language and thought.

At t0, there were enough respondents at both schools with self-ratings. Therefore, we compared the two schools on self-ratings of interactive skills performing a MANOVA with school and type of teacher as between subjects factors. A significant main effect for type of teacher was found, $F(2, 26) = 8.97, p < .01$. As can be seen in Figure 4, students scored lower than the other types of teachers. Also, a type of teacher x school interaction was found, $F(2, 26) = 3.73, p < .01$. Students of the Van Ostadeschool scored higher than those of Beppino Sarto, whereas playgroup teachers of Beppino Sarto scored higher than those of the Van Ostadeschool (see Figure 4).

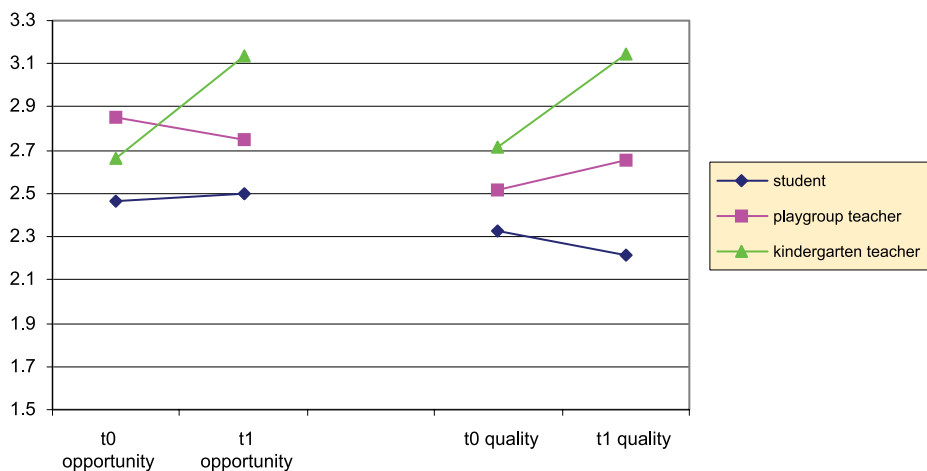


Figure 3. Growth curves in the provision of opportunities for children's own contributions and the promotion of the quality of their language production and thought processes between t0 and t1 as a function of type of teacher (student, playgroup teacher and kindergarten teacher).

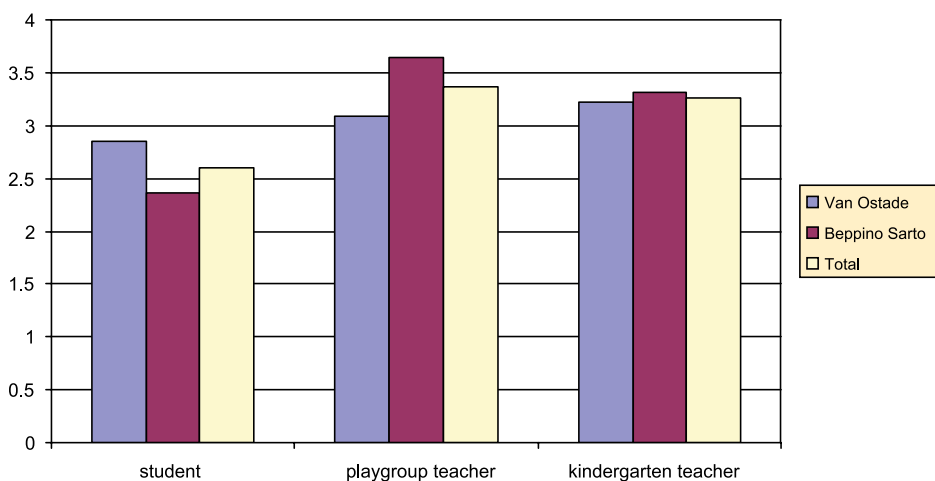


Figure 4. Mean overall scores on interactive skills at t0 as a function of type of teacher (student, playgroup teacher or kindergarten teacher) and school (Van Ostadeschool and Beppino Sarto).

A possible explanation for these differences in self-ratings of interactive skills between students and playgroup teachers of the schools may be the special characteristics of students and playgroup teachers of the schools. At the Van Ostadeschool, students had to apply for their traineeship and only four of six students were engaged. At Beppino Sarto, every student who was interested in this school was taken on. Thus, the application process may have influenced the quality of students of the Van Ostadeschool. Playgroup teachers of Beppino Sarto generally had more experience in the early childhood education program than those of the Van Ostadeschool (about 10 years versus about four to seven years, respectively), which may explain their higher scores on interactive behaviour.

