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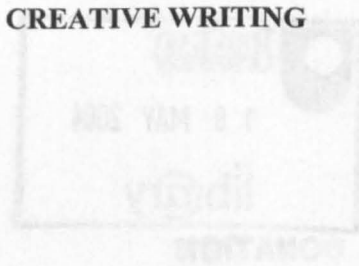
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UNDERSTANDING COLLABORATIVE CREATIVITY:

**AN OBSERVATIONAL STUDY OF THE EFFECTS OF THE SOCIAL AND
EDUCATIONAL CONTEXT ON THE PROCESSES OF YOUNG CHILDREN'S JOINT
CREATIVE WRITING**



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**Thesis submitted to the Open University in part fulfilment of the requirements of
the degree of Doctor of Philosophy**

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ABSTRACT

Drawing on socio-cultural theory, the research presented here examines the nature of productive group work in the context of children's collaborative creative writing. The thesis explores the role of friendship in mediating the processes of joint creative writing, and examines the effects of other contextual features in the classroom-context – task design, instructions and writing medium – in structuring and supporting shared creativity. The study draws on preliminary observations of Year 5-Year 6 classrooms (children aged 9-11) and longitudinal observational data of ongoing classroom activities in Year 3 and Year 4 classrooms (children aged 7-9) in England. It offers a contextualised, qualitative analysis of the social and cognitive processes linked to shared creative text composition via the in-depth study of verbal interaction. For the analysis of joint creative writing discourse a functional model was developed.

The research study contributes to the theoretical debate on collaborative learning by studying peer processes in the context of creative writing and by exploring the mediational role of friends and features in the learning context in influencing classroom-based collaboration. The findings show that the pairs' discourse varied in the level of collectivity and individualism they displayed and that, for most part, the variations can be explained by the differences in their relationships. Thus the study demonstrates the potential affordances of friendship pairing for shared creativity. Furthermore, the research presented in the thesis shows the mediating effects of task design, instructions and the writing medium, highlighting the inextricably linked nature of contextual features in structuring shared work in the classroom.

PUBLICATIONS ARISING

- Vass, E. (2004) Understanding collaborative creativity. In D. Miell & K. Littleton (Eds.), *Collaborative creativity*. London: Free Association Press.
- Vass, E. (2002). Friendship and collaborative creative writing in the primary classroom. *Journal of Computer-Assisted Learning*, 18(1), 102-110.
- Vass, E. (2002). Computers and collaborative creative writing in the primary classroom. In G.A. Santana Torrellas & V. Uskov (Eds.), *Computers and Advanced Technology in Education – Proceedings of the IASTED International conference*, Cancun, Mexico, May 2002.

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INTRODUCTION

The research context

This introduction has three main functions. First, it outlines the broad aims of the thesis. Second, it situates the current research, assesses its significance, and introduces the main theoretical questions that will be addressed in the thesis. Third, the introduction outlines the content of the chapters of the thesis.

An observational study of young children's classroom-based collaborative creative writing

Drawing on contemporary socio-cultural theory the research presented here studies young children's collaborative creative writing in the primary classroom. The broad aim is to contribute to theorising and research on children's collaborative learning by looking at the relatively under-researched area of collaborative creativity. Embedded within this broad purpose are the aims to understand and describe the process of collaborative creative text composition better, to examine the role of relationships in mediating shared creativity and to explore ways in which the contextual features of the learning context – such as the task design, the writing medium or instructions – shape processes of joint creative text composition.

Collaborative creativity in education and research

The centrality of creativity in human life – the need for self-expression and the sharing of experiences with others through art, music or dance – has manifested itself throughout history in all cultures and civilisations. Creativity and imagination are not seen as

qualities restricted to a privileged few, but rather as essential ingredients of our everyday life, associated with a high degree of mental health, and skills which enable us to become well-established and capable members of our society (Duffy, 1998; Loveless, 2002).

This is especially so in the world of new technology, with its increasingly rapid changes, and burgeoning challenges. In our multi-modal *Knowledge Age* (Loveless, 2002) innovative ways of using information, readiness to deal with the unexpected and exploratory, playful, flexible thought are of paramount importance. The societal need for cultivating creative and imaginative thought – and the recognition of the lack of creativity in the curriculum – has in recent years been emphasised by educators and researchers alike, and led to changes in educational policy in the UK (Loveless, 2002). Note for example government initiatives such as *Culture Online* to facilitate students' creative experiences (Loveless, 2002), or new *creative* agendas outlined by the UK School Curriculum and Assessment Authority, 1996, or the Department of Education, 1995 (Duffy, 1998).

The changing perspectives in policy making have initiated shifts in educational research as well (Loveless, 2002). One area of special significance is peer-mediated learning: the study and conceptualisation of effective groupwork in the classroom. Research on collaboration – on computer-based interactions especially – has primarily been concerned with understanding the nature of effective paired work in the domain of science, particularly physics, with relatively little attention on work in other domains. Yet, there is a growing number of studies in the collaborative learning literature which shift the focus of enquiry from the hitherto predominant fields of mathematical and scientific problem-solving to creative activities. Such changes are especially timely in an era when education for creativity is gaining ground, yet teachers are reported to have difficulties regarding the

teaching of creative techniques to be used in groupwork (Byrne, 1996 in MacDonald & Miell, 2000).

Indeed, in order to provide *powerful learning contexts* for the development of creative skills – for example, building on groupwork – practitioners need to be offered a model of creativity which is applicable for educational purposes. One of the major imperatives in current educational research is therefore to conceptualise, study and describe processes of classroom-based creativity.

Contributions of study

This research makes a contribution to educational research by redressing the imbalance in the academic literature on collaborative learning. By exploring the nature of productive collaboration in classroom-based creative writing tasks, the research contributes to theorising on *collaborative creativity*, and to educational practice regarding the use of paired work in school-based creative writing activities. Also, the special contribution of this research is the examination of the emotional dimensions of creative peer collaboration and the exploration of the affordances and constraints of different peer relationships, such as friendship. A further contribution of the current research to the study of collaborative learning is the consideration of different aspects of the learning context – task design, instructions, writing medium – in structuring processes of joint creative design.

Outline of the research project

The research involved naturalistic observations of ongoing classroom activities, working with children in Years 3 and 4 (aged 7-9) in middle schools in England. The study

followed their ongoing writing projects as planned for them by their teachers. For the study of the processes of paired creative writing through the analysis of collaborative discourse a functional model was developed. Contextualised, qualitative analysis was carried out to identify and examine episodes associated with different cognitive functions involved in the creative writing process. The ultimate aim was to analyse how children engaged in talk to cope with the demands of the task, and how talk was used to mediate different phases of the joint writing process. The significance of the research lies in the task-sensitivity and descriptive power of the developed model for the specific context of studying paired creative writing.

Structure of the thesis

The thesis is organised in six Chapters. Chapter 1 offers a review of the existing theoretical and empirical work which informs the thesis. Chapter 2 discusses the methodological issues addressed in developing the research design. The findings of the research are presented in Chapters 3, 4, and 5. Chapter 3 looks at children's discourse in order to define and examine the task of joint creative writing. In this chapter I discuss different phases of the creative writing process, and elaborate on the effective use of discourse functions and collaborative strategies in these phases. Chapter 4 focuses on the social aspects of collaborative creative writing. The chapter examines how the nature of the relationship influenced the processes of the collaborative activity. Chapter 5 looks at joint writing as embedded in daily classroom life – *classroom based writing* – and as an activity in the context of research – *observed writing*. In this chapter the collaborative activities are examined to study how contextual aspects, other than the affective context, impact on and structure the processes of collaborative creative writing. Among the contextual aspects, the task design, written and verbal instructions, the writing medium and the research setting are considered. The chapter explores how these features of the

learning context impact on the children's understanding (and sense-making) of the activity, and thus shape shared creative writing. Chapter 6 draws out the conclusions of the study, in theoretical, methodological and substantive terms and identifies areas for further research.

CHAPTER 1 LITERATURE REVIEW

1.1 Introduction

Research on *collaborative learning* is diverse and multi-disciplinary, and is *not* restricted to the collaboration of people in physical proximity or to human-human interaction. It ranges from work in computer science and cognitive science (distributed artificial intelligence, DAI and computer-supported collaborative learning, CSCL, Dillenbourg, 1999) to developmental psychology and educational research. Dillenbourg (1999, p.2) defines collaborative learning as "a situation in which two or more people learn or attempt to learn something together." The current research follows the socio-cultural tradition, and focuses on the study of *children's* collaborative work. Thus, a more precise definition, specific to the research context, will be offered in the course of this review.

Drawing on contemporary socio-cultural theory the research presented here studies young children's collaborative creative writing in the primary classroom. In this chapter I will first outline the theoretical framework the research builds on. Next, a discussion of contemporary research on collaborative learning will be presented. I will situate the study by directing attention to the ways in which it addresses key issues that are currently under-researched and in need of consideration. Next, contemporary theory and research on creativity will be discussed and linked to the academic debate on creative writing in general and to classroom-based creative writing specifically. Finally, the methodological basis shaped by the theoretical choices will be detailed.

1.2 Theoretical framework

The question of whether human behaviour is shaped by *endogenous* or *exogenous* factors has been one of the most hotly debated issues in psychology. Piaget's interactional theory (Piaget, 1971) of development has been a significant contribution in the efforts to move this debate forward from previous dualistic (e.g. behaviouristic [Skinner, 1953] or biological maturation-centred [Gesell, 1940, 1945]) approaches. His model builds on an interplay between biology (*maturational readiness* – Schaffer, 1996) and environment (*challenging experience* – Schaffer, 1996), thus placing equal weight on endogenous and exogenous factors. The innate properties unfold through maturation which is triggered or released by experiences. The socio-cultural perspective introduces a third factor which no previous developmental theory accounted for: culture. It goes beyond the Piagetian model by positing an indirect relationship between our innate potentials and the physical environment, culture acting as a mediator between the two (Cole, 1998).

The socio-cultural perspective on child development (or using a more recent term, cultural psychology, Crook, 1994) emerged in the 1980s, and, alongside other influences such as developments in anthropology (Lave & Wenger, 1991), ethnography and sociology (Heath, 1983), socio- and cognitive linguistics (Gumperz, 1982a; 1982b; Hymes, 1974; Lakoff, 1987) and cognitive sciences (Suchman, 1987), it draws heavily upon the works of Lev Vygotsky (1978). It models human development as a culture-specific, context-bound, and inherently social process. This perspective is closely linked to the Vygotskian notion of social and cultural *mediation* (Crook, 1994). In the discussion which follows I will outline ways in which these tenets stem from Vygotsky's social constructivist theory, and contrast them to the Piagetian individualistic constructivism. I will also indicate the directions in which contemporary neo-Vygotskian theorising has progressed.

1.2.1 Learning and development as social processes

Socio-cultural theory has a distinctive interest in social interaction, considering learning and development as fundamentally *social* and not *individual* processes (Crook, 1994). In this view, the child is a characteristically social organism from the very beginning, innately adapted to social communication (Göncü, 1998; Trevarthen, 1998). This conceptualisation (*the social basis of mind*, Rogoff, 1999) is in sharp contrast with traditional developmental models characteristic of the Western ideology, which offer a highly individualistic conception of development. For example, the Piagetian perspective takes the individual as the starting point, the environment denoting the physical surroundings of the child. Focusing on the cognitive aspects of child development, Piaget likened the emergence of logical thinking – i.e. the formulation, internalisation and modification of symbolic, mental representations of knowledge in the child's mind – to the biological maturation of living beings. He saw cognitive development as a form of active adaptation and argued that children shape their own mental growth through adapting to their environment.

Piaget modelled psychological development as a staged process, defining the stages in terms of the internal cognitive structures that determine children's capacities for thinking and reasoning. He was concerned with individual development and change (a feature of utilitarian and individualist psychology). Piaget attributed little role to relationships with other individuals, and regarded experiences as resulting mainly from the child's interactions with the physical world. As Haste (1998, p.181) remarks "the role of other individuals is mainly seen as a sort of catalytic intervention, providing challenges that, in Piaget's terms generate disequilibrium." Nevertheless, when applying the stage theory to the development of moral judgement in his later work, Piaget acknowledged the role of interpersonal factors. However, he limited effective social experience to peer interaction,

marginalising the significance of the child's relationships with adults. He explained this by claiming that the child cannot make sense of arguments (knowledge) presented by adults due to differences in power and status. Thus, such interactions cannot trigger *socio-cognitive conflict*: confrontation with opposing views leading to the reconstruction of existing knowledge.

At the same time, he argued that conflicts with peers – who are approximately at the same cognitive level – present children with views that are more appropriate to represent alternatives. The social pressure to reach an agreement will initiate the reconstruction of knowledge through the incorporation of competing views. Thus for Piaget – and for the neo-Piagetians (Doise & Mugny, 1984; Perret-Clermont, 1980) as well – symmetry of cognitive competence, status and power was the key factor determining the effectiveness of interactions.

Piaget's limited consideration of social factors, as well as the emphasis placed on conflict, was contested by the Russian theorist Vygotsky. He argued that *higher mental functions* – such as thinking, learning and problem solving – or the awareness and understanding of self can only be acquired through social interaction, and should not be seen as the result of continual conflict-resolution between opposing forms of thinking in the mind (Rogoff, 1999). In Vygotsky's view interpsychological thinking is a prerequisite for intrapsychological thinking: it is through speech and action with others that we learn to reason and gain individual consciousness.

In this framework asymmetrical relationships play a central developmental role, offering a theory not only of *learning* but also of *teaching*. Vygotsky argued that children need guidance and instruction by more competent individuals (typically adults), who can assist the learning process by providing the right amount and nature of help, and who can

control and co-ordinate the child's activities. As Schaffer sums up, cognitive skills "must first be performed jointly with an adult before they come under the child's control" (1996, p.235). As opposed to Piaget, Vygotsky argued that direct instruction is crucial, but is only effective in so far it goes *beyond* the child's individual capacities. He thus differentiated between the actual developmental level and the level of potential development. The former is based on individual achievements – this is the level Piaget was interested in – whereas the latter defines achievements through guided activities. Vygotsky claimed that effective learning and teaching takes place between these two levels: within the limits of the child's *zone of proximal development* (ZPD).

Effective instruction takes the emerging competencies of the child into consideration, which will shape the interactive relationship between the more competent adult and the child. The neo-Vygotskian tradition uses the concepts of *contingent instruction* (Wood & Middleton, 1975) and *scaffolding* (Wood, Bruner & Ross, 1976) to define such sensitive guidance. This is in contrast with the Piagetian perspective, which reduces the role of the adult to that of a *facilitator*, only involved in the selection of appropriate material and context (appropriate experiences) to support the cognitive growth of the child. In this approach, the key concept linking productive asymmetrical and symmetrical learning situations is the *joint construction of knowledge*. Thus, for the purposes of the thesis, the most important distinction between the two approaches is the emphasis on conflict on the one hand and on sharing and the co-construction of understanding on the other hand. This contrast will be elaborated on in the section on peer collaboration research.

Although we can readily accept the idea that the acquisition of social skills requires social interaction (an interpersonal context), the proposition that the same requirements hold for cognitive development does not have the same intuitive appeal (Schaffer, 1996). Yet, the Vygotskian model inspired a whole new strand of psychological inquiry and has shifted

the focus from intrapersonal towards interpersonal processes. As Trevarthen describes this new approach, "conversational intelligence is the hallmark of a human mind... It is an intelligence that tries to negotiate with other minds to share the process of conscious awareness and purposeful thinking itself" (1998, p.90).

If, as Trevarthen claims, the real measure of the human mind is *conversational intelligence*, then the focus of psychological research needs to be on relationships and communication, and not on individual capabilities and skills. Therefore, an overarching theme of the socio-cultural approach is to explore ways in which communication structures thought, ways in which social interaction during joint activities with adults and peers facilitates learning. Applying this argument, the initial questions arising were:

- *How do children use talk to get things done together?*
- *How does social interaction (for example paired talk) support cognitive processes?*
- *How can we best understand cognition through the analysis of discourse?*

As later sections detail, these general questions were developed into specific research questions. The other pivotal theme in the current research, the notion of cultural mediation, will be addressed in the next section.

1.2.2 Cultural mediation

As noted in the introduction, the socio-cultural framework departs from traditional dualistic models, regarding culture as a mediator between endogenous and exogenous factors. This new conceptualisation is rooted in the Vygotskian perspective. The Hegelian notion of mediation (*Vermittlung*) had a strong influence on Vygotsky's approach to cognitive development, both in terms of the mediational role of the social context, and in

terms of cultural mediation (Kozulin & Presseisen, 1995). But why is culture such an important factor?

Cole (1998, p.17) explains it as follows:

“The environment in which human beings live is an environment transformed by the artefacts of prior generations, extending back to the beginning of the species. The basic function of these artefacts is to co-ordinate human beings with the physical world and each other; in the aggregate, culture is seen as the species-specific medium of human development.”

The environment of the infant is not a natural habitat, but one created by people, and the child therefore is not in direct contact with the world (Macmurray, 1961). In this sense there is only an indirect relationship between nature (i.e. our innate biological set-up) and the environment (the universal features of the context), with culture acting as a mediator between the two. Furthermore, culture does not only supplement and extend human capacities and skills, but it is seen as a key ingredient of them (Cole, 1998). Vygotsky regarded culture – artefacts, technologies and practices (rituals) – as the medium supporting human psychological functions.

The Vygotskian notion of cultural mediation is taken up within the socio-cultural approaches to learning, which lay heavy emphasis on cultural tools and artefacts, taking human learning as "learning to do something with cultural tools" (Säljö 1999, p.147); and have a *strong contextualist flavour* (Crook, 1994, p.32), taking culture as a universal mechanism with specific forms (Cole, 1998).

Culture as context for learning

In the previous section it was argued that social factors (interaction or relationships) are a prerequisite for human development. The general conclusion drawn was that we need to widen our scope of inquiry from events *within* individuals to interactions and relationships *between* individuals. However, from a socio-cultural perspective, what goes on between

any two individuals is influenced by – and so can only be made sense of in terms of – other, concurrent interactions and relationships. For example, families belong to wider social structures (neighbourhood, community, society, etc.). The wider context – which some researchers describe as *developmental niches* (Super & Harkness, 1986) or *ecocultures* (Nsamenang & Lamb, 1998) – largely influences family relationships, and determines child-rearing practices and pedagogies.

There is a wide range of research demonstrating that variations in child-rearing practices and educational imperatives reflect variations in how people in different cultures view human existence and development, what *agenda* they set for the child (or individual), and what relationship they posit between the individual and the community (Nsamenang & Lamb, 1998; Rogoff, Mosier, Mistry & Göncü, 1998; Schieffelin & Ochs, 1998; Super & Harkness, 1998). As Nsamenang and Lamb remark, "both social and technological intelligence are embedded in the ecocultural imperatives that focus and channel individuals to acquire the right moral posture, the appropriate social graces, and the technical skills required for acceptable, functional membership in the culture" (1998, p.251). Consequently, each developmental niche will promote competence in a particular set of skills – related to the use of tools and technologies dominating human practices – and not in others. Members of a community will practice only those skills to a high level of competence which are offered in their culture (Meadows, 1995). This argument has implications to research on learning and teaching in both informal and formal contexts.

Note that the socio-cultural context does not merely influence child rearing practices and routes of socio-cognitive development, but also frames our perceptions and theories about them. As Singer (1998) notes, our conceptualising about development is shaped by the cultural, social, religious setting our theories are embedded in. Also, we need to examine patterns of interaction as social phenomena specific to a particular context: extracted from

these settings they lose meaning. Consequently, there is a marked shift in socio-cultural theorising from taking developmental processes as universal towards viewing them as context specific.

The review started with the consideration of the mediating effect of the social context (social interaction) on learning and development. Then, this section widened the scope and discussed the role of the wider socio-cultural niche in shaping these processes. Yet, between the immediate setting and the broad context there are several other *contextual layers* which require consideration. The general aim of the current research was to describe processes of collaborative learning in one specific setting: the English primary classroom. More specifically the aim was to explore the role of the social and cultural context in structuring and shaping classroom-based collaborative creativity. Thus, for the purposes of the current research the *intermediate context* of the *primary classroom* received central attention.

In subsequent sections, I will elaborate on research concerning the immediate social context (peer collaboration), linked to which is the discussion of literature on the emotional dimensions of paired work (friendship as the context for collaboration). Then the discussion will continue with theorising and research concerned with contextual factors within the classroom setting. Thus, the overview presented here concentrates on existing research exploring different aspects of the context, with a lens focusing on the immediate and then gradually expanding the focus. For the purposes of a structured account, different contextual features will be approached separately. Note however context is not seen as a set of distinct variables. Rather, as both existing empirical evidence and the current research will demonstrate, context is understood as a set of interdependent and inextricably linked contextual features. Such a context-sensitive and context-centred approach to the study of children's cognitive development has strong

methodological implications, pointing towards more naturalistic observation techniques which help to explore the role of cultural and social factors (e.g. Corsaro, 1985).

Accordingly, the issue of context-dependency was addressed both in the design of data collection and analysis.

In the next section I will discuss further the notion of cultural mediation and elaborate on the mediational role attributed to the cultural tools in human learning and development.

Cultural tools and learning

Vygotsky connected the creation of cultural tools or technologies to higher mental functions – the voluntary and reflective processes of thinking, remembering and reasoning. As Crook (1994, p.33)¹ explains this view,

“The important sense in which the human subject came to act back upon nature, and thereby change it, is manifest in the creation of tools. These are at once outcomes of human activity upon the environment while, at the same time, they serve to organise further and future encounters with it.”

Vygotsky separated *technical* (or *material*) tools from *psychological tools* (*tools of the mind*). In his framework, *technical tools* are directed at the objects of nature, and as such, only have an indirect influence on human psychological processes. They are used to *respond* to the world. In contrast, *psychological tools* – including notations, diagrams and sign systems – are *non-physical* (symbolic) and they mediate human beings' own psychological processes. They are the means by which we manage the behaviour of others and *interpret* the world (Crook, 1994). The term of *appropriation* (Light & Littleton, 1999; Wertsch, 1998) is a useful notion to describe the process by which humans develop and adopt tools which in turn become an integral part of the way they view, understand and act upon the world. The emergence of new tools is also associated with the re-

¹ Higher mental functions are preceded by elementary (biological) functions, such as perception, attention and recognition. These functions are necessary to perform simple, concrete, here-and-now problem solving.

distribution of power and authority, bringing new forms of social and economical inequalities.

The relationship between cultural tools and human mediators is unique: ‘human others’ mediate (preserve and communicate) the use and meaning of artefacts and technologies both at the individual and historical level. Indeed, the employment of even the simplest material tool presumes social mediation: “collective use, interpersonal communication and symbolic representation” (Kozulin & Presseisen, 1995, p.68). In turn, cultural tools and techniques mediate the communication between others and ourselves. For instance, spoken language (or *orality*) is not usually seen as a cultural tool. Yet, it is an arbitrary sign-system developed by human beings, which has become and still is the central means of communication, reasoning and knowledge building: a mediator of basically all human mental activities. Furthermore, cultural artefacts and technologies may not only shape existing forms of social interactions, but may as well create new ones. For example, the introduction of literacy altered human communication, and contributed to the emergence of new (hitherto non-existent), *academic* or *schooled* discourses.

Socio-cultural approaches seek to understand how cultural tools are created and used, and how they transform human life, including processes of learning and communication.

Currently, there is an ever-increasing interest in conceptualising the role of computers – or more generally new technology – in restructuring processes of knowledge building and creating new contexts for teaching and learning. This issue is central to the current thesis, and will be elaborated on in Section 1.5.

Situated cognition

Note that an emergent conceptualisation regarding the social construction of knowledge is one which not only views learning and development as inherently social, but which

describes social interaction as a *social mode of thinking* (Mercer & Wegerif, 1999). In this formulation "discourse is cognition is discourse" (Resnick, Pontecorvo & Säljö, 1997, p.2), and knowledge is not only jointly constructed but distributed. This is a radically new conceptualisation of knowledge, which defines it as a socially mediated activity "rather than as a stored property of the individual" (Crook, 1994, p.47). Although recognising the limitations of the traditional concept of individual thinking and the appeal of the notion of *interthinking* (Mercer, 2000, 2001), the thesis adopts a more moderate position within the socio-cultural tradition. In agreement with Light and Littleton (1999), cognition is recognised as fundamentally social and knowledge as co-constructed. Thus, knowledge is a social construct developed through interaction and recreated in each situation. Yet, the agency of the individual in actively interpreting, re-organising and drawing upon knowledge is maintained.

Another significant issue that the *situated cognition* approach underlines is the situation-specific nature of skills and knowledge. Supporting the Vygotskian argument that learning "is the acquisition of many specialised abilities for thinking" (Vygotsky, 1978, p.83), proponents of the situated cognition approach argue that cognition, or *knowing* is not a state but a mental activity, which is always anchored around the particular situation in which it is exercised, or around other individuals involved in the particular situation (Crook, 1994). In support of this argument, empirical work has successfully demonstrated the limitations of knowledge transfer (Detterman, 1993; Donaldson, 1978, cited in Crook, 1994). Yet again, a more moderate view is taken up in the current research, which Crook defines as follows:

"I shall argue that what is 'in' achievements that affords generalisation is something that is invariably put there by the social environment. In other words, this is an account of learning that views new acquisitions as initially situated, but which recognises the possibilities of transfer. Such a possibility arises through supportive interventions of a socio-cultural nature" (1994, p.45).

Crook's approach is in accord with Gee's (2000) model of the *social mind*, a socio-cultural model specifically conceived to conceptualise language and literacy. Drawing on a wide range of areas (including work on language production and processing such as the connectionist model by Clark, 1993), Gee argues that the mind constructs *mid-level generalisations* of the world based on experiences which are situated in (and thus associated with) specific instances of interacting with particular people and particular cultural tools, artefacts and technologies in particular contexts. He uses the example of naval expertise, claiming that in navigating a large ship, each sailor's general knowledge is situated in the expertise they gained from interacting with other sailors and the naval equipment. Each crew member's highly specialised knowledge intersects with the knowledge of the other crew members, and thus becomes socially and culturally mediated and distributed. Gee then goes on to assert that these mid-level generalisations of the world – or *situated meanings* – are not static. Although Gee argues that our access and application (or *assembly*) of situated meanings is *routinised* and is dependent on the socio-cultural context which filters through the experiences these generalisations are based upon, he also points out that situated meanings are *flexibly transformable patterns* when adapted to new experiences.

In what follows, the review focuses on the immediate context the thesis was concerned with, and details theorising and research focusing on *collaborative learning*.

1.3 The study of peer collaboration

As noted in the introduction, research on peer collaboration goes beyond the framework of socio-cultural theorising. The detailed account of all the diverse approaches is beyond the scope of the chapter. The following review concentrates on the central issues addressed in the socio-cultural literature investigating the cognitive effects of social interactions,

concentrating on work on peer collaboration. The review will start with a discussion of the Piagetian approach and the neo-Piagetian tradition to collaboration and then will move towards current socio-cultural conceptualisations through the discussion of the Vygotskian and neo-Vygotskian standpoint.

Early studies on collaboration in the classroom compared solitary and pair activities to test whether working in pairs is more advantageous or not, assessed in terms of the quality of the outcome. They found that children working in groups or pairs typically do better than children working individually (Light & Littleton, 1998). Dillenbourg (1999) notes that both solitary and paired activities trigger the same learning mechanisms (e.g. reading, building or predicting). In his view, the advantage of working in pairs is not being two, but that the interaction generates extra activities (e.g. explanation, disagreement or mutual regulation) which in turn initiate unique cognitive mechanisms (such as knowledge elicitation, internalisation or reduced cognitive load). The following section offers a historical overview of collaborative research in order to show the shifts in formulation leading to current conceptualisations such as Dillenbourg's.

1.3.1 Socio-cognitive conflict

Although both Vygotsky and Piaget recognised the role peers may play in the process of knowledge construction, their accounts were markedly different on the subject. Piaget defined the facilitative effects of peer relationships in conflictual terms, building on the notion of *symmetry*. Piaget's main argument was that children at a pre-school age (at the *pre-operational stage*) are *egocentric*: they are unable to consider points of view different from their own. A major aim at this stage is to overcome this developmental obstacle, and move towards more advanced (*operational*) forms of cognitive functioning. Although Piaget saw cognitive development as characteristically induced by encounters with the

physical world (as a solitary discovery process), he attributed a central role to peers in learning to *decentre* and overcome egocentrism. He argued that through social interaction with equals, egocentric children are confronted with alternative viewpoints which they are strongly motivated to consider due to peer pressure. In contrast, he argued, confrontation with adults' viewpoints would lead to complete disregard or submission as a result of the asymmetrical power relationships. Piaget saw the benefits of peer collaboration in terms of *socio-cognitive conflict*, triggering the reconstruction of knowledge through decentration and through the incorporation of competing views.

A wealth of research in the neo-Piagetian tradition has been carried out to investigate the facilitative effects of socio-cognitive conflict in collaborative problem solving tasks, notably, researchers in the *Genevan school* (e.g. Doise & Mugny, 1984; Doise, Mugny & Perret-Clermont, 1975; 1976; Mugny & Doise, 1978; Perret-Clermont, 1980). The central aim of these studies was to investigate the effects of peer conflict on five-to-seven year old children's logical reasoning skills such as perspective taking, and thus to explore ways in which peer conflict impacts on children's transition from the pre-operational to the operational stage. For this reason, the experiments built on the possibility of presenting different points of view (i.e. the *village* task involving different spatial arrangements based on Piaget's *three-mountains* task, or the *conservation* task, involving the estimation of the quantity of liquid poured into differently shaped beakers). (For a comprehensive overview, see Light & Littleton, 1999.)

