PARABLE UNDERSTANDING IN THE PRIMARY SCHOOL CLASSROOM: A SOCIO-CULTURAL PERSPECTIVE ON LEARNING TO UNDERSTAND PARABLES

THEO VAN DER ZEE
CHRIS HERMANS
COR AARNOUTSE
Radboud University Nijmegen

Abstract
In recent decades parable understanding has been widely researched in the field of pedagogy of religion, mainly conducted in a Piagetian framework. This article presents an intervention study taking a socio-cultural perspective on learning to understand parables. The aim of this research is to investigate the effects of curriculum interventions by way of both comprehensive and partial strategic learning tasks on the understanding of parables in the primary school classroom, as well as which aspects help to explain these effects.

The study involved 484 primary school students in the fifth and sixth grades. It consists of an intervention study involving a quasi-experimental design with two experimental groups and a control group.

Results reveal that the effect on the group which dealt with the partial strategic intervention is greater than that on the control group. The difference in effect between this experimental group and the control group is jointly attributable to the factors of age, gender and initial achievement level.

The study shows that innovation of learning practices is only effective if it proceeds in successive steps. The partial strategic intervention may well be an appropriate first step in the innovation of parable understanding learning practices. Students should first master a limited number of strategies, which gradually increases. This need not wait until the child reaches the age of twelve; the first steps can be taken as early as the age of nine.

Key Words: Religious education, primary schools, parable understanding, strategic intervention.

1 INTRODUCTION

Parables play an important part in introducing students of religious education to the Christian religious community and its practices. In contemporary secularised and pluralistic societies such as those in Western Europe many students are no longer familiar with religious practices in which these narratives are told. They find parables strange, not only because of the religious language but also because they do not see the narratives' relation to real-life situations. Put differently, students perceive parable language and representations as originating from a totally different culture (Theis, 2005; Bucher, 1999; Porzelt, 2002). Learning to understand parables has become

highly problematic. The question is how religious education can enhance understanding of parables in a secularised and pluralistic society in order to facilitate construction of knowledge about the world and how to deal with it in a religious perspective.

This article reports on our research into parable understanding in the field of pedagogy of religion. In section 2 we cite previous research into the subject and examine some of its shortcomings. After outlining some theological reflections, culminating in a number of characteristics of parable understanding, we present basic principles for a learning environment in which students can learn to understand parables. The aim of our research, the research questions and hypotheses are given in section 4. Taking a sociocultural perspective, we examine whether a comprehensive strategic intervention may be a more effective way of enhancing parable understanding than a partial strategic intervention, and we try to determine which aspects help to explain such understanding. In section 5 we describe the research method: design, participants, educational intervention and measures. After presenting our research results we come to the conclusion and discussion, in which we also examine some implications for religious education.

2 A Paradigm Shift in Learning to Understand Parables

In recent decades parable understanding has been widely researched in the field of pedagogy of religion. In this section we present the findings of earlier studies of parable understanding in schools. The emphasis in mainstream research, conducted in a Piagetian framework, has been on the developmental and structural aspects of understanding. Scholars have sought to determine the age at which students can learn parables and have focused on aspects like cognitive skills, mental age and abstract and figurative thinking (cf. Jablonski, 2005).

A first focus of research was the developmental aspect of understanding. Using the Piagetian paradigm, Bucher (1987, 1999) studied parable understanding as a process of text reception. He regards the relation between the text of the parable and the reader as an interaction involving two aspects: assimilation and accommodation. On the one hand students can only assimilate parables by relating them to their worldview and cognitive structures; on the other hand their receptive structures can be accommodated or changed by reading parables. Bucher (1987) maintains that understanding parables for what they are – narratives about the kingdom of God – correlates with students' way of thinking and judgment. In order to understand

parables, students have to be capable of formal operational thinking (Piaget) or of understanding God at the fourth level of religious judgment as the one who is good (Oser & Gmünder). Bucher therefore advises against dealing with parables in religious education before students have the cognitive competencies to understand them as narratives about the relation between God and human beings, which happens round about twelve years of age. From that age onwards students should be given the opportunity to optimise their competencies and to transform their way of understanding parables. Tamminen (1987) came to similar conclusions. We conclude that, from a developmental point of view, parable understanding relates to mental age and cognitive skills.

A second focus of research was the semantic structure of parable understanding. Hermans (1990) identifies parables as complex metaphors and, following Soskice (1985), thinks that students will be able to understand parables by analysing their structure of meaning. Students have to learn how to relate representation (e.g. the labourers in the vineyard, the lost sheep) to the topic (God's interrelationship with human beings). With respect to understanding parables, Hermans's research provides evidence that it is determined by cognitive development and vocabulary rather than by religious background characteristics as church affiliation. Interest and reflexive analysis appear to support each other. In his survey research Theis (2005) came to very similar conclusions when stating that biblical disposition (understood as cognitive and affective understanding of biblical texts generally and a specific parable in particular) is a determinant of parable understanding. In the Piagetian paradigm understanding clearly relates to the ability or disposition to identify the semantic structure of parables.

Empirical research into parable understanding in a Piagetian framework has provided evidence that mental age and cognitive skills are the main determinants of understanding, and that understanding relates to identification of the semantic structure of parables. According to Piaget's genetic structuralism students are expected to be able to understand parables once their structure of understanding the world has reached the formal operational phase. Since the developmental sequence of this structure is considered to be constant, parable understanding can be linked to a specific age. In the Piagetian framework scholars use a cognitive paradigm and accordingly think that understanding depends on development. Viewed from a socio-cultural perspective, however, development is not so much a precondition for learning; rather it is a matter of learning awakening development. According to Vygotsky (1978) learning triggers various developmental processes

(Palincsar, 1998). As a result of social interaction students develop by engaging in learning activities under adult guidance or in collaboration with more proficient students. By participating in learning practices for parable understanding students may be expected to develop their intellectual competencies. Empirical evidence on whether a learning environment based on the socio-cultural framework enhances parable understanding is still lacking.

Finally, research into parable understanding was conducted in largely homogeneous classrooms of Christian students and tended to neglect the religious pluralism of the student population (Hermans, 1990; Theis, 2005). In present-day secularised and religiously pluralistic society students enter the primary school classroom with diverse personal characteristics (Van der Zee, Hermans & Aarnoutse, forthcoming). Empirical evidence that these personal characteristics help to explain parable understanding has not been documented yet.

3 Religio-Pedagogic Reflections

In this section we first present some theological reflections on parable understanding (cf. Erlemann, 1999). To this end we elect to regard parables as extended metaphors with a view to finding a viable way of understanding them. Then, following the theological reflections, we formulate, from a socio-cultural perspective, certain basic principles for the creation of a learning environment in which students can learn to understand parables.

3.1 *Theological reflections*

Parables are a special kind of narrative. Their distinctive nature lies in their semantic structure, which can be analysed in terms of two polarities: firstly the polarity between immanent and transcendent reality, and secondly the polarity between the anticipated and actual unfolding of the narrative. Partly on account of their structure parables are not readily comprehensible, but theoretical perspectives can guide us heuristically to an interpretation. Without going into detail it should be noted that interaction and cognitive semantic theories have had a great impact on parable understanding (Kjärgaard, 1986; Ricoeur, 1981; Boeve & Feyaerts, 1999; Soskice, 1985). From these theoretical perspectives parables are perceived as extended metaphors (Weder, 1978, 1993; Crossan 1973a, 1973b). Both phenomena are considered to display semantic tension: metaphors at the level of meaning (i.e. between individual concepts) and parables at the level of compo-

sition (i.e. in the narrative as a whole) (Weder, 1978; Erlemann, 1999). In short, parables are special linguistic phenomena and by treating them as extended metaphors we can understand them.

Let us look more closely at the semantic structure of parables. In the first place they display tension between the narrative (vehicle) and what the narrative refers to (topic) by uniting two apparently irreconcilable worlds. The strained relationship between vehicle and topic is comparable to the semantic tension, so characteristic of metaphors, between subject and predicate. Subject and predicate derive from different domains, for instance as in "My love (interpersonal relationship) is the sun in my sky (astronomy)". By uniting the two domains metaphors can evocatively generate new meaning and fulfil a heuristic function in our understanding of the world. Parables in their turn unite the immanent and transcendent worlds. Thus they are uniquely able to generate images of the transcendent (Weder, 1993). Some authors even see parables as a heuristics of the kingdom of God, in other words a fundamental model for understanding transcendent reality (Meurer, 1997).