Evaluation of trainings

There were only two students of the school in Eindhoven who filled in an evaluation form. Therefore, we report no results of this school. For the school in The Hague, only three kindergarten teachers completed Form A directly after the first training. These data are not reported. Five playgroup teachers and four kindergarten teachers answered the questions for the first training of Evaluation Form B (after six to eight weeks, see Table 1). The internal coach and one educational adviser filled in an evaluation form after the first training. The second training was directly evaluated by 18 participants using Evaluation Form A (two students, eight playgroup teachers, and eight kindergarten teachers, see Table 2) as well as by one educational adviser. Due to work pressure, the persons involved here did not complete Evaluation Form B for the second training. We will only discuss answers that are mentioned at least twice.

The evaluation of the first training is demonstrated in Table 1. As can be seen, two thirds of the participants gave the answer 'becoming aware' on the question what the effects of the first training were on their knowledge and skills. One third or less mentioned (self)reflection, interchanging ideas and motivation. All subjects said they spoke with colleagues and/or managers about the content of the training. Six people indicated they spoke to each other while giving feedback to each other, and three said they spoke to colleagues and managers in meetings. They spoke about: how to apply theory of thought processes, language input, use of Piramide project steps (orienting,

Table 1. Evaluation first training Van Ostadeschool 19 November 2007.

<i>Evaluation six to eight weeks after the training, (form B)</i>	N = 9 (5 playgroup and 4 kindergarten teachers)	
1. Effect of first training on knowledge and skills	Becoming aware	6
	(Self) reflection	3
	Interchanging ideas	2
	Motivation	2
	More occupied in team	1
	Applying feedback	1
	2. Spoken about training with colleagues/ managers? About which subjects?	Feedback from colleagues
Applying theory		3
Language input		3
In meetings		3
With each other		2
Use of the Piramide project steps		2
Positively approaching teachers' performance		2
Personal development plan		1
Reflection on teaching		1
Themes		1
Stimulating children's language production and own thought	1	
3. Continuation of professional development?	Filmshots	3
	Coaching	1
	Follow-up training	1

demonstrating, broaden and going deeply into) and positively approaching teachers' performance. The question about the next step in the professional development activities was mainly answered by referring to making new videotapes of adult-child interactions.

According to the internal coach (who coaches the playgroup teachers), participants became more aware of different thought strategies and of integrating these strategies in the schools' didactic approach (cooperative tasks and effective instruction model) after the first training. Also, they gained more insight in concrete and abstract levels of asking questions. The educational adviser (who coaches the students and kindergarten teachers) also refers to becoming aware of things that matter for children's thought development as an effect of the first training.

For the second training, 18 subjects filled in Evaluation Form A. As shown in Table 2, two thirds of the subjects answered yes to the questions whether the second

Table 2. Evaluation second training Van Ostadeschool 18 March 2008.

Evaluation directly after training Form A	N = 18 (2 students, 8 playgroup and 8 kindergarten teachers)	
1. Associated with expectation?	Yes	12
	Other answer	3
	No expectation	3
2. Associated with needs?	Yes	12
	No	2
	No needs	2
3. Effects on knowledge	Other answer	2
	Becoming aware	8
	Children's own contribution	5
	Differences in questions	4
	Knowledge development /stimulation of thought	3
	Continuing asking questions	3
	Listening	2
4. Effects on skills	More and concrete knowledge	1
	Little	1
	Becoming aware	8
	Ways of asking questions	5
	Examples teaching thought	2
	Listening	1
	Being clear	1
	Being alert	1
	Refining	1
	Better transfer of knowledge	1
	More effectively stimulating thought processes	1
	Concrete, applicable	1
	Applying theory	1
VAT (following, adjusting, and adding)-principle	1	
Challenging children	1	
Little	1	

training fitted their expectation and needs. Three persons had no expectations and two persons had no needs. Five times another answer was given. For example, one playgroup teacher answered she went deeper into the subject of stimulating children's thought processes and she became more conscious. Two kindergarten teachers mentioned that the training did not fit their needs, one because she worked only shortly at this school, and the other because she expected to go deeper into the matter.

Eight times 'becoming aware' was mentioned as an effect of the second training on both subjects' knowledge and skills. Only one teacher (the one who expected to gain more in-depth knowledge) commented she did not learn much yet. Other effects of the second training on knowledge were: children's own contribution, differences in (effects of) asking questions, the development and stimulation of children's thought, continuing asking questions and listening. Other effects of the second training on skills were: ways of asking questions and examples of how to teach thought.

The educational adviser indicates (in her intervention form) that after the second training students and teachers became more aware of the use of different thought strategies and the importance of asking the right questions during instruction and free moments. She wonders whether they can convert this awareness in their interactive behaviour in the classroom. Some teachers told her they already tried to perform some strategies.