In these classic studies, the researchers adopted a three-step design of individual pre-test, experimental situation, individual post-test, which method has been widely used in subsequent research, even that not informed by neo-Piagetian theorising. For the experimental situation, they paired or grouped children strategically, in order to compare the on-task performance and pre- to post-test gains of partners with similar, slightly

different or substantially different pre-test levels, and to compare the benefits of individual and of groupwork.

With regards to the village tasks, the researchers found that children benefited from the joint activities most if they were grouped with partners who held slightly different views (reflected in the pre-test scores), or if the researchers ensured (for example by positioning the children and the models at different angles) that the partners would come up with conflicting views (see Light & Littleton, 1998, for an overview). For children with slightly different views, substantial benefits of working in pairs were shown both in terms of on-task performance and follow-up post-test scores. The researchers concluded that through the consideration of different viewpoints – or *centrations* – the children were able to come up with a more decentred solution while carrying out the task together, and that the benefits carried on to subsequent individual problem solving. On the other hand, in the conservation tasks, Perret-Clermont (1980) found that more egocentric children (*non-conservers*) benefited from being grouped with more capable children (*conservers*), reflected in the significant pre- to post-test gains. When reviewing this body of research, Perret-Clermont (1980) concluded that the two sets of studies provided plenty of empirical evidence for the positive effects of socio-cognitive conflict on cognitive progress. She argued that socio-cognitive conflict was most typical in settings where partners who held moderately different perspectives were asked to reach a consensus.

Nevertheless, the Piagetian (and neo-Piagetian) approach to examining the role of peer collaboration in cognitive development has been under much scrutiny since the emergence of these original findings. First, as Forman and Cazden (1985) indicate, these studies did not directly observe the participants' interactions during collaborative problem solving. Forman and Cazden argue that the hypothesis that the cognitive benefits of peer collaboration are linked to the need to recognise and coordinate conflicting perspectives is

only supported with anecdotal evidence. In order to identify the social conditions that are the most accountable for the cognitive gains, they argue, one needs to examine the processes of social co-ordination in detail, through the analysis of collaborative discourse. Similar considerations have since led to a shift in focus in collaborative research from the study of the outcomes of collaborative activities to the exploration of the collaborative processes. This process-oriented approach is especially strong in research embedded in the socio-cultural tradition, as will be detailed later.

Second, the primacy of conflict has been questioned by several authors. Donaldson (1978), for instance, suggests that working with peers actually changes the way children understand the problem at hand and helps them make sense of it. Other authors see the concept of conflict as defined by Piaget insufficient to determine the effectiveness of peer interaction. For instance, Hoyles and colleagues (Hoyles, Sutherland & Healy, 1990) found that a broader view of conflict – i.e. the expression of different opinions that are then discussed, analysed and negotiated in order to arrive at a jointly accepted view – leads to a better understanding of what makes paired activities facilitative to children's learning. It is apparent that this reformulation incorporates aspects of the Piagetian notion of *decentring through conflict*, but it also goes beyond the concepts of disagreement and negotiation of conflicting views. This broader view is actually closer to the notion of *joint construction of understanding* (Light & Littleton, 1999; Littleton, 1999), a term which current neo-Vygotskian literature uses to describe productive social interactions in general. In what follows, this line of theorising and research will be elaborated on.

1.3.2 The co-construction of knowledge

In contrast to Piaget, Vygotsky argued that pairwork – similarly to adult-child interaction – is only productive as long as it is carried out with a more competent partner, who can

guide the other and structure the activity. Thus, Vygotsky emphasised asymmetry, claiming that only interactions with a more able peer lead to progress within the learner's zone of proximal development. Although socio-cultural research into peer tutoring has provided strong evidence of benefits in terms of cognitive gains for both tutor and tutee (Light & Littleton, 1999), such a narrow focus on unbalanced abilities among peers leaves little room for the study of social interaction between peers of similar ability and experience. Yet, social interaction of the symmetrical kind is a prevalent feature of children's lives in literacy-based societies, where education is organised in age (and ability) groups from a very early age. It is therefore essential to conceptualise peer facilitation effects in symmetrical relationships and extend the Vygotskian perspective of learning as a process of co-construction to this facet of the social world.

Indeed, as noted above, there have been some attempts to marry the Piagetian notion of socio-cognitive conflict and the Vygotskian perspective of co-construction of knowledge to provide a better understanding of the processes and cognitive effects of collaboration between partners of symmetrical ability. One of the first examples of such attempt is the afore mentioned study by Forman and Cazden (1985). They reported a study involving the collaborative problem solving of 9-14 year old children, following the neo-Piagetian three-step experimental design. However, they expanded the focus of inquiry by examining both the processes and the outcomes of the collaborative activities, through the analysis of (video-taped and transcribed) paired discourse. On the basis of these analyses, Forman and Cazden concluded that the Vygotskian and the Piagetian approaches are equally helpful in describing the cognitive consequences of peer interaction. They argued that in the observed collaborative situations constructive conflict resolution and mutual guidance and support were of equal importance. They claimed that the mutual support and guidance observed between equally capable partners was a form of scaffolding, and that the complementary roles of *observing, guiding, and correcting* and *performing* enabled

the partners to carry out a task together which they may not necessarily be able to perform individually. Thus, although they recognised the strength of the Piagetian standpoint to describe the cognitive effects of collaboration, they also demonstrated the descriptive power of the Vygotskian notion of co-construction of knowledge through building a shared understanding and through the co-ordination of individual efforts.

The discussion of Forman and Cazden's study leads us to a very important distinction between *collaborating to learn* and *learning to collaborate*, as described by Grossen and Bachmann (2000). Grossen and Bachmann argued that the earlier experimental work described above was mainly concerned with ways in which children collaborate to learn, hence their sole focus on cognitive outcomes. They also noted that the shift in focus to collaborative dialogues (as shown in the Forman and Cazden study) corresponds to a growing interest in exploring how children learn to collaborate, and the recognition that the *mode of collaboration* is a crucial factor determining the outcomes of paired activities. This new approach converges with situated approaches to learning and cognition, and reflects a movement to the study of *processes* as opposed to the *outcomes* of collaborative activities when assessing peer facilitation effects.

Studies with such interest by Mercer and colleagues (Mercer, 1995; Mercer & Fisher, 1998; Wegerif & Mercer, 1997; Wegerif, Mercer & Rojas-Drummond, 1999) have provided ample evidence that the quality of children's talk – their ability to co-ordinate the interaction and task-related action through verbal discourse, and their success in taking each other's perspective and *negotiate* – has a strong impact on the quality of learning. Mercer and colleagues developed a typology of three types of talk (*exploratory*, *cumulative* and *disputational*) arguing that exploratory talk, which they characterised as the constructive and critical negotiation of views, led to the highest cognitive gains. Their findings led Mercer and colleagues towards a paradigmatic shift from studying different

modes of collaboration to the identification and teaching of efficient ways of collaboration which students could use in order to make the most of the collaborative situation. An alternative and highly influential model describing productive forms of talk is presented by the line of research on *transactive discussion* (e.g. Azmitia, 1996; Azmitia & Montgomery, 1993; Kruger, 1992; Teasley, 1997). These two approaches to the study of collaborative discourse will be further detailed in Chapter 2, which outlines the main methodological considerations regarding the research presented here.

One of the key criticisms regarding the approaches based on the cognitive-developmental theories of Piaget and Vygotsky is their sole focus on the cognitive aspects of peer collaboration (Light & Littleton, 1998; Littleton, Faulkner, Miell, Joiner & Häkkinen, 2000). Traditional literature generally identifies three main strands of psychological development: *cognitive*, *emotional/affective* and *social/moral*. These strands are characteristically treated as separate, parallel processes (e.g. Schaffer 1996), with an overwhelming emphasis on cognition. The affective component of human endeavours (or the affective aspects of the functioning of the human mind) have largely been disregarded in mainstream Western developmental theories. As Donaldson (1996) points out, these theories conceptualise emotion as a lesser function with characteristically harmful effects on rational thinking, which is reflected in the consequent disregard (and conscious elimination) of emotions from the study of human learning and development. The overemphasis on logical and *systematic thought* over *intuitive thought* has been criticised by others (Duffy, 1998).

In contrast, Donaldson offers a more complex perspective and draws up a model which incorporates emotion and reason as two interwoven, equally important functions. She argues that in the interpretive process of making sense of the world – knowing and understanding – emotion and reason are equally central. Furthermore, she posits a two-

way, interactive relationship between emotion and thought, arguing that both can interfere with as well as empower the other. Donaldson identifies three subdivisions of thinking in more advanced developmental stages: *core*, *intellectual* and *value-sensing*. These subdivisions all build on the combination of emotion and reason, with a different level of emphasis on each. In the core sub-mode feelings and thoughts are working hand in hand in close collaboration (e.g. religion, politics, ideology, concerns about one's self-image). In the intellectual and value-sensing sub-modes emotions or thoughts are eliminated or their role is highly limited. Such differentiation into value-sensing or reason-driven thinking is a later stage in development, needing conscious cultivation, while the core mode where thoughts and feelings are interwoven develops as a natural consequence of being brought up in a human society (as a part of the general developmental process).

This complexity is acknowledged by current socio-cultural theorising and research, which brings social, emotional and cognitive development together, emphasising the need to explore all three dimensions when studying socially mediated learning situations such as peer collaboration. Current socio-cultural work also underlines the complex and highly interwoven nature of these dimensions. The move away from the cognition-centred approach towards more comprehensive accounts is well-illustrated by recent work on identity. Notable examples are Murphy's research on identity, negotiation and social interaction (Murphy, 2000) and on popularity and collaborative communication strategies (Murphy & Faulkner, 2000), or Elbers and Streefland's (2000) studies describing the classroom as a community of inquiry where the process of negotiation and development of shared understanding is shaped by the negotiation and development of identity. Also, there is a growing number of studies showing the equal importance of close links between social and cognitive dynamics of peer group interaction (for instance, Kumpulainen & Kaartiken, 2000). Furthermore, the affective aspects of peer learning are also addressed by the small, but increasing number of studies concerned with the role of relationships in

shaping the process of peer collaboration (e.g. Azmitia & Montgomery, 1993; Hartup, 1996a; MacDonald & Miell, 2000).

However, the focus of research on children's collaborative work has mainly been concerned with problem solving tasks in science, particularly physics and maths, with relatively little attention paid to other subject domains. For example, we know very little about the facilitative effects of peer collaboration in creative tasks, such as creative music composition or creative writing, although these activities are often based on paired work in formal educational contexts (MacDonald & Miell, 2000). The current research aims to redress this balance, exploring the role of affect and emotion in collaborative creative writing activities. In accord with current socio-cultural work on peer collaboration, the research presented here concentrates on processes of paired creative writing through the analysis of collaborative discourse.

Nevertheless, it should be made clear from the beginning that the idea that collaboration invariably leads to productive work is one that has been challenged by the current research. Collaboration is not an *educational panacea* (Light & Littleton, 1998), just as joint activities in everyday settings have their *affordances* and *constraints*. Instead, building on existing empirical findings, it is assumed that contextual factors impact on the collaborative process and may affect productivity. As already noted, context is used in the broad sense, referring to both the external features of a situation, and as "constructed *within* the interactions themselves and *through* the effect of the participants' interactional work" (Grossen & Bachman, 2000, p.492). There is empirical evidence that both external factors – e.g. task design, instructions, or the cultural tools used (Joiner, Faulkner, Littleton, Miell & Thompson, 2000; Light & Littleton, 1999) – and contextual features arising from within the collaborative partnership – e.g. their previous experience (MacDonald & Miell, 2000), or their relationship (Azmitia, 1996; Hartup, 1996a) or

identity (Murphy, 2000) – play significant roles in shaping the collaborative process. The following sections of this chapter will focus on the contextual features chosen for investigation in the current research: i) the relationship between the collaborators; ii) the nature of the task; and iii) the cultural tools mediating the activity.

1.3.3 Children's relationships and development

Although the socio-cultural approach attributes a central role to social interactions in cognitive development, there is very little written about how differences in the cognitive benefits of social interaction may reflect variations in the nature of children's relationships. As Hartup (1996a) points out, in most developmental theories the social agent (adult or peer) in interaction with the child is an abstraction, and not a flesh-and-blood individual in a unique relationship with him or her. It is the qualities (e.g. skills and knowledge) of the social agent that are typically used to explain the benefits of social interaction, not the quality of the relationship between the participants.

Consequently, in empirical studies on peer collaboration children are often assigned to a systematically chosen partner – based on skills, experience or other factors (Hartup, 1996a). Studies with such systematic pairings are not primarily concerned with the friendship-dimension, and do not aim to consider the shared histories of the partners as a distinct variable contributing to the processes and outcomes of the collaboration.

Educational practice may contribute to the limited interest until recent years in studying the effect of friendship collaboration in formal contexts (Azmitia, 1996). A common opinion among teacher-practitioners is that friendship pairings lead to too much off-task discussion and disruption – an attitude especially strong in the case of male friends (Hartup, 1996a) – which results in the restriction of pairwork to random pairs.

Nevertheless, the major shortcoming of educational research building on such systematic

pairing is that it fails to recognise the role of affect in everyday social interactions, or the spontaneous organisation of joint activities in everyday life.

Children's peer relationships vary widely in their intensity and nature from intimate friendships and loosely knitted classroom relationships to detached acquaintanceships, and at the other extreme, they may take the form of bully-victim relationships. Are friends better collaborators than non-friends or is it more fruitful to work with an acquaintance in the classroom? Are friends more cooperative and less antagonistic in conflictual situations? It is surprising how little attention researchers pay to friendship as a context for cognitive development, when friends are so important and central in children's lives.

When friendship is ever considered as some sort of cognitive resource, it is characteristically explained by the quantity and not the quality of joint activities (Hartup, 1996a). Yet, it is not only the length of time friends spend together that make close relationships so special but also the quality of interaction.

For example, as Dunn (1993) reminds us, friends provide the most exciting intellectual challenge for young children in the form of *shared fantasy play*. Most peer interaction among young (approximately 3-7 years old) children is thought to be focused around some sort of coordinated play activity, which requires a high level of involvement, other-orientation, good conflict-management skills, and emotional control (Gottman, 1986). This is taken as the "highest level of coordinated play", building on the "willingness to go on an adventure with someone else, to influence and to accept influence" (Gottman, 1986, p.156). Through establishing a shared world of play children learn to *connect* and *communicate*, and build shared understandings (Blatchford, 1998). They practice how to coordinate their actions, negotiate, compromise (involving giving up or repressing their own will for the benefit of the relationship) and how to resolve conflicts. Although joint fantasy play is an age-specific phenomenon, the centrality of coordinated play during

later, pre-adolescent years has also been reported (Corsaro, 1998), and is seen as the key element of primary-aged children's friendships (Blatchford, 1998; Dunn, 1993). Organised games build on complex patterns of verbal negotiations, disputes and conflicts (Goodwin, 1985, 1990) and follow elaborate rules and rituals which evolve naturally through shared experiences of playing together (Evaldsson, 1993). Research on children's play thus provides strong evidence that friendship has a special effect on cognitive functioning in play situations, which is not restricted to temporal factors.

Although these studies describe processes of children playing together, they have implications for studying how children work together in formal contexts, which the thesis presented here aimed to explore. There is still very little we know about the dynamics of different types of peer relationships (Azmitia, 1996) or how particular relationships – such as friendship – differ in terms of benefits for school-based learning. The study presented here was inspired by some recent work in the area addressing this issue (Azmitia, 1996; Hartup, 1996a, 1996b; Pellegrini, Galda & Flor, 1997). These researchers posit a strong link between the quality of the relationship between partners, and the nature and outcome of the collaborative learning process in classroom contexts, arguing that the way partners relate to each other may be a crucial determinant of their joint success. Before elaborating on this growing field of research the notion of friendship needs first to be defined.

1.3.4 Friendship theories

What are the qualities of friendship that make it so unique for us? According to Hartup (1996a, p.214), "friendships are close relationships whose normative essentials consist of reciprocity and commitment, and which occur between individuals who see themselves more or less as equals."

This is an excellent definition to start with. However, friendship is not a static or homogenous experience. First, the features and content of friendship change with age (Hartup, 1996a). For very young children, the motivation is typically *proximity* (Cotterell, 1996), and the thing to seek in friendship is the *enjoyment* of joint play (Dunn, 1993). Proximity and having fun together are defined as *companionship* (Berndt, 1989), which is seen as the most important aspect of children's friendship (Howes, 1996). As children grow older, similarity of *interests, attitudes* and *beliefs* becomes a more and more important motivational factor (Cotterell, 1996). Also, they will themselves identify the positive features of friendship as *companionship, intimacy, loyalty* and *attachment* (Dunn, 1993). From middle childhood to adolescence, *intimacy, self-disclosure* and *emotional support* become the central features children expect from friendship (Dunn, 1993).

Beyond differences due to age, there are *cultural differences* in terms of expectations or motivation as well, for example (i) variations reflecting gender differences; and (ii) variations rooted in the socio-cultural context. First, patterns of communication between male and female friends differ hugely, which is marked by the content as well as the form – such as vocal features (accentuated speech patterns for girls), and metalanguage (body-positioning, gestures) (Cotterell, 1996). On the other hand, different cultures vary as to whether they promote competition (hunter-gatherer and industrialised societies), or cooperation (agricultural ones) (Hartup, 1996a). This, again, will shape views on friendship and expectations set for friends.

We can also differentiate between *positive* and *negative* friendships, negative ones being imbalanced or asynchronous, limited in the forms of interaction they allow for and the emotional experiences they facilitate (Bukowski, Newcomb & Hartup, 1996). Also, there are variations from relationship to relationship in terms of *warmth, status* and *power, closeness* and *interdependence*. Berndt (1996) argues that the effects of friendship on

social development cannot be evaluated without distinguishing friendship features and friendship quality, friendship features determining the quality of friendship and thus defining the effects of friendship.

In sum, according to the reviewed literature friendship should be understood as meaning more than simply having friends, or reflecting something universally positive. Friendships should be treated as multidimensional and diverse: they differ in content, constructiveness, closeness, symmetry and their *affective substrates* (Hartup, 1996b). Also, instead of treating friendship as a dichotomous category (i.e. friend vs. non-friend), it should be taken as a more continuous aspect of life (Hartup, 1996b). Dumont and Moss (1996) define this continuum as *socio-affective distance-proximity*, arguing that proximity and distance (defined in terms of the degree of *familiarity* and *similarity* between partners) are useful concepts to distinguish friends and acquaintances, or different types of friendship. That the benefits of a close relationship need to be explored with this complexity in mind had implications regarding the methodological choices in the research reported here (see Chapter 2).

Note that the exploration of gender differences is beyond the scope of this thesis. This is not to assume that I do not acknowledge such differences, or that the data collected could not be used to compare gender groups. My analysis considers, incorporates and builds on previous research and theorising on gender differences in discourse styles. However, the analysis does not aim to contrast or compare, but to describe and explain discourse features in their own right. In other words, I have drawn on gender-sensitive models in the analysis (such as Coates' work on the discourse of female friendship, 1996) but not to compare but to describe in depth. Gender aspects are used to illuminate, not to contrast.

1.3.5 The potential affordances of friendship in collaborative contexts

Next, I will detail theorising and research regarding the potential benefits of friendship pairing in joint learning activities, with friendship of high proximity and reciprocity.

According to Hartup (1996a; 1996b), the four main reasons most typically cited to describe the advantages of friendship pairing for collaborative work are: i) friends have different expectations of one another; ii) friends are more motivated than non-friends to maintain contact with one another and to behave in ways that continue their interaction; iii) friends know each other better; and iv) friends provide affective contexts that facilitate problem-solving.

Underlying expectations

Keeping in mind the possible variations in friendship as described above, most reciprocal close friends' expectations can be seen as rooted in the underlying requirements of *reciprocity*, *commitment* and *equality* (Hartup, 1996a). These attributes can also be viewed as the essential ingredients of the ideal collaborative situation. Thus, in theory, friendship pairings form an ideal context for joint efforts. Due to the relative scarcity of research on friendship collaboration, especially in naturalistic settings, there is a need to gather empirical evidence to test this hypothesis.

Contact maintenance

It was noted that when spending time and doing things together close friends learn to regulate their actions around shared goals, to monitor each other and adjust their actions to suit the joint activity, and to manage the relationship at the same time (Gottman, 1986). Although, due to the mutual trust, friends will be more ready to disagree and challenge each other without the fear of endangering the relationship; they will also be more

inclined to repair communication breakdowns and continue the interaction (Dunn, 1993; Hartup, 1996b).

Other-orientation and shared imagination

The unique qualities of friendship can be especially facilitative in the context of creative collaborations, which may benefit from (and build on) the close friends' previously shared imaginative fantasy experiences, for example those developed during *coordinated play*. Thus while playing together, friends acquire and practice skills which are extremely useful in formal collaborative tasks.

Common ground

According to Crook (1999a) the productivity of peer activities in classrooms depends both on the nature of the ongoing interaction and on previous joint experiences – either at school or in their private world – which he refers to as *shared histories*. Shared experiences (or the supposition of having some) help the partners to establish common ground and to draw inferences about common knowledge. Shared histories are advantageous for their affective aspect as well, providing the motivation to work together. Friends have plenty of shared experiences to draw on in order to establish intersubjectivity. The motivation to connect and confide in one another means that mutual friends know each other better than non-friends (Hartup, 1996a). Indeed, it is due to this intimately connected existence – in other words *shared social reality* (Rogoff, 1990) or *shared frame of reference* Azmitia (2000) – that friends are claimed to be better collaborators, or better *cognitive bridges* (Hartup, 1996a) than non-friends both in everyday life and in educational contexts.

Shared discursive tools

Crook (1999a) argues that, in their domestic and playful lives, children frequently encounter situations which build heavily on their *discursive capabilities*. Thus, naturally occurring joint activities in everyday settings provide children with a repertoire of discursive skills – for example *hypothesising, predicting or challenging* – which are otherwise seen as restricted to school-based activities. Such shared histories and pre-established discursive strategies are characteristic of close relationships, which develop while friends play or spend time together. These collaborative and discursive strategies could be put to use in the classroom context, thus deploying the resources that the close relationship provides. As Crook explains, "Once we start from accepting that the learner already has available a repertoire of discursive resources, our attention can become focused on how to bridge that gap between the playful and the schooled deployment of those resources" (1999a, p.105).

Affective context

Although evidence is scarce and scattered, research shows that children are more active and less anxious about exploring an unfamiliar situation with a friend than with a non-friend (Hartup, 1996a). Thus, working with a friend may enable the child to cope with an intimidating or perplexing context, and to fight back anxieties that may block the successful completion of a task. Also, affective exchanges between friends may reduce negative effects – such as frustration due to an unusually challenging task – and help maintain the children's motivation to solve difficult problems (Azmitia, 1996; Hartup, 1996a).

Altogether, the potential benefits of friendship pairing can be linked to underlying expectations in close friendships, the friends' ability to influence and accept influence, and their skills in contact maintenance. Also, the potential advantages can be explained in

terms of the high degree of intersubjectivity between close friends, rich discursive resources and well-established, mutually accepted collaborative strategies, all originating from their shared histories. Finally, there is some evidence that the affective context that friendship pairings provide facilitates problem solving by helping to overcome anxiety, caused by an unfamiliar or strange situation (Hartup, 1996a). Following from these arguments, collaborating with friends appears to have a positive effect on cognitive processes in general. The next section will detail empirical work on the affective aspects of peer collaboration.

1.3.6 Friendship benefits and the nature of the task

Friendship and collaborative problem-solving

In the section above I summarised the main theoretical arguments regarding the role of friendship in mediating peer collaboration. As sections 1.3.1 and 1.3.2 have demonstrated, there is a wealth of empirical research investigating the facilitative effects of peer interaction in collaborative problem solving tasks. There is strong empirical evidence regarding the cognitive gains of collaborative problem solving as opposed to individual work (Azmitia & Montgomery, 1993; Hartup, 1996b).

Empirical evidence for the cognitive effects of the quality of an interpersonal relationship is scarce though, due to the relatively little attention paid to the affective dimensions of peer relationships (Azmitia, 1996; Dumont & Moss, 1996; MacDonald & Miell, 2000). The few existing studies provide a mixed picture. While some indicated no friendship-effect on collaborative work (e.g. Berndt, Perry & Miller, 1988), others reported the positive effects of friendship pairing on cognitive processes. In particular, research by Azmitia and Montgomery highlighted potential benefits in the context of scientific problem solving, especially when faced with a *challenging* task (Azmitia, 1996; Azmitia

& Montgomery, 1993). They found that friends working together outperformed non-friendship pairs, but advantages were only evident in more challenging (e.g. unstructured, open or ill-formed) cognitive tasks. Thus, they posited an interaction between friendship and the nature of the task (or task complexity).

Due to the relatively little attention paid to creative contexts in collaborative literature, we know very little about the facilitative effects of peer collaboration in creative tasks – such as creative music composition or creative writing – although these activities are often based on paired work in educational contexts (MacDonald & Miell, 2000). In what follows, I will first outline work on collaborative music composition, then move on to research which explores the role of friendship in creative collaborative writing.

Collaborative music composition with friends

Studies on friend's collaborative music composition by MacDonald and Miell have similar findings to those of Azmitia and colleagues (MacDonald & Miell, 2000; Miell & MacDonald, 2000). They posit a link between the quality of the composition and the pattern of communication, claiming that it is the discursive style of friends that put them at advantage. However, they argue that there is an interaction between the nature of the relationship and the experience of the participants in determining the quality of paired talk and the productivity of the collaboration. For example, musically experienced children were found to use language more constructively, regardless of the pairings, whereas less experienced children's communication style was most affected by the nature of their relationship with the peer. These findings suggest that the processes and outcomes of peer collaboration can only be speculated by considering both the nature of the relationship, the type of task, and the previous experience of the partners.

Collaborative creative writing

In terms of literacy education, the role of social context – notably the role of the mother-child interaction – in supporting the child's language and literacy learning has received considerable attention (Bus & van Ijzendoorn, 1995; Heath, 1983). In contrast, there is relative limited work exploring the role of peer collaboration in literacy development in the preschool and early primary school years (Pellegrini *et al.* 1997; Pellegrini, Galda, Bartini & Charak, 1998).

With regard to writing, the traditional assumption is that it is a solitary activity. But some recent studies describe the writer as a member of a *community of practice* (Sharples, 1999) and approach writing as a fundamentally social activity. In this view the writer is in constant interaction with his or her socio-cultural environment. As Sharples (1999, p.168) notes, "all writing is collaborative."

One of the main functions typically attributed to joint writing is that of a pedagogical tool, a method to teach writing skills by reproducing and extending the inner dialogue of a mature writer through collaboration (Hartup, 1996a). The English and Welsh National Curriculum advocates collaborative writing (Appendix 1), and textbooks for teachers recognise paired writing as a valuable technique, offering guidelines for collaboration (Wahstell, 1998). Yet, in practice shared writing is more likely to take the form of co-operation (e.g. children positioned in groups and sharing thoughts on individually developing work) and not collaboration as defined by educational theories (Dillenbourg, 1999). This argument is shared by educational research on classroom collaboration in general, pointing at the relative infrequency and not particularly *pedagogically effective* use of groupwork (Light & Littleton, 1999).

Although research on collaborative writing is scarce, studies comparing individual and collaborative writing processes and outcomes revealed that compositions written by pairs were more advanced than individually written ones, and the benefits of collaboration carried over into subsequent individual creative writing (e.g. Hartup, 1996a). There is one exception: Daiute (1992) reported the opposite effects, finding in a case-study that individually written stories were more coherent than paired compositions. However, the case study only involved two children, thus any implications of this study can only be tentative. On the other hand, Hartup explains the positive friendship-effect by arguing that social interaction is especially facilitative in tasks involving the creative manipulation of materials and language.

When reviewing the relatively small amount of academic work on the affective aspects of peer collaboration, the imbalance between scientific problem solving and creative subjects is further emphasised. In what follows I will detail the few studies which concentrate on the role of relationship in creative collaborative contexts.

Friendship and collaborative creative writing

The affective aspects of collaborative creativity are just as under-researched as the affective factors in collaborative problem solving, with only very few studies (Hartup, 1996b; Jones & Pellegrini) investigating ways in which friendship may facilitate literacy and learning. However, these studies unanimously agree that working with friends shows more benefits than working with a non-friend.

Hartup and colleagues (Hartup, 1996b) found that collaboratively written compositions were of higher quality than individually written ones, and in turn, the collaboration of friends was more fruitful than that of non-friends (Hartup *et al.*, 1995, in Hartup, 1996b). As Hartup notes, “the affordances of collaboration differ from the affordances of solitude

and, during collaboration the affordances of 'being friends' differ from the affordances of 'being acquaintances'" (1996a, p.227). Hartup and colleagues explored the differences in terms of better use of Standard English rather than the narrative elements included in the text. Their analysis revealed that stories written collaboratively by friends, as compared with stories by non-friends, contained more personal pronouns (but fewer affect words and references to present events), which they linked to a greater interpersonal emphasis.