In addition parables create a tension between the narrative and the reader's everyday world, in the following manner. They evoke a particular discourse of images in which the story is narrated and invites readers to enter this fictional world. At a given moment this narrated world no longer accords with their prior understanding. At that moment the parable starts perplexing its readers, and because they observe that their existing interpretive framework no longer suffices, they are placed in a position where they are receptive to new ideas. It is at this receptive moment that parables can introduce images of how to understand human life in a new way. They show how life could be lived differently; in other words, they present a possible world (Weder, 1978). The story of a parable relates to a possible rather than a real world and in that sense may be considered fictional. By regarding the image of a possible world as an image of God's kingdom human coexistence is put in a transcendent perspective. Thus the division of wages according to the judgment of the owner of the vineyard (Mt. 20:1-16) evokes images of what is just in the perspective of God's kingdom. One might say that the parable's portrayal of an unconventional division opens up an angle on the kingdom of God. The image of such a possible world appeals to readers to work towards the realisation of that kingdom while still in this world (Meurer, 1997).

Parable understanding is more that just unravelling the meaning contained in the story. Far rather it entails construing (new) meaning that emerges with the aid of the narrative in the light of the readers' own situation(s).

By measuring their own assumptions and beliefs against images of a possible world readers are enabled to construct meaning. In so doing they tell the story further and become, as it were, co-authors of the parable (cf. Tolbert, 1979).

The question is how this construction of meaning operates. John D. Crossan paves an interesting and promising way for the understanding of parables. This American theologian perceives parables as extended metaphors and thinks that the parable invites readers to participate in its world. Only after readers have actually dared enter the story and experience the metaphor can they understand (Crossan, 1973a, 1973b, 1988). According to Crossan, the structure of parables comprises three steps: first an introductory episode, then an unexpected event that disrupts the story, and finally an open ending. When the reader risks entering and is affected by the story (first step), the deep structure of the accepted world is suddenly shattered (second step). In this unexpected event things happen in an extraordinary way and thus subvert normality. This event is called the critical moment and can bring about estrangement. Estrangement makes the reader susceptible (third step) to a new point of view (Crossan, 1988). Briefly, the structure of the parable story combines with its content in shattering expectations. For example, the parable of the labourers in the vineyard (Mt. 20) starts with a perfectly normal, recognisable situation of men working in a vineyard and getting paid at the end of the day. When it comes to the payment the owner of the vineyard decides to proceed in an extraordinary way by paying all workers the same wage. This shatters the expectations of the labourers in the story, but also those of the readers of the parable, who can only learn to understand the owner's behaviour by opening themselves up to a new point of view. In this case the new viewpoint concerns justice: the parable evokes images of what is just according to the lights of a possible world.

The images a parable evokes via its plot is called the narrative plot. Readers proceed to construct meaning by linking the narrative plot with their own assumptions and beliefs, in this case their notions of justice. The linking process can be seen as a dialogue and as such it constitutes an essential part of understanding. In the dialogue various voices communicate with each other: those of the readers and their context on the one hand, and those of the story and the community in which it is narrated on the other (cf. Tappan, 1991). By entering into dialogue readers are obliged to reconstruct their assumptions and beliefs. Thus they are invited to leave behind their (common) knowledge and open themselves up to the construction of new knowledge. By subverting the commonly accepted world parables not only present a possible way of human coexistence, but also prepare their read-

ers for an experience of transcendence. For this reason Crossan (1988, p. 105) prefers to speak of Christianity as a parabolic religion, "a religion that continually and deliberately subverts final words about 'reality' and thereby introduces the possibility of transcendence". In view of the new experiences that readers have, each new reading will produce fresh insight and meaning (Schillebeeckx, 1990). Parable understanding is perceived as an ongoing process.

From the foregoing we infer the following characteristics of parable understanding. Parables evoke representations of both immanent human reality and God's transcendent reality and are able to generate new meaning. The three steps of the procedure can function as a heuristics to discover the narrative plot of the parable. The narrative plot pertains to a possible world, to be understood as an image of God's kingdom. By comparing the narrative plot with the reader's assumptions and beliefs people can understand parables and construct meaning.

3.2 *Basic principles of learning to understand parables*

From a socio-cultural perspective learning and development take place in socially and culturally shaped contexts (Palincsar, 1998). Learning is perceived as engagement in the (learning) practices of a community, in which students construct knowledge by appropriating what previously belonged to others (Wertsch 1985, 1998; Wegerif, Mercer & Dawes, 1999; Brown, Collins & Duguid, 1989).

Participation has become a key paradigm in educational theory. By viewing learning as the process of becoming an active participant in a community of practice the socio-cultural approach stresses the role of cultural and semiotic tools as mediators of social interaction and means of thinking (Wertsch, 1998; Kaartinen & Kumpulainen, 2004). The Christian community uses various genres such as hymns, prayers and stories to express its understanding of and dealings with the world. Parables afford insight into how to understand this reality and act upon it. Biblical parables, therefore, can be seen as important tools of the Christian community. Learning is perceived as a process of appropriating tools like parables and introjecting one's own intentions and meaning (Wertsch, 1998). Put differently, learning is both getting to know how you can use a community's tools and finding out how you yourself are going to use them. Hence learning to use these tools entails both mastery and appropriation. Following Vygotsky (1978) the space in which learning occurs (Zone of Proximate Development, ZPD) is constituted by the space between the student's real-life actions and

her or his potential actions in the particular context. In that context students find greater or lesser support that can help them to perform new actions. A context in which there is interaction with more proficient students and teachers extends this space. Thus the space in which learning occurs may be seen as a social space. Students develop by engaging in learning activities under adult guidance or in collaboration with more proficient students. By stimulating interaction with more proficient others or experts the boundaries of students' ZPDs can be expanded (Palincsar, 1998; Järvelä, 1995).

Appropriation of tools can be seen as management of alterity. Alterity refers to things students are unfamiliar with and do not (yet) know or understand. Participation in learning activities teaches students to manage alterity and promotes conceptual change (Cameron, 2003). When it comes to the appropriation of parables alterity refers, firstly, to the story of the particular parable. Students must learn to understand what happens in the narrative and discover what new images it evokes (cf. Mette, 1994). By relating the story to their own experience or that of others in their environment they may become aware of the extraordinary or unexpected and thus gain fresh insight. The way the vineyard owner in the parable pays his workers will only be considered unusual once students realise that it is not normal for everyone to receive the same wages. This awareness dawns when students scrutinise their own experience and expectations regarding division, as well as the experience of contemporary others. Once pupils realise how unusual the division is they are able to construe new images of a possible world. The three-step procedure (see section 3.1) can function as a heuristics to find such images. If students want to acquire new knowledge, they need to follow the three steps. In short, management of alterity primarily entails getting to understand the narrated story, of which the unusual or unexpected is a major feature.

Secondly, alterity pertains to the world that the story refers to (cf. Cameron, 2003). Jesus told parables so as to evoke images of his Father's kingdom, the kingdom of God. Images of transcendent reality are not readily accessible; they only become so if the reader, in a manner of speaking, explores further. Further exploration entails constructing images of God's transcendent reality. By following the full three-step procedure students can probe further and construct and understand images of a possible world. These images are mediations of images of transcendent reality. It is important that students should incorporate their own images, possibly augmented with those of contemporary others. Understanding images that present a world with unexpected possibilities as an image of God's kingdom is a first step towards constructing images of the transcendent world. In the second

place, then, management of alterity entails learning to construct images of the transcendent, of which unexpected possibilities are a major feature. Parable understanding consists in managing the alterity of the narrated story and the world to which it refers in order to construct meaning. Religious education should assist students' participation in learning practices in which they learn to manage both aspects of alterity.

The cognitive apprenticeship model that is used for the teaching-learning situation is supposed to create optimal conditions for students' participation in religious practices. Teachers should provide models of expert performance and encourage students to reflect on the differences between their own learning and the experts' performances. Besides modelling and reflection, teachers should promote students' participation by means of strategies, questions or feedback that scaffold the students' learning (Järvelä, 1995). Scaffolding refers to (mental or physical) supports provided by the teacher to help students carry out their tasks (Collins, Brown & Newman, 1989).