Conclusion and discussion

The objective of the present study was to examine effects of professional development activities on the quality of adult-child interaction in two Dutch PDSs, attempting to improve the outcome of early childhood education programmes. In the PDSs students, (in)experienced playgroup and kindergarten teachers are supposed to learn from and with each other how to support and challenge language and reasoning skills. The central research question was whether students, playgroup and kindergarten teachers of the two PDSs would grow in their interactive skills over time.

Therefore, participants' interactive skills were measured twice during one school year by self and observer ratings using a checklist referring to language input, providing opportunities for children's active involvement, stimulating the quality of the child's language and thought processes, and giving feedback. In addition, students' and teachers' own sense of growth and effect of the trainings were studied employing an evaluation form. Since there were not enough respondents with scores at both times on one school (Beppino Sarto), we will only reflect on the data of the other school (Van Ostadeschool).

A striking finding is that we did not find a main effect of time on subjects' interactive skills. Thus, overall, the persons involved did not grow in their interactive skills over time. However, kindergarten teachers significantly grew in providing opportunities for children's own language and thought contribution, and in fostering the quality of children's language and thought. Both skills were frequently discussed and practiced during the trainings, for example by experiencing differences in types of open-ended and closed questions and inventing open-ended questions around different play materials. That students did not develop their interactive skills may have been due to the fact that they received education for a relatively short period of time (they are in their third year of teacher education). Probably they still need to learn a

lot at different domains. An explanation for the finding that playgroup teachers did not show professional growth in interactive skills may be their level of former education. Playgroup teachers generally followed intermediate vocational education which is at a lower level than teachers training college. We suppose playgroup teachers need more time and instruction to learn the interactive skills and reflective abilities needed. Recently, in the Netherlands a discussion was started about raising the level and standards of teacher education for early childhood teachers who work with nought- to six-year-old children (Onderwijsraad 2008). Our data are in line with this discussion and discussions in other countries (cf. Hevey 2008). The internal coach of the school, educational adviser and researchers experienced that the playgroup teachers needed more concrete explanations about the items used in the checklist. Despite the fact that the checklist data revealed consistent scales of interactive skills, our first recommendation is to use more concrete and less abstract words in the list.

Another eye-catching result is that self-ratings of interactive skills were higher than observer ratings. An explanation for this finding is based on impression management theory, i.e., people may be inclined to present themselves in a socially desirable way, and, therefore, are less critical in evaluating their own performances (Goffman 1959). In future research, it is recommended to observe teacher's interactions with young children (using observer ratings), because it is difficult to determine whether teachers' own evaluations of their interactive skills actually represent their interactive behaviour with the children. The quantitative approach used in the present research helps to determine strengths, weaknesses and growth in teachers' interactive skills and gives directions for further improvements of these skills.

Comparing the quality of students', playgroup teachers' and kindergarten teachers' interaction with children, it can be seen that kindergarten teachers score higher on interactive skills than students. The playgroup teachers scored intermediate. This finding is also in line with the above-mentioned differences in time spent in and level of education.

Concerning the evaluation of the trainings using evaluation forms two thirds of the subjects gave a positive evaluation of the first training, that is, they acknowledged that the training sessions fitted their expectations and needs. Only two kindergarten teachers mentioned that the training did not fit their needs. About a half to two thirds of the participants involved mentioned awareness in response to the question what the effects of both trainings are on their knowledge and skills. One teacher commented she did not learn much yet. These results suggest that the trainings did help many participants to consider their practices and explore new ideas. This suggestion is in accordance with remarks of the educational adviser who also wrote about awareness as the most significant effect of the trainings.

For the second training, five participants (consisting of two playgroup and three kindergarten teachers) commented on having learned skills indicating they have learned to ask different kinds of questions. The observations of the interactive skills employing the checklist confirmed the growth in providing opportunities (asking questions) for kindergarten teachers. Probably more time is needed to implement all the interactive skills for all subjects.

A major recommendation calls for the involvement of teachers and students in the articulation (definition, goals, design, role structure, and implementation) of the PDS and the research. Some teachers and students are not totally aware of what the PDS and the research on their professional development entails. They sometimes demonstrated a lack of research ownership directing statements to their research contribution

like: 'We have to fill in this list for her [researcher]' and 'Did you already profit from watching the videotapes of our lessons?' Also, many teachers did not return their checklists and evaluation forms, especially at one school. A continuous and systematic method of information exchange for all PDS participants should be provided, including regular visits by the researchers. Commitment to the PDS and accompanying research probably will come only if teachers and students experience a concrete gain from it (cf. Redemer and Nourie 1999, 127). Professional development through the PDS effort should increase the capacity of teachers for continuous improvement of their interactive competencies. The present research shows that at least for kindergarten teachers, their time and energy spent in the PDS development programme appeared to have a positive impact on the growth of their interactive skills.