Similarly, working with a friend has been reported by Jones and colleagues to be more beneficial than collaborating with a non-friend (Jones, 1998), at least at the early stages of literacy acquisition (Jones & Pellegrini, 1996). Jones (1998) reported the positive effects of friendship discourse on the narrative structure of the composition, which was scored along six dimensions: the *setting*, *initiating event*, *internal response*, *attempts*, *consequence* and *reaction*. In a previous study, Jones and Pellegrini (1996) used the linguistic measures introduced by Halliday and Hasan (1976) – focusing on *lexical density*, *cohesion* and general *well-formedness* – and found that collaborating with a friend improved the linguistic properties of young children's written narratives. They linked the advantages of friendship pairing to the higher proportion of metacognitive verbalisation and claimed that friendship has facilitative effects on metacognitive processes central to writing.

Elsewhere, Pellegrini and colleagues (Pellegrini *et al.*, 1997; 1998) explained the discrepancies in gains with the higher frequency of conflicts, resolutions, emotional terms and literate language in friendship discourse. Their assumption was that during their shared history of conflict-resolution cycles, friends often need to monitor their interactions and reflect on each other's utterances: to talk about thoughts, feelings or intentions (Pellegrini, 1985). They concluded that the proportion of metacognitive verbalisations (the use of words such as *think*, *know*, *guess*, *remember*, *say*, *tell* or *ask*), emotional talk and

conflict correlated with the nature of friendship. Also, the frequent use of metalanguage resulted in more sophisticated compositions. Note the emphasis in these studies on combining the analysis of the *processes* and *outcomes* of paired writing activities. In line with this, the present study shifts the focus to the analysis of the *processes* of paired writing, through the detailed and context-sensitive study of children's paired discourse.

On the whole, there seem to be significant qualitative differences between collaborative and solitary work, and between working with friends or non-friends. In particular, empirical evidence shows that that the quality of close relationships provides extensive support for the development of creative writing skills. The discrepancy between the bias against friendship with respect to groupwork (characteristic of contemporary educational practices and mainstream educational research), and the evidence presented above is evident. Further empirical work is needed to evaluate the affordances and constraints of different relationships in collaborative activities, especially in creative fields. The study detailed in this thesis serves to fill in several gaps in collaborative research, by i) focusing on the study of collaborative creative writing; ii) considering the nature of relationship between partners and iii) shifting the emphasis to the analysis of processes as opposed to outcomes when evaluating the productivity of the paired activities. So, focusing on the most immediate contextual feature (collaboration with friends and acquaintances) and thus developing further the initial questions raised at the end of section 1.2.1, the current research aimed to address the following issues:

- *How does the nature of relationship impact on the collaborative activity, reflected in the collaborative strategies and discourse patterns?*
- *What are the affordances and constraints of friendship pairing in the context of paired creative writing?*

In the next section I move onto other crucial contextual features the current research was concerned with. First I will expand on the issue of task design and explore the special nature of creative writing tasks. (This issue has already been touched upon in the discussion of friendship research in different task-settings.) Then the review will concentrate on theorising and research on creativity, with special emphasis on creative writing in general, and classroom-based creative writing in particular. This way, I will shift the focus from the immediate context of collaborative relationship to the intermediate context of classroom setting.

1.4 Creativity and literacy education

1.4.1 Creativity

Creative thinking

As was pointed out in the Introduction, self-expression through creativity is an age-old, fundamental human endeavour. However, we regard some people as more creative than others. Csikszentmihalyi describes creative individuals as sharing the gift of *flow*: "the automatic, effortless, yet highly focused state of consciousness when engaged in activities, often painful, risky or difficult, which stretch a person's capacity whilst involving an element of novelty or discovery" (Loveless, 2002, pp.8-9). McGhee (1980) associates novelty with creative insights induced by *divergent thinking*, an argument which builds on Koestler's definition of creativity. Koestler traces all types of creativity down to the process of *bisociation*, which in his views involves "the perceiving of a situation or idea... in two self-consistent but habitually incompatible frames of reference" (Koestler, 1964, p.35). In this sense, creativity is not the formulation of hitherto non-existent thoughts, but rather, the association of existing but seemingly unrelated ideas, perceptions, domains and contexts, which have no previously established meaningful connection. This formulation

can easily be linked to Sharples' description, who citing the findings of psychiatrist Rothenberg (1976), lists *Janusian thinking* – "simultaneous conceptualisation of opposites" – and *homospacial thinking* – the active conception of "two or more discrete entities occupying the same space" – as highly characteristic of creative people (1996, p.129). In all these perspectives on creativity the common thread is the propensity to playfulness and experimentation, the pursuit of complexity, the demonstration of flexibility of thought and the lack of fear of failure (Shallcross 1981, in Craft 2000, p.13).

Practically, what differentiates highly creative individuals from people in general is the high frequency and the relative novelty or uniqueness of associations (McGhee, 1980). Yet, there is an important distinction between creative and novel ideas. As Sharples points out, creativity is about testing the boundaries, but maintaining general appropriateness. It is about both satisfying and breaking the constraints, through the systematic exploration and transformation of the conceptual structure they provide (1996). In Sharples' formulation, the distinction between creative and novel ideas is that the latter may be original and convey an unique image, but are inappropriate because they do not satisfy the constraints of the task. These issues will be vital in the discussion of classroom-based creativity, where the constraints may either be inherent (e.g. genre), imposed by the teacher or linked to the educational context.

Creativity as a social practice

In previous sections I have outlined the main tenets of the socio-cultural perspective, describing human cognition as a fundamentally social process, situated in and mediated by the socio-cultural context. Similarly, creativity – verbal or other – can also be seen as a situated and mediated human act; a socially (and ideologically) contested terrain. What counts as creative, what sort of creativity is promoted, recognised, valued and remembered is determined by the wider cultural context, and may change with time. As

Csikszentmihalyi (1996) notes, "creativity arises from the interaction between the 'intelligence' of individuals, the domain or areas of human endeavour, disciplines, crafts or pursuits, and the field, such as people, institutions, award mechanisms and 'knowledgeable others' through which judgements of individual performances in society are made" (Loveless, 2002, p.10). Csikszentmihalyi (1996) argues that other members of the society act as *gatekeepers* who recognise, preserve and remember creative products. Their role is to foster or discard creative initiations. Such a context-sensitive model, which denies the existence of a universal measure of creativity and purports its relative value, has strong implications for research on classroom-based creativity, which needs to consider the role of teachers (or the role of the educational institution as such) as gatekeepers determining creativity (Loveless, 2002). Note, however, that the current research is not primarily concerned with the role of the teacher in classroom-based creative activities. Rather, the main focus is on children's collaborative work which is set in the classroom, but carried out as the *independent* phase of the literacy session (see Appendix 1 for a description of the independent phase of the Literacy Hour). In what follows, I continue with the discussion of theorising on creative writing in particular, as embedded in the wider scope of creativity studies.

1.4.2 Creative writing

Sybil Marshall's definition of creative writing is an extension of what has already been said about creativity in general: "creative writing is the use of written language to conceptualise, explore and record experience in such a way as to create a unique symbolisation of it" (1974, p.10).

Although I fully share Tonfoni's views (1994) that creativity is not a genre-specific trait and that any sort of writing task may provide opportunities for creative thinking, the

current research is concerned with the classroom-based creative writing of young children. Therefore, the focus of the discussion is on what *The National Literacy Strategy: Framework for Teaching* (Department for Education and Employment [DfEE], 1998) defines as Fiction and Poetry to be taught: stories, poetry, radio advertisements, TV jingles and songs. The next section will concentrate on the special cognitive skills and mechanisms involved in the process of creative writing.

Creative writing as complex problem solving

Classic cognitive models (e.g. Bereiter & Scardamalia, 1987; Flower & Hayes, 1980) define the process of writing as complex problem solving, "in which narrative content must be generated, narrative structure developed, and linguistic mechanisms utilised" (Hartup, 1996a, p. 225). Such an approach is rooted in the cognitive model of writing introduced by Flower and Hayes (1980), who claim that the complex task of writing requires a high degree of planning unseen in spoken forms of conversation. The three components of their model are *planning* (the generation and organisation of information needed for the task and goal-setting), *translation* (the turning of the plans and thoughts into text appropriate for the goals of the task), and *reviewing* (the editing and evaluation of the text or the goals).

This cognitive model has been highly influential in writing instruction (Czerniewska, 1992), and contributed to the shift in attention from the outcomes to the underlying mechanisms of writing. Yet, it fails to take account of aspects outside the individual, such as the fact that creative writing is framed by social and cultural perspectives (Resnick, 1990), or that it depends on specific goals and social functions (Boscolo, 1995). Also, as will be shown below, the definition of writing as problem solving is too narrow to account for all the cognitive processes involved. As with developmental theories in general, the same critique is raised regarding developmental theories of creative writing:

they are mostly cognitive accounts, with very little room for the consideration of interpersonal and affective aspects.

Writing as creative design

According to Sharples, the fundamental difference between writing and problem-solving is that the former is an open-ended design process, without a fixed goal and without clearly specified and ordered stages leading to one single solution (1999, 1996). He argues that writing is comparable to creative design and, as such, can be defined as a fusion of synthetic (or productive) and analytic phases. It is seen as building on two interlinking and interdependent processes, *engagement* – the generation of creative ideas; the emotional engagement with the material – and *reflection* – the conscious break of the chain of association; reviewing, contemplation and planning (Sharples, 1999).

In his model Sharples incorporates existing conceptualisations, such as Bereiter and Scardamalia's (1987) coinage of *knowledge telling* and *knowledge transforming processes*, or Hayes and Flower's (1980) cognitive model of writing as problem solving. He also reconciles opposing approaches such as Gelernter's (1994) and Boden's (1990) perspectives on the cognitive aspects of creativity. First, Sharples assumes that the repetitive cycle of engagement and reflection is linked to two mental processes, *knowledge telling* and *knowledge transformation*. Using Bereiter and Scardamalia's formulation, he describes knowledge telling as the creation of ideas through association, which is followed by the translation of the generated thoughts and ideas into words, which serves as a trigger for further association and writing. The process can take the form of *stream of consciousness* or *daydreaming* or *free association*. This account is very similar to general models of creative thought. On the other hand, knowledge transforming is defined as "an interaction between two problem spaces – content and rhetoric – with the content space being the writer's beliefs about the writing topic and the rhetorical space

containing the writer's knowledge about the text and writing goals" (Sharples, 1996, p.133).

Sharples links this dichotomy to Gelernter's (1994) concepts of *high focus thinking* (the manipulation and construction of ideas or analytic thought) and *low focus thinking* (day-dream-like mental state, affect-linked thinking in which "whole episodes from memory are blended and linked together by a common flow of emotion" [Sharples, 1996, p.132]).

Sharples argues that when high and low focus thinking are mobilised towards text production, then they can be seen as knowledge telling and knowledge transforming.

However, general theories of creativity contradict regarding the emphasis they place on one process or the other. In Boden's (1990) formulation creativity is primarily linked to deliberate explorations and transformations in the mind (high-focus thinking or knowledge transforming), whereas Gelernter (1994) argues that low focus thinking is the foundation of creativity, and unique analogies are formulated as emotion sparkles and binds thoughts in the dream-like associative process. Sharples (1996) joins these two arguments, and posits that high and low focus thinking are both crucial to creativity. They are combined by the mind's *conscious* effort to recreate an *emotional* experience, which prompts the composition of the written text. Thus emotion acts as the trigger and the filter of thought at the same time (Sharples, 1996). The main idea is that engagement and reflection form iterative cycles. Engagement phases are characteristically low-focus in nature, while reflective phases (planning and reviewing) typically build on high focus thinking.

Sharples' model emphasises the centrality of emotions instead of describing creative writing as a fully cognitive process. Also, by assimilating creative writing to other types of creative design, his model fully grasps the complexity of the activity. It is not a linear

process of problem solving but an unpredictable and seemingly *serendipitous* problem finding activity. However, Sharples' definition of *engagement* and *reflection* implies that reflection is associated with detachment (disengagement with the material), and is purely intellect driven. Also implied in Sharples' engagement-reflection dichotomy is the sole association of engagement with emotions, it being the only emotion-driven function.

The current research challenges the clear-cut distinction between engagement and reflection, and the restriction of the role of emotions to phases of engagement. It is argued that reflective phases can also be emotion-driven, and may vary in their emphasis on intellect and emotion. This approach is more in line with Gelernter's original formulation, where high and low focus thinking (reflection and engagement) are not seen as two unconnected modes of thought but are posited on a spectrum. (Note however that Scardamalia and Bereiter's corresponding formulation of knowledge telling and knowledge transforming is dichotomous.) It also draws on Donaldson's (1996) description of value-sensing and intellect-driven modes. Content generation is seen as positioned at the value-sensing end of the continuum – mostly emotion-driven – whereas reflective phases (planning, reviewing, transcription) may vary in the degree of intellect or emotion they involve. Thus, the notion of *reflection* is used in a broader sense than simply associated with detached, logical reasoning.

In light of the definition of creative writing as an open-ended creative design the following questions were formulated:

- *How do cognitive and social processes of paired creative writing differ from those reported as being associated with collaborative problem solving?*
- *How is paired discourse used to support different processes linked to creative writing?*
- *What does sharedness mean at different phases of the collaborative creative writing process?*

The chosen setting for the current research was classroom-based creative writing, embedded in the broader context of literacy education. In order to situate the interest in the specific task of classroom-based creative writing, the next section will detail some issues highlighted by recent efforts to conceptualise the acquisition of literacy. Note that a comprehensive overview is beyond the purposes of this review. The discussion is restricted to socio-cultural approaches to literacy education.

1.4.3 Socio-cultural approaches to literacy

There is a burgeoning set of studies approaching literacy from a socio-cultural perspective (Gee, 1996, 1999, 2000; Lankshear 1997; Lankshear & Knobel 2003a; Street, 1995). The convergent themes drawn from a range of interdisciplinary work which serve the theoretical and empirical basis for the approach are well documented by Gee (2000). Elsewhere, Gee (1996, Chapter 3) also describes ways in which recent efforts specifically focused on the reconceptualisation of literacy led to the emergence of the *socio-cultural literacy studies* or *new literacy studies*.

Viewed from a socio-cultural perspective, literacy practices are inextricably linked to the social and cultural contexts they are embedded in. These views are represented in the *ideological model* (Street, 1995), which assumes that literacy practices are not homogenous but that they vary according to the social, ideological and political background. Cultural norms and local ideologies, political-economic agendas and power relationships define what constitutes literacy in a given socio-cultural context, and they also determine the ways in which we conceptualise and reflect upon the role of literacy in everyday practices.

Lankshear and Knobel (2003a, p.8) capture the essence of the argument as follows:

"From a socio-cultural perspective, it is impossible to separate out from text-mediated social practices the 'bits' concerned with reading or writing (or any other sense of 'literacy') and to treat them independently of all the 'non-print' bits, like values and gestures, context and meaning, actions and objects, talk and interaction, tools and spaces. They are all non-subtractable parts of integrated wholes. 'Literacy bits' do not exist apart from the social practices in which they are embedded and within which they are acquired. If, in some trivial sense they can be said to exist (e.g. as code), they do not mean anything. Hence, they cannot meaningfully be taught and learned as separate from the rest of the practice."

Literacy acquisition as apprenticeship

Viewed as a social construct, literacy is regarded as a form of social practice, and not as technical expertise relating to the mechanics of reading and writing. Following from this, socio-culturally inspired research has a unique take on literacy acquisition itself, approaching it as "apprenticeship in particular ways of being" (Kern, 2000, p.35), and not as the accumulation of specific technical skills related to reading and writing. For the purposes of the current study, I have adopted Kern's (2000, p.35) definition of literacy acquisition, which describes it as the "acculturation into the particular conventions of creating and interacting with texts that characterise a particular discourse community."

This definition fully grasps the mediated and situated nature of learning, and appropriates these key concepts to the study of the acquisition of literacy. It also draws our attention to the importance of expert guidance in the process, initiating the learner in the appropriate ways in which to approach, work with and respond to texts, and thus providing membership to a community of practice. Indeed, the issue of how "children interpret, work with, and eventually come to understand the system of writing with which their culture surrounds them" (Pontecorvo, Orsolini & Resnick, 1996, p.ix) is central in socio-cultural accounts, which regard productive and effective participation in literate practices as a result of successful socialisation (Lankshear & Knobel, 2003a). The definition also emphasises the complexity of the acculturation into literate practices, which involves

competence in using the system of written language, an understanding of why and how different contexts require different ways of reading and writing, and finally, a critical awareness of the ideological nature (and thus relative value) of all literacy practices (Lankshear & Knobel 2003a). Finally, Kern's definition refers to conventions of particular discourse communities, moving the discussion to the study of literacy as Discourse.

Literacy as Discourse

Drawing on the work of philosophers of language such as Foucault and Bourdieu, Gee (1996) invites us to approach social practices as different types of Discourses. He defines Discourses (capital D) as "ways of behaving, interacting, valuing, thinking, believing, speaking and often reading and writing that are accepted as instantiations of particular roles (or types of people) by specific groups of people" (1996, p.viii). He distinguishes primary and secondary Discourses. Our primary Discourse involves "face-to-face communication with intimates", and is the discourse of our immediate social environment (Gee, 1996, p.143), determined by social class, ethnicity, etc. Secondary Discourses are acquired through involvement in social groups which are beyond the immediate context; institutions such as schools, clubs, religious or community groups, workplaces and so on.

He argues that membership in a discourse community requires the mastering of relevant Discourses, that each Discourse has their distinctive language uses (e.g. family-, patient-doctor- or legal discourse) and that each of them contribute to what we are through the beliefs, ideologies, purposes or conventions attached to them. Thus, the appropriate use of a Discourse means more than appropriate use of language, it is the mastering of different *ways of being* and different ways of relating to people and the environment (Kern, 2000). In this view, being literate equals being able to use the "right language in the right ways within discourse". (Lankshear & Knobel, 2003a, p.13). With respect to school-based

creative writing this entails the mastering of Discourse related to the composition, appreciation and evaluation of creative texts.

However, Gee points out that the relationship between one's primary and secondary Discourses may vary in terms of their *resonance* or *compatibility* with each other. Social practices at home can be used as the grounding to prepare the child for the mastery of educational Discourses, but they can also hinder the process. In other words, children may benefit from a primary discourse which resonates with the values and practices associated with school-based Discourses, which Gee (1996) calls *filtering*.

The issue of *filtering* (or knowledge transfer) has been addressed by developmental psychologists working in the area of peer collaboration. For example, as indicated before, Crook (1999a) argues for the transferability of knowledge and expertise between different contexts. He advocates that we mobilise discursive resources acquired outside school to school-based collaborative tasks. This position sees the teacher as the facilitator of the learning process, whose goal is to create continuities "between existing concerns and new ones that we are asking them [children] to reason about together in classrooms" (1999a, p.105). In contrast, others – most notably Mercer and colleagues (Mercer, 1995) – advocate that children need to receive explicit instruction to help them engage in groupwork and group talk and thus to master schooled discourses.

This debate points towards another central theme of the research presented here: the role peers may play in the mastering of the Discourse of school-based creative writing. Drawing on Crook's argument, the current research explores ways in which peers of equal ability can be mobilised as resources in the process of acquiring schooled Discourses. More specifically, the question was whether there is any possibility for filtering (or

transfer) between the primary Discourse of friendship, and the secondary Discourse of school-based creative writing.

My interest lay in the study of discourse and social practices related to literacy (with a special focus on creative writing within) as embedded in the classroom setting. The research focus was placed on the social aspects of the process of acquiring the Discourse of creative writing; and on the investigation of how children negotiate meaning, and come to a joint, shared understanding of what it means to engage in creative writing activities at school. I was interested in how they learn what it means to write *creatively*, to write creatively *in the classroom*, and to compose creative texts *collaboratively* with a partner. The first and the last themes – creative writing and creative peer collaboration – have already been addressed in the review. In what follows, the theme of classroom-based creative writing will be introduced in more detail.

1.4.4 Classroom-based creative writing

Children's creative thinking

Our understanding of the processes and capacities involved in creativity are grounded in theorising about adult creative thinking (McGhee, 1980). So far conceptualisations about children's creativity were extensions of theorising of adult creativity, regarding divergent thinking as the generally applicable basis for creativity at all developmental stages (e.g. Wallach & Kogan, 1965, in McGhee, 1980). Yet, as McGhee points out (1980), there is some empirical evidence that creativity at later stages in life can be linked to *make believe play*, to the occurrence of imaginary friends, and day dreaming in childhood. His conclusion is that the conceptualisation of fantasy play as a form of creativity in the early years provides the bridge between the creativity of young children and creativity at later stages of life. This argument ties in neatly with the discussion of fantasy play as a

grounding for children to learn how to collaborate. It seems that friendship – by creating a platform for children's play – equips them with essential discourse skills and provides a context for shared creativity. If this is so, young children's classroom-based creative writing efforts may benefit from being paired with their friends, with whom they may have a shared history of fantasy play, or other forms of coordinated play during playtime and out of school. One of the central aims of the research presented here is to explore this argument, and investigate whether friends are better collaborators in creative contexts than children who have no shared friendship experiences.

Classroom-based creativity

In previous sections I have outlined the main tenets of socio-cultural theorising, describing the situated and mediated nature of human cognition. The section on creativity underlined the localised meaning and value of human creativity. It follows from all the above that classroom-based creativity is seen as substantially different from creative endeavours in other contexts, in terms of i) purpose, ii) control and audience and iii) motivation.

Whereas in general creative endeavours are seen as serving the purpose is self-fulfilment, in the literacy classroom creative writing is an educational activity, with the typical aim to develop students' expertise in particular literacy-related technical skills. Since young, inexperienced writers are in the process of mastering these skills, there is greater dependence on the teacher (Browne, 1996). Sharples (1999) argues that it takes about five years of regular practice for children to progress to reflective, controlled writing, which in the British educational system he estimates to be achieved at around the age of 11. Thus, in the context of young children's classroom-based writing, it is the teacher who controls the writing process and sets the task: they choose what, when and how to write. Consequently, children often write for the teacher as the audience (Czerniewska, 1992).

Also, teacher-control means that creative writing tasks are not inspired by internal motivation, and children write because that is what they are asked to do (Czerniewska, 1992).

Although the pivotal role of the teacher is clear from this discussion, the current research on ongoing classroom practice is not concerned with the teacher's contributions in the classroom situation. Since the lessons are observed in context of the National Literacy Strategy, the current research looks at the *independent writing* component of the literacy hour, and places the emphasis on studying children's group work (see Appendix 2). Thus, although the analysis addresses ways in which children draw on the resources provided by the teacher and materials or tools available for them in the classroom context, the focus is on the way in which these resources impact on their interactions with *each other*. The implications of the restricted focus on children's interactions will be further detailed in Chapter 2.

On the basis of i) the adopted approach to classroom-based peer-collaboration as situated in and mediated by the social and cultural aspects of the context; ii) the discussion of classroom-based creativity as potentially different from the free-flowing associative games found in children's play activities, and iii) the discussion around the study of school-based peer-work, the following research question was formulated:

- *How do contextual features of the learning context influence collaborative creative writing activities?*

Instead of identifying focal contextual features at these levels prior to the observations and analysis, the current research planned to focus on contextual aspects recognised as central in the findings and proving to be of major interest as a result of a reflective analytic-interpretive process. Note however, that one aspect within the classroom context has been

identified and incorporated in the design of the current research. This aspect is the role of computer technology in mediating classroom-based collaboration. The next section details major themes of theorising and research in this particular field.

1.5 Collaborative learning and new technology

Computers and social interaction

As defined in earlier sections, *distributed* approaches to human cognition emphasise the mediational role of cultural tools and artefacts in human practices. "The mastery of mediational means is an essential aspect of the process of learning" (Säljö, 1999, p.152). However, new cultural tools do not only represent new resources for the same activity. As research on computer-mediated cognition informs us, they fundamentally change the activities they are used for. They shape human life, modify our ways of thinking, and create new ways of knowledge construction (Säljö, 1999).

Computer technology has also altered already existing discourse patterns, and created new ones. With regard to classroom activities, Crook (1994) lists the following types of interactions involving computers:

- interactions at computers (working with the same computer);
- interactions around computers (working individually, parallel);
- interactions through computers (through time and space; distinctive feature is the immediacy, and the participants' full control of and access to information resources);
- interactions in relation to some computer application.

Computers and collaboration

Just as with research on collaboration in general, early studies on computer-supported collaboration concentrated on whether joint efforts lead to better results than individual work. Current empirical studies have shifted their focus to the processes underlying productive interaction (Littleton, 1999). The ultimate goal of such research is to define ways in which computer technology can support education.

Computers appear to have a specific role in collaborative learning. As many commentators note, the initial scarcity of computers in schools almost demanded that children were organised to work at them in small groups. It also appears that groups focused around a computer task do far better than most other sorts of groups both in terms of group performance and in terms of subsequent individual performance on similar tasks (Light, 1997). What is even more striking is that the presence of other children in the room was also found facilitative even if the children were working on separate computers without any interaction (Light, 1997).

One possible explanation is that, through facilitating role distribution, computers open up new metacognitive space for reflection. Role differentiation in collaborative problem solving has already been discussed with reference to the study of Forman and Cazden (1985). Role differentiation in computer-supported collaborative problem solving contexts was explored by Light and Littleton (1999). They found that, when sharing the computer equipment and additional props (e.g. paper maps), children typically divided the responsibilities among themselves, thus adopting the role of the *navigator* (working with the map) and the *pilot* (working with the mouse or keyboard). This, they argued, has not led to imbalanced contributions, since upon encouragement from the experimenters, the children alternated these roles frequently. Thus, through navigating or monitoring the task, the children both acquired skills to jointly *engage* in the completion of the task and to

reflect on the joint processes. The current study aimed to move this discussion further, and explored ways in which resources already available at school (i.e. word processors) can mediate collaborative creative writing activities.

There is a strong research interest in children's computer-supported collaboration (e.g. Joiner *et al.*, 2000; Murphy, 2000; Scanlon, Issroff & Murphy, 1999). However, Lankshear and Knobel (2003b) report the paucity of research in new technologies and literacy, especially in early childhood research. The small set of studies which look at the computer as a tool for collaborative writing purposes (Daiute, 1992; Lankshear & Knobel, 2003b) suggest that computers may significantly boost interaction and collaboration in the classroom, for example indicated by the frequency and content of spontaneously initiated talk among students in computer-based writing activities as opposed to *normal* classroom writing (Kamil, Intrator & Kim, 2000). An aspect which the current research addresses is the way the writing medium organises writing activities which are planned and set out as collaborative (as opposed to spontaneously evolving).

Computers and the process of creative writing

The literature available so far indicates the positive effects of computer use in this context. For example, Jones and Pellegrini (1996) suggest that the use of a word processor improves the writing skills and writing quality of young children. One possible explanation is that it reduces the mechanical demands of writing – such as spelling, correcting mistakes and inserting and deleting texts – and thus helps less skilled writers to concentrate on organising their thoughts and constructing sentences (Jones & Pellegrini, 1996). This may lead to more intense metacognitive processing, content generation and longer texts of higher quality. Another assumption is that computer use enhances processes of planning and revising, especially if the software encourages children to edit

their texts repeatedly. Reflection and reviewing, as it was pointed out before, are essential in creating cohesive and well-written texts.

In sum, these studies extend the debate on the role of computers in peer collaboration by considering the use of computers in literacy education. They show that computers appear to be ideal tools to enhance creative writing skills and to create a thriving, exciting context for collaboration. However, they typically examine the effects of the writing media on the written products or the relationship between processes and outcomes. This product-based approach mirrors early research on computer-supported collaboration in scientific problem solving tasks, and mainstream work on peer collaboration in general. Also, the paired writing sessions they report do not involve working on a shared product, but rather build on the sharing of plans, the discussion of ideas while engaged in individual writing, and the sharing of finished compositions. Although these studies clearly demonstrate the role of the writing medium in shaping ways in which children think about the writing process, they cannot show in detail how the writing medium influences processes of creative writing *while* engaged in creative text composition. Neither can they show how the writing medium structures collaborative processes when working on a shared product. The current thesis addresses these issues.

The research question formulated on the basis of the literature review, for the particular area of new technology and literacy was as follows:

- *What are the constraints and affordances of computer mediation in the context of collaborative creative writing?*

1.6 Summary and research questions

This literature review discussed the major tenets of the socio-cultural approach from a historical perspective. Then the main arguments concerning the role of social interaction and cultural mediation in human development and learning were discussed. The theoretical grounding for the research questions was derived from the review and critique of existing socio-cultural theorising and research.

The study of contextual aspects in learning situations was identified as a central theme in socio-cultural theorising and research. On the basis of the review different *contextual layers* were identified as of central interest for the study of school-based learning, for example the immediate social context, the broader context of the classroom, and the wider context (including the research setting or the institutional setting). Contextual features within these levels were seen as interdependent and inextricably linked. Yet, in order to offer a structured analysis, they were approached separately.