In the first place, scaffolding should include social strategies that promote and improve cooperative behaviour in small groups. Students' participation can be promoted and encouraged through small-group assignments and discussions, as well as full class discussions (Wegerif, Mercer & Dawes, 1999). Social strategies concern rules and procedures for effective cooperative groups, which means that every student has a duty to participate in small group interaction, both to be helped themselves and to help others (Hoek et al., 1997; Webb, 1991).

Secondly, the scaffolding should include cognitive strategies to manage the alterity of both the parable story and the reality to which it refers. It is important that students learn to explicitly recognise parables as extended metaphors; to acquire knowledge about the vehicle term; to acquire knowledge about the topic term; to contextualise the vehicle; and to reassemble the vehicle and topic terms. Interrelating vehicle and topic can be done in several ways, but students should at least learn to transpose meaning from the vehicle to the topic in order to construct knowledge. Cameron (2003, p. 236) observes that sometimes "[m]ediation is needed when the bridge offered by metaphor from familiar vehicle to unfamiliar topic concepts cannot for some reason be constructed". This mediation can be supported by strategies like the three-step heuristics and the learning strategy to link the story with personal experience, assumptions and beliefs. By providing scaffolding teachers mediate students' construction process from familiar to unfamiliar domains.

Thirdly, the scaffolding should include affective strategies, chiefly in the form of coping with emotions (Op't Eijnde, De Corte & Verschaffel, 2001;

Järvelä, 1998). Students should be systematically stimulated to acquire affective strategies such as verbalising emotions, sharing aroused emotions with peers and the teacher, interpreting emotions by finding out why they feel happy or sad, and reinterpreting the current learning situation in the perspective of learning goals.

Finally, students should be stimulated to mentally represent learning goals as well as their behavioural intentions. By linking the two they can regulate their own learning. Motivational strategies assist students to regulate their learning, chiefly by relating their current task to their learning goals (Boekaerts, 1987, 2001).

To sum up we formulate four basic principles for creating a learning environment in which students can learn to understand parables. (1) In the educational context of the classroom students should be encouraged to participate in learning activities which relate to the Christian community's religious practices aimed at understanding parables. (2) The learning environment should promote and encourage interaction both between the students themselves and with the teacher. (3) The learning activities should comprise meaningful content. Students should be encouraged to understand parables, which entails management of the alterity of the parable story and the world to which it refers in order to co-construct knowledge and meaning, structure their experience of the environment, and create coherence in their understanding of the immanent and transcendent dimensions of reality. (4) Students' participation should be supported by modelling, reflection and various scaffolds such as social, cognitive, affective and motivational strategies, questions and feedback.

4 Goals, Research Questions and Hypotheses of the Study

The intervention study described below is located in the theoretical context of research into parable understanding in the educational setting of the classroom (Bucher, 1987, 1999; Hermans, 1990; Theis, 2005). Taking a socio-cultural perspective, we seek to enhance theoretical understanding of classroom learning and how this learning could be refined (cf. Wegerif, Mercer & Dawes, 1999).

The first goal of our study is to examine whether a comprehensive strategic intervention creates better conditions for parable understanding than a partial strategic intervention. These conditions refer to knowledge, comprehension and application of basic ideas and strategies relating to biblical parables. Following Vygotsky, we think that learning environments can

awaken students' parable understanding. By engaging in learning activities under adult guidance or in collaboration with other students, students are able to expand the boundaries of their ZPDs. This learning environment is operationalised in learning tasks which include meaningful content; learning strategies to understand what happens in the story, relate the story to real-life experiences and understand the narrative plot; and affective strategies to cope with emotions (see section 5.3). The question is whether students who are systematically given an opportunity to appropriate diverse learning, affective and motivational strategies in a comprehensive strategic intervention will end up with greater parable understanding than those who are given this opportunity by way of fewer strategies in a partial strategic intervention. If we compare the results of both groups with those of students who were not systematically exposed to such strategies, we can determine which intervention offers the best conditions for parable understanding.

The second goal of our study is to find out which aspects are conducive to progress in parable understanding. First we think of personal characteristics that are, as it were, given (gender, age) and characteristics that are partly formed by students' experience with past (learning) practices, such as religious self-definition (see section 2). A second factor to be taken into account is students' initial achievement level. Research has shown that prior understanding of biblical stories appears to be a major determinant of parable understanding (see section 2), and we labelled students' cognitive understanding prior to the intervention 'initial achievement'. Thirdly it is advisable to research the course of the learning process. Finally we seek to allow for current motivation. From previous research we know that interest influences parable understanding (see section 2), and we believe that interest is socio-culturally situated. By current motivation we mean students' motivation in the current learning situation.

In short, we investigate the effects of curriculum interventions by way of both comprehensive and partial strategic learning tasks on the understanding of parables in the primary school classroom, as well as which aspects help to explain these effects. Our research questions are as follows:

(1) Does a comprehensive strategic intervention create better conditions for parable understanding than a partial strategic intervention?
(2) To what extent do personal characteristics, initial achievement, an indicator of the development of the learning process and current motivation help to explain the progress of understanding?

Concerning our first research question, one would expect students that have systematically appropriated many strategies to be better able to understand parables than students who have appropriated only a few strategies. In the comprehensive strategic intervention students were able to appropriate several strategies to scaffold their parable understanding. In the partial strategic intervention fewer strategies are provided and students' learning is scaffolded in a more limited way, although the content is exactly the same (see section 5.3). Hence we expect that a comprehensive strategic intervention will promote better parable understanding than a partial strategic intervention. To determine whether students exposed to a comprehensive strategic intervention produce better results than those exposed to a partial strategic intervention, we compare their respective results with those of students in the control group, who were not systematically exposed to any strategies at all. Students in the two experimental groups are systematically given an opportunity to appropriate strategies, albeit in varying degrees, whereas those in the control group are not given this opportunity.

With respect to the second question we expect the personal characteristics of religious self-definition, belief in God, participation in religious practices and initial achievement level to help explain the effects on students subjected to the comprehensive strategic intervention. In this intervention students are questioned about various aspects of their identity that relate to their experience of earlier religious (learning) practices. For example, we think that Christian students and those who participate regularly in religious practices will be more familiar with biblical parables and better able to understand them than non-Christian students and those who do not participate regularly (Theis, 2005). As for students in the partial strategic intervention, we believe that their better results are partly attributable to cognitive aspects such as previously acquired knowledge and skills, and partly to aspects shaped by innate factors rather than experience of earlier religious (learning) practices (Bucher, 1987; Theis, 2005). These are initial achievement, age and gender. Regarding current motivation, it is expected that students who are highly motivated are better able to understand parables than those who are not. We think that this applies irrespective of the number of strategies provided.

5 Method

5.1 *Design*

Our research consists of an intervention study involving a quasi-experimental design with three groups. The design is presented in table 1.

Table 1. *Research design*

Research groups	*October*	*November-December*	*January*	*February-March*	*March*
Experimental Group 1	O11	X1	O21	X3	O31
Experimental Group 2	O12	X2	O22	X4	O32
Control Group	O13		O23		O33

We administered an instrument to ascertain personal characteristics and the Cognitive Test of Parable Understanding to students of the first experimental group (O11), the second experimental group (O12) and the control group (O13) in October. The three research groups are described in section 5.2. In November and December students in the first and second experimental conditions were introduced to the first part of the comprehensive strategic intervention and partial strategic intervention respectively, both of which comprise six lessons. In January we administered the intermediate test to all groups (O21, O22 and O23). The second part of the intervention programmes followed in January and February, both comprising seven lessons (X3 and X4). Directly after the completion of this second part in March we administered the Cognitive Test of Parable Understanding to both experimental groups (O31 and O32), as well as to the control group (O33). We shall return to the intervention programmes and the measures in sections 5.3 and 5.4.