References

- Bowman, B.T., M.S. Donovan, and M.S. Burns. 2001. *Eager to learn: Educating our preschoolers*. Washington, DC: Committee on Early Childhood Pedagogy, National Research Council.
- Byrd, D.M., and D.J. McIntyre. 1999. *Research on professional development schools: Teacher education yearbook VII*. Thousand Oaks, California: Corwin.
- Damhuis, R., A. de Blauw, and N. Brandenburg. 2004. *Combilist. Een instrument voor taalontwikkeling via interactie* [Combilist. An instrument for language development by means of interaction]. Nijmegen: Expertisecentrum Nederlands.
- Deinum, J.F., D.W. Maandag, W.H.A. Hofman, and J. Buitink. 2005. *Aspecten van opleiden in de school: een vergelijkend internationaal overzicht* [Aspects of training in the school: An international comparative overview]. Den Haag: Onderwijsraad.
- Goffman, E. 1959. *The presentation of self in every day life*. Edinburgh: University of Edinburgh Social Sciences Research Centre.
- Gorter, R.J. 2007. *Jong geleerd, oud gedaan: Onderzoek, opleiden en educatieve dienstverlening: een integrale aanpak in de voor- en vroegschoolse educatie* [Early learned, old done: Research, training and educational service: An integrative approach for early childhood education]. Den Haag: Hogeschool INHolland.
- Hevey, D. 2008. Beyond professionalism: Developing a culture of continuing professional development in early years. Paper presented at the 18th EECERA annual conference, 3–4 September, in Stavanger, Norway.
- High/Scope Educational Research Foundation. 2008. *The High/Scope educational approach: A prospectus for pre-kindergarten programs*. Ypsilanti, MI: High/Scope Press.
- Hohmann, M., and D.P. Weikart. 2002. *Educating young children: Active learning practices for preschool and child care programs*. Ypsilanti, MI: High/Scope Press.
- Howes, C., and E.W. Smith. 1995. Relations among childcare quality, teacher behavior, children's play activities, emotional security, and cognitive activity in child care. *Early Childhood Research Quarterly* 10, no. 4: 381–404
- Inspectie van het Onderwijs. 2008. *De kwaliteit van voor- en vroegschoolse educatie in de vier grote steden. Pilot: Toezicht op voor- en vroegschoolse educatie in de G4. Inspectierapport 2008–15* [The quality of early childhood education in the four big cities. Pilot: Inspection of early childhood education in the four big cities. Survey of the Dutch educational inspectorate 2008–15]. Utrecht: Afdeling communicatie, Inspectie van het onderwijs.
- Kiewiet-Kester, J. 2006. *PDS nader bekeken: Een praktijkbeschrijving van 'Opleiden in de school'* [A closer look at PDS: A description of a PDS]. Leiden: Kenniskring Educatie, Hogeschool Leiden.
- Neapolitan, J.E., and T.R. Berkeley. 2006. *Where do we go from here? Issues in the sustainability of professional development school partnerships*. New York: Peter Lang.
- Onderwijsraad. 2008. *Een rijk programma voor ieder kind. Advies uitgebracht aan de staatssecretaris van het ministerie van OCW, nr. 20080161/913july* [A rich programme for every child. Advice to the State Secretary of the Department of Education, Culture, and Science]. Den Haag: Onderwijsraad.

- Redemer, J.D., and B.L. Nourie. 1999. Concerns of professionals involved in implementing a professional development school. In D.M. Byrd, and D.J. McIntyre, *Research on professional development schools: Teacher education yearbook VII*. Thousand Oaks, CA: Corwin.
- Schepens, A. 2006. Een studie naar de meerwaarde van partnerschappen in de lerarenopleiding [A study on the surplus value of partnerships in secondary teacher training]. *Velon* 27: 4–12.
- Simmons, J.M., L.R. Konecki, R.A. Crowell, and P. Gates-Duffeld. 1999. Dream keepers, weavers, and shape-shifters: Emerging roles of PDS university coordinators in educational reform. In *Research on professional development schools: Teacher education yearbook VII*, ed. D.M. Byrd, and D.J. McIntyre. Thousand Oaks, CA: Corwin.
- Tigelaar, D.E.H., D.H.J.M. Dolmans, P.C. Meijer, W.S. De Grave, and C.P.M Van Der Vleuten. 2008. Teachers' interactions and their collaborative reflection process during peer meetings. *Advances in Health Sciences Education* 13, no. 3: 289–308.
- van Kuyk, J. 2003. *Piramide voor jonge kinderen: De methode* [Piramide for young children: The method]. Arnhem: Citogroep.
- Wilcox-Herzog, A. 2004. How experience and education relate to teachers' beliefs and behaviors. *Journal of Early Childhood Teacher Education* 25: 11–18.
- Winer, B.J., D.R. Brown, and K.M. Michels. 1991. *Statistical principles in experimental design*. 3rd ed. New York: McGraw-Hill.