The current research had a specific interest in *peer collaboration* as the immediate social context, and aimed to examine how children use talk to get things done together when collaborating on school-based tasks, and how paired talk can support joint processes of learning. It has been noted that research on collaborative learning has paid little attention to the affective dimensions of peer interaction. Yet, the reviewed empirical work proved working with friends to be highly advantageous in complex or challenging tasks or ones that rely on the use of metacognitive skills. Thus, with regards to the *immediate* social context, the strong need to further study the emotional dimensions of paired work was emphasised. Hence the overarching theme of the affective dimensions in peer-mediated learning in the research presented here. The current research planned to explore the

potentials of friendship as the context for classroom-based shared creative writing. The specific research questions identified were as follows:

- *How does the nature of relationship impact on the collaborative activity, reflected in the collaborative strategies and discourse patterns?*
- *What are the affordances and constraints of friendship pairing in the context of paired creative writing?*

The study of the role of emotions was also a strong theme with regards to the chosen task of collaborative creative writing. Since the vast majority of research on collaboration is concerned with scientific problem solving, the need to redress the balance by studying open-ended and unstructured types of activities – such as creative text composition – was stressed. The cognitive processes involved in creative writing have been discussed, and the differences between creative design and scientific problem solving have been outlined. The key differentiating aspect which the current thesis was concerned with was the centrality of emotions in the creative writing process. Thus, when expanding the scope to the contextual effects linked to the nature of the task, the following questions were identified:

- *How do cognitive and social processes of paired creative writing differ from those reported as being associated with collaborative problem solving?*
- *How is paired discourse used to support different processes linked to creative writing?*
- *What does sharedness mean at different phases of the collaborative creative writing process?*

Finally, the issue of how children's school-based collaborative creative writing activities are shaped by the classroom setting was raised, as follows:

- *How do contextual features of the learning context influence collaborative creative writing activities?*

While the identification of central contextual aspects was planned to be a part of the reflective interpretive-analytic process itself, one important aspect was identified and incorporated in the design: the writing medium as a mediating feature of the classroom-context. The review detailed empirical work outlining the advantages of computer-supported writing as opposed to pen-and-paper writing, and emphasised the need to carry out further research to elaborate on the mediational role of computers in restructuring processes of knowledge building and creating new contexts for teaching and learning. Within this particular theme, the following question was formulated.

- *What are the constraints and affordances of computer mediation in the context of collaborative creative writing?*

The current research incorporated three aspects of inquiry in need of further investigation, studying the *affective* dimensions of peer interaction and the mediational role of the *writing media* in the context of classroom-based *creative writing* via the analysis of paired discourse. The next chapter will detail the methodological considerations.

2.1 Overview

The aim of this chapter is to discuss the methodology employed for data collection and analysis, to offer a rationale for the chosen methods, to outline the ethical considerations, and to describe the stages through which the design evolved. Also, it will offer a detailed discussion of the research schedule and introduce the participants in order to provide the reader with a clear understanding of the process of data collection. Note that, due to the nature of the study – following ongoing classroom activities planned by the teachers – identical replication would not be possible. However, the elaborate discussion of *how* the lesson plans by teachers were built into a structured observation schedule will provide sufficient information about the *naturalistic* observational approach adopted.

The discussion of the Preliminary observations will provide the reader with a rationale for the methodological choices made. It will be shown how existing research in the socio-cultural tradition and preliminary classroom observations jointly motivated these choices and thus shaped the direction of the study, via an iterative process. Similarly, data collection and analysis during the study were conducted in a reflective fashion, with processes of data collection being further refined during the observational sessions, and features of the collected data resulting in slight modifications to the analytical tool.

The chapter will start with an overview of the main methodological points, as they emerged from the literature review. The line of argument being highly reflective in nature, I have openly adopted a more informal style, and have used the first person singular when reporting and discussing the development of the research design. This

decision is motivated by the reporting style within the ethnographic tradition (see for example Coates, 1996; and Corsaro, 1985).

2.2 Methodological issues

Drawing on contemporary socio-cultural theory, the research investigates children's classroom-based collaborative creative writing. The strong influence of the socio-cultural framework can already be seen in the development of research focus, as detailed in Chapter 1. Similarly, the methodological aspects of the research were influenced by socio-cultural theory, as outlined below.

2.2.1 Setting and data collection

As indicated in Chapter 1, this research study moved away from the general discussion regarding the benefits of peer collaboration as opposed to individual work and studied collaborative work in its own right. Second, it shifted the focus from the study of individual outcomes to the study of shared processes, through the analysis of social interaction.

The majority of educational research on peer interaction reviewed examines the pairwork of children in experimental settings, most typically pairing children on the basis of ability and gender. It was argued that the major problem with this approach is that it does not consider the spontaneously evolving nature of joint activities in everyday life, or the fundamental role of the cultural and social context in organising, resourcing or constraining these. Thus, the observed *self-contained* activities in experimental or snapshot studies are bounded in time and space, without the possibility to link their productivity to the wide range of social interactions they were embedded in.

In contrast, the situated approach to learning views learning as an “intrinsic and inseparable aspect of participation in the various ‘communities of practice’ that make up society” (Light & Littleton, 1999, p.XVII). Viewed this way, there is a strong motivation to move away from studying social phenomena in experimental settings, and explore processes of peer interaction and pairwork in the context in which they naturally occur in a given social group. Crook (2000) uses the metaphor of *ecology* to challenge empirical research that studies and presents collaboration in isolation from its social and cultural context, arguing that in order to fully understand processes of peer and group work, we need to see it as co-ordinated with, and thus inseparable from the particular environment it is set in. If our aim is to understand processes of classroom based peer-learning, then we need to study these processes as they occur as a part of the daily classroom-life.

The *naturalistic* approach to classroom observation is strongly advocated by researchers in the qualitative tradition. In this respect, the research by Coates (1996) on the discourse of female friends and Corsaro’s (1985) work on the social world of nursery school children were the most influential for the current research. Although it is understood that all contexts which are researched are *constructed* no matter how little intervention they involve (Light & Littleton, 1999), the current research adopted a naturalistic approach in order to “capture the rich social world of children's lives” (Corsaro, 1998, p.35). Thus, the research study explored social interaction supporting ongoing paired activities, embedded in (and in no way extracted from) the everyday school-life of the observed children.

Also, the methodological choices were motivated by the recognition of the limitations of snapshot studies, as described by Crook (1999a). Crook argues that “snapshot studies do not recognise the motivational power of previously shared experiences” (1999a, p.104). In contrast, I was interested in comparing friends and acquaintances in terms of what they

can offer to each other, and how changes in the relationship impact on the processes of shared work. Existing research supports this argument, showing ways in which patterns of interaction change over time (Issroff, Jones & Scanlon, 1994). Given that friendship (or acquaintanceship) is not a static experience, and it may go through changes over time, single sessions with children do not offer a rich enough base to illuminate this complex issue. For this reason, a more longitudinal approach was adopted.

When deciding on the methods of data collection, two opposing aims needed to be considered. On the one hand, the process needed to be as unobtrusive as possible in order to minimise observer effect and capture ongoing as opposed to *staged* events. On the other hand, the obtained observational data needed to be as accurate and detailed as possible, to provide sufficient information for a contextualised analysis.

During the Preliminary observations and the Preliminary Study different data collection techniques (e.g. field notes, audio-recording, video-recording with or without microphone-support) were used, in order to develop a clear understanding of the limitations and benefits of each for the particular research focus. Thus, data collection methods were chosen and refined during these initial observational phases, in order to provide the appropriate type of data for the intended analyses.

2.2.2 Analytic tools

It was felt necessary to develop an analytical tool which allowed the examination and description of discourse patterns and language forms in the specific context of creative writing collaboration, and the identification of productive discourse styles and collaborative strategies within this particular context. This required the examination of the

descriptive and contrastive power of existing analytical approaches in the specific research setting.

One considerable difficulty with capturing and analysing the mental activities that take place during processes of writing lies in their elusive nature. Also, the core processes of content generation and reflection can be carried out in different ways, supported by different techniques and strategies (Sharpley, 1999), thus making analysis and categorisation difficult. Before discussing approaches to the study of cognitive processes via the analysis of paired talk, I will shortly outline other ways in which processes of writing have been studied.

Think-aloud protocols

Protocol analysis is a technique which has been widely used in research on composition processes (Smagorinsky, 1994). Think-aloud research methodologies involve the writer verbalising all their thoughts while composing, in order to study the thought processes involved in writing. This may be used to identify cognitive processes central to writing – such as planning or reviewing (Flower & Hayes, 1980), or to design empirical models of the cognitive system (Olive, Kellogg & Piolat, 2002). Writing usually takes place in experimental conditions, for example in laboratory booths (Hyland, 2002).

However, think-aloud protocols have been criticised for conceptual and methodological problems, as described by Smagorinsky (1994) and Hyland (2002). First, it is argued that the protocols do not as such correspond directly to mental processes, and not all mental processes are documented in the protocols. Thus, the analysis involves a heavy reliance on inference: therefore is not a particularly reliable way to verify models of cognitive processes. Second, the protocol analysis builds on a cognitive model of writing as problem solving, thus has very little room for the analysis of associative, *stream-of-*

consciousness processes which, in Chapter 1, were defined as central to the creative process. The protocols have no consideration of the affective aspects of composing, concentrating on the documentation of reflection and detached thinking. Finally, and most importantly, think-aloud research methodologies study writing in artificial settings, disembedded from any social or cultural context. Therefore, they fail to recognise the situated and mediated nature of everyday writing tasks. Also, by forcing the writer to verbalise their thoughts – something that they may not do in *normal* circumstances, and which therefore may result in an extra cognitive load – think-aloud writing sessions may change the normal composing process, and document a distorted version of what it means to write in everyday circumstances.

In addition to the above critique, I would also argue that with very young children (or inexperienced writers) such a method is inappropriate, due to the high level of cognitive activity writing on its own requires from them. Next I turn to approaches which study cognitive and collaborative processes through the analysis of paired talk.

The analysis of collaborative discourse

As detailed in Chapter 1, there is a strong interest in socio-cultural research on peer collaboration to examine collaborative processes through the analysis of paired talk. The analytic tools used are i) coding schemes providing quantitative data and typically used in experimental studies, and ii) qualitative, interpretative methods characteristically applied in classroom-based observational studies. In what follows, a quantitative and a qualitative approach will be discussed briefly: transactive coding (Azmitia & Montgomery, 1993), and Mercer's typology of talk (Mercer, 1995). The two models are conceptually similar, but analytically different, each contributing to the model developed for the purposes of the current research. Azmitia and Montgomery's coding scheme provides a good basis for the study of the affective dimensions of paired work, developed for the systematic

comparison of friendship and acquaintanceship talk. On the other hand, the typology of productive talk by Mercer provides an excellent basis for more context-sensitive, qualitative approaches to the study of collaborative discourse, in accord with the general aims of the current research. Note that the comprehensive evaluation of research methodology in terms of the qualitative-quantitative contrast is beyond the scope of this review. Qualitative and quantitative approaches are seen as complementary and equally important approaches to psychological research. The major issue here is not whether one is better than the other, but which one suits the purposes of the current research outlined so far.

Transactive talk

This analytical framework builds on the notion of transactive talk, as described by Azmitia and Montgomery (1993). This model allows for a quantitative analysis, linking patterns of talk to measures of outcome (for example success in solving a scientific problem). Azmitia and Montgomery define *transactive talk* as the use of explicit statements that operate on either partner's previous *reasoning*. Transacts include *transactive statements* (restate, clarify, elaborate, critique and integrate self and the other) *transactive questions* and *transactive responses*. Azmitia and Montgomery also identified a fourth analytical category of conflicts, which can either be transactive (including transacts) or non-transactive (e.g. cases of insistence).

Transactive coding has been used extensively to study paired discourse and explore the links between the nature and effectiveness of the discourse and the quality of the relationship. Using transactive coding, Azmitia and Montgomery (1993) found that friends working together on problem-solving tasks outperformed non-friendship pairs. However, the advantages were only evident in more challenging (e.g. unstructured, open or ill-formed) or more complex cognitive tasks.

Although the framework was originally used to define productive talk in a problem-solving context, it has been modified (Kruger, 1992) and applied to other tasks as well, such as collaborative music composition (Miell & MacDonald, 2000). In the modified description, transacts are utterances children use to refine, extend or elaborate on *ideas* that they or their partners introduced in the activity previously. According to Miell and MacDonald (2000), such extension of Azmitia and Montgomery's definition of transactive discourse as *reasoned argument* is necessary for the context of creative design, where formulating and refining ideas may involve more than explicit argumentation.

Researching collaborative music composition, MacDonald and Miell (2000) have successfully applied the transactive model to analyse paired discourse and differentiate between the quality and effectiveness of different pairings. They linked the quality of the composition and the pattern of communication, claiming that it was the discursive style of friends that put them at advantage. These findings suggest that the processes and outcomes of peer collaboration can only be speculated by considering both the nature of the relationship and the type of task, and that transactive analysis can help identify the features of friendship discourse that lead to its facilitative effects, both in problem solving and in creative activities.

Thus, studies using the coding scheme have produced considerable results. The general strength of the quantitative methods employed in these studies was the ability to work with a large data-set, the capacity to build on clearly defined criteria in making systematic comparisons between the collaborative behaviour of different pairs of children and to link the differences found to measures of the collaborative outcomes (Wegerif & Mercer, 1997). However, as a general critique of coding schemes, the main concern with this

model is that it codifies language. This is problematic due to the ambiguity in meaning and layeredness (simultaneous functions) prevalent in language use (Wegerif & Mercer, 1997). Coding cannot offer an in-depth, contextualised analysis of the discourse data. Also, it presents discourse as the sum of individual contributions in a linear order, an approach that has also been challenged (Coates, 1996; Wegerif & Mercer, 1997). These concerns were addressed in the analysis of the Preliminary Study discourse data.

Exploratory talk

Based on the findings of an extensive project (Spoken Language and New Technology – SLANT), Mercer (1995) distinguishes three discourse types predominant in children's collaborative activities: *disputational*, *cumulative* and *exploratory* talk. Disputational talk is characterised by disagreement and the lack of cooperation in decision making. The exchanges are short, consisting mainly of assertions and counter-assertions, and there is a lack of clear resolution. Cumulative talk, on the other hand, contains exchanges that build positively but uncritically on each other, including repetitions, confirmations and elaborations. Third, exploratory talk implies constructive criticism, and builds on challenges and counter-challenges (which involve offering reasons for assertions and giving alternative hypotheses). Mercer describes exploratory talk as the discourse style which has the most potential to facilitate cognitive growth by making knowledge *publicly accountable* and reasoning explicit.

Mercer and Wegerif (1999, p.89) argue that exploratory talk is a special *social mode of thinking* the ground rules of which "facilitate the production and the critical examination of varied ideas in such a way that the proposal best supported by reasons will be accepted by all." In this sense, exploratory talk is necessary in becoming skilled member of communities of educated discourse, and is promoted as the most productive and efficient form of social interaction in classroom-based groupwork. This argument is supported by a

number of studies (Wegerif, Mercer & Dawes, 1999; Mercer 1995), which report the cognitive benefits of exploratory talk on subsequent individual problem solving, and posit a correlation between competence in social and individual reasoning abilities.

Note that in his recent book Mercer (2000) develops these arguments further. He elaborates upon the complexity of language use, and talks about the usefulness of cumulative talk in getting things done together. However, the benefits of cumulative talk are mostly linked to the *social uses of language* (which are contrasted with *intellectual purposes*). For example, he claims that cumulative discourse may support the maintenance of relationships, may be used to demonstrate friendship or to facilitate the process of bonding between partners (Mercer, 2000). Mercer's description of the layeredness of language – that collaborative discourse serves both social and intellectual purposes – is crucial from a methodological point of view. However, in Mercer and colleagues' research the emphasis is placed on the exploration of the intellectual purposes of discourse in the area of problem solving and academic debate, where the goal is to take a “relatively detached perspective that is aimed at the joint but impersonal construction of explanations, answers and solutions” (Mercer 2000, p.103).

Thus, although Mercer and Wegerif (1999) acknowledge that cumulative or disputational talk may just as well be *socially appropriate* or *cumulatively effective* in other settings, they concentrate on discursive strategies which are *specifically* useful in the mastering of skills linked to educated discourse, such as *logical reasoning, rhetoric skills (argumentation), rationality* and *analytical thinking*.

Also, Mercer indicates that in creative contexts – such as the collaborative writing of a newspaper article – cumulative talk is a legitimate and successful means to achieve both social and intellectual aims. However, the elaboration of this line of enquiry is not his

main focus. Thus, the limitation of the typology is that there has been no strategic attempt to use it to distinguish talk according to the nature of the relationship between the peers, or the nature of the task. Nevertheless, Mercer's claims and findings provoke very interesting questions. What makes creative contexts different from scientific problem solving in terms of typical or desirable discourse strategies? How are the intellectual purposes in creative tasks served by the uncritical accumulation of ideas or by detached perspective taking? To what extent do processes of joint creative text composition build on one or the other? The current research aimed to unpack these issues.

From a methodological point of view, the typology offers an excellent tool to approach and examine collaborative discourse as the means to facilitate the mastering of school-based Discourses, as outlined in Chapter 1. In line with socio-cultural theorising – and unlike categorical coding schemes – it allows the study of social interaction in context. Second, his framework is both descriptive (showing links between processes and outcomes) and explanatory (showing *causal* relationships, that is, how and why such links develop). Note that, as Wegerif and Mercer (1997) point out, qualitative studies of discourse – largely based on the presentation and interpretation of key episodes – cannot provide the basis for generalisations on their own.² They are useful to generate but not to rigorously test theories (Hammersley, 1992). However, since the aim of the current research was to expand work on collaborative learning by developing a model for cognitive processes involved in collaborative creativity, this was not seen as a limitation.

Summary

One major aim of the Preliminary Study was to evaluate the applicability of Azmitia and Montgomery's (1993) transactive coding and Mercer's (1995) typology of productive talk

² Wegerif and Mercer advocate the careful combination of qualitative and quantitative approaches to the study of discourse, for example the use of computer-based text analysis, which allows for both quantification and contextualised analysis.

in the context of collaborative creative writing, both in terms of their descriptive power of shared creative writing processes, and in terms of their contrastive power regarding friendship and acquaintanceship discourse. As noted before, Azmitia and Montgomery's coding scheme has successfully been used to contrast friendship and acquaintanceship discourse in problem solving contexts (Azmitia, 1996). Also, a modified version of the coding scheme has been used to explain the benefits of friendship pairing in the context of music composition (MacDonald & Miell, 2000). However, so far it has not been applied to the exploration of friendship effects in creative writing discourse. On the other hand, Mercer's typology provides an equally influential and powerful *qualitative* approach to the study of paired discourse, which appeared to be appropriate for the purposes of the current research.

In addition to the evaluative discussion of available analytic tools, this chapter will also introduce the new model developed during the early phases of the current study. In developing this analytic model, I built on the critical evaluation of existing frameworks in the particular context of creative writing, and the in-depth analysis of the obtained data. The Preliminary observations and the Preliminary Study were especially crucial in the development and refinement of the new analytical tool.

2.3 Preliminary observations

During the first year of the research visits were carried out in a Milton Keynes middle school (School 1). The opportunity for the visits arose through a personal link, rather than a strategic choice or selection. School 1 is a larger than average combined school for boys and girls of 4-12 years of age (624 children on roll in 2002). It has a Beacon status, with a special interest in literacy development. (The Beacon school programme was established in 1998 and involves nursery, primary, secondary and special schools. It was planned to

build partnerships between high performing schools across the country and represent examples of successful practice, with a view to sharing and spreading that effective practice to other schools to raise overall standards in pupil attainment.) The attainments of pupils as they enter school are above average in reading, writing, mathematics and science. The school has an outstanding reputation in terms of the quality of teaching, excellent resources and facilities, and provides a very stimulating learning environment. The head teacher and staff regarded my working in the school as part of their relationship with the wider community and as linked to their work as a Beacon status school. I developed a very good working relationship with the form teacher I initially visited, and this relationship continued as she moved on to become one of the literacy consultants for the Local Educational Authority (LEA).

The initial aim was to get an insight into current British primary school practices, with a special focus on the teaching of English (the literacy hour) and ICT. Being from overseas, I was not familiar with the British education system at a primary level. These observations helped me learn about the general patterns of school organisation, regarding for example a typical school day and the physical layout of classrooms. During the visits I had a chance to discuss the central pedagogical or methodological principles employed at the school with the head and observed staff.

These initial observations followed the daily routine of Year 5 and Year 6 children (Key Stage 2, age 9-11), the age-group I identified as the potential target group for my research. Six visits took place between December 1999 and February 2000, capturing whole school days, including assembly, shared time and breaks. During these visits I paid special attention to how children were organised by the form teachers – or organised themselves – around school tasks. I looked at types of talk that children engaged in, and how the activities were set up by the teachers to facilitate – or inhibit – group work and

peer talk. (In order to do so, I followed the content and the impact of the teacher's instructions.)

During this general observational period, an opportunity arose to follow a longer literacy project in Year 6, where children working collaboratively with a partner had to design a story book for Year 1 (5-6 years old) pupils. Thus, I could also carry out some more focused observations of children's paired creative writing in ICT and literacy. The observations of children's shared writing were used to identify possible focal points for the current research. During this period I moved from taking general field-notes of overall impressions to the close observation of one particular collaborative pair's interactions. This was further extended by audio-taping one session of the pair's ICT-based work. Consent issues were dealt with in accordance with the school procedures. I also obtained the informed consent of the focal pair to record the observed activities.

I concluded the observations with an interview with the children and their form teacher about the processes and outcomes of their project. In the interview I asked the children about the project, their relationship with one another and their shared experiences of working and talking together (see Appendix 4 for discussion points). The understanding I gained had a strong impact on the future directions of the current research, so the key points of these observations are briefly outlined below. The reason for discussing these findings in this chapter is to show how they influenced the way in which my methodological approach was developed, motivating the methodological choices I made.

Picture book writing

In general, school work was divided between whole group sessions, and independent work. During whole group sessions the teacher (or teachers) addressed the whole class (or the whole year group), who were seated on the carpet in their class or in the shared area.

When asked to work individually, children carried out tasks seated around tables. As already noted in Chapter 1, the current research was concerned with the independent work part of the literacy hour. However, during the Preliminary observations I closely observed the independent phases in other classes as well. My first important observation was that during independent work children spontaneously formed pairs or small groups around the tables to exchange ideas about the task, compare their results or to share props and tools. Children were neither encouraged nor discouraged to chat with their neighbours: the teacher did not initiate or prohibit peer talk. Consequently, there was a significant amount of 'buzz' as children were carrying out individual tasks, especially in ICT. The Year 6 teacher I worked with acknowledged this, but regarded most of the unfacilitated interaction between children as highly productive. In her Year 6 class the children could actually swap tables, and they decided their own seating on the basis of friendships, or other choices (for details of a general observational day, see Appendix 3).

When working with a partner on the picture book in ICT, pairs typically displayed one of two role distribution strategies. Some pairs shared the duties, for example, one was looking after the props – e.g. picture books to help them in the activity – while the other controlled the equipment – keyboard and mouse. The other strategy was alternation, with children swapping roles – for example typing – at regular intervals. Such role-distribution was widely reported in the academic literature on computer-based collaborative problem solving (Light & Littleton, 1999).

The focal pair demonstrated one of the two observed strategies in ICT, showing a rigid sharing of equipment. While one of them was working with the mouse, the other controlled the keyboard. This implied domination – the boy who controlled the keyboard had potential control over the activity. Another interesting observation was that they engaged in a lot of *cumulative talk* (Mercer, 1995), incorporating and building on each

other's ideas with some instances of argumentation and challenge, but with very little attempt to make reasons for acceptance or rejection explicit. They were usually alternating who provided the input. Using Mercer's typology, their discourse did not reflect the explicit sharing of knowledge or follow the kind of *ground rules* for reasoning and problem solving that are seen as important for educational success. In itself, this observation is not surprising, and reflects the findings of Mercer and colleagues regarding classroom-based peer talk in general (Mercer, 1995).

However, the interviews with the teacher and the partners revealed that the outcomes of the pair's attempts were highly successful, reflected in the teacher's assessment of their composition, and the partners' reflective comments on it. (One pupil was awarded a merit for the illustrations -computer-graphics – while the other was awarded a merit for the story line, and both claimed to be very happy with the outcomes of their joint work.) Their apparent success was in contradiction with the collaborative strategies and discourse patterns used, which generally lacked features typically associated with productive paired talk.

Also, in the interview the children revealed a well-established working relationship, based on previous collaborative experiences and the mutual acceptance of the role division shown above. They claimed to be good friends who knew each other very well, and explained that the division of roles was consciously based on efficiency, allowing both of them to do what they were good at. This would explain the lack of explicitness in their discourse, and the apparent rigidity regarding the use of the equipment.

The interview revealed that they liked working as a team and thought that working with others would be harder. When asked what they thought about the way they were relating to and talking to each other, they displayed a thoughtful awareness of their relationship

and behaviour. They thought that their friendship centred around "talking together" more than doing anything else, and that they rarely argued or shouted. They would rather try to discuss things and work out which is the best idea. As they put it, "see what would happen [if]". They were also aware of the role distribution existing within their friendship. One of them regarded himself as the more argumentative one, while the other described himself as the more accommodating partner. When asked about their discourse styles in the classroom, they thought the context did not force them to adopt more *appropriate* styles, and that they talked to each other the same way everywhere.

Their awareness of the strengths of the friendship, their knowledge of the part they played in it, and their claims about the pervasive nature of the discourse styles they used as friends had implications for the study. First, these findings pointed at the role of the wider social context in the processes and outcomes of classroom-based interactions, reinforcing the central arguments of the socio-cultural tradition, and the situated learning approach.

The observed collaborative processes appeared to extend beyond the boundaries of individual sessions, and seemed to build on experiences and skills gained outside the classroom: in the informal setting of a friendship. This finding ties neatly in with the main arguments of the *friendship literature* (Hartup, 1996a; 1996b).

These observations highlighted the need to explore the experiences children bring from other contexts, and look at whether skills mastered elsewhere – such as negotiating skills or collaborative strategies used to build and maintain their friendship – may be used to facilitate classroom based collaboration. Thus, in synergy with existing academic literature on friendship pairing (Azmitia, 1996; Hartup, 1996a; MacDonald & Miell, 2000), the Preliminary observations reinforced the initial interest in exploring the theme of *friendship*, with a design that incorporated the observation of both friendship and acquaintanceship pairs.

The observations also supported Crook's (1999a) critique of snapshot studies, demonstrating the temporality and locality of research experiments, representing processes of learning as bounded in time and space. They highlighted the need for a longitudinal approach, in order to explore the emergence and development of children's collaborative and discourse strategies over time. They also reinforced the need to adopt more naturalistic approaches to data collection, which could capture processes of learning through collaboration as embedded in the classroom life of children.

Finally, the observations pointed at the task-specificity of discourse, another interesting aspect raised by educational research (Azmitia, 1996; MacDonald & Miell, 2000). In particular, they stressed the need to look at the special features of discourse associated with shared creativity. Thus, the two emerging aspects that needed further refinement in the design were the type and nature of pairings, and the analytical framework employed. I intended to address these issues in a small-scale study at the same school.

In terms of data collection techniques, it became clear that audio-taping had serious limitations in capturing the interaction and shared work of the children in detail. It could not record non-verbal interaction in ICT (for example keyboard use), which proved to be vital to clarify ambiguities in the talk. Another issue that emerged was the need for a directional microphone when observing ongoing classroom activities, in order to be able to focus on the discourse of the chosen pairs, and eliminate the background noise. In terms of data analysis, the usefulness of triangulation (for example, the involvement of the participant children and the teachers in the interpretation of the observational data) became evident.

During the Spring term changes in the teaching staff in Year 6 made it problematic to carry out any further observations in that year group. The fact that I intended to observe ongoing literacy activities involving paired writing in both literacy and ICT narrowed my possibilities further. The head suggested Year 3, where a paired writing project with computer support was planned for the Summer term. Although this group was a lot younger (aged 7-8), the poem-writing week promised plenty of data to begin to pursue the questions regarding friendship pairing. It was also seen as appropriate to explore the methodological issues concerning the applicability of existing frameworks.

2.4 Preliminary Study

The Preliminary Study was planned to clarify two main aspects of the research design. One was the issue of pairing: I wished to explore whether the emerging theme of friendship pairing was an aspect that needed to be built into the design. The other issue was the development of an analytical framework, which the Preliminary Study addressed through the assessment of two existing frameworks. Mercer's (1995) typology of productive talk and Azmitia and Montgomery's (1993) categorical coding scheme – modified by Kruger (1992) – are fundamentally different in terms of their approach to the analysis of talk. I aimed to assess these two radically different approaches in terms of their applicability to the study of paired creative writing discourse.

Participants

The participants were four Year 3 (aged 7-8) girls. Due to the practical limitations – a two-week writing project – I decided to observe the paired writing activities of one gender group only. I worked with one female friendship and one female acquaintanceship pair, which allowed the analysis of the discourse of the children without the need to address gender-related issues.

The children were selected on the recommendation of the form teacher, who was informed about the purpose of the study and the criteria that needed to be addressed in the selection (ability, relationship and gender). The teacher defined the two selected female pairs as of mainstream ability, with one member of each pair being slightly more able than the other. The selected FP (friendship pair) spent a lot of time together at school and outside school hours as well. At school they were not typically paired to work together – on the basis of past experiences the teacher thought that they would engage in too much off-task talk and *girly gossip*. Note that this is a clear indication of the problems teachers anticipate with friendship pairings. However, in an informal interview the friends told me that they went around to each other's houses a lot, sometimes they did homework together, and played with the computer too. Also, they liked reading poems together, and sometimes wrote poetry in their free time. The AP (acquaintanceship pair) were also selected by the form teacher. She chose two girls whose ability was comparable to the FP's, and who would not consider themselves as friends but were happy to work together. I talked to each of the four girls individually and they were all ready to participate. The AP girls were excited about the prospect of working together for the project. So, although they were not friends, their positive orientation towards each other was evident.

According to the form teacher, the children were not used to collaborative tasks in literacy, where pairwork simply meant sitting next to someone and exchanging ideas, but working on the task individually, and producing individual work. The teacher planned the observed paired activities for the year group as the first step in learning to work closely together on school based writing tasks, as a part of the process of inducting children into collaborative work.