5.2 *Participants*

The study involved 484 primary school students in the fifth and sixth grades. In selecting schools the first criterion was whether religious education is part of the curriculum. In the Netherlands religious education is taught only in religiously affiliated schools, not in the public system. Our selected multi-stage sample consists of children at Catholic primary schools in the Netherlands (approximately 35% of all primary schools, all fully state funded). The second criterion was the religious composition of the school population. We expected that understanding of parables would relate to

religious background variables as a result of familiarity with these biblical stories. Consequently we selected Catholic schools with a population of between 10% and 30% non-Christian students. From this group we drew a random sample of 85 schools. In view of the time that participation in the research would take, several schools declined to cooperate. In the end a sample of 16 schools in the southern Netherlands participated, totalling 22 grade 5 and 6 classes. All participating schools are situated in a socio-culturally fairly similar area with a rural and small town environment.[1]

The design comprises three research groups, whose composition is pragmatically motivated. A one-day training course before implementing the programme was arranged at two locations: Nijmegen and Sittard. The first experimental group is composed of schools within reasonable travelling distance from Nijmegen, and the second within reasonable travelling distance from Sittard. Students in the first group are subjected to comprehensive strategic intervention and students in the second group to partial strategic intervention. The control group comprises schools that indicated willingness to participate in the research with minimum time investment. The results of analyses of data obtained by means of the questionnaire on personal characteristics (see section 5.4) are presented in table 2.

Table 2. *Personal characteristics of students according to research group*

Group	N	Gender	Age (years)	Religious self-definition	Belief in God	Participation in religious practices
Experimental Group 1	148	77 boys 71 girls	75.3%: 9-10; 21.9%: 11; 2.7%: 12-13	52.4%: Christian; 15.2%: Muslim; 22.1%: nonreligious; 10.3%: other (incl. Hindu and Buddhist)	35.2%: certain; 11.7%: questions; 35.9%: doubtful; 7.8%: difficult; 9.4%: disagree	60.8%: (almost) never; 18.2%: now and then; 8.8%: regularly 12.1%: at least once a week
Experimental Group 2	109	56 boys 53 girls	21.1%: 9-10; 57.8%: 11; 21.1%: 12-13	75.0%: Christian 7.4%: Muslim; 13.9%: nonreligious; 3.7%: other (incl. Hindu and Buddhist)	25.8%: certain; 34.8%: questions; 28.1%: doubtful; 4.5%: difficult; 6.7 %: disagree	56.9%: (almost) never; 27.5%: now and then; 6.4%: regularly; 9.2%: at least once a week

Table 2. (*cont.*)

Group	N	Gender	Age (years)	Religious self-definition	Belief in God	Participation in religious practices
Control group	227	117 boys 108 girls 2 m.val.	38.8%: 9-10; 45.5%: 11; 15.6%:12-13	63.2%: Christian 13.5%: Muslim; 18.8%: nonreligious; 4.5%: other (incl. Hindu and Buddhist)	32.1%: certain; 21.9%: questions; 24.6%: doubtful; 10.7%: difficult; 10.7%: disagree	51.8%: (almost) never; 27.9%: now and then; 13.7%: regularly; 6.6%: at least once a week

Because we compare the results of the experimental groups with those of the control group in all our analyses (see section 5.5), the groups' composition was likewise controlled for possible differences. The composition of the first experimental and control groups is similar in regard to gender, religious self-definition, belief in God, participation in religious practices and initial achievement level. Independent Samples T-tests indicate that the first experimental group differs from the control group in respect of age ($t = -7.54$, $df = 335.53$, $p = .000$: the first experimental group has relatively more 9- and 10-year-olds). The second experimental group and the control group are similar in regard to four of the five personal characteristics and initial achievement level. Independent Samples T-tests indicate a similar age difference between the second experimental group and the control group ($t = 3.47$, $df = 250.83$, $p = .001$: the second experimental group has relatively fewer 9- and 10-year-olds and more 11-year-olds). In the analyses we need to control for these discrepancies.

5.3 *Comprehensive strategic intervention and partial strategic intervention*

The educational interventions were carefully designed according to the principles of participatory learning by the authors and two experienced curriculum designers (Hermans, 2003). These interventions aim at improving parable understanding by providing meaningful learning practices. They take account of performance in the subject of religious education over the past 30 years, as well as students' experience as a source of knowledge and insight and the critical power of Bible stories for their understanding and dealings with the world. Our aims in implementing new learning practices are ambitious: we want to establish a different classroom culture not only

through learning practices that relate to religious practices in the Christian community, but also by promoting and encouraging interaction between students through both small-group assignments and discussions and full class discussions. According to the basic principles formulated in section 3.2, the interventions have the following characteristics:

(1) They attempt to establish a different classroom culture through learning practices that relate to Christian religious practices aimed at understanding parables. These include ongoing construction of meaning in the light of new experience. Students are systematically encouraged to declare their assumptions, beliefs and experiences, and to discuss their understanding of parables with their peers and teacher. They are stimulated to generate alternative understandings of a given parable story and to evaluate these in the light of interpretations suggested by the class community. Students' own experience and present-day situations are discussed and measured against the narrative plot of the parable. For example, in lesson 10 students are invited, with reference to excerpts from diaries, to discuss their own experience of forgiveness, whereupon lesson 11 deals with the parable of the unmerciful servant. In this lesson students are asked to deliberate in small groups on what the story conveys to them. Students are challenged by way of open questions to construct meaning by comparing their personal experience of forgiveness with the biblical narrative. Examples of such questions are, "Do you recognise what happens in the story?", "Have you ever experienced something like that?" The teacher's task is to stimulate, encourage and scaffold students' engagement in these learning practices, and to show that diverse knowledge and meaning constructions can be useful for parable understanding.

(2) They attempt to establish and support the religious education class community by promoting and encouraging interaction between students through small-group assignments and discussions, as well as full class discussions. Each session includes small-group assignments and discussions in fixed, religiously heterogeneous groups of four students. A full class discussion precedes and follows each small-group assignment and discussion. The full class discussion serves to compare and evaluate the various interpretations emerging from the groups. For example, in lesson 7 students first consider the extraordinary division of wages in the parable of the labourers in the vineyard, then break up into small groups to work out what it means to them personally and what it tells them about God. The

groups then present their findings in a full class discussion. The teacher's task is to stimulate, encourage and scaffold students' engagement in these interactions.

(3) The contents of the intervention programmes derive from three sources: biblical parables, contemporary events and students' real-life experience. In both parts of the programme they are introduced to the biblical narratives and invited to discuss their own experience. In the first part of the programme students learn to understand the biblical parable of the labourers in the vineyard (Mt. 20) and are asked in small groups to construct knowledge about what is or could be just. The unusual distribution of wages (every worker gets the same wage, no matter how many hours he worked) invokes students' own notions of what is fair. In the second part of the intervention students construct knowledge about forgiveness by way of understanding the parable about the unmerciful servant (Mt. 18). Here the story, in which the servant shows no patience and refuses to forgive, invites students to reflect on forgiveness. They are asked to link the parables with contemporary events and their own experience. The events are presented to them in the form of a video (a man going around at night distributing bread to needy people) and an excerpt from a diary (a girl talking to her grandfather about the war). Students' real-life experience is invoked mainly in assignments that ask them to recount their own experience of division (e.g. of pocket money) or forgiveness (e.g. after a quarrel). The critical moment in the parables can help them to see their own experience and current events in a different light. Linking the narrative plot of the parable (through questions like, "Do you recognise what happens in the story?", "Have you ever experienced something like that?", "What does the story try to tell us?", "Does it call on us to do something?") with current events and personal experience enables students to appropriate the following five key concepts of the programme, which we treat as basic ideas: (1) a biblical parable is a religious story in which unexpected things happen; (2) God is someone who gives abundantly; (3) God sometimes asks people to share abundantly; (4) if you can't handle a problem by acting moderately, you should act abundantly; (5) extraordinary things in life can be understood with the aid of stories from religious books like the Bible or the Koran.