Procedure

In order to become familiar with the new classroom, three visits took place prior to the writing project. These were whole-day visits once a week, and entailed the close observation of all class activities, including break times. These visits gave the opportunity for the children to get used to my presence. I aimed to establish a relationship with the children that was not based on hierarchy or power, and tried to make them see me as someone they could approach freely. (I asked the teacher to address me by my first name, and encourage the children to do so as well.) The four participants were then selected, and observed in their daily routine.

Ethical considerations

It was felt necessary to obtain the participants' informed consent, and stress the voluntary nature of participation. The children were informed about the nature of the study. They were told that the observations focused on how children worked together, and not on how well they did in terms of outcomes. They were assured that they were not being tested, and that they could withdraw from the observations at any time. They were also encouraged to ask questions about the study throughout the writing project. Finally, they were assured that the data would be treated as confidential, and that I would not show the recordings to anybody, including their teachers or classmates. The form teacher and head were given an outline of the nature and aims of the study, who in turn, informed the parents of the four children about the observations. Consent issues were handled in accordance with school procedures. Note that I followed the same routine of familiarisation and orientation in the subsequent phases of the current research. Also note that the current research worked within the Data Protection Act regarding storing and using the research data, and regarding the use of pseudonyms for analysis and data presentation.

On the last visit prior to the data collection the video camera was brought in and showed to the participating children. A practice session was carried out, videotaping the four children working independently in the literacy classroom. The independent phase of the literacy hour was recorded, when children were seated next to each other, but were not asked to work together.

The data collection took place during the two-week literacy project. This project included collaborative poem-writing in literacy and ICT, individual comic script design, and shared adventure story-writing, all under the theme of *Sea*. The aim of the poem-writing activities was to identify different patterns of rhyme and verse in poetry, and write poetry based on the structure and style of the poems read in class. The sessions were linked to ongoing projects in history and art. The study comprised of naturalistic observations of poem-writing activities (acrostics and limericks) of the four children, whose collaborative work was observed and recorded by using video and audio equipment, in the literacy classroom and in ICT. Acrostics are poems in which the first letter of each line forms a meaningful word when read vertically, usually the title or the theme of the poem.

Limericks are humorous poems with a strict syllabic and rhythmic pattern. There are five lines, the first two lines rhyme with the fifth one and have three feet each. The third and fourth lines form an independent rhyming couplet, 2 feet each. (See Appendix 14 for an example of each poem type.) The observed children were working together alongside the rest of the class, and were not instructed to do anything differently.

The literacy sessions followed the regular pattern of literacy hour as defined in the National Literacy Strategy (NLS), starting with group work led by the teacher, followed by independent work of about 20-30 minutes, and finished with a short round-up activity or plenary (see Appendix 1). The teacher instructed all the children to carry out the independent phase of the observed literacy sessions in collaboration with a partner,

explaining that they needed to share ideas and come up with a shared product. The drafts of the poems were developed on a shared scrap sheet. Then children wrote their own copy of the finished poem in their literacy books. In ICT children were asked to work in pairs, each pair sharing one computer. They were using Microsoft Word for the writing activity. As the teacher explained, they used the application on previous occasions in ICT and had basic text-formatting and typing skills. Many had used Microsoft Word at home. The children were asked to jointly write their composition, and print out one shared copy.

I observed the whole literacy sessions, but recorded only the independent work phase of these sessions, and made field-notes of the group work and plenary. During each observed session one pair was videotaped. A microphone was attached to the camera, and was placed in front of the children. In order to make the most of the opportunity, I audio-taped the collaborative work of the other pair for each observed session, using a tape-recorder and a microphone. I alternated the recording medium, planning to use the audio-recordings only if they were meaningful and comparable to the video-recorded data. Since the observations in literacy and ICT followed classroom activities, the recordings varied in length and content, depending on the teacher's instructions and the schedule for the day. The following sessions were recorded:

Table 2.1 Recorded poem-writing sessions - Preliminary Study

Sessions	Pair	Setting	Theme	Approximate duration
1	FP*	ICT	Acrostics (video)	20 min**
	AP***	ICT	Acrostics (audio)	45 min
2	FP	Literacy	Acrostics (audio)	28 min
	AP	Literacy	Acrostics (video)	28 min
3	FP	Literacy	Limericks (video)	40 min
4	AP	Literacy	Limericks (video – audio)	37 min
	FP	Literacy	Limericks (video – audio)	37 min

*Carina and Jenni

**Due to recording problems

*** Mary and Annabel

The recorded dialogues were transcribed in as much detail as possible, representing verbal and non-verbal interaction between the partners, noting interaction with others in the classroom, and recording general observational commentary as well. The transcriptions were analysed using the two existing analytical frameworks: Azmitia and Montgomery's coding system (1993) and Mercer's (1995) typology of productive talk. In what follows, I will briefly outline the main findings in terms of the applicability of the two approaches to the study of collaborative creative writing discourse. I will highlight the limitations of the frameworks in this particular context, using short episodes to illustrate the points and indicating how the findings led to the emergence of a new analytic tool. When transcribing and presenting the dialogues, I have used a set of conventions, which can be found in Appendix 16.

2.4.1 Coding for transacts

The first framework to evaluate was Azmitia & Montgomery's (1993) coding scheme. In the analysis I used Kruger's reformulation (Kruger 1992, 1993, Kruger & Tomasello, 1986) advocated by Miell and MacDonald (2000) in creative contexts. The conversational turns were coded in each transcript. Each time a child spoke without interruption was regarded as a turn, ranging from one word to several statements. However, a pause longer than 3 seconds or a change in the subject was taken as the marker of a new conversational turn. Each conversational turn was either coded as a transact or was left uncoded. Among transacts, transactive statements, questions and responses were distinguished. Another level of analysis was to distinguish self- and other-oriented utterances. Table 2.2 summarises the specific definitions and examples for the 6 categories.

Table 2.2 Transactive turns

Transacts	Description	Example
Transactive statements (TS)	spontaneously generated critiques, refinements, extensions or paraphrases of ideas	see subcategories
• Self-oriented (TSS)	clarifications, extensions or refinements of one's own ideas	A: 'I, what can we have, another one for I? Ice sea, no, Iceberg'
• Other-oriented (TSO)	operations on the other's ideas	Child A: 'It was like a cat' Child B: 'And it would shake like a cat!'
Transactive questions (TQ)	spontaneously produced requests for clarification, justification or elaboration	see subcategories
• Self-oriented (TQS)	requests for feedback for self	Child A (editing a line she came up with): 'There was a young girl from York. I wonder, I want to know if all that's one beat'
• Other-oriented (TQO)	questions operating on the other's ideas	Child A: 'H' Child B: 'Is it? Let's see what it looks like' (presses H on keyboard)]
Transactive responses (TR)	clarifications, justifications or elaborations of ideas triggered by a question, statement or non-verbal action	see subcategories
• Self-oriented (TRS)	responses operating on one's own ideas	Child A: 'A, A, just copy that for A!' Child B: 'Yeah, what?' Child A: 'Cause it's sailing. S-A. Should copy that one!'
• Other-oriented (TRO)	Responses that elaborated on the partner's ideas	Child A: (working on the keyboard, using spell check) 'Pirates ((pause)) come. Oh, I see it's not right!' Child B: 'But don't worry about it, sometimes I think the computer is wrong. It does not have a brain you know. Not like us!'

Linearity was a necessary condition in the coding, only utterances that operated on ideas that have been introduced in the previous turn were taken as transacts. The coding process did not lead to quantification, it was only used to explore the applicability and limitations of the coding scheme in this particular context.

Coding proved problematic in the case of certain transacts. A number of the conversational turns identified as transactive talk did not fit the self-oriented or other-oriented distinction. The majority of these transacts were critiques, refinements and extensions of ideas children already agreed upon, and which had therefore entered the collective domain and could not be attributed to either child. This was especially the case when children were engaged in the editing phases of their poem-writing, and already had a draft version of the poems (or particular lines), as it is illustrated by Sequence 2.1. Prior

to this episode, the girls have agreed on and written down the line *Who sat on some Yorkshire pork* on the draft sheet.

Sequence 2.1 – Annabel and Mary, poem-writing, literacy

- 1 M: Wait a minute. ((reading and mumbling)) Who-
- 2 A: ((interrupting, repeating drafted line)) Who sat on some Yorkshire pork.
- 3 M: But now, yeah, but now it is only six!
- 4 A: No it isn't. If Eva ((researcher)) worked it out then it shouldn't be.
- 5 M: OK, come on.
- 6 A: ((counting on fingers)) There Was A Young Boy From York, Who Set On
- 7 Some Yorkshire Pork. SEVEN. ((fingers show 7))

Line 3 contains a critique of the drafted line regarding the number of syllables, whereas line 4 is a counter-challenge, offering justification for the jointly agreed idea. Further proof for this argument is offered in lines 6-7 through demonstration (syllable-counting). Since editing is a central phase of the writing process, utterances operating on already drafted lines would need to be included in the analysis, by introducing an additional category for transacts operating on *jointly agreed ideas*. This modification is not substantial, and would still allow the use of the coding scheme in the analysis.

However, some friendship transacts could not be categorised as operating on either individual's ideas, or on drafted material, as they represented instances of *collective thinking*, indicating the children's engagement in joint brainstorming. Although such episodes of collective brainstorming mark successful sharing during the writing process, and thus reveal productive uses of paired talk, the coding scheme does not allow for their inclusion in the analysis.

Sequence 2.2 shows such collective generation of ideas. The pair is engaged in writing an acrostics poem where the first letters of each line spell out SAILING, the theme of their

composition. Carina starts the episode with the question "What can we do for S?", to which each of the girls starts to brainstorm. The ideas are not only shared, but actually generated together.³

Sequence 2.2 – Carina and Jenni, poem-writing, literacy

- 1 C: Right. We do sailing. There. How do you spell S. What can we do for S?
- 2 J: **Sharks, swimming** ((pause)) sssss-
- 3 C&J: ((overlapping, almost together)) **Swish-swash** ((pause))
- 4 J: ((happy, musing tone)) *Swish-swash*.
- 5 C: No, ((playful intonation, following it by 'shark' gestures)): *Sharks, Swimming,*
- 6 *Swish-Swash!*
- 7 J: ((happy, musing tone)) *Swish-swash!*
- 8 C: ((overlapping, playful, giggly intonation)) Swashy. ((pause))
- 9 J: ((interrupting)) Right. What shall we, I tell you something. Right. ((playful
- 10 intonation)) *Sharks* ((pause))
- 11 C: ((musing tone)) **eating** ((contemplating silence))
- 12 J: ((with excitement)) Sh- I KNOW! *Sharks*
- 13 J&C: (()) *Eating*.
- 14 C: ((with excitement)) **Scales of FISH!** Yeah!
- 15 J: ((overlapping)) Yeah. Shall we put exclamation mark?
- 16 C: Yeah!

The two lines (*Sharks swimming swish-swash* and *Sharks eating scales of fish*) cannot be attributed to either child, and indeed, most of the utterances themselves are better seen as working on *collective* ideas rather than on ideas of individuals. The togetherness of the two children is indicated in line 3, in which they continue an idea ("Sharks swimming") with the same words ("Swish-swash"), almost simultaneously. The girls seem to go in the same direction, generating and expanding the image together. The material is clearly evolving as a joint input.

³ Bold marks a new idea, and italics the repetition of an idea. For a detailed list of conventions see Appendix 16.

This sort of talk, in which each idea seems to enter into a collective pool, open to extension or elaboration for both children, is a distinctive discourse feature of this particular pair. Since their collective style is a spontaneously occurring and effective discourse strategy (leading to jointly developed, fully shared and accepted creative ideas), it was seen necessary to account for it in the design of the analytic tool. The exploration of the potential benefits of such collective brainstorming strategy in the process of shared creative writing was seen as a central aim of the current research, which was also motivated by theorising about creative design (Sharples, 1996, 1999).

Within the coding scheme of transactive talk, one could introduce a new category for *collective transacts* – utterances that operate on collective ideas – and contrast it with more individualistic styles. However, the guiding principle of transactive analysis is to approach paired discourse as the sum of individual contributions in the form of strictly linear turn-taking. This way, transactive analysis does not have room for the notion of *collective content generation*. The analysis of individual utterances does not tell us how such collectivity is established through discourse. Sequence 2.2 highlights that the unit of analysis needs to be extended to longer episodes, linked to particular phases within the writing process, such as the joint development of creative ideas. These findings had a crucial impact on the analytic design of the current research. On the one hand, they revealed the limitations of this particular coding scheme for the purposes of the current research. However, they had a more general implication, demonstrating the shortcomings of quantitative approaches towards the analysis of paired discourse, and resulted in an ultimate shift towards qualitative approaches.

Note that the observations above contradict work on collaborative music composition (Miell & MacDonald, 2000), which found transactive coding a useful tool to differentiate between the interaction of friends and acquaintances and to assess the productivity of the communication. I argue that this is due to the differences between the two creative tasks, in terms of the medium of expression in content generation phases. In musical compositions phases of creative content generation are conveyed through music, and only reviewing phases are managed through verbal interaction. To account for the content generation process in their design, Miell and MacDonald introduced categories for *musical transacts*. These categories were used to measure the responsiveness of the children to the creative ideas of each other, and proved appropriate to describe joint phases of content generation as expressed through music.

In contrast, the medium of all the processes in joint creative writing tasks is language. One may argue that verbal discourse is more accessible and open for the study of ongoing cognitive processes than musical discourse. I would therefore argue that verbal discourse allows for a more elaborate and finite analysis of the responsiveness of the children towards each other (or in my formulation, the levels of collectivity children display). Although a contrastive analysis of the two types of content generation data would be highly interesting, the discussion of such contrast is beyond the scope of the current research. Rather, the methodological conclusion to be drawn from this argument is that the unique process of content generation requires special attention in the analytic design. The analysis shows that joint creative content generation does not necessarily take the form of a linear and transactive dialogue. In addition to listening to, evaluating and elaborating on each other's ideas, verbal interaction allows the children to develop creative ideas *collectively* through paired discourse.

2.4.2 Using Mercer's typology

As described earlier, Mercer (1995) distinguishes three discourse types predominant in children's collaborative activities, *disputational*, *cumulative* and *exploratory talk*.

Exploratory talk is defined by constructive criticism: initiations, challenges and counter-challenges which involve offering reasons for assertions and giving alternative hypotheses, thus demonstrating joint engagement and growing intersubjectivity. In contrast, disputational talk involves initiations and challenges without explicit argumentation or any overt sign of joint agreement. Finally, children engaged in cumulative talk typically build on each other's ideas without challenging or evaluating them, using repetitions and elaborations with superficial changes.

In the seven transcripts of the Preliminary Study exploratory, disputational and cumulative *sequences* were identified and a qualitative discourse analysis was carried out, in order to ascertain whether this analysis helped identify links between discourse features and cognitive processes central to creative writing. Key episodes – both exemplary and ambiguous – were identified and discussed with fellow researchers. Note that this practice was maintained throughout subsequent phases of the current research.

Exploratory talk

Episodes of *exploratory talk* were infrequent in both pairs' discourse. The pairs mainly engaged in explicit argumentation during processes of planning or editing, particularly during limerick-writing (while sorting out problems with rhymes and syllables). Sequence 2.1 was an example of such argumentation, in which Mary and Annabel engaged in the explicit discussion of their reflections upon a jointly edited line. The following sequence (2.3) is another example of such intellectual use of exploratory talk, in which the friendship pair is trying hard to combine rhyme with syllabic pattern. The girls are writing

a limerick poem, and are about to compose the next line that would match the previous line, *There was a young girl from York*.

Sequence 2.3 – Carina and Jenni, poem-writing, literacy

- 1 C: ((counting the syllables on her fingers)) There was a young girl from- We
2 have got to think about whether it has seven letters ((meaning beats)). There
3 was a young girl from York. What's it that rhymes with seven letters in. There
4 was a young girl from York.
- 5 J: Wait. ((She pats the other on the shoulder)) There was once a- ((pause)) No.
6 Hang on. ((Counting the syllables on her fingers)) She ab-so-lute- ((pause))
7 No, I did it as two beats, absolutely. That's what I did. I did absolutely loved.

First Carina reflects on the composed line, externalising about how to evaluate its syllable structure (line 2: "We have got to think about whether it has seven letters"), then she continues with externalising about the plans for the next line (lines 3-4: "What's it that rhymes with seven letters in"). They both keep repeating the first line in order to set the pattern for the next one. Then Jenni tries to generate material (line 6: "She absolute") followed immediately by externalised reflections (lines 6-7: "No, I did it as two beats, absolutely. That's what I did. I did absolutely loved"). Such transparent thinking seems to be very useful in this context, aiding reflection (reviewing and modification). They rely on it to cope with the complex task of combining rhyme with rhythm. Although they do not succeed in their attempts during this sequence, the reasoned dialogue helps them problematise the task and identify strategies (e.g. counting syllables on fingers, or marking syllables on the draft sheet), which will ultimately lead to the successful composition of a poem.

These exploratory features are indicative of detached perspective taking (Mercer, 2000), and correspond to the productive use of discourse when reviewing the material.

Exploratory talk was also used to sort out management problems. However this was only

found in the discourse of the acquaintanceship pair. Such exploratory episodes were used to reflect upon and solve problems with the process of collaboration, and not problems related to the emerging text.

Apart from the instances of explicit argumentation discussed so far, the two pairs mainly engaged in talk with *cumulative features* (using a lot of repetition and elaboration without criticism) and *disputational features* (offering propositions and challenging them without explicit arguments). However, the purpose of disputational and cumulative features seemed to be different for the two pairs. The cumulative features in the FP's discourse did not reflect passive acceptance, and disputational features did not necessarily correspond to individualistic decision-making. Rather, these features seemed to support the process of collective thinking. The girls often seemed to have *two minds in one*, generating and sharing ideas without constraints, brainstorming and pooling freely, contemplating (*musings*) over each other's propositions, and elaborating them when they captured their imagination.

Sequence 2.2 has already illustrated the process of collective brainstorming. Sequence 2.4 is another example of collectivity, with short exchanges, and without any reasons or justifications offered. However, it is obvious from the extract that there is no need for explicit reasoning; it would probably hinder the processes of free pooling and free association. In this sequence the children are generating ideas for the first line of an acrostic poem, where the first letters read OCTOPUS vertically.

Sequence 2.4 – Carina and Jenni, poem-writing, ICT

- 1 J: ((reading)) *Ocean octopus*.
2 C: ((giggling, playful intonation)) *Octopus*.
3 J: **Crunching-**
4 C: *Octopus* ((now facing the other, heads close, almost touching, playful
5 intonation)) *Octopus* () **eyes looking everywhere**.
6 J: ((still facing the other)) No, **beady eyes**.
7 C: OK.

Both Sequences 2.2 and 2.4 consist of short utterances which either build on ideas uncritically – repeating them (line 2) or elaborating on them (line 3) – or reject them without any reasons offered (line 6). The exchanges are short, there are interruptions and slight overlaps, which makes the conversation speedy. Although the usefulness of cumulative features to serve social purposes is recognised, such apparent lack of explicitness is not typically regarded as serving intellectual purposes in problem-solving contexts (Mercer, 2000, 1995). Yet, in the setting of creative writing, they appear to be highly effective to trigger and link new ideas, feelings and images.

The two sequences reveal that cumulative features may be useful to start off a collective stream of consciousness, thus serving intellectual functions that are closely linked to processes of creative text composition (Sharples, 1996, 1999). So, although the ideas are not connected by the rhetorics of argumentation, cohesion is still achieved. Previously, reflective phases were described as benefiting from exploratory thinking and detached perspective taking. The important point to make here is that creative engagement, a process equally important in creative design, appears to be supported by something radically different: the *uncritical* and free accumulation of ideas. In episodes of joint brainstorming explicit argumentation is superfluous, it would probably hinder the processes of free association. This observation supports findings of the transactive analysis regarding the uniqueness of the content generation process. It also draws

attention to the differences in the ways in which paired talk may resource the two distinct cognitive functions of content generation and reflection. Consequently, the analysis of creative writing discourse needs to entail the differentiation and close examination of talk serving different sub-processes of creative writing.

Such a task-sensitive, function-based design allows us to make fine distinctions between joint content generation and the shared reviewing or planning of content, and identify typical (or effective) discourse styles for each. Also, there is a need to distinguish between the productive use of cumulative features for joint brainstorming, and cumulative talk which reflects the lack of sharing, or passive acceptance. In other words, we need to recognise that the same discourse features may have productive as well as less effective uses within the same task.

Another crucial point is that Sequences 2.2 and 2.4 inform us about the affective aspects of creative writing, highlighted by the friends' tendency to *muse* over the input and their desire to act some lines out. These observations indicate that emotional and logical thinking are equally crucial in the creative process. The transactive analysis does not address the affective aspects of pairwork. Although Mercer does discuss the role of emotions with regard to the social purposes of discourse, they are not given any consideration with regard to educational purposes. This may be due to the differences in focus. However, the current research on joint creative writing needs to address this issue.

Disputational talk

Next, disputational features will be elaborated on. We have already seen that the friends' use of interruptions, unexplained propositions and challenges often corresponded to unconstrained content generation (Sequences 2.2 and 2.4). However, such *productive* use of occasional disputational features needs to be distinguished from disputes in which

frequent challenges and counter challenges, and a lack of reasoning correspond to individualistic approaches to the activity.

The acquaintanceship discourse contained frequent disputes regarding every possible aspect of their work. This sometimes led to explicit argumentation about the collaborative process, as was mentioned before. However, more typically, their arguments were characterised by disputational features, as is shown in Sequences 2.5 and 2.6. Sequence 2.5 contains a reflective episode, in which the acquaintances evaluate the transcription of their work.

Sequence 2.5 – Annabel and Mary, poem-writing, ICT

- 1 M: Ok, my go. We'll go down one. Let me think.
- 2 A: ((pointing at the screen)) Oh, it says that that's wrong!
- 3 M: No, no it does not.
- 4 A: I know ((pause))
- 5 M: It is not wrong.
- 6 A: Ok, go then.

Mary takes over the role of the scribe in this episode, and starts to think about the next line. Note use of the first person singular in line 1, which excludes her partner from the process of content generation. Similarly, when Annabel points out a formatting problem on the screen (line 2), Mary refuses to acknowledge the problem she raises. Mary's individualistic approach to creative content generation and reviewing is clear from this episode. (That Annabel has a similar approach to the task, excluding the other and regarding the process as a solitary activity, will be demonstrated in Sequence 2.6).

It is obvious that we need to look at the pragmatics of the discourse very carefully, to clarify the distinction between the individualistic and collective uses of disputational features. For instance, the marked distinction between the function of *no* in the FP and AP

dialogues above cannot be revealed by focusing on the language forms only. In our interpretive analysis we need to study the language forms and discourse patterns as embedded in their communicative contexts, and place emphasis on the analysis of the communicative *purpose* of the discourse.

Although the three levels of analysis outlined by Mercer (1995) – linguistic, psychological and cultural – are used to offer a practical model for the study of paired discourse, I argue that the links between the linguistic and the psychological levels in the evaluation of the three types of talk are not straightforward. For example, the discourse features identified as characteristic of cumulative talk (linguistic level) are regarded as essential in the building of solidarity and trust (psychological level) (Mercer 2000). However, the findings discussed above highlight that in creative contexts, discourse with cumulative features may also be used to resource the collaborative pooling of creative ideas. Thus, in addition to the social purposes, cumulative talk may serve intellectual purposes in certain contexts, supporting cognitive processes central to the task. There is a similar argument for disputational talk. If this is so, transparency and explicit reasoning may not be the sole discourse feature that distinguishes productive collaboration from less effective collaborative efforts in the context of paired creative writing. The detailed analysis of cumulative and disputational forms can be equally essential when describing effective discourse styles in this particular learning context. There is also the issue of the separation of intellectual and social purposes.

Overlaps and interruptions

Finally, an interesting phenomenon that neither framework explores is the use of parallel and overlapping talk. As the following episodes show, parallel and overlapping talk can indicate both individualistic and collective discourse styles. Therefore, the analytic design developed for the current research needs to address this ambiguity. First, in Sequence 2.6

the acquaintanceship pair's parallel and overlapping talk is indicative of domination (by Annabel) and reflects individualistic approaches to collaboration. In this sequence the partners are generating content for their acrostic poem in the ICT suite.

Sequence 2.6 – Annabel and Mary, poem-writing, ICT

- 1 A: I wanted to () ship, ship, ship.
- 2 M: I think-
- 3 A: ((interrupting)) Sailing away on a ship- on the sea ()
- 4 M: I, I, I was going to say, s-
- 5 A: ((interrupting)) Sailing away-
- 6 M: No, I was going to say s-
- 7 A: ((interrupting)) Sailing away to the seven seas.
- 8 M: Listen to what I was gonna say. I was gonna say: Salty sea on the sea shore
- 9 ((pause)) what about-
- 10 A: She sells, what about sailing well ((pause)) what about she sells she, sea sells,
- 11 shells on the sea shore.
- 12 M: OK, you can put that down.
- 13 A: OK.

The episode above reflects individualistic discourse styles. The talk is full of interruptions (lines 3, 5, 7). Both partners are trying to get their ideas across, but are ignoring their partner's efforts. Annabel is working on a line on her own, repeating and rephrasing it in each turn (lines 3, 5 and 7). At the same time, Mary is trying to share her ideas, but is always interrupted by Annabel (lines 2, 4, 6, 8 and 9). Finally, she gets Annabel's attention in line 8. The interruptions in this episode make the shared content generation problematic, and are possibly due to the lack of collaborative histories.

In contrast to 2.6, the overlapping talk by the friendship pair is reflective of something completely different. In the following episode the girls are pooling their ideas for a limerick. Their first line is: *There was a young girl from York.*

Sequence 2.7 – Carina and Jenni, poem-writing, literacy

- 1 J: There was a
2 C: ((overlapping with line 3)) She loved.
3 J: young girl from York.
4 C: She ((overlapping with line 5)) loved
5 J: She loved
6 C: to ((overlapping with line 7)) collect
7 J: to collect-, to collect cork! Ermmm big and ((overlapping with line 8)) small.
8 C: No, big (corks)!

As in the previous episode, there is plenty of interruption and parallel talk. The friends often talk simultaneously, without waiting for their turns or listening to the other's input all the way through (as in lines 1-2-3, 4-5, 6-7 and 7-8). Yet, closer inspection reveals that they do incorporate each other's ideas in their next turn, implying that they are listening and talking at the same time. For example, in lines 1-2, Jenni is reciting the previous line while Carina introduces the first bit of the next line: "She loved". However, in the next turn this idea is repeated almost simultaneously by both partners. Thus, Jenni is aware of Carina's suggestion, although she does not seem to pay attention in the first place. Similarly, the challenge and modification of the idea presented in line 7 comes almost simultaneously to its introduction in line 8. Thus the creative thoughts of the partners feed into each other.

The study of the use (and usefulness) of overlaps and interruptions appears to be highly relevant in the context of collaborative creative writing. Such intertwined, *fuzzy* discourse was typical in the FP transcripts. Their style is hard to define using either framework. Also, on the surface it is difficult to distinguish from instances of parallel or overlapping talk which reflect intense sharing (Sequence 2.7) from individualistic efforts and competition (2.6). What distinguishes the two episodes is not necessarily the formal characteristics, but the way they are employed to resource the activity. In Sequence 2.7,

parallel and overlapping discourse is utilised to engage in a short and speedy cycle of shared brainstorming. I argue that this demonstrates the discrepancies between the linguistic and psychological levels of analysis (the study of prevalent language forms and the study of the use of these language forms) regarding the cumulative and disputational talk. In contrast, the AP discourse is far less ambiguous. The formal features of overlapping talk in 2.6 are indicative of a dispute, revealing the partners' lack of consideration towards rules of turn-taking, and their lack of interest in the other's ideas. Their discourse reflects the lack of collectivity in the development of creative ideas. This finding reinforces the argument that instead of associating different discourse patterns (e.g. exploratory or cumulative features) with different levels of productivity, the study of creative collaboration needs to explore both the productive (collective) and less productive (individualistic) uses of these discourse features.

2.4.3 Summary of critique

It was argued that Azmitia and Montgomery's coding scheme cannot capture instances of collective thinking, as it is based on the analysis of individual turns strictly attributed to one or the other partner. The examination of individual utterances does not tell us how such collectivity is established through discourse. For this reason, the present study needs to take longer sequences as the unit of analysis and offer a contextualised account. Also, the characterisation of paired discourse as linear turn-taking does not consider the layeredness and complexity of the observed social interaction.

When applying Mercer's typology of talk to the transcripts of joint creative writing, it was found that each type of talk had important roles at different phases of the iterative cycle of writing, but could also be seen as hindering the collaborative activity. These findings indicated that discourse features associated with the three main types of talk can

have different purposes, and their productivity varies according to their specific function within the task. As mentioned before, Mercer (2000) acknowledges the usefulness of different types of talk in different contexts. The point that is made here is that the three different styles can successfully be employed to support different *task-specific functions* within collaborative creative writing. Thus, we need to recognise that the values we attach to discourse styles are not only context-specific or task-specific, but that they vary *within* this particular task. In the context of shared creative writing, the analysis of the productivity regarding these discourse styles needs to come from an in-depth study of both the forms and task-specific purposes of the language used.

The analyses revealed the unique nature of the joint development of creative ideas, and its centrality in the process of creative text composition. It was shown that the pooling of creative ideas was not a clear-cut linear process, and did not necessarily build on explicit argumentation. I argue that this unique, emotion-driven phase differentiates the process of creative design from processes of scientific problem solving, and requires special consideration in the methodological design employed in the current research. It was also pointed out that patterns of paired talk associated with the functions of content generation and reflection were qualitatively different, the former benefiting from the uncritical accumulation (pooling) of ideas, the latter often (but not solely) resourced by detached perspective taking. It was also concluded that the *collective-individualistic* dimension of shared creative composition needs to be given emphasis in the design.

The weaknesses of the two frameworks in the context of creative text composition were attributed to their being primarily geared towards effective ways of *talking together* (and *thinking together*) in problem solving tasks. Paired talk in other tasks may serve purposes other than problem solving in the traditional sense. For example, as seen in the collaborative creative writing data, it may also function as the source of inspiration, the

platform of generating and sharing creative ideas. Some key studies in the field of creative writing literature support this argument, demonstrating that creative writing is not simply a complex problem solving activity (Sharples, 1996, 1999). It requires the use of language to reflect upon, explore and express one's own emotional experiences in a unique, imaginative but meaningful way. In this setting, productive talk can be defined as the successful sharing, joint exploration and expression of emotional experiences; communication in which children come up with and reflect upon shared creative ideas which would not have emerged from their individual work.

Due to the specific research focus outlined above, neither of the frameworks allow the study of paired writing in its full complexity. For similar reasons, neither framework informs us about the affective aspects of creative text composition, though the observations revealed the salience of emotional engagement in collaborative creative writing. The conclusion drawn was that a new framework was needed to study and evaluate joint activities in this specific context, which offers a detailed contextualised analysis, and combines the study of language forms with the study of discourse functions associated with different phases in writing. Such a model is needed to understand how collaborative discourse supports the planning, composition and review of creative texts.

2.4.4 Functional analysis

As the literature review and the present chapter have already established, current theories see creative writing as fundamentally different from problem-solving. Creative writing (or creative design) is described as an open-ended process, without a fixed goal and without clearly specified and ordered stages leading to one single solution (Sharples, 1996). It builds on repetitive cycles of *content generation* and *reflection* (the metacognitive skills of reviewing, contemplation and planning), and entails *emotion-*

driven thinking. Note, that in the literature review this iteration was linked to the notion of creative design as problem finding (Sharples, 1996). Chapter 1 also detailed the modifications suggested to Sharples' model and conceptualisation. The sub-processes of creative writing were redefined as mainly emotion-driven (content generation), or as combining emotion and intellect (planning, reviewing, contemplation). Thus, the clear-cut dichotomy of engagement and reflection was softened by plotting the sub-processes along a continuum of emotion-driven and intellect-driven functioning, with content-generation being the only characteristically emotion-driven phase.

The chapter will continue with the discussion of the model developed for the current research. In the next phase I worked on the transcripts of the Preliminary Study again to identify further links between cognitive processes associated with creative writing and prevalent discourse patterns. The following table shows the initial categories used for the analysis of the transcripts, applying in part the model of Sharples (1996, 1999).

Table 2.3 Processes of text composition

Main focus	Processes linked to writing
Text-oriented thinking	Content generation Reflection <ul style="list-style-type: none"> • planning • reviewing (re-reading, contemplation, evaluation, modification) Transcription
Process-oriented thinking	

First, in a similar fashion to the transactive analysis, the conversational turns were marked in each transcript. Then each turn was marked for the function (or functions) it served. Discourse not linked to any of the functions in the model – for example off-task talk – was left unanalysed. The model was not intended to focus on individual turns. Rather, the focus of analysis was extended to longer sequences, in which utterances were marked as centring around one or the other function. Thus, in each transcript, a string of episodes

was identified, each of which was linked to a different function within the repetitive cycle of the writing process. Through the examination of the transcripts of the Preliminary Study, I developed the following descriptions of the five central cognitive processes or *functions*.

Content generation

Creative content generation; the development of creative ideas through association, followed by the translation of these ideas into text. It largely draws on emotional-driven thinking (*value-sensing*, Donaldson, 1996), the retrieval of emotional experiences from the memory, which are used to stimulate the process of creative text composition.

In *joint* content generation episodes discourse was used to pool ideas for the text, to engage in joint brainstorming and to extend and refine joint ideas. [Child A: "S-A, S-A-I, I, What do we do for I? Ice-creams melting ((pause))" Child A&B: "In the sand."].

Discourse expressing emotions – musing, acting out and humour – was also given the content generation function when aiding the joint development of creative ideas.

Planning of content

Planning involves goal-setting regarding the text (theme, content, form or style). (Note that episodes focusing on the planning of procedure, collaborative strategies and working styles were assigned the process-oriented function.) Planning takes place at *macro level* (general planning typically at the beginning of the writing session) and at *micro level* (specific planning throughout the writing session, regarding the next line or idea).

Planning requires the application of rules to the composition on the whole (macro planning), or to one particular part of the composition (micro planning).

Episodes reflecting the *joint* planning of the composition were given this function [Child A: "We do sailing." Child B: "Yeah, we do sailing."].

Reviewing the generated content

This involves re-reading and contemplation; the evaluation of the generated content and subsequent modification or redrafting if necessary. It requires the halting of the process of content generation. Evaluation can be carried out from two aspects, *appropriateness* – whether the writing fits the constraints of the task – and *appeal* – whether or not the composition pleases the writer. The latter function further highlights the centrality of emotions in creative activities: in reviewing phases emotions act as the *moderator* of thought.

Discourse reflecting *joint reviewing* was given this function [Child A: "Remember, you are not supposed to end with -ork, you are supposed to end with another sound." Child B: "I said the pork was so FAT, F-A-T!"]. The joint reviewing process may focus either on written material or freshly generated ideas prior to transcription. Thus, the analysis of shared reviewing was extended to the evaluation (and modification) of verbally shared ideas.

Transcription of generated content

In this phase the writer focuses on the spelling and formatting of the generated material while transcribing the text, or following the transcription.

The function of *joint transcribing* was used to describe discourse centering around transcription, spelling, punctuation and formatting [Child A: "What does it say? I don't understand your writing."].

Process-oriented thinking

Four out of the five phases were text-oriented. The fifth function identified on the basis of the Preliminary data analysis was the *process-oriented* function. This function does not centre around the text, but on the ways in which it needs to be developed.

The function of *shared process-oriented thinking* was used to label discussion about the step-by-step procedure, management issues, role division, sharing, strategies for collaboration, or the use of technical equipment [Child A: ((looking at their printed draft)) "Let's use this to help us."].

My analytic aim was to identify discourse strategies associated with (and characteristic of) these five processes. On the basis of the analysis of the Preliminary data the following discourse strategies or discourse styles were identified (Table 2.4).

Table 2.4 Processes central to collaborative creative writing and associated discourse styles

Cognitive processes	Discourse styles
Joint content generation	Characteristically short exchanges, where propositions, challenges and alternatives are offered without explicit argumentation. The incorporation of each other's ideas in a new proposition is not necessarily accompanied by visible reasoning. Cumulative and disputational features, overlaps, interruptions and repetitions characterise joint engagement, and the use of emotions to trigger new ideas (musing, acting out, humour).
Joint planning	Often involves explicit reasoning in the form of longer, more elaborate exchanges.
Joint reviewing <ul style="list-style-type: none"> • re-reading • contemplation • evaluation • modification 	Evaluative phases often (but not always) involve explicit argumentation (with reasons for challenges and alternatives offered), and can take the form of longer turns. The evaluation of the generated material may also involve emotion-driven thinking. Recital of verbal input or drafted lines can be used to test the emotional appeal of the material (e.g. recital with a playful, <i>storytelling</i> intonation). The evaluative process is followed by modification when necessary, which can but need not be followed by explicit argumentation.
Joint transcription	Discussion of spelling problems typically takes the form of a question-response sequence. Problematising about formatting typically involves explicit argumentation.
Joint process-oriented thinking	Joint process-oriented thinking often (but not always) involves explicit reasoning in the form of longer, more elaborate exchanges.

As Table 2.4 shows, different discourse styles were found characteristic of different functions. Departing from the transactive model, the developed framework allows for the contrastive analysis of *collective* and *individual* discourse styles. Yet, it still builds on the recognition of the benefits of reasoned dialogue in certain phases associated with creative writing (e.g. planning or evaluation). Thus it builds on Mercer's (1995) typology of talk, but applies it at a very *local* level, examining the use of different types of talk in each phase of the writing process. Consequently, it can give a highly contextualised picture, grasping the mechanisms of creative writing without simplifying them, as shown in Chapter 3. The design was also employed to contrast the discourse of the observed friendship and the acquaintanceship pairs. Friendship and acquaintance episodes associated with different functions were identified and compared in a qualitative fashion. The findings of this contrastive analysis can be found in Chapter 4.

2.4.5 Limitations and strengths of the analytic design

A clear limitation of the design as presented here is that it is developed using a very small set of data, restricted to one gender group. The subsequent phases were planned to test how generalisable the insights drawn from the Preliminary Study are, including the issue of gender. My plan was to use the transcripts of subsequent phases to refine this model, and identify distinct discourse strategies for each intellectual process. The discourse styles introduced above will be further elaborated on in Chapter 3, which will present a refined version of this design, building on data from subsequent phases.

Furthermore, due to the specificity of the design, it cannot and is not intended to be taken as a general model to study paired talk. However, it may be used to develop an analytic tool for the discourse of collaborative creative writing, or collaborative creative design in general.

2.4.6 Further considerations for data collection

It became clear during the Preliminary Study that good quality microphones are vital in capturing the observed children's talk during lively classroom-based collaborative sessions. Also, the observational setting proved to have unexpected advantages. Surrounded by other collaborating pairs, the voices of the participants blended in the lively discussions of other children. In experimental settings the recorded interaction is removed from naturally occurring background noises, thus making participants feel more self-conscious. This was not observed in the Preliminary Study. Although the children were aware of being recorded, they were talking in an unconstrained manner. Thus, the surroundings probably made the children less inhibited, yet by using the microphone I was able to capture their conversation and reduce the background noise on the recordings. Furthermore, the recording of parallel sessions proved very useful, providing highly comparable data. I decided to try to improve data collection in the subsequent phases by using two cameras, and recording two simultaneous collaborative sessions at a time.

The Preliminary Study also brought my attention to the *fluidity* of classroom-life. Unexpected circumstances, such as illness or last-minute changes, as well as special events organised for the children made research planning difficult. Thus, the need to build a flexible schedule providing space for changes in the plans was noted.

The Preliminary Study in Year 3 demonstrated that observations with this age group can be highly informative about processes of collaborative creative writing. The head and staff were very supportive and happy for me to carry out subsequent research at the school during the next school year. I decided to stay with the same groups of children (then Year 4) for the subsequent observations for two reasons. First, the negotiations with the head revealed that this year group would be the best option for the school for practical

reasons. Also, staying with the year group meant that I already had an established relationship with the children.

At the beginning of the next school year (2001) I started planning subsequent observations at the school for Study 1. I carried out naturalistic observations of ongoing classroom activities in literacy and in ICT. The only intervention was the selection and pairing of the participants into friendship and acquaintanceship pairs. I planned to collect sufficient data for the two main contrasts (type of relationship and nature of writing medium), and approach the other contextual aspects as they emerged naturally during data collection and analysis.

2.5 Study 1

Participants

In order to be able to select from a larger set of children, I decided to expand the study to the whole Year 4 group. During the planning with the teachers, it became apparent that when selecting the participants I would have to consider many different aspects. Careful consideration had to be given to select partners who were in the same class – and therefore attended ICT sessions together – and belonged to the same ability group – and therefore worked together in literacy. The number of participants from each class needed to be balanced, in order to have a similar number of participants in each ICT group. Furthermore, the friendship pairs needed to be close friends in and outside school as well. Having so many constraints, it was unavoidable that different pairs came from different ability groups, although the selected partners in each pair were of the same or very similar ability. (This was decided by the teachers, on the basis of the children's school-based literacy test results, and their personal evaluation of the children's work during the first term of the year).

The study involved 16 children, 6 friendship and 2 acquaintanceship pairs of the same gender. The friends were chosen using a sociometric questionnaire. This was a conscious move from *teacher choice* towards the involvement of children in the identification of potential friendship pairs. Previous research has established the reliability of the sociometric questionnaire in identifying mutual friendship pairs (Mérei, 1998). (See Appendix 5 for the questionnaire, Appendix 6 for a sociometric matrix developed in one of the three classes, and Appendices 7 and 8 to illustrate how this information was used to identify mutual choices and measure the level of popularity.)

Procedure

I spent the Autumn term of the school year finalising the design, and planning my work in the next two school terms with the teachers. When the planner for the coming (Spring) term was finalised, we identified potential literacy and ICT projects, which could be used for the naturalistic observations of children's collaborative activities (See Appendix 11 for the reproduced Term Planner). During the Autumn term I visited the school regularly, to get to know all the three classes and form teachers within the year-group (by then Year 4). The familiarisation with the children followed the same routine as in the Preliminary phases.

During this term I selected the participants. Children in each class were given a sociometric questionnaire, and were told that the purpose of the questionnaire was to help me get to know them better. On the basis of the answers I drew up a sociometric matrix (sociogram) of each class (Appendix 6), marking both uni-directional and mutual choices, and mapping up friendship formations within the classes (Mérei, 1998; Moreno, 1937). I identified both the most popular and the isolated members of the class, counting how many times each child was selected by others, and how many mutual friendships they had

(Appendices 7 and 8). Highly popular and isolated children were excluded from the study, since the aim was to work with a more or less homogenous group of *averagely popular* children. I then made a list of mutual friendship choices in each class, with the activities they liked doing together. I then discussed this list with the teachers, who identified those of the same class and ability grouping. I also asked their opinion about the suggested pairings and asked their suggestions on potential candidates for the acquaintanceship pairs.

The selected FPs were close friends who mutually chose each other in the sociometric questionnaire. It was also important that they were friends outside school as well. The APs were selected on the recommendation of the form teachers, from among children of the same or similar ability. They did not choose each other in the sociometric questionnaire but, according to the form-teachers, did not dislike each other, and would get on well.

The informed consent of all the participants was obtained. I had an orientation session with the 16 selected participants outlining the study. I showed them one of the cameras, and how it worked. I made sure that they understood that this was not a test of their abilities and that there would be no consequences to their assessment. I asked them to tell me if they felt uncomfortable about being recorded at any time during the study, or turn to me with any questions. I also reminded them that they could ask questions from the friendship pair of the pilot study, who were experienced participants and knew much about what was going to happen. Finally, they were assured that the data would be confidential. Meanwhile, I discussed the nature and aims of the study with the head and the form teacher. Again, consent issues were dealt with according to the school procedures, in accordance with their status as a Beacon school.

I then had a practice session with each pair during the week preceding the first writing project. This entailed recording each pair while working independently, but seated next to each other in the literacy classroom. (As mentioned before, during independent classroom work children were allowed to talk to people around the table.) Also, during this same week, the teachers discussed the week planner with me in detail, so that the content and amount of observations could be finalised.⁴ This orientation session with the teachers was repeated before each writing project. Also, in between the projects I visited the school frequently, in order to receive some updated information regarding future plans. Table 2.5 details the projects which were used for data collection.

Table 2.5 Recorded collaborative writing projects - Study 1

	Date	Genre	Duration	Pairs	ICT support
1	2000 January	Genre 1: Poems	one week	6 FPs (1 session each): Jenni - Carina Dawn - Linda Zeena - Louise Robbie - Zak David - Chris Mike - James 2 APs (1 session each): Jane - Claire Martin - Alan	no (only literacy)
2	2000 February	Writing session in ICT, linked to History project (NOT creative writing)	3 ICT sessions, one for each class	4 FPs (1 session each): Jenni - Carina Dawn - Linda Robbie - Zak Dave - Chris 2 FPs (1 session each): Jane - Claire Martin - Alan	yes (although not creative writing)
3	2000 March	Genre 2: Story-writing	one week	2 FPs (4 sessions each): Jenni - Carina Robbie - Zak	no (only literacy)
4	2000 April	Genre 2: Story-writing	one week	2 FPs (2 sessions each): Dawn - Linda David - Chris	yes
5	2000 May	Genre 2: Predicting the next chapter of a book	one session	2 APs (1 session each): Jane - Claire Martin - Alan	no (only literacy)
6	2000 June	Genre 3: Writing advertisements	one week	2 APs (1 session each): Jane - Claire Martin - Alan	no (only literacy)

⁴ The usual procedure for teachers was to plan the lessons in detail one week ahead, which meant that I could only discuss the finalised lesson plans with them during the weeks preceding the observations.

The literacy hours followed the regular pattern of i) whole class teaching, ii) group activity (independent work) and iii) whole class activity (plenary), as defined by the National Literacy Strategy: Framework for Teaching (DfEE, 1998). (For details see Appendix 1.) I recorded the independent work phase, and took field notes during the rest of the literacy hour. To follow up the observations, I talked to the teachers who pointed out aspects in which some of the observed pairs could help each other develop skills through collaboration. These notes were used in the analysis of the work of individual pairs.

The aim was to collect sufficient data to build a picture of each pair's initial collaborative patterns and strategies. This, in turn, was planned to be used both for an initial contrast of FP and AP discourse styles, and as the first phase of a longitudinal evaluation, which would focus on the development and changes in the discourse of the pairs. However, by following the work of different pairs in different classrooms on different days, the compiled set of data varied greatly in content and length. First, the activities developed by the class teachers involved writing poems of a great variety, including:

- a free poem without a rhyming or syllabic pattern but with a set theme ('Hands');
- a rhyming poem (rhyming couplets) with a set theme ('Haunted house');
- a rhyming poem (alternate line rhyme) with a chosen theme and set syllabic pattern ('Hobbies');
- a rhyming poem (alternate line rhyme) where the first line of each stanza is set ('Oh Lordy, Oh Lordy...');
- a rhyming poem with an optional theme but a set structure (two-word lines, noun + verb-ing);
- a poem made up of questions, (in the style of 'Hiawatha').

Some of the sessions were full writing sessions, whereas others involved editing and refining only. Due to the methodological choices (observing parallel literacy sessions but turning on equipment only at the start of the collaborative activity), instructions were not successfully recorded for each session of the poem-writing project. Naturally I had access to paper records (written planning). Yet, it was felt necessary to shift the data collection strategy in subsequent projects, so that I had access to verbatim instructions, as small differences in orientation to task were also seen as crucial (Littleton *et al.*, 2000). I decided therefore that a cassette-player would also be introduced in subsequent phases, to record the teachers' instructions.

The practical implementation of the observational plans was difficult to achieve, due to variations in the class teachers' individual lesson plans – with modifications to suit the ability groups – substitution, absence and special school activities. Note, this is not a critique of the school practices. The point I am trying to make is that naturalistic observations have the danger of putting the researcher in a vulnerable position. The frequent changes in plans make structured and systematic observations hard to carry out. These problems also highlight the complexity of classroom-based learning situations, where different agendas (classroom, school, home and personal) may be interlinked in shaping the processes and outcomes of learning, and may sometimes clash as well.

Despite these difficulties, the observations proved the value and potential of the rich set of data. The data present powerful records of classroom-based peer interaction. I argue that working within the classroom setting and not isolated from their peers, the children were not *overwhelmed* by the research context. They saw the observed activities as embedded in the wider school context. One aspect, however, motivated a slight change in my approach to the subsequent phases. I felt that it would have been interesting to see how each pair progressed through the different activities, and analyse their development

within the project. Thus I decided that I would follow two selected pairs throughout the next literacy project.

2 *Collaborative writing in ICT*

The collaborative writing of the pairs was next observed in ICT. A project in History involved the shared writing of a description of Henry VIII in ICT. This project was not strictly creative writing, but was the composition of a factual description. Yet, it was thought to be useful to practise ICT-based observations, and could also help build a picture of the pairs' general ICT-based collaborations. Since the observations were of three sessions in ICT (one session with each class), I decided to observe and record the collaborative writing sessions of 6 pairs only (2 pairs in each ICT session). These were four FPs and two APs, with a gender-balance. The data was planned to contribute to the longitudinal questions of the study, and be used in the initial, general analysis of the mediational role of computers in peer collaboration.

3 *Story-writing project*

I focused on two friendship pairs for this one-week observational phase (one female and one male pair). I planned to use the data to explore the changes and/or stability within the selected pairs' discourse patterns over the duration of the project (four recorded sessions each). I also observed the general lead-in session the teachers planned for the children. This consisted of children designing a poster which advertised an author they knew and liked, to recommend their books for other people. This would take the form of a short paragraph which promotes or sells the author, accompanied by illustrations. The session was followed by a general brainstorming session, involving the discussion of story-books children had read, detailing the genre, the audience and the plot of these books.

During the next 4 literacy sessions children were asked to work in pairs, and write a story for a young audience (aged 5-6) in the style of an author they liked. The first two sessions were dedicated to planning, using the story planner provided by teachers (see Appendix 13). The last two sessions were dedicated to writing up the story on the basis of the story-planner. This was the only literacy project where children were asked to produce a joint copy. In addition to the video-recordings of the two pairs' work, I took fieldnotes of the literacy sessions, obtained audio-recordings of the teachers' instructions, and carried out an informal interview with the four participants (recorded with a video-camera). The data was used to contribute to the genre-analysis (*story-writing*), and to the longitudinal analysis of the affordances and constraints of friendship pairing.

The data collection during this particular project further highlighted the practical drawbacks of naturalistic observations. Most children, including the selected participants, were highly excitable during the week for various reasons (*Sports Day* with a famous Olympic athlete, a forthcoming school trip and stormy weather). The circumstances had an observable effect on the children's behaviour, as well as on the actual realisation of the lesson plans. Also, the observations clearly indicated the impact of the data collection method – camera – on the nature of the collected data. The children's behaviour showed the influence of contemporary cultural phenomena ('reality television'). These observations revealed the crucial role of context in the processes and outcomes of the collaborative activities. Thus the original interest in studying the role and effects of context was reinforced and refined by the processes of data collection.

4 *Story-writing 2*

The next project was planned for the week when Year 4 children went for a school retreat. (During the week half of Year 4 would be at the school retreat, while the other half would continue to have classes at school, which were slightly different from the

regular activities. Then the children would swap.) The project involved the composition of a story, based on a picture book by Jeannie Baker. I observed two friendship pairs (one male one female) on two consecutive days.

On the first day, children were instructed to write two paragraphs, one comparing the first and second part of the book in terms of the changes, and another paragraph comparing the second and third part of the book. This was individual writing, but children were seated in pairs to discuss their ideas with each other. This activity was observed but not recorded.

On the second day, children were asked to write up the story. This was collaborative work, which they started in literacy and continued in ICT. Both the literacy and the ICT sessions of each pair were recorded, alongside with the teacher's instructions. The data was used to contribute to the longitudinal discussion of the study regarding the benefits and affordances of friendship pairing, and to the discussion of the role of computers in mediating collaboration.

5 Predicting the next chapter of a book

The next session to be recorded was linked to ongoing reading activities. During this session the teachers read the next chapter of the book that was regularly read to the class at the time. This was the whole-group phase of the session. Then the children were asked to jointly predict the next chapter of the book, and write down their ideas. In one of the observed classes the children produced a mind-map – see Appendix 15 – in the other they wrote a full paragraph. The children were asked to work collaboratively, but they each were to record the jointly generated ideas in their literacy books. The literacy hour was concluded by the teachers reading the next chapter.

The two acquaintanceship pairs were selected for this recording, in order to provide some data for the longitudinal analysis of the developments in their collaborative relationship.

The last project to be observed was a week-long advertisement writing project. The writing week was preceded by a preparatory week, when children were shown and evaluated adverts. The project included one collaborative writing session, when children were asked to write an advertisement together with a partner. This session was recorded. The two acquaintanceship pairs were selected for this recording, in order to provide further data for the longitudinal analysis of the developments in their collaborative relationship.

There were a few additional literacy projects that were appropriate in terms of general content, but were later abandoned. Thus, these six projects formed the basis of Study 1. The data was planned to be used as Table 2.6 describes. Each project was considered for the different aspects of analysis. For instance, the first project was planned to be used for the genre analysis, to describe the initial contrast of friendship and acquaintanceship discourse, and to serve as the first phase in the longitudinal analysis (for both friends and acquaintances).

Table 2.6 The planned use of data from Study 1

Project	Genre analysis	Relationship			Medium (pen-and-paper vs. word processor)
		Initial contrast between AP and FP	Longitudinal analysis of FP	Longitudinal analysis of AP	
1. Poem-writing		3	3	3	
2. History-writing					3
3. Story-writing	3		3		
4. Story-writing 2	3		3		3
5. Predicting the next chapter of a book				3	
6. Advertisement writing				3	

The two school terms provided me with plenty of data in terms of literacy-based writing. However, the observations lacked sufficient ICT-based writing. As the summer term progressed, the teachers realised that they were not able to plan more ICT-based writing sessions, as they needed to cover other areas in ICT. This prompted me to carry out a further study. From the beginning of the summer term, I started to search for schools where computer-supported literacy projects were planned that would be compatible with what I had done so far. I found a middle school in the Milton Keynes area, where a collaborative story-writing project with computer support was planned for Year 4 in the Summer term, and who were happy to participate.

2.6 Study 2

The second participating school (School 2) is a middle school with about 300 pupils on roll that come from a variety of social and economic backgrounds. There is a high proportion of children with special educational needs and high proportion of pupils enter the school with below-average reading rates (OFSTED Inspection Report, 1999). However, there have been some positive developments in recent years due to the appointment of a new management. The head and the staff were very enthusiastic and highly supportive of research. The participation of this school in the research enabled me to work with two schools which serve areas of contrasting affluence and provided a good opportunity to examine the generalisability of the findings of Study 1.

Participants

The ongoing collaborative creative writing episodes of eight Year 4 children were observed during a two-week long literacy project in the ICT suite and in the literacy classroom of their school. The selection process was identical to that in Study 1. Six friendship pairs of matching ability were selected using a sociometric questionnaire, and

the advice of the form teacher. Five pairs replied positively to the study, thus in the end these pairs were selected. I had an orientation session with them and ensured the confidentiality and anonymity as well as the voluntary nature of the study (see Study 1 for details of information provided for participants). Due to unforeseen circumstances, one pair had to withdraw from participation, so the recordings were based on the work of the remaining 4 pairs (3 boy-boy and 1 girl-girl pair).

Procedure

The organisation for this study was very similar to that in Study 1. First, I discussed the already collected data, and my plans with both the head and the Year 4 teacher. The form teacher and the head were provided with a written description of my study. Issues of ethics and consent were dealt with in line with school practices. The form teacher discussed with me the detailed plan for the writing project, and I explained how I planned to carry out the data collection. Then we drew up an observational schedule based on the week planner she designed for the children. As before, I spent a short amount of time familiarising myself with the classroom.

The selected pairs' collaborative work was observed and recorded using video and audio equipment in the literacy classroom (2-3 occasions each) and in the ICT suite (1-2 occasions each) of the school. The frequency of observations depended on the availability of the children (absence made it difficult to carry out the full number of observations with one of the three male pairs).

During the two-week project children had to write two stories, both of which involved computer use. (For the first story they used computers to write the ending, while for the second story the computers were used to edit the draft they wrote in literacy.) In the literacy classroom children worked in their literacy books (generating two copies),

whereas in ICT they shared a computer and produced a joint copy. The data was originally planned to be used to study the mediating role of the medium (pen-and-paper vs. word processor) in shaping the processes and outcomes of creative writing sessions. Yet, the recordings proved to be valuable for the study of other aspects as well, such as the affordances and constraints of working in a friendship pairing in shared creative writing. Table 2.7 below outlines the observed sessions and the participants involved (for a full list of participants see Appendix 9).

Table 2.7 Recorded story-writing sessions - Study 2

Session	Pair	Setting	Theme	Approximate duration
1	Lisa - Julie Mark - Simon	Literacy	Story 1: beginning	35 min
2	Lisa - Julie Mark - Simon	ICT	Story 1: ending	40 min
3	Judy - Miriam* Liam - Tom	Literacy	Story 2: Theme Paragraph about bullying/death	20 min
4	Lisa - Julie Kenneth - Del	Literacy	Story 2: Planning	20 min
5	Mark - Simon Kenneth - Del	Literacy	Story 2: Emotions (brainstorming)	20 min
6	Lisa - Julie Liam - Tom	Literacy	Story 2: Story writing	30 min
7	Lisa - Julie Kenneth - Del	ICT	Story 2: Editing	35 min

*withdrew due to health problems

With the data obtained from Study 2, the analysis of the main issues was supported by the collected data as follows (Table 2.8).

Table 2.8 The planned use of all collected data

Project	Genre contrast	Relationship			Medium (pen-and-paper vs. word processor)
		Initial contrast between FP and AP	Longitudinal analysis of FP	Longitudinal analysis of AP	
Preliminary Study					
Poem-writing	3	3			
Study 1					
1. Poem-writing	3	3	3	3	
2. History project in ICT					3
3. Story-writing	3		3		
4. Story-writing 2	3		3		3
5. Predicting the next chapter of a book				3	
6. Advertisement writing				3	
Study 2					
7. Story-writing 3	3	3			3

2.7 Summary of methodology

This chapter reported on the methodological choices, describing the development of the methodological design as an ongoing interpretive and reflective process. It was shown that, through the Preliminary observations and the Preliminary Study, the methodological choices moved towards qualitative approaches to the study of collaborative discourse. However, this does not mean that the analytic method was by then finalised. As Eisner and Peshkin point out (1990:2) qualitative research is relatively *idiosyncratic*, without any generally accepted and standardised procedures or canons to follow. In this sense, qualitative research is organic, and the procedures of data collection and analysis emerge and are fine-tuned during the research process. In what follows, the key aspects of the adopted methodology will be summarised, as planned and reformulated during the research process.