(4) They give students the opportunity to appropriate learning, affective and motivational strategies systematically. The intervention involves the following strategies: (A) Learning strategies for understanding

the story and what it refers to, relating the story to real-life situations and understanding the narrative plot. These strategies are operationalised in questions that try to scaffold the students' understanding process. Scaffolding refers to (physical) supports that the teacher provides to help students carry out their tasks (Collins, Brown & Newman, 1989). Strategies involve questions like, "Do you know what kind of story this is?", "Are you able to repeat the story in your own words?", "Do you recognise what happens in the story?", "Have you ever experienced something like that?", "Can you work out its intention?", and "Does it call us to do something?" Students are given these questions on small mnemonic cards that they use as learning aids. At the start of the programme the teacher introduces these cards and teaches students how to use them. Students are encouraged to use them while working in small groups, and gradually internalise them by asking themselves or other students the questions without using the cards. (B) The heuristic strategies scaffold students' planning of their learning process and these, too, are operationalised in drawings on small mnemonic cards. The drawings visualise three steps in acquiring new knowledge, starting from "Right at the beginning I already knew what's up!", via "Later on I wasn't so sure anymore. How will it continue?", to "Then something very new happened. I know a lot more now!" These strategies can help students to discover the extraordinary, critical moment in the narrative and explore further. (C) In addition students are systematically stimulated to acquire affective strategies such as verbalising emotions while sharing aroused emotions with peers and the teacher, interpreting emotions by finding out why they feel happy or sad, and reinterpreting the current learning situation in the perspective of the learning goals. The affective strategies to scaffold students' coping with emotions are again operationalised in questions written on mnemonic cards. Examples of questions are: "What do the characters in the story feel?" "Are you feeling angry or are you enjoying yourself?" "Do you know why you feel the way you do?". (D) Finally, motivational strategies are meant to assist students to relate their current task to their learning goals. Students are introduced to these strategies through the teacher's instruction and full class discussions. The teacher introduces the strategies with questions like, "What do you want to learn? What does your current task mean for your learning?" In the first part of the programme the learning, affective and motivational strategies are introduced to the students, who can acquire them

through small-group and individual assignments. Students are given the opportunity to appropriate the strategies both individually and collectively. Thus the affective strategies on the mnemonic cards are presented in conjunction with learning strategies, and the contents of the questions that enable students to appropriate the strategies are interrelated. Students are then taught learning strategies to understand the story and relate it to real-life situations, and to verbalise their emotions (first mnemonic card), heuristic strategies (second mnemonic card), the learning strategy to understand the narrative plot and affective strategies to interpret their feelings (third mnemonic card), and the learning strategy to deal with what they have learnt (fourth mnemonic card). In the second part of the intervention programme students use the strategies that they learned in the first part to carry out various assignments.

Whereas the comprehensive strategic intervention includes all the aforementioned strategies, the partial strategic intervention offers only some of them. The latter intervention lacks two strategies that conventional religious education offers only to a limited extent if at all, namely the learning strategy to relate religious stories to real-life situations and the affective strategy to cope with emotions. Students in the first experimental group are introduced to comprehensive strategic intervention, and students of the second experimental group to partial strategic intervention. To both experimental groups the intervention means a drastic change in the classroom culture and learning practices. Neither of the two groups knows to relate biblical narratives systematically with their own experience and learn mainly according to the model of classical education. In the first experimental group a great deal of time is devoted to teaching these strategies and class discussions about them. In the second experimental group teaching time and class discussions are confined to learning strategies to understand the story and what it refers to, and to understand the narrative plot, heuristics and motivational strategies. Students in both experimental groups are invited to relate their own assumptions, beliefs and experiences to the parables and to learn from each other through small-group assignments and discussions. The first experimental group does so with the aid of all the aforementioned strategies; the second has to manage minus one major learning strategy and without the affective strategies. By giving them first simple, and later more complex, small-group assignments students in both experimental groups are introduced step by step to the new mode of operation.

The control group follows the ordinary religious education programme, devoting the same amount of time to it as the two experimental groups (45 minutes per week on average). The control group does not work on the same lesson material as the experimental groups but uses existing material as religious education methods (e.g. *Klapband, Hemel & Aarde, Beloofd blijft beloofd*) or projects (e.g. from the local parish). This material, like the intervention programmes, contains both biblical stories and the experience of contemporary children. Control group students are not systematically given even limited opportunity to appropriate learning, affective and motivational strategies. This is a cardinal difference between the two experimental groups and the control group.

The interventions were implemented by class teachers in a series of 13 lessons. All the teachers have several years' experience of teaching religious education and were given a one-day training course before implementing the programme. The lessons constituting the intervention, each comprising about 45 minutes, were taught almost weekly over a period of four months. During the intervention the experimental groups dropped the normal religious education programme and invested the same amount of time in the intervention programme. All experimental classes were visited at least once by the first author, who not only observed classroom learning during his visit but also coached the teachers afterwards. Although heavier demands in terms of instruction and strategies were made of teachers in the first experimental group than of those in the second, all teachers received much the same monitoring. During the intervention teachers of both experimental groups kept a logbook, in which they indicated opposite each lesson how it proceeded, how the lesson material was implemented and how students participated (see section 5.4f.).

5.4 *Measures*

a. *Questionnaire on personal characteristics.*
In this questionnaire students report the following personal characteristics: gender (1 item: boy or girl), age (1 item: 9-13 years), religious self-definition (1 item: Christian, Muslim, nonreligious, other (including Hindu and Buddhist)), belief in God's existence (1 item, ranging from 1 ("I definitely believe in God's existence") to 5 ("I definitely disbelieve in God's existence"), and participating in religious practices such as reading a religious book, praying or attending a religious service (5 items, ranging from 1 (never) to 5 (every day); $\alpha = .83$).

b. *Cognitive Test of Parable Understanding*

We developed a Cognitive Test of Parable Understanding (CTPU) containing 32 tasks. The tasks involve 12 assignments concerning their knowledge about key concepts, 10 assignments concerning their knowledge about the learning strategies, while 2 relate to heuristics, 6 to affective and 2 to motivational strategies. Knowledge includes knowledge, comprehension and application (Bloom, 1979: categories 1.00, 2.00 and 3.00). The CTPU tests to what extent students know, comprehend and apply basic concepts and strategies when dealing with parables as a condition for understanding them. The first twelve assignments, which include items like "What can you learn to understand from Bible stories?", ask students to select the best response from four options. The remaining 20 assignments relate to three stories: one is a biblical parable, the other two are about activities of contemporary children of the same age as the students. After reading the story students have to do six or seven assignments based on the story. The following is an example. After reading the biblical parable of the marriage feast (Mt. 22), item 23 requires students to demonstrate that they know the learning strategy for constructing the narrative plot: "You now know what happens in the Bible story about the marriage feast. Now you want to find out the intention of the story. The best way is to . . .". Again they are asked to choose the best of four possible responses.

On average students took 40 to 45 minutes to complete the CTPU. Before the test was administered a trial run was conducted in two higher primary school classes that did not participate in the research. The final version of the CTPU was adjusted on the basis of the trial run. Cronbach's alpha indicates that the test is reliable ($\alpha = .81$).

c. *Questionnaire on current motivation*

This questionnaire is based on the On Line Motivation Questionnaire (OLMQ) (Boekaerts, 1987). It comprises 12 items (e.g. "I am quite competent to answer the questions and assignments", "I find the questions and assignments intriguing"), in which students scored from 1 (very much so) to 5 (not at all). The questionnaire is administered to students immediately before the CTPU. For purposes of analysis the scores were recoded (from 1 = not at all to 5 = very much so). Factor analysis yields three factors (Eigenvalue = 1; Adj. $R^2 = .63$): (1) Intrinsic motivation: student feels motivated and perfectly able to do the assignments (9 items: $\alpha = .87$); (2) extrinsic motivation: student is motivated and prepared to invest energy in doing an assignment if she earns a mark for it (2 items, $\alpha = .87$);

(3) estimation of difficulty: "I think the questions and assignments are difficult" (1 item).

d. *Questionnaire on self-evaluation*
This questionnaire is based on Turner's (2001) Experience Sampling Form (ESF) and comprises three items. By scoring their responses on a 5-point Likert-type scale students are asked to evaluate their own efforts by way of the following three items: "I find the questions and assignments challenging", "I was able to put the things I knew to good use", and "I am satisfied with the way the questions and assignments are constructed" (ranging from 1 = agree totally to 5 = totally disagree). The questionnaire is administered to students immediately after completing the CTPU. Prior to analysis the scores were recoded (into 1 = totally disagree to 5 = agree totally). Factor analysis yields only one factor: self-evaluation (Eigenvalue = 1; Adj. $R^2 = .75$, $\alpha = .83$).

e. *Intermediate Test of Parable Understanding*
In addition to the CTPU we designed an Intermediate Test of Parable Understanding (ITPU). Although the structure of the two tests is the same, they differ in that the ITPU has only 24 items, which test relatively more knowledge and relatively less comprehension and application than the CTPU. The ITPU contains 12 assignments to test knowledge about key concepts, 7 assignments to test knowledge about learning strategies, 1 relates to heuristics, 3 to affective and 1 to motivational strategies. The last twelve assignments are presented to students on the basis of two stories: one is a biblical parable, the other concerns activities of contemporary children of the same age as the students. On average students took 30 to 35 minutes to complete the intermediate test. Cronbach's alpha indicates that the ITPU is fairly reliable ($\alpha = .71$).

f. *Teacher's logbook*
We designed a logbook for the teachers of both experimental groups. In addition to some general information (e.g. name of their school, composition of their group, years of teaching experience and usual method of religious education), they were required to indicate for each lesson how it proceeded, how the lesson material was implemented and how students participated. In the case of the last three aspects the logbook asks closed questions (e.g. "Does the use of instruction cards lead to satisfaction?" and "Were the students sufficiently motivated?", to which teachers can respond "no", "to some extent" or "yes"); teachers are also given the opportunity

to comment. We hoped these logbooks would give us an indication of how the interventions were implemented and will report on this in section 6.3.

5.5 *Data analyses*

Our study comprises two intervention programmes. To find out whether the intervention of comprehensive strategic learning tasks results in better conditions for parable understanding than the intervention of partial strategic learning tasks, we compare the respective effects of the two experimental groups with those of the control group. We follow this method of separate comparisons with the control group in the statistical analyses of the data (General Linear Model), using MANOVAs for repeated measures to analyse the data of the CTPU both prior to and after the interventions in the very same tests (multivariate tests). We term the difference between the pre- and post-test scores the effect. When it can be inferred from the analysis results that there is an effect, we check whether the interaction between time of measurement and research group is significant. If it is, it means that the effects on the experimental groups and the control group differ. In that case the Custom Hypothesis Tests included with the MANOVA for the difference score between pre- and post-test are used to determine whether the first experimental group differs from the control group, and the same in regard to the second experimental group. We then compare the two experimental groups' respective differences from the control group to see how they relate to each other.

To answer the second research question we use the same model to analyse the respective differences between the first and second experimental groups and the control group and apply the same analytical methods. Aspects that could possibly help to account for the differences are added to the model one by one to determine their influence on (one of) the differences.

6 Results

6.1 *Effects of the comprehensive and partial strategic interventions*

On the basis of the results of descriptive statistical analyses of the CTPU data we omitted six items (viz. 6, 21, 39, 42, 43 and 47) whose corrected item total correlation value was too low (<.15) from subsequent analyses. The remaining items (i = 26) together form a scale that we call the Cognitive Test of Parable Understanding (Cronbach's α = .81). Table 3 shows the mean scores (average number of items responded well) and standard

deviations (sd) for the various research groups on the CTPU prior to (pre-test) and after the intervention (post-test).

Table 3. *Mean scores (X) and standard deviations (sd) of the three research groups on the Cognitive Test of Parable Understanding in pre-test and post-test measurements*

Group	N	pre-test (sd)	post-test (sd)
Experimental group 1	135	10.52 (3.67)	12.02 (5.07)
Experimental group 2	102	11.47 (3.87)	13.67 (4.47)
Control group	198	10.97 (3.51)	12.17 (4.13)

Before we examine the results of further analyses it should be noted that the foregoing results reflect mean scores of between 10.52 and 13.67. From these low scores (students on average answer between 40% and 53% of the questions well) we infer that the test was difficult and it was not easy to show progress. It should also be noted that the standard deviation in the post-test is higher than in the pre-test, indicating that disparities between students have increased.

Results of the analyses show that there is an effect.[2] The question is, does the effect vary between the research groups? Because the research groups' composition differs in regard to age, we controlled for this in the analyses (see section 5.2).[3] The results of the MANOVA show that the interaction between time and research group is significant, implying that research group in fact makes a difference.[4] But does the effect on either the first or the second experimental group differ from that on the control group? More detailed analyses show that the difference between the *second* experimental group and the control group is significant.[5] Comparison between the *first* experimental group and the control group shows that students in the first group started with a lower initial scores and did not improve their position vis-à-vis the control group.[6] In short, we can report no difference between the first experimental group and the control group.

To sum up: the data indicate that the effect on the second experimental group is greater than that on the control group. Also, contrary to our expectations, the effect on the first experimental group does not differ from that on the control group.

6.2 *Aspects that help to explain the effects*

To answer our second research question we added one aspect to each analysis to see whether it contributes to the respective differences between the first

and second experimental groups and the control group (see section 5.5). First we look at personal characteristics, which form, so to speak, the background against which students approach the learning tasks. Next we include initial achievement level in the analyses, indicated by scores on the CTPU prior to the intervention (see section 4). We want to know whether students in the experimental groups who score low initially (low and medium low achievers) and those with relatively high initial scores (high and medium high achievers) make greater or less progress than those in the control group.

First we look at the psychometric data on initial achievement level. Scores on the CTPU prior to the intervention enable us to classify students into four quartile groups: low achievers (.00<X<7.99), medium low achievers (8.00<X<10.99), medium high achievers (11.00<X<12.99) and high achievers (13.00<X<26.00). Table 4 reflects the means scores of the two experimental groups and the control group, split up according to initial achievement.

Table 4. *Mean scores (X) on the Cognitive Test of Parable Understanding in the pre-test and post-test, and standard deviations (sd) for the three research groups split up according to initial achievement*

Initial achievement	Low achievers		Medium low achievers		Medium high achievers		High achievers achievers	
Test	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Exper. Group 1	7.52	10.21	9.88	10.23	12.24	11.98	15.12	16.52
X (sd)	(1.83)	(4.26)	(1.86)	(3.43)	(1.81)	(5.40)	(2.29)	(5.06)
Exper. Group 2	7.86	11.83	10.20	12.50	12.05	14.94	15.73	15.86
X (sd)	(2.77)	(4.38)	(1.56)	(4.01)	(1.78)	(4.34)	(2.66)	(4.15)
Control group	7.03	10.45	10.64	11.86	12.24	12.77	14.62	13.76
X (sd)	(2.00)	(3.79)	(2.06)	(3.53)	(1.37)	(4.35)	(2.83)	(4.58)

A remarkable finding is that for all achievers in all three research groups the standard deviation is notably higher in the post-test than in the pre-test. From this we infer that the CTPU after the intervention has strong differentiating power for all students. So much for the psychometric data on initial achievement level. Having determined the contribution of initial achievement, we investigate whether the ITPU has any influence on the difference between the two research groups and the control group. This test gave students a first chance to provide proof of competencee (see section 5.4e). Finally we check whether current motivation and self-evaluation influence one of the two discrepancies (see section 5.4c and d).

Regarding personal characteristics, the results of MANOVA for repeated measures indicate that age, gender and participation in religious practices help to account for the differences in effect, except in the case of religious

self-definition and belief in God. In section 6.1 we saw that the incorporation of age makes a difference in the case of the second experimental group and the control group. In addition it appears that the progress of younger and older students in the second experimental group is the same: both the 9- and 10-year-olds and the 11- and 12-year-olds in the second experimental group make greater progress than students in the control group.[7] Gender, too, helps to account for the disparity. The results of the analyses reveal no interaction between time and research group, but in respect of gender there is such a correlation.[8] This means that only one of the two genders in an experimental group shows greater progress – it does not apply to both boys and girls. Boys in the second experimental group show greater progress than boys in the control group.[9] Hence the gender factor makes a difference in our comparison of these two groups. In addition girls generally score better than boys in all research groups.[10] When participation in religious practices is included in the analyses there is a significant correlation between time and research group.[11] There is a difference between the first experimental group and the control group: the more frequent students' participation in religious practices, the greater the progress of those in the first experimental group compared with the control group.[12] MANOVA results also show a significant interaction between time and research group when it comes to participation in religious practices.[13] Students in the first experimental group who participate in religious practices at least once a week make progress, whereas those in the control group retrogress.[14] To sum up: of the five personal characteristics age, gender and participation in religious practices help to account for differences in effect. Age and gender (boys) contribute to the difference in effect between the second experimental group and the control group, and participation in religious practices to that between the first experimental group and the control group.

Initial achievement level, too, is a differenting factor in the effect of the intervention. Results of the analyses show a significant interaction between time and research group.[15] Introduction of initial achievement causes the second experimental group to show noticeably more progress than the control group.[16] The second experimental group starts from a higher initial position and – more importantly – makes greater progress than the control group. To sum up: initial achievement also helps to account for the difference in effect in the case of the second experimental group and the control group.