Naturalistic observations - benefits and costs

The difficulties with long-term planning, and the problems with the practical implementation of the research plans were highlighted throughout the chapter. The major cost of the naturalistic observational method was that the obtained data (transcripts of paired discourse) varied greatly in length and content and did not necessarily provide material for all the planned analyses. This is the reason why the rescheduling of plans and the inclusion of a second school in the study became unavoidable. Also, the frequency and amount of observations with the chosen pairs were not adequate to carry out a full longitudinal analysis.

Yet, the main benefit of the observations was their *documentary* nature, following the pairs' ongoing work in different writing contexts, without removing the children from the familiar classroom setting. Although the technical aspects of the research (the presence of the camera and microphone) had a strong impact on the nature of collaborative discourse, it has already been noted that the equipment did not intimidate the participant children. As the subsequent empirical chapters reveal, the use of the cameras and the microphones enabled me to capture ongoing classroom interaction in its full complexity, and provided rich discourse material for a detailed, in-depth qualitative analysis of a variety of contextual aspects.

Qualitative inquiry to promote understanding

My adopted methodological approach followed the main features of qualitative research, as described by Stake (1995). Most importantly, these methods were appropriate to address the research questions raised in Chapter 1, which emphasised the importance of context and unique relationships in shaping processes of collaborative learning. As opposed to trying to “nullify context in order to find the most general and pervasive explanatory relationships” (Stake, 1995, p.39), I set out to understand the observed

children's learning experience in context, and to tease out contextual effects and the interrelationship of these. Instead of focusing on the relationship between a limited number of clearly defined and set variables, I decided to seek out patterns of *unanticipated* and *expected* relationships, with the underlying aim to understand "the complex interrelationships among all that exists" (Stake, 1995:37).

One difficulty with qualitative enquiry is that it is often *data-led* (Tonkiss, 1998): key themes and focal points of the research may only emerge during the analytic process. Indeed, in addition to the comparisons built into the research design - the friendship-acquaintanceship contrast, or the medium used for the collaborative writing episodes - the analysis identified further salient features of the context as influencing factors, such as task design, genre, the nature of instructions, or the research-context. These *emerging* themes - although theoretically grounded and linked to existing research - were the result of the careful examination of the data and the extensive search for evidence for contextual effects in the transcripts.

The study of the impact of these contextual features on the processes of peer-collaboration constituted a considerable proportion of the analytic process. Beyond the interest in investigating how these features affected patterns of paired interaction, the analysis also aimed to explore how shared meanings were constructed within specific contexts. In other words, how discourse reflected sense-making, showing the integration and consideration of contextual aspects in the process.

The analysis of transcribed discourse

My approach to the study of the transcribed dialogues was informed by discourse analysis in social psychology (as described by Harre, 1997, Billig, 1997 or Hammersley, 1999) and educational research building on the analysis of talk and collaborative activity in the

classroom (Barnes, 1976). Tonkiss (1998:250) remarks on the elusive nature of discourse analysis as a research method, and the difficulty in formulating a standardised approach to it. Similarly, Hammersley (1999:254) argues that discourse analysis is “a fluid, interpretive process which relies on close analysis of specific texts, and which therefore does not lend itself to setting up hard-and fast ‘rules’ of analysis.” Instead of outlining the variety of different approaches, I will describe the key techniques adopted for the current research. The methodology presented here, although influenced by existing educational or social research in the qualitative tradition, was developed specially to address the initial research questions, and was modified and finely shaped during the Preliminary observations and the Preliminary Study.

As advocated by Billig (1997) the transcribed dialogues were read and re-read several times, in order to search for regularities and discursive features that were seen as relevant for the research questions, or simply *stood out* and captured the attention. This way, I developed *hunches* and *intuitive understandings* (Billig, 1997) of the collaborative processes, which, although evolving from the intense engagement with these particular transcripts, nevertheless had strong theoretical grounding in the reviewed socio-cultural literature. Ambiguities in the transcripts regarding the specific aspects in focus were solved by going back to the video recordings and making refinements in the transcripts, or by looking at the fieldnotes and notes on informal discussions with participants.

During the initial phases of analysis I examined the transcripts and identified episodes in the dialogue supporting different writing-related functions. (Note that the functional model itself was subject to revisions and modifications on the basis of this analysis.) I also worked on the key themes based on the research questions, or emerging through my intense involvement with the data. For example, during the initial phases of analysis I searched for features or patterns of the discourse which could be used for the contrastive

study of friendship and acquaintanceship discourse. On the other hand, the striking differences in shared-copy and separate-copy writing modes led to an *unexpected* interest in the more detailed study of this particular contextual aspect.

Selection of key episodes for each theme

I followed the discourse analytic method of selecting and examining key extracts from the transcribed corpus (Billig, 1997:48). This approach has been adopted to the analysis of classroom-based collaborative discourse (e.g. Barnes, 1976, Barnes and Todd, 1978, 1995). The current thesis includes three substantial empirical chapters which present the findings of the research, approaching the data from different angles. As pointed out above, the analyses build on the functional model introduced in Chapter 2. For each main strand of inquiry, the transcripts of all the relevant projects were examined in detail. The transcripts, which by now had clearly identified episodes with specific writing-related functions, were further analysed from specific points of view (for example the links between the nature of the relationship and the nature of discourse).

Driven by the understanding of the discourse I gained during the initial phases of the analysis, I selected *key episodes* within relevant transcripts for each different line of inquiry. These were both *typical* and *powerful* as examples: typical in the sense that they described the ongoing writing situation and discourse patterns, and were not isolated instances of social phenomena, and powerful in the sense that they demonstrated the discussed social phenomena clearly, and presented a straightforward example to the reader.

For example, when examining the affective aspects of peer collaboration, I tried to select key episodes in the dialogues of each friendship and acquaintanceship pair which were representative of their discourse - and not a unique and otherwise uncharacteristic

incident - and were the most effective examples to illustrate each pair's collaborative repertoire. In other words, the selected episodes made the most salient features of the pairs' discourse visible, both in general terms ('this is what the pairs did when they worked together'), and in terms of the specific research questions (e.g. 'this is what this particular friendship pair did when they were working together', or 'this is how pairs approached shared content generation'). With regards to the contrast and comparison of the discourse of friends and acquaintances, I carried out an in-depth, thorough analysis of these key episodes, and examined discourse features which i) could be used to differentiate the discourse of friendship and acquaintanceship pairs and ii) could be linked to different degrees of productivity.

For the purposes of the research I defined productivity as the effective use of discourse to get things done collaboratively. The Preliminary observations and the Preliminary Study revealed that, in the paired discourse of the observed children, different levels of productivity were associated with collective or individualistic features in the dialogues. *Collectivity* in each writing-related phase was linked to other-orientation (*readiness to share*), reflected by collaborative and discursive strategies involving mutually accepted roles and democratic decision making. Note that in highly collective discourse reasons behind choices and decisions may often be left implicit. This was explained by the heightened intersubjectivity between partners, rendering explicit argumentation superfluous. Such implicitness poses significant difficulties for researchers oriented towards the analysis of reasoning in talk (Littleton, 1999). In contrast, individualistic styles were characterised by the lack of collectivity and sharedness (for example, parallel work, lack of attention towards the other's ideas, refusal to share).

Validity

In the selection and presentation of key episodes I also attempted to maintain gender balance, and tried to pay an equal amount of attention to all projects, and all the participating pairs. Yet, since the aim was to make the observed social phenomena *visible* to the reader and provide a persuasive and insightful account, this unavoidably led to an overemphasis on particular pairs or projects which enabled me to do so.

A frequently raised criticism with regards to this approach is that the selected episodes present the researcher's perspective, and thus represent bias. However, identifying with the approach of the qualitative tradition, the aim of the current research was to offer a personal interpretation of the observed phenomena. As Stake (1995:42) put it, the goal was "not veridical representation so much as stimulation of further reflection."

Nevertheless, to minimise subjective misunderstandings – such as the over-interpretation or misrepresentation of data – I engaged in a continuous discussion with my supervisors and research colleagues regarding the use of data and the selection and interpretation of episodes. I also built on field notes (as shown in Appendix 3) and informal interviews with participants and teachers during the interpretative process.

In what follows, three empirical chapters will present the findings of the current research. The first empirical chapter (Chapter 3) looks at children's discourse in order to define and examine the task of joint creative writing.

3.1 Introduction and overview

As the first two chapters established, the current research defines creative writing as an open-ended, non-linear process. This perspective is in line with Sharples' formulation (1996, 1999) and builds on existing theories of writing and creativity. Creative writing is seen as a fusion of synthetic (or productive) and analytic processes. It is argued that the interlinking and interdependent processes of planning, content generation and reviewing form iterative cycles. This iteration, in turn, has been linked to the notion of creative design as *problem finding*. In this approach different phases are associated with different levels of emotion-driven and intellect-driven mental functioning. In this sense, the model goes beyond the clear-cut dichotomy of engagement and reflection posited by Sharples, and softens it by plotting the sub-processes along a continuum between purely emotion-driven and intellect-driven functioning, with content-generation being the only characteristically emotion-driven phase. Thus, the centrality of emotions in this formulation is not restricted to the process of content generation, it permeates much of the activity. Emotion-driven thinking is seen as having a more general purpose in the process, fuelling inspiration, association and analogy formation, contemplation and evaluation. This shift in approach was motivated by more general critiques on theorising of human cognition (e.g. Donaldson, 1996).

This chapter looks at the ways in which the collaborating young writers engaged in talk to cope with the demands of the task of creative writing, and used language to jointly compose and reflect upon their shared composition. It aims to identify discourse features indicative of processes associated with writing, thus highlighting ways in which paired talk can support different phases of the process of joint creative text composition. The

typology developed for the analysis of writing discourse allows the study of how children carry out the joint planning of text, how they generate ideas together, and how they engage in the joint reviewing (e.g. evaluation and modification) of their work. The analysis is not restricted to content-related discourse. It also looks at how children talk about the formal characteristics of the developing text by examining discourse about layout, presentation and transcription. Furthermore, it investigates children's use of process-oriented discourse, exploring how children reconstruct the task by talking about the step-by-step procedure. (For further details regarding the analytic design, see Table 2.4).

As was pointed out previously, such functional analysis offers the possibility of linking episodes within the joint writing activities to different phases or processes of creative text composition. The ultimate goal is to explore ways in which the paired dialogue mediates processes of creative text composition and thus inform practice about the possible uses of pairwork to facilitate the development of creative writing skills. Note, however, that collaboration is not seen as invariably positive or productive: the importance of context is seen as crucial in the present research. For instance, one contextual feature explored is the nature of relationship between the partners, as discussed in Chapter 4.

In what follows, different phases of the creative writing process will be discussed, and the use of particular discourse functions and collaborative strategies associated with these phases will be detailed, concentrating on the *collective* end of the spectrum. Note however that clear-cut distinctions between functions proved difficult to make. Thus, the presented data will also show the complexity of the task of creative writing, and further highlight the difficulty of categorical analysis.

When selecting key episodes, the whole set of data was considered, including the Preliminary Study. Thus, some of the central episodes of the Preliminary study will be re-used for the analysis presented here. In Chapter 2 they were used to demonstrate the limitations of existing analytic approaches to paired talk of joint creative text composition. Here they will be used to further elaborate on the special nature of the task, and to support the analysis of *effective discourse strategies* in this particular context.

3.2 Joint content generation

In Chapter 2 creative content generation was defined as a process in which creative ideas are developed through association, followed by the translation of these ideas into text. The centrality of the affective aspects was emphasised in this process, where the emotion serves as the prime generator of thought, bringing up and linking ideas together. It was noted that the generation and articulation of imaginative and original ideas is seen as vital to the process of creative text composition.

Chapter 1 linked the process of creative writing to the notion of *knowledge telling* (Bereiter & Scardamalia, 1987), and introduced the concept of *low focus thinking* (Gelernter, 1994) as the core strategy serving this process. This formulation was also linked to the concept of *value-sensing mode* or emotion-driven mental functioning (Donaldson, 1996). The question addressed in this section is, whether collaborative talk could enable the partners to engage in joint association. The analysis will show how the observed children employed language to achieve such sharedness in content generation episodes. Four key strategies found in the children's discourse will be discussed: i) joint chain of associations, ii) joint pooling of ideas; iii) *growing a story* together and iv) the joint crafting of ideas.

3.2.1 Joint chain of associations

Theories of cognition and creativity see *free association* and *stream of consciousness* thinking as every-day mental activities linked to knowledge-telling, which can also be used to support the process of creative writing (Sharples, 1996). An interesting, although highly infrequent feature of one particular pair's collaborative work was the collective engagement in free association. An example of such collective stream of consciousness was given in Sequence 2.2 in Chapter 2, reproduced here as Sequence 3.1. It is an acrostics-writing episode, where the first letters of each line are spelt out SAILING, the theme of the composition.

Sequence 3.1 – Carina and Jenni, poem-writing, literacy⁵

- 1 C: Right. We do sailing. There. How do you spell S. What can we do for S?
- 2 J: **Sharks, swimming** ((pause)) sssss-
- 3 C&J: ((overlapping, almost together)) **Swish-swash** ((pause))
- 4 J: ((happy, musing tone)) *Swish-swash*.
- 5 C: No, ((playful intonation, following it by shark-like gestures)) *Sharks,*
- 6 *Swimming, Swish-Swash!*
- 7 J: ((happy, musing tone)) *Swish-swash!*
- 8 C: ((overlapping, playful, giggly intonation)) Swashy. ((pause))
- 9 J: ((interrupting)) Right. What shall we, I tell you something. Right. ((playful
- 10 intonation)) *Sharks* ((pause))
- 11 C: ((musing tone)) **eating** ((contemplating silence))
- 12 J: ((with excitement)) Sh- I KNOW! *Sharks*
- 13 J&C: ((together)) *Eating*.
- 14 C: ((with excitement)) **Scales of FISH!** Yeah!
- 15 J: ((overlapping)) Yeah. Shall we put exclamation mark?
- 16 C: Yeah!

⁵ As previously noted, bold marks the introduction of a new idea, italics indicate the repetition of an idea.

It was argued that this episode reflects collective thinking, where ideas are not just shared, but jointly generated. Some of the ideas are articulated together (as in line 3), others are the source of inspiration for both partners, helping to set the scene and create the right atmosphere for the poem. For example, in line 3 the children expand on an idea – "Sharks swimming" – with the same words – "Swish-swash", which they verbalise together. I would argue that the idea Jenni comes up with triggers the same images in the two girls, and leads to a fully shared and sometimes simultaneous associative process. The unique associations in the sequence are derived from a shared imagery. Thus, the children achieve sharedness in the core cognitive process which creative content generation builds on, and form *a chain of associations* together. Therefore, I would argue that this talk is indicative of the highest level of collectivity in content generation phases.

The tone of their exchanges, and the exuberance of emotions highlight the centrality of affective aspects in the process of knowledge telling. The children display excitement (e.g. lines 12 and 14), they act out the images (lines 5-6), and mull over the lines they made up (lines 4 and 7). Their strong emotions with regard to the scene they have created are apparent. These emotions both serve to fuel their imagination, and to link the created images. We can see that the content-generation phase is immediately followed by contemplation (musing and mulling over the words and ideas), which is also strongly emotion-driven. Furthermore, the partners' acceptance of the created line is an emotion-based acceptance: no explicit reasoning is offered, only Carina's excited, immediate *Yeah's* mark the end of the generating process.

The sequence consists of utterances which either build on ideas uncritically – without challenging or evaluating them – or reject them without any reasons offered. The exchanges are short, and there are interruptions and overlaps. I argue that Sequence 3.1 clearly demonstrates the educational advantages of cumulative talk in shared creative

writing. Discourse with such features appears to be useful to share new ideas, to link feelings and images and to start off a collective stream of consciousness. Alternatively, one could argue that it is the shared emotions – inspiring the jointly created images – which provide cohesion, and allow for the implicitness in the dialogue. Thus, in episodes of such lively brainstorming explicit argumentation may become superfluous, hindering the processes of free association.

Note that such use of discourse to build a joint chain of associations is not a prevalent feature in the observed dialogues in general, and is limited to this pair only. (Although *stream of consciousness* episodes occurred in other pairs' dialogues as well, these instances were less shared, as they were more likely to correspond to the externalised associations of one partner only.) The infrequency of this strategy may be due to the difficulties with the joint engagement in such an *intense* mental activity. Yet, because the observed sequence is in accord with current theorising (e.g. the description of knowledge telling processes by Sharples, 1996), the finding has significance for research on collaborative creativity. *Working from within* a shared imagery is the key feature differentiating this discourse strategy from the other strategies discussed later (all of which may involve associative work of a less collective kind). In the other strategies discussed in this section, children generate and articulate their ideas, which through discourse, become shared. Thus discourse typically serves as the means by which to create the shared imagery, whereas in this episode it is promptly available from the start.

3.2.2 Collective pooling

Collective pooling is another discourse strategy found in the joint writing episodes, linked to the function of content generation and indicative of a high degree of collectivity.

Similarly to joint association, collective pooling is characterised by overlaps,

interruptions and speedy exchanges. However, pooling sequences typically present a seemingly random (unrelated) set of ideas which, probably due to their random nature, are often in competition with each other. Most of the ideas are then abandoned through the process – with one becoming dominant – or are merged into one new idea through the process of *fusion* (see later in the discussion of Sequence 3.3).

In the extract below, the children engage in overlapping talk, constantly cutting in, never waiting for the other one to finish. Their exchanges seem almost parallel, as if they weren't listening to each other at all. In order to show how each child invades the other's *talking space* I used Coates' (1996) transcription conventions for this particular episode, which she developed especially for the study of interruptions and overlaps. (Note that the reason why this transcription method was not generally used is that the analysis largely concerned the *content* of the paired dialogues, and not the temporal or sequential relationships between subsequent turns.) The broken lines structure the text, presenting the dialogue as a *musical score*. The dialogue between the broken lines was spoken simultaneously. Slashes indicate the end of a tone group or chunk of talk. Square brackets indicate the start of overlap between utterances. An equals sign at the end of one speaker's utterance and at the start of the next utterance indicates the absence of a discernible gap.

The episode is characterised by quick exchanges, interruptions and overlaps. For example, in lines 5-6, both girls share two images each, which however are articulated almost simultaneously. Similarly, in lines 9-10 the exchanges are either simultaneous, or follow each other without a pause.

Sequence 3.2 – Carina and Jenni, poem-writing, literacy

- 1 J: What shall we do? Sharks swimming-
2 C: Done it.
3 J: No. No, no, done that.
4 C: Yeah.
-
- 5 C: Darks, hmm/ [Darks, oh, no. Sharks plaits / [cows poop/
6 J: Sh[arks swimming / No, sh[arks wailing, wail, wail /
-
- 7 C: ((giggles)) Whales/ Whales/ =No, I've got one/
8 J: ((giggles)) Whales wail/ wail/ Dolph=
-
- 9 C: [OK, sharks/] Sharks die, dolphins/ =No. Darks fly, da/ [Da/ ((giggles))
10 J: [Dolphins/] ((giggles)) survive= ((grins)) ((frowns)) [What? ((grins))
-
- 11 C: Sharks/ No, sharks/ Sharks die/ Birdies fly/ ((giggles))
12 J: Darks! ((teasing tone)) ((giggles))
-
- 13 C: ((giggly voice)) We do that one! Cool! ((starts writing))
14 J: ((happy)) Alright then! ((starts writing))
-

However, when we look at the content of the exchanges, we find that the seemingly individualistic and unrelated utterances lead to the joint composition of a line, and that the children – without acknowledgement or possibly without much awareness – are influenced by each other's ideas. The partners bring up all kinds of animals as *themes* for the line – *sharks, dolphins, whales, cows, ducks* and *birdies*. The theme of *sharks* is suggested by Jenni and then taken up by Carina. This is the most enduring idea, which will be chosen for the first part of the line. However, Carina picks up other ideas from Jenni. For example, the images of *whales* and *dolphins* are first introduced by Jenni, and subsequently appear in Carina's suggestions. (These are later abandoned.) Similarly, Jenni extends one of Carina's themes (lines 9-10: "C: Sharks die, dolphins J: Survive"), and she is also quick to pick up a mispronounced word (line 12: "Darks"). Thus, in addition to searching for ideas themselves, both children monitor the other's input very closely. Their ideas form a competitive pool, and the line they finally accept – *Sharks die, birdies fly* – is the product of shared selective work and extension.

The dialogue does not adhere to the rules of linear turn-taking: there are no clear-cut turns, and the exchanges do not necessarily relate to the one preceding them directly. The discourse style is *fuzzy* as opposed to being structured and ordered. Also, the sequence shows disputational and cumulative features: rejections and repetitions without any explicit reasoning. Coates (1996) defines such discourse (cumulative and disputational features, overlaps and interruptions) as building on the use of *collaborative floor*, and not on linear turn-taking. She associates collaborative floor with personal discourses (for example the discourse of female friends). These links will be elaborated on in Chapter 4. The important point here is that this discourse style has been defined in Chapter 2 as highly characteristic of, and effective in shared creative writing, especially in content generation phases. The analysis of the larger body of data confirms this argument, pointing at the potential value of such discourse styles to support joint knowledge telling.

Again, the central role of emotions is demonstrated by the sequence: the shared giggles do not only mark the pleasure the children gain from the activity, but also show the driving force of emotions in stimulating and maintaining the process of content generation. Lines 13 and 14 round up the episode with the emotion-driven acceptance of the created line by both partners.

On the other hand, when coming up with two equally strong, competing ideas, children also employed the strategy of *fusion*: merging the two ideas into one. For instance, in the sequence below two boys are planning their story, and choosing the characters. While one of them wants an animal story, the other wants one with human characters from *Jo-Jo the Melon donkey* – a book by Michael Morpurgo whom they chose as their model author. In the sequence below we can see collective pooling, which ends with the fusion of these two, seemingly unrelated and competing ideas in a democratic manner.

Sequence 3.3 – Zak and Robbie, story-writing, literacy

- 1 Z: **Monkey. Jo-jo, a pig and a duck.** That's it.
- 2 R: **A dough.** Or whatever you call him.
- 3 Z: No, *a duck*.
- 4 R: No, the *dough thing*. What's its called? **The master, the master-**
- 5 Z: *A monkey, a monkey.* (As the person who bought the melon?) ((Robbie giggles))
- 6 Yeah! come on, let's have **an animal story!**
- 7 R: ((overlapping)) *The dough. The master!*
- 8 Z: **The doge's daughter?**
- 9 R: Yeah.
- 10 Z: *The doge's daughter.* ((overlapping)) **Which is the pig.**
- 11 R: And *the doge*.
- 12 Z: *The pig!* ((they both giggle)) You know, you know, pigs are pigs, she buys lots of
- 13 melons, so she is a pig.
- 14 R: ((mocking-singing voice)) We are doing a pi-ig, we are w-w-w-w-w.

Zak wants animals in the story: *monkeys, ducks* and *pigs* (lines 1, 3, 5-6), whereas Robbie would like to have a story about the doge of Venice (lines 2, 4, 7). The solution comes in lines 9-10, where Zak comes up with the idea that the human characters should be personified by animals ("The doge's daughter. Which is the pig").

Thus, although there is a competition of individual ideas, this pooling is still collective in nature: the boys listen to each other and respect the other's ideas, and are trying to come up with a solution which can be wholly shared. The boys hold on to the idea of animals playing roles of humans for the rest of the planning activity, which will therefore have a major impact on how their story plan unfolds. (For example, besides the doge's daughter being played by a pig, the doge will be personified as a monkey, as is shown in sequence 3.4 below.)

Sequence 3.4 – Robbie and Zak, story-writing, literacy

- 1 R: (Duck pig) It's a **Duck pig!** ((writing)) It's a **Jo-jo Duck pig!** ((giggles))
2 Z: *Ani- Animals*. The **monkey is the master**, Jo-jo he does, no sorry, the **duck is**
3 **the master**, because you know, ducks are pretty bossy, aren't they? ((Robbie
4 gives him a puzzled look)) Like quack-quack-quack ((moving his hands and
5 using a playful tone, Robbie giggles)) They are! And the ((pause, Robbie
6 bursts out laughing)) They are, and the ((pause))
7 R: ((excited)) **Duck Supreme!** ((playful intonation)) Quack quack, quack.
8 Z: Quack quack ((playful intonation and gestures)) And erm ((pause))
9 R: Remember when ((pause))
10 Z: Ermmm ((pause)) Jo-Jo as the melon donkey, the monkey as the Doge's
11 daughter and the pig as the nurse.
12 R: *The pig is the daughter!* ((giggles))

In this sequence Robbie and Zak continue playing with the idea of personification, coming up with variations to the theme. This shows that the fusion is fully shared and accepted by both partners (Robbie actually corrects Zak in line 12, reminding him that the pig is supposed to personify the doge's daughter). Note again the reliance on cumulative and disputational features. There is no explicit argumentation, the acceptance or rejection of ideas is not supported by explicit reasoning.

3.2.3 *Growing a story together*

This joint knowledge telling strategy was often observed in content generation episodes in the story-writing projects. The term comes from Anderson (2003) who uses the term *growing a novel* to describe the emergent, intuitive, free-flowing activity of novel-writing. Once again this strategy shows a high degree of collectivity. The dialogue is characterised by cumulative talk, whereby each of the partners adds to the previous turn, elaborating on and extending the idea previously introduced. Thus, the story-line is

developed step-by-step, each input feeding into the previous one and going beyond it at the same time.

The sequence below was taken from a story planning activity. The partners are generating ideas regarding the ending of their story, and putting them down on the story plan.

Sequence 3.5 – Robbie and Zak, story-writing, literacy

- 1 Z: The doge is in it. And ((pause)) **he gets** ((pause)) **Jo-Jo-** ((starts writing without consulting Robbie, who is still talking to the boys opposite))
- 2
- 3 R: ((to the boys opposite)) And they are so real!
- 4 Z: *Gets* ((starts writing))
- 5 R: ((to the boys opposite)) Stop showing off! ((to Zak)) Matthew shows off!
- 6 Z: ((reads)) **Gets the statue back.** ((continues writing))
- 7 R: **And the police, the police arrest him!** ((Zak looks up))
- 8 Z: **They lock up the doge!** ((continues writing "Jo-Jo gets the statue back"))
- 9 R: Yeah. And **the girl-**
- 10 Z: ((writing, overlapping)) Jo-jo.
- 11 R: **gets to live with Jo-Jo.**
- 12 Z: Yeah. ((writing))

The story is about a lost statue, thus the inevitable conclusion is that it is found – "Jo-jo gets the statue back" (lines 1-6). This triggers the generation of the next event, the culprit goes to jail (line 7: "And the police, the police arrest him" and line 8: "They lock up the doge"). The boys then plan the happy ending, in which two characters end up living together (lines 9-12). They use cumulative talk to plan the storyline, building on each other's ideas uncritically. There is a linear progression, they take turns in their contributions to the story plan, each describing *what comes next*, building on the previous event. The ease with which the boys can jointly form a chain of events that are neatly linked is indicative of a high degree of collectivity, they openly use each other's ideas to generate the next step.

Note that, although in the example above the children adhere to conventions of linear turn-taking, this has not always been the case. Highly charged episodes, such as the next one below, may have contained frequent overlaps and interruptions. Also, there have been variations regarding to the extent to which each of the partners contributed to the process. In the next sequence the partners are planning the main events of their story.

Sequence 3.6 – Carina and Jenni, story-writing, literacy

- 1 J: And Phoebe was going, going to the toilet, or get, no, Phoebe was gonna get a
2 drink, and the two naughty boys-
- 3 C: ((cuts in)) Robbed a bank.
- 4 J: No, they crawled on their hands and knees, behind the till, they got as much
5 money as they can, then they come out, they go, they stand up, and then they
6 go-
- 7 C: ((interrupting, acting out)) I think I'll have this and this.
- 8 J: ((acting out)) Excuse me, can I be served? and he goes, and Phoebe goes, What
9 do you want, and the they go, Hummm, I think I will have that rocket, and that
10 bike-
- 11 C: ((interrupting)) And that CD player.
- 12 J: What about that toy, I need one as well ((smiling))
- 13 C: Ermmm ((pause)) what about that Ferrari and that Ferrari, and that will be all
14 then.
- 15 J: And the little- And Phoebe goes, where is your money, and they go, here we
16 are. Arggggh, that's MY money, I am not gonna give you all that ((playful,
17 mocking intonation)). We don't want to give you that!!!

In this sequence too, the girls are using cumulative talk, building on each other's ideas uncritically, expanding and adding to them, and thus jointly constructing the storyline step by step. Note, however, the frequency of interruptions (lines 3, 7 and 11). Jenni is leading the activity, improvising and acting out most of the storyline. But Carina has the important role of a *moderator*, her shorter exchanges signal the turns in the storyline: *robbing the bank* (line 3) will be taken up on by Jenni and paraphrased as *stealing money*

from the toyshop till, Carina's expression "I think I'll have this and this" (line 7) will prompt Jenni to act out the conversation with the fictional shop manager, and "That will be all then" (lines 13-14) will lead Jenni to introduce the conflict: the shop manager finds out that the boys have taken the money from the till. Carina is offering the frame, Jenni is filling it up with content. Again, such high level of collectivity in the *knowledge telling* process may be the result of a large amount of shared experiences, the existence of a shared *repertoire*, or an established *vernacular* in which two people talk to one another: a common frame of reference. Also, it is indicative of mutual trust, the "willingness to go on an adventure with someone else, to influence and to accept influence" (Gottman, 1986, p.156). This will be elaborated on in Chapter 4.