Thirdly, we incorporated ITPU scores in the analyses to see whether initial achievement is a significant factor in accounting for disparities in effect. On the basis of results of descriptive statistical analyses of ITPU scores we omitted six items (3, 11, 14, 30, 31, 32) with a low corrected item total

correlation value (<.15) from subsequent analyses. The remaining items (i = 18) together form a scale that we call the Intermediate Test on Parable Understanding (Cronbach's $\alpha = .71$). When scores on this test are introduced as covariants the ANCOVA results show that research group indeed contributes.[17] More detailed analyses indicate a significant difference between the first experimental group and the control group.[18] In short, the ITPU helps to account for the difference in effect on the first experimental group and the control group.

Finally we incorporate current motivation and self-evaluation in the analyses to determine whether one or more scales (see section 5.4c and d) help to account for the difference in effect. ANCOVA results show that the only contribution is that of intrinsic motivation,[19] and it is confined to the first experimental group's difference from the control group.[20] Extrinsic motivation, estimation of difficulty and self-evaluation are not contributory factors. To sum up: only intrinsic motivation helps to account for the difference in effect, and only for that between the first experimental group and the control group.

In conclusion we recapitulate the factors that contribute to the difference in effect between the respective experimental groups and the control group. Since we found no difference in effect between the first experimental group and the control group in section 6.1, there is no point in dwelling on these factors here. But there is a difference between the second experimental group and the control group. We present the factors contributing to this difference in a single figure (figure 1).

The difference in effect between the second experimental group and the control group is jointly attributable to the factors of age, gender and initial achievement level. It should be noted that, although significant, they have only limited relevance in view of the low partial explained variance (total partial $\eta^2 = .06$).

6.3 *Analysis of logbooks*

Ten of the eleven teachers returned completed logbooks. Six logbooks come from teachers in the first experimental condition, and four from teachers in the second experimental condition. From our analysis of responses to the closed questions we infer that teachers in the first experimental condition are less satisfied with the course of lessons 3, 7 and 8. In these lessons students are supposed to learn to understand either a parable or a contemporary story with the aid of learning and affective stategies (lessons 3, 8) and in one lesson they have to start working in new small groups (lesson 7). With reference to these lessons teachers report dissatisfaction with at least

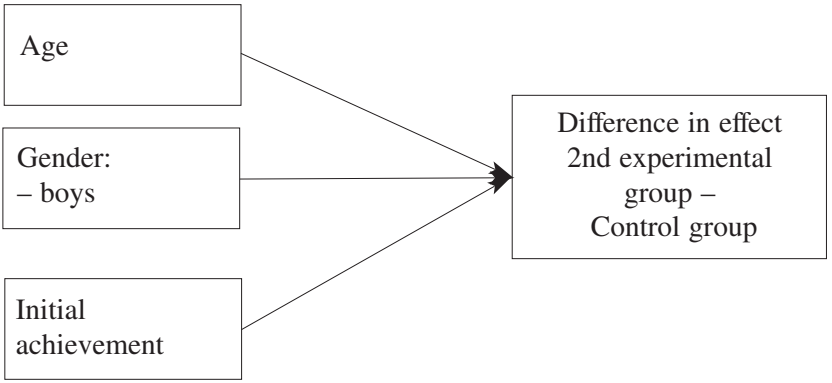

Figure 1. *Factors contributing to the difference in effect between the second experimental group and the control group*

three of the four categories: some components of the lesson do not get due attention, instructions to teachers are unclear, the use of mnemonic cards does not proceed smoothly, and students are not sufficiently motivated and/or interested. Teachers in the second experimental condition indicate dissatisfaction with lessons 4 and 10. These lessons require students to measure their own experience against a contemporary story about giving (presented on a video tape, lesson 4) and to learn to understand a parable by way of previously acquired learning stategies (lesson 10). It is also remarkable that teachers in the first experimental condition give far more negative responses to the question whether they are satisfied about the use of mnemonic cards than those in the second experimental condition (in the case of 8 lessons, as opposed to 2).

Analysis of responses to the open questions reveals that teachers comment on five aspects: the Cognitive Test of Parable Understanding, working in small groups, the mnemonic cards, lack of time, and students' interest and motivation. Firstly, teachers indicate that many students find the CTPU assignments difficult and complete them with some reluctance. One teacher comments thus: "The phrasing of many of the questions is difficult." Another accounts for students' reluctance in answering: "It seems to be quite a job for the children to work with concentration: especially those with poor reading skills battle to do so." Teachers also observe that working in small groups means a total change in the class culture: "Working in groups is in its infancy. Requires guidance." Teachers point out that this way of working needs getting used to and a lot of time: "Deliberating and

evaluating in groups take more time than you think." Teachers in the two experimental conditions agree on the difficulty of the CTPU and working in small groups, but not on the following three aspects. Firstly, they assess the use of mnemonic cards differently. They comment at some length on these cards. One teacher in the second experimental condition observes with reference to lesson 4: "More often than not the mnemonic cards confuse the children. They manage better without them." Interestingly, the comments of teachers in the second experimental condition change in the second half of the intervention: "They no longer need to look at the mnemonic cards: they have memorised them by now." Teachers in the first experimental condition, however, continue to mention the difficulty of using the cards. One of them observes, with reference to lesson 7 (!): "The mnemonic cards took a lot of explaining." Several teachers say that there is too little time to do justice to all components of the lesson, for example: "Alas, no time left for a class discussion about God." Three of the six teachers in the first experimental condition indicate several times that the time is too short, whereas only one of the four in the second experimental condition does so. Finally, it is mainly teachers in the first experimental condition who observe that "motivation remains a problem I have to work at".

To sum up: in their logbooks teachers report that students find the CTPU difficult and that working in small groups needs time and attention. Teachers in the first experimental condition also indicate more problem areas than those in the second condition, especially as regards the use of mnemonic cards, quantity of content matter and students' motivation.

7 Conclusion and Discussion

Our aims in implementing the new learning practices were ambitious: we wanted to establish a different classroom culture, not only through learning practices that relate to Christian religious practices aimed at understanding parables, but also by promoting and encouraging interaction between students through small-group assignments and discussions as well as full class discussions. To assist students' participation in the new learning practices we developed two interventions: a comprehensive strategic and a partial strategic intervention. The two interventions are meant to establish a different classroom culture and introduce meaningful content.

The interventions differ in respect of the strategies offered as scaffolds for learning to understand parables. Students subjected to the comprehensive strategic intervention were introduced to several strategies; those

undergoing the partial strategic intervention were given fewer. In the second case we omitted two strategies that hardly feature in present-day religious education if at all, namely the learning strategy to relate religious stories to real-life situations and affective strategies to cope with emotions. Whereas the comprehensive strategic intervention represents a bold advance in the innovation of religious education learning practices, the partial strategic intervention is more modest. Our study is meant to show whether students exposed to the comprehensive strategic are better able to understand parables than those subjected to the partial strategic intervention, and whether we can identify factors that help to explain the effects.

The results indicate an effect in the case of all three research groups. Counter to expectation, however, the effect on the first experimental group is not greater than in the control group and, secondly, the second experimental group displays a greater effect. In other words, students in a less innovative experimental condition make more progress than the control group exposed to conventional learning practices, in contrast to those in an experimental condition entailing comprehensive innovation. How do we explain these remarkable results? Both interventions entail innovation of conventional learning practices. Teachers indicate as much in their logbooks, for instance by pointing out that working in small groups requires training. In the partial strategic intervention we took a limited number of innovative steps, in the comprehensive strategic learning tasks we ventured quite a lot more. It appears that the limited number of steps in fact help students to progress. The requirements of the first experimental condition appear to have been excessive. We gather this from the comments of teachers in the first experimental condition, who repeatedly note in their logbooks that there was not enough time to fit in everything. We conclude that the innovation was too much of a good thing given the time available, and that it made excessive demands on teachers' competencies. We suspect that in the case of the comprehensive strategic intervention the disparity from conventional practice became so great that students (and teachers) experienced it as overly demanding. Research has shown that the extent to which new learning practices are congruent with the daily routines of teachers and students is an important indicator of successful implementation of an innovation (Van den Akker, 1998). It could well be that students' progress correlates with the fact that the partial strategic intervention is more congruent with their daily routines than the comprehensive strategic intervention.

We suspect that students' experience of the comprehensive strategic intervention as very demanding relates not only to the number of strategies but also to the manner in which they could appropriate these. They could do

so by means of mnemonic cards presented in an integrated way. In the first half of the intervention teachers in both experimental conditions indicate that working with mnemonic cards is not easy. This comment is no longer made by those in the second experimental conditions during the second half of the intervention, but it keeps featuring in logbooks from the first experimental condition. Whereas teachers in the second experimental condition now say that the children have already memorised the cards, those in the first experimental condition note that students still need clarification. The way the strategies were introduced probably overcharged students in the first experimental condition considering the time available (the intervention lasted only four months). Because of the greater number of strategies we believe that what students in the first experimental condition had to internalise was more complex than what was demanded of students in the second experimental group. Especially when innovations are complex teachers and students need longer training and coaching (Hoek et al., 1997). To sum up: a possible reason why students exposed to the comprehensive strategic intervention did not make greater progress than the control group could be that the number of strategies and the way students had to appropriate them was experienced as burdensome (demanding) rather than supportive (scaffolding).

Our second research question concerns factors that help to explain the disparate effects. In other words, are the differences between the research groups partly attributable to the type of students we are dealing with? Since we found no difference when we compared the first experimental group with the control group, the second research question is not applicable. When we compared the second experimental group with the control group age, gender and initial achievement were – as expected – differentiating factors. It is noteworthy that both 9- and 10-year-olds in the second experimental group registered greater progress than those in the control group, and that on average 9- and 10-year-olds do not show less progress than 11- and 12-year-olds. Earlier research (Bucher, 1987, 1999) seems to indicate that parable understanding is not possible or desirable before the age of twelve. Our findings show that improved understanding can also be expected at a younger age. This concurs with Vygotsky's view that learning environments can awaken students' (parable) understanding. Our research provides evidence that both young and older students develop by engaging in learning activities in which they are stimulated to acquire learning strategies systematically.

With respect to initial achievement, low, medium low and medium high achievers exposed to a partial strategic intervention make greater progress

than in a conventional programme. The fact that across the spectrum of the three groups of initial achievers those in the second experimental group (and *not* those in the first) make greater progress than those in the control group probably relates to the learners' working memory, which serves to process new knowledge. A given supply of new knowledge can overload the working memory, a phenomenon known as cognitive overload (Sweller, 1994). Religious narratives such as parables have a complex structure of various interactive elements (e.g. the relation between vehicle and topic), which imposes an intrinsic cognitive load on the working memory. In addition there could be an extraneous cognitive load imposed by the way in which students appropriate new knowledge. Working memory is taxed not only by the core concepts of parables but also by the way this new knowledge is presented in learning tasks. Here we think of the large number of strategies and the way they are presented. Students who have only limited cognitive constructs for storing new information and have moreover not had time and practice in flexibly processing such information will benefit by progressing in small steps. The demands of appropriating key concepts and strategies should not be greater than the space between the actual and potential capacity of the working memory permits. The vast majority of students are low, medium low and medium high achievers, and these progressed in the second experimental condition. Probably the demands in the second experimental condition corresponded with the students' potential, while those in the first experimental condition exceeded it. We suspect that this is why students in the second experimental condition outstripped the progress of the control group and those in the first experimental condition did not.

Because students in the second experimental group made greater progress than the control group we can say that focused interventions in which students can appropriate strategies afford good conditions for improved parable understanding. Strategies actively assist students to appropriate knowledge about the parable story and the world it refers to. Heuristic strategies enable them to appreciate the critical power of biblical narratives by going beyond the critical moment of the parable and exploring further. In this regard it is helpful if students (and teachers) have sufficient time to appropriate the strategies. To innovate learning practices takes time. Besides, our research shows that innovation is only effective if it proceeds in successive steps. The partial strategic intervention may well be an appropriate first step in the innovation of parable understanding learning practices. Students should first master a limited number of strategies, which gradually increases. In other words, they should start off with the partial strategic intervention and then progress to the comprehensive strategic intervention.

The only way to enhance parable understanding is step by step innovation. This need not wait until the child reaches the age of twelve; the first steps can be taken as early as the age of nine.

Further research is needed to provide insight to optimise learning practices for parable understanding. Our study has indicated the need for step by step innovation. Further research must show how successive steps can optimally deepen the complexity of new learning practices (cf. Collins, Brown & Newman, 1989). The question is over what period the steps should be spread so as to challenge rather than overload the working memory. Earlier research has shown, moreover, that parable understanding correlates with affective aspects such as the emotions evoked by religious stories (Theis, 2005; Jablonski & Van der Lans, 2001). But how does learning to understand parables relate to the development of emotions triggered by the stories? For instance, is an increase in positive feelings accompanied by increased parable understanding? Finally, further research should afford insight into the influence of meta-cognitive beliefs about religious education on learning outcomes. Do students who agree with the notion that other students are important for their learning and who who agree with intrinsic task motivation make more progress in parable understanding than those who disagree with these notions? (Cf. De Corte et al., 2002; Van der Zee et al., forthcoming.)

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NOTES

1. The schools are located in Bergen-op-Zoom, Boxtel, Gennep, Heerlen, 's Hertogenbosch, Heythuysen, Oudenbosch, Roermond, Sittard, Venlo, Venray and Waalwijk.
2. ANOVA for repeated measures: $F (1, 432) = 65.715$, $p = .000$, partial $\eta^2 = .13$
3. Because the 12- and 13-year-old groups are so small we combined them with the 11-year-olds in subsequent analyses.
4. MANOVA for repeated measures: $F (2, 425) = 3.384$, $p = .035$, partial $\eta^2 = .02$
5. MANOVA, Custom Hypothesis Tests: independent variable = research group and age; dependent variable = difference score post-test/pre-test: contrast estimate: .051, $p = .021$.
6. MANOVA for repeated measures, Custom Hypothesis Tests: independent variable = research group and age; dependent variable = repeated measures pre- and post-test): contrast estimate: -.034, $p = .047$. The first experimental group has a lower *mean* score than the control group.
7. Independent Samples' T-test: independent variable = age group; dependent variable = difference score post-test/pre-test: $t = 1.42$, $df = 100$, $p > .05$
8. MANOVA for repeated measures: $F (2, 427) = 3.262$, $p = .039$, partial $\eta^2 = .02$.
9. Independent samples T-tests: independent variable = research group; dependent variable: difference score pre-test/post-test: $t = 2.01$, $df = 153$, $p < .05$.

10. MANOVA for repeated measures, tests of between-subjects effects: F (1) = 9.661, p = .002.
11. MANOVA for repeated measures: F (2, 422) = 3.506, p = .031, partial η^2 = .02
12. MANOVA, Custom Hypothesis Tests: independent variable = research group and participation in religious practices; dependent variable = difference score post-test/pre-test: contrast estimate: .056, p = .016.
13. MANOVA for repeated measures: F (6, 422) = 2.233, p = .039, partial η^2 = .03.
14. Independent Samples T-tests: independent variable=research group; dependent variable: difference score pre-test/post-test: t = 3.43, df = 28, p < .005.
15. MANOVA for repeated measures: F (2, 423) = 3.139, p = .044, partial η^2= .02.
16. MANOVA, Custom Hypothesis Tests, independent variable = research group and initial achievement; dependent variable: difference score pre-test/post-test: contrast estimate: .041, p = .026.
17. ANCOVA: F (2) = 3.310, p = .037, partial η^2 = .02
18. ANCOVA, Custom Hypothesis Tests, independent variable = research group and ITPU; dependent variable = difference score pre-test/post-test: contrast estimate: -.11, p = .023
19. ANCOVA: F (2) = 3.749, p = .024, partial η^2 = .02
20. ANCOVA, Custom Hypothesis Tests, independent variable = research group and intrinsic motivation; dependent variable = difference score pre-test/post-test: contrast estimate: -.17, p = .008.

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Theo van der Zee is researcher at the Institute for Catholic Education, Radboud University Nijmegen. E-mail: T.v.d.Zee@theo.ru.nl

Chris Hermans is professor of Empirical Practical Theology at the Radboud University Nijmegen. E-mail: C. Hermans@theo.ru.nl

Cor Aarnoutse is professor of Educational Sciences, in particular Language Education in Primary School at the Radboud University Nijmegen. E-mail: C.Aarnoutse@pwo.ru.nl