An interesting feature of this dialogue is the use of *no*. When Carina suggests that the two naughty boys "robbed a bank", Jenni replies with a *no*. However, this does not imply rejection. On the contrary, it actually signals the consideration but significant modification of the idea, in order to suit the context. Instead of robbing a bank, the boys *got as much money as they can* from the till in the toyshop.

3.2.4 Joint crafting

This observed strategy is very similar to the previous one, but the emphasis here is on the articulation of the emerging ideas: shaping and fine-tuning. Chapter 1 detailed how the metaphor of writing as creative design allows us to think of *intermediate products* as *generators of new ideas* (Sharples, 1996). This can be shown at a macro-level, via the study of how whole drafts serve as generators for something completely new, and at a micro-level, as below, through the analysis of how particular ideas are used as intermediate products leading to the final one.

Joint crafting is a discourse strategy with high collectivity, and involves the extension and refinement of the other's ideas or its incorporation in one's own version. The ideas are used as shared property, open to modifications by both partners. Again, the discourse is characterised by cumulative and disputational features, and frequent repetitions. The collaborating writers repeat each other's ideas for expansion, offer slight modifications, and reject the presented alternatives without explicit argumentation.

In the next sequence, two friends are writing a poem about hobbies, their theme is football. Through the slight modifications of an image (*running into post*), they come up with a new image (*sliding in mud*), linked to the original one through an intermediate product (*running in mud*).

Sequence 3.7 – Mike and James, poem-writing, literacy

- 1 M: Hobbies. **Football, football, running into post.**
- 2 J: *Running into mud.*
- 3 M: Yeah.
- 4 J: *Football, football, running*
- 5 M: ((interrupting)) NO, **sliding in mud.** *Football, football sliding in mud.*
- 6 J: ((repeating)) *Football, football, sliding in mud.*

It is clear from the episode above that both of the children are attentive to each other's ideas, and treat them as shared. It is Mike who starts the process, offering his suggestion for the first line of their poem. James modifies this idea (line 3), which is further refined by Mike (line 5). Once again, the collaborative discourse has cumulative and disputational features, and is void of explicit argumentation about the modifications, or about the acceptance and rejection of those. Similarly, the next episode involves the modification of an idea – in this case the partners are thinking about the next turn of their story.

Sequence 3.8 – Mark and Simon, story-writing, ICT

- 1 M: It'll be (easy).
- 2 S: **What's the matter? He said.** ((Mark is typing))
- 3 M: *He said.* ((typing)) *He said* ((typing))
- 4 S: *He said-*.
- 5 M: **He wanted a job in the family business.**
- 6 S: *He said he wanted a job in the, in the garage.*
- 7 M: Yeah. ((typing))

In this episode we see Mark typing up the first part of a sentence, which starts the next event in their story. Then in line 5 he describes the next event, which is paraphrased by Simon in line 6. The two formulations refer to the same act – the husband of the main character getting magic in his finger and joining his magic wife in the magic workshop – but Simon's version is the one they finally accept.

The final example is another sequence from a poem-writing episode, and shows the discussion of the two boys about the title of their poem.

Sequence 3.9 – Robbie and Zak, poem-writing, literacy

- 1 Z: **Racing the wind.**
- 2 R: Yeah ((little giggle))
- 3 Z: *Racing the dogs.*
- 4 R: **A dog race.**
- 5 Z: *Dog race.*
- 6 R: Yeah!

It entails modification at the level of translation of ideas into words. Although I discuss it among the content-generation episodes, it could be easily regarded as a *modification* sequence. The fine-tuning of the title mostly centres around form. It is ambiguous as to

whether it involves constant re-engagement on both sides (thus referred to as content generation) or detached manipulation of the words (modification). Again, this shows the layeredness and complexity of language, and the difficulties of categorical analysis.

First Zak introduces the title of the poem the class used as a model, *Racing the wind*. The next move is to modify this title to suit their particular theme, *Racing the dogs*. Then comes the delicate shaping of the new title into a neat phrase: *Dog race*. Just as before, this sequence builds on cumulative exchanges, and the construction of what *feels good* is indicative of emotional engagement. Again, their acceptance has emotional content, but this is hard to show textually, as it is mostly indicated by the prompt, excited responses, intonation and speed.

The episodes so far have described observed discourse strategies which can be linked to knowledge telling, and were regarded as representing productive uses of paired talk to support the process of creative content generation. The episodes reflected a high level of sharing: openness towards the other's creative input, mutual contribution to the generation, expression and refinement of creative ideas. Note that, although presented separately, these strategies typically merged in the discourse, interlinking with and supporting each other.

3.2.5 The role of emotions in content generation

As was mentioned in the literature review, the role of emotions is very often underestimated by research studying the processes and outcomes of children's collaborative work. For example, neither of the two designs evaluated in Chapter 2 accommodate emotion-driven cognitive functioning. However, intuitively one would predict that successful co-operation with others depends on positive attitudes towards the

task and towards working together. Socio-cultural theorising emphasises the central role of *common ground* in the productivity of group work, reflected in joint engagement, shared understanding and mutual commitment. However, these are not purely intellectual factors. They are coloured by emotions, and so is the satisfaction participants gain from their partnership with each other and from the accomplishment of the task. The realisation that the participants need to establish intersubjectivity both at an intellectual and at an emotional level brings with it the understanding that the expression of one's own feelings and the sensitivity towards those of the other are essential in successful collaboration.

In the context of shared creativity, it was also argued that emotion-driven thinking is fundamental in the generation of creative ideas. Indeed, the observed dialogues offer plenty of evidence of emotion-driven thinking which inspired and channelled the creative flow of ideas. The study identified *humour*, *acting out*, *musings* and *singing* as the crucial facets of discourse carrying emotive content and linked to content generation. Apart from task-related functions, emotive language also appeared to have social functions.

Humour

First it will be shown that humour and playful language are a central ingredient (and thus indicator) of playful, imaginative thinking. Keeping within the norms may lead to conventional, predictable ideas, whereas breaking them may result in novel but nonsensical ones (Sharples, 1996). Creativity lies between the conventional and the nonsensical and requires a careful balance between exploration and safety. Going to extremes and then *softening the edges* to suit the purpose of writing is an essential skill in imaginative writing. Verbal humour and playful language is one way of testing the boundaries.

McGhee (1980) views humour – such as jokes – as the intermediary between the metaphor and storytelling, drawing attention to its relevance to the development of skills related to the creative uses of language. In the following example two boys are writing a poem with the theme: *Haunted house*. During the generation of the next two lines they show careful consideration of the boundaries, working within the limits of originality and avoiding being nonsensical.

Sequence 3.10 – Martin and Alan, poem-writing, literacy

- 1 M: I see, I want to write, **so scary you see Mary**.
- 2 A: Yeah, but then we need to think of another one to rhyme with Mary.
- 3 M: Yeah. *It's so scary*.
- 4 A: **And Mary is so hairy**.
- 5 M: Yeah. ((A giggles)) *It's so scary and Mary is so hairy*. Yeah!
- 6 A: No, let's put *You'll see Mary, and all so hairy*.
- 7 M: And **you'll be so hairy**.
- 8 A: OK. ((very quick, happy-with-it gesture))
- 9 M: *You'll see Mary and you'll be so hairy*.

The line *And Mary is so hairy* reflects playful thinking that goes beyond conventions. The oddness of the created image makes the boys giggle, but the image is then quickly modified and softened. Although not stated explicitly, this is most probably done to satisfy the constraints of classroom-based writing (sensible and not silly). The issue of acceptability versus originality has especial importance in the context of classroom-based writing, where the inherent constraints (such as genre, audience or style) are further complicated by the constraints imposed by the educational framework (the expectations of the teacher or assessment criteria). Chapter 5 will discuss in detail the constraints the classroom context imposes on the activity of creative writing, in addition to the ones already inherent in the task.

On the other hand, as the next example reveals, highly imaginative thinking reflected in humorous, playful ideas can go beyond the purposes of the task, and can result in aimless silliness. The two boys here are editing their poem entitled *Hands* – the theme and title set by their teacher. They are working on the line *At nights hands are as stiff as concrete*, a line reflecting the hands' idleness at night.

Sequence 3.11 – David and Chris, poem-writing, literacy

- 1 C: **As hard as rock, as stiff as rock**, because rock isn't very (hard) is it?
- 2 Well, it's not exactly (spodgy), is it?
- 3 D: **Wibbly-wobbly as a worm**. ((following with wavy gestures))
- 4 C: ((waves with hands too)) **Squidgy. Jelly beans. Yes, jelly babies.**
- 5 D: Blo-bl-blo-blo-blo blo-blo-blo-blo-blo ((this is followed with gestures of waves, using his pencil, bouncing it up and down as if on waves)).
- 6 waves, using his pencil, bouncing it up and down as if on waves)).
- 7 C: No. Instead of Jelly baby. DAVID!!!!

In the first line, Chris offers an alternative for *As stiff as concrete*, and provides some justification as well. The boys show other-orientation and creative engagement with each other's ideas, influencing the other and allowing themselves to be influenced. There is acting out and musing: in lines 3 and 5 Dave uses gestures to show the wobbliness of worms, and accompanies this with playful noises as well. However, they seem to get *off track* and start to generate similes and metaphors that do not serve the purposes of the developing text ("wibbly-wobbly as a worm" in line 3 and "squidgy (as) jelly beans" in line 4).

The boys come up with highly imaginative metaphors, but do not make use of them in their work. Subsequent (and previous) attempts to rephrase this line show that their imagination and humour does not resource the composition they are working on, their playfulness is not deployed constructively. Thus, the sequence does not serve the intellectual goals of the task. However, as I will return to this in Chapter 4, such episodes

may have social functions, contributing to the bonding between these particular children and the maintenance of their relationship.

There appears to be a very fine line between such off-task playfulness and task-oriented uses of verbal humour, making the distinction between the two especially problematic. The implications of this will be detailed in Chapter 5, which will discuss potential problems with evaluating collaborative behaviour in school context. In the final example on humour, this fine line is further exemplified. In this episode a boy-pair are choosing the characters for their story.

Sequence 3.12 – Robbie and Zak, story planning, literacy

- 1 Z: Choose the characters.
- 2 R: **Robbie Williams** ((giggle))
- 3 Z: No, come on!
- 4 R: **Billie Piper**. ((giggle))
- 5 Z: Nooooo! Choose different characters, dude. Any characters. **Animals**.
- 6 R: Yeah. ((Zak starts to write)) **Monkeys. Hyenas. David Beckham**.
- 7 Z: Well, David Beckham is a bit of an animal, ain't he?

The giggles and the joking, playful manner can easily deceive the outsider, who could mistake the above sequence as off-task *mucking about* – quite similar to Sequence 3.11. However, the boys simply combine working on the task with playful banter and actually use verbal humour to make sense of the task together (for example, what it means to chose characters or what should the central criterion be). Zak channels Robbie in the right direction. Also, they make creative use of the ideas that were originally presented as a joke, as Sequences 3.3 and 3.4 show. Thus, such humour can actually boost the activity, the seemingly off-task jokes feeding into on-task content generation, creating a playful atmosphere.

So far I have discussed the use of humour to serve imaginative thinking, and the development of creative ideas. The next section will detail the use of another strategy building on affect-linked thinking, *acting out*.

Acting out

Children frequently repeated lines with playful intonation and gestures. As has been already highlighted in the discussion of Sequences 3.1 and 3.6, such *acting out* appears to be a vital part of children's joint content generation. The following examples further emphasise the importance of this strategy in the development of creative material.

The next sequence is from a story planning session. During this session the teacher first asked the pupils to come up with a list of adjectives that could be used to describe the emotions of the main character of their story (as defined in the story-plan developed in the previous session). Then she asked them to think about how the character would be behaving, and put their ideas in sentences that could be a paragraph in their story, to be written in the subsequent session.

In the following sequence the observed children are generating ideas regarding the behaviour of their main character, a boy whose dog has just died. At one point, Simon starts acting as if he was the boy and Mark joins in. They jointly recreate the emotional state of loss, drawing on and sharing their personal experiences.

Sequence 3.13 – Mark and Simon, story planning, literacy

- 1 M: Come on, then! Shall we just write (She is just pushing herself about) **and**
- 2 **throws the pillows down.**
- 3 S: No, it's a boy, Mark. It's not a girl.
- 4 M: ()
- 5 S: No, **he is smashing the pillow against the metal bars-**

- 6 M: ((interruption and slight overlap)) Do you know, when you-
- 7 S: ((interruption and slight overlap)) Feeling really miserable, and sad-
- 8 M: ((interruption and slight overlap)) You know, when you are really upset, you
- 9 go up to your bedroom, right, and you-
- 10 S: ((interruption and slight overlap)) Punch something.
- 11 M: No,
- 12 S: ((acting out, theatrical gestures and tone)) It's not fair!
- 13 M: Yeah.
- 14 S: ((fist hitting table)) I am feeling really miserable! I hate my life, I wish I
- 15 never- ((Mark is giggling)) And you get really horrible and upset, and then
- 16 you go down and say, 'Sorry, it's too late-'
- 17 M: And then you go, It's unfair, I hate life-
- 18 S: ((interrupting)) And it just slips out and you don't actually mean it.

The sequence starts with Simon describing the boy's initial reaction to the loss of his pet dog, both at a physical (line 5) and a mental (line 7) level. Interlinking with his ideas, and almost simultaneously developed, are Mark's thoughts. He starts his turns with "Do you know, when you are really upset" (lines 6 and 8), inviting his partner to identify with the boy-character. Simon joins in and they start to act the boy's feelings out (lines 12, 14-16 and 17). They both use emphatic intonation and body language to highlight the emotional state (e.g. in lines 12 and 14).⁶

Acting out makes the feelings of the character accessible for the boys and facilitates the development of a shared understanding. In this particular instance they explore together what it feels to lose something, and what emotional displays it may involve. (In the story plan they have written *He goes up to his bedroom and throws his pillow around* and *He goes up to his bedroom and gets in a strop and says It's not fair, I hate my life.*)

⁶ Note that the acting up sequence was not performed for the camera: there was no indication of this in the dialogue or in the non-verbal interaction (e.g. addressing, looking or pointing at the camera). This is not to say though that the children were not aware of the equipment.

The sharing of such intimate experiences bonds them as partners, but it also indicates a well-developed relationship which allows the disclosure of feelings. This episode is an excellent example of how the shared re-creation of emotional experiences enhances creativity, supporting my previous argument about creativity emerging from re-living earlier experiences. We can see clearly in this episode how emotions serve both as the generator and moderator of creative thought. As with the use of humour, acting-out sequences can be ambiguous. For a casual observer, who cannot follow the interaction as it develops, such sequences may reflect off-task talk. This posits a serious problem for educators, who may assume that the children who engage in task-related acting out are actually not doing their work.

As was noted in the sections on other knowledge-telling strategies, there is a heavy reliance on cumulative and disputational features in the sequence (interruptions and overlaps in lines 6, 7, 8, 10, 18; accumulation or rejection of ideas without explicit argumentation).

Musing

Musing and singing were also observable ways in which children expressed or explored emotions during the writing process. Musing was seen as a conscious strategy to recreate the emotional experience linked to the developed image, typically involving the repetition of the material with playful intonation. Sequence 3.1 has already provided a good example for children musing or mulling over the lines they have created. In what follows another sequence is presented including acting out and musing (This episode was used in Chapter 2 to describe the special nature of creative writing.) In this session the partners were writing an acrostic poem in which the first letters vertically read OCEAN. The partners started the first line with the word *octopus*.

Sequence 3.14 – Carina and Jenni, poem-writing, ICT

- 1 J: ((reading)) *Ocean octopus*.
- 2 C: ((giggling, playful intonation)) *Octopus*.
- 3 J: **Crunching-**
- 4 C: *Octopus* ((now facing the other, heads close, almost touching, playful intonation)) *Octopus () eyes looking everywhere*.
- 6 J: ((still facing the other)) No, **beady eyes**.
- 7 C: OK.

In this sequence lines 2, 4 and 5 are associated with musing. First Carina repeats the word *octopus* followed by playful intonation and giggles. Then Carina turns towards Jenni, looking closely in her eyes, and says the word with musing intonation. The musing sequence starts content generation (lines 3 and 4-5), Carina is narrating and displaying the image of the octopus looking around with its many eyes at the same time. Finally, Jenni modifies this image ("No, beady eyes", in line 6). Their final version is going to be *Octopus is looking with its beady eyes*, incorporating this modification. I argue that the generation and sharing of creative thought in this sequence has clearly benefited from the emotional recreation of a scene through musing and acting out.

Singing

Singing can also enhance emotional involvement. Indeed, some peers engaged in lots of singing and humming. For instance, in the example below two boys are designing the setting of their story. They have decided that the setting will be *Venice, four golden horses and next to the statue of Jo-Jo*. While transcribing the line they agreed upon, one of them starts to hum the tune of an ABBA song – *Money, money, money* – cleverly modified to include their own ideas (lines 2-3 and 5-6). The other immediately joins in, singing the next line of the song (line 4).

Sequence 3.15 – Steve and Paul, story planning, literacy

- 1 Z: ((writing)) Horses ((pause))
2 R: ((reading)) Four golden horses ((starting to sing the ABBA-tune)) Money,
3 money money, four golden horses,
4 Z: ((joining in, singing)) In the rich men's world.
5 R: ((overlapping, singing) Men's world. ((giggling, then singing again)) Four
6 golden horses, four golden horses, in the rich man's world. ((he continues to hum
7 the rest of the tune))
8 Z: Now, that's alright now. ((reading the instructions)) Choose the characters.

The boys' singing shows their emotional engagement with what they are doing, and reveals that they are working in a playful, experimental atmosphere. The fact that Zak joins in indicates sharedness of playful thinking. Note, however, that this singing episode is ambiguous as to which phase it serves. I would argue that it can be regarded as a type of musing, which facilitates the development of new ideas through emotional thinking. However, it may also be taken as an example of contemplation by which the evaluative phase is supported. In this sense, the episode may serve to aid the evaluation of the idea, which is concluded by Zak's remark "Now, that's alright now" (line 8), starting a new cycle of content generation.

The main point of this section is that strategies supporting emotional involvement play an important role in creative content generation. Later it will be shown that emotion-based thinking is equally essential in reflective phases, thus strengthening the argument about the centrality of emotions in social interaction and shared work on the one hand, and with specific regard to the development of creative skills on the other hand. The findings have implications for classroom management and discipline, highlighting the ambiguous nature of these emotionally charged discourse features. Content generation is characterised by cumulative and disputational features, and lacks explicit argumentation and reasoning. Although acting out, humour, musing or singing seem to enhance emotional involvement,

they do not conform to the behavioural norms typically expected from children doing groupwork at school. The implication of this argument is that playfulness needs to be recognised as necessary for creative purposes, despite of the reluctance to do so in educational settings. This argument is in accord with Crook's (1999) argument regarding the need to bridge the gap between playful and schooled discourses.

After the review of collaborative content generation strategies, the discussion will continue with shared reflective processes. Before going on to the next section, a crucial point needs to be raised. So far content generation and reflection have been dealt with as distinct phases. However, these processes are very difficult to separate, due to the *iterative* nature of writing.

3.3 Iteration

Chapter 1 discussed major theories on creative writing. It was shown that writing is mostly seen as an iterative sequence of synthetic and analytic phases (e.g. Hayes and Flower, 1980), whereby the generation and translation of ideas is segmented by evaluation, which in turn could either lead to modification, or a new cycle of content generation or alternatively, planning. The constant movement between content generation and deliberate reflection – thinking *with* and thinking *about* writing (Sharples, 1996) – was linked to the description of creative writing as *problem finding*. This was especially obvious in more *complex* genres, such as the limerick writing detailed in Chapter 2. It was argued that reflection serves to evaluate the emerging material, and to identify the problems with it, which may lead to modification or rejection. Reflection may also serve to highlight problems with the generating process itself. For example, the writer may recognise constraints which she has not considered so far, and draw up new strategies.

In the observed activities ideas were often immediately reflected upon, triggering the emergence of new thoughts and resulting in very short iterative cycles. For example, in Sequence 3.10 lines 1-2 showed a short content generation-evaluation-planning cycle, and in Sequence 3.9 the crafting of an idea seamlessly turned into the fine editing of the line. To further emphasise the interlinking nature of these processes, a story-writing episode is presented below.

For this story, the teacher asked children to think about themes involving sadness and loss, the two options being *death* and *bullying*. For the story-planning session the children were asked to make up a bullet-point list, describing the theme of the story, the characters, the beginning, the middle and the end. The five main questions were listed as bulletpoints on the classroom whiteboard.

In this episode two girls are formulating ideas about the theme of their story, working on the first question: *What's the story about?* They choose to write about the death of a pet hamster, Fluffy, drawing on personal experiences. The analysis of the extended sequence regarding the theme offers a very good opportunity to highlight the complexity of the work the children are undertaking, and the intertwined nature of the processes involved. In order to make it explicit, I indicated below the specific function or functions I attributed to each turn (CG = content generation, CE = content evaluation, CE-mod = content evaluation and modification, CP = content planning, P = process-oriented talk).

Sequence 3.16 – Lisa and Julie, story-writing, literacy

1	J:	((reading the whiteboard)) "What's the story about?" Fluffy the dead	CG
2		hamster.	
3	L:	No, no.	CE
4	J:	Yeah, you have to do it when he is dead. So you go like, say Fluffy was	CE, CG
5		very ill-	
6	L:	((is trying to interrupt Julie)) No, no, you have to start it when Fluffy is	CE
7		(still) alive.	
8	J:	Yeah, So one day fluffy was very ill, when he, and he suddenly died early	CG
9		on.	
10	L:	It's a girl.	CE
11	J:	I know. And she only died in the story. Then we do number 2. So Fluffy	CE, CP
12		the dead hamster.	
13	L:	No, don't say-, put Fluffy the dead hamster. That's not nice, isn't it?	CE
14	J:	Yeah, but it's got to have something about death. Not unless he gets	CE
15		bullied by another hamster.	
16	L:	()	?
17	J:	Then we've got to do about death, don't we.	CE+P
18	L:	()	?
19	J:	Ok, the story is-	?
20	L:	((interrupting)) Fluffy, the wonderful hamster.	CE-mod
21	J:	It's not the title, it's what the story is about. What it is about. A hamster.	CE + P
22		So it's about a ((pause))	
23	L:	We are doing a story plan!!!	P
24	J:	Yeah, I know, but it has, it says, "What is your story about?" ((points at	P
25		the whiteboard)) The story is about your ham-, ermm, Fluffy the hamster.	CE-mod
26	L:	Fluffy the wonderful hamster. ((Pause. Julie is writing))	CE-mod
27	J:	Who dies. There you go! Yeah? Who dies. In the end.	CG-ext

The episode is a good example for short, iterative content generation-evaluation cycles, the combination of productive and analytic processes. For example, in lines 1-2 Julie formulates her ideas about the theme ("Fluffy the dead hamster"). This is immediately challenged by Lisa in line 3 (evaluating function), which leads to contemplation on Julie's side ("Yeah, you have to do it when he is dead"), which is followed by an extension of her own proposition ("So you go like, say Fluffy was very ill"). Thus, processes of content generation, evaluation and contemplation are swiftly followed by a new

productive phase. Then once again, this productive input prompts a challenge from Lisa (line 6), initiating the reflective processes of evaluation, contemplation and modification. This pattern is characteristic of this episode (see for example lines 8-10 or 20-21), with each proposition for the story plan immediately reflected upon, evaluated and challenged. Lisa is acting as the *agent provocateur*, Julie as the creative initiator and moderator. The girls in the episode are able to jointly halt and restart the process of creative composition and reflect on the emerging ideas.

The issues raised in the episode are central to the girls' understanding of the planning process and are a key to the success of their efforts. Take for example the issue of how one defines the theme. Lisa concentrates on the outcome of the story when formulating ideas for the theme (focusing on the death of the main character) whereas Lisa sees the formulation of the theme in terms of a more general aspect of the story, seeing the description of the main character – *Fluffy the wonderful hamster* – as an integral part of it. Then a very important process-related discussion ensues regarding the theme, the title, and what needs to be done when thinking about and defining either. Thus, process-oriented thinking plays a central part in the activity, as seen in lines 21-24. In line 21 Julie offers a critique of Lisa's formulation of the theme, arguing that they are not doing the title but they are working on the general theme. Although the comment is aimed to evaluate Lisa's idea, the argument reflects process-related thinking, highlighting the shortcomings of Lisa's suggestions from the point of view of the procedure.

The episode clearly indicates that the writing process cannot be segmented into clear-cut phases, posing significant difficulties for the analysis. Although Julie and Lisa's central aim is to develop ideas for and formulate a mutually accepted description of the story-theme, the exchanges indicate that in order to do so, they need to shift constantly between content generation, reflection and process-oriented thinking. For the purposes of the

study, I tried to identify sequences in which most of the utterances centred around one or the other function. This strategy worked for some parts of the dialogues, as previous extracts in this chapter show. However, as the sequence above reveals, such selection was not always straightforward. Sequence 3.16 could be regarded as an extended planning episode. Equally – as I defined it – it can be seen as an extended content-generation episode, for the purposes of story planning. Such definition implies that the process of content generation can be carried out at the level of planning (generating creative ideas for the *frame*) and can serve the emergence of the actual text. Yet, it is important to examine (and demonstrate through a more detailed analysis of interlinking functions and phases) how evaluative, planning and process-related exchanges support the development and articulation of creative ideas. Such analysis helps reveal the complexity of language use in this particular context.

Apart from the apparent methodological implications, the episode also has theoretical significance. It highlights the ability of children to switch between content generation and reflection, to halt and restart the process of creative brainstorming, and review the emerging ideas. They are using visual aids (the framework for the plan presented clearly on the white board) both as the trigger to initiate content generation (lines 1 and 11) and as the criteria for reflection (line 24). The episode shows the children's ease with internalising the instructions and using them to structure the activity for themselves.

This finding contradicts existing research, which found that young or inexperienced writers have difficulties with restarting the content-generation reflection cycle. In particular, existing research evidence on narratives shows that young writers (i.e. under ten as these children are) have problems with taking command of the writing process, working with a *what next* strategy (Sharples, 1999). This strategy enables them to engage in knowledge telling, and create and put down a chain of associations, but it makes

metacognition (reflection on one's own mental processes) problematic (Bereiter & Scardamalia, 1987). The planning episode above provides evidence for the opposite, with younger children switching consciously and smoothly between content generation and reflection.

3.4 Joint reflection

As Chapter 1 already highlighted, the ability to reflect on one's own work is fundamental in the process of writing. This key role can be linked to by the notion of constraint satisfaction. There are *external constraints* – for example set topic, instructions or external guidelines – *internal constraints* – existing concepts and schemas constituting the writer's knowledge spaces – and the constraints set by the *tools* the writer uses. These constraints combine to both limit and resource the process of writing (Sharples, 1996). The concepts of *knowledge transformation* (Bereiter & Scardamalia, 1982), *high focus thinking* (Gelernter, 1994) and *metacognition* were used to define the activity by which the writer explores and transforms conceptual spaces, constructs and manipulates ideas and reflects upon the writing process in order to monitor the text production and satisfy the constraints identified at the start, or emerging during the process.

The analytic tool developed for the study contains two main discourse functions linked to reflective processes, *planning* and *reviewing* of content. A third, *process-oriented* function was identified to analyse paired discussion about the procedures involved in generating and shaping the content and about collaborative strategies, role division and the use of equipment. This was done in order to distinguish and contrast text-related discourse and process-related discourse.

However, the main argument here is that due to its prescribed nature, classroom-based writing involves a lot of sense-making and reflection upon the writing procedure.

Therefore, process-oriented reflection plays a highly crucial role in determining the success of classroom-based creative writing. Consequently the analysis of reflective phases drew both on text-related and process-related discourse. The next section focuses on the analysis of paired planning discourse.

3.4.1 Joint planning

The observed creative writing episodes were invariably highly structured by the teachers, who were very explicit and prescriptive as to what children had to do. The rationale behind such careful pre-planning was to provide a potentially constructive learning episode, taking the age and experience of the students into consideration. In their instructions teachers set detailed and accessible constraints for the writing activities. In poem-writing sessions children were required to follow a set syllabic or rhythmic pattern or a theme and in story-writing sessions children were asked to plan a story around a set theme, or in the style of an author they chose, or for a set audience. Consequently, in planning phases the emphasis was often on understanding *external* constraints. Planning by children involved interpreting the teacher's instructions regarding content and procedure, and devising strategies in order to follow the instructions and so satisfy the constraints that were set for the specific task. For story-writing, whole sessions were dedicated to planning, and children were asked to fill in planning sheets or draw up bullet-pointed plans regarding the theme, plot and characters. Thus, the global planning of the whole text – or large sections of it – involved formulating, selecting and listing ideas regarding a specific set of questions. The discussion will start with the analysis of such macro planning discourse.

Controlled planning of content

The detailed instructions often led to highly controlled planning of content. For example, when children wrote stories with set themes, planning could simply mean a choice between two options, as sequence 3.17 demonstrates.

Sequence 3.17 – Del and Kenneth, story planning, literacy

- 1 K: What are we gonna do? ((reading whiteboard)) Bullying or death. What do you
2 want to do?
- 3 D: Hmm. ((playing with his pen))
- 4 K: What you want to do. ((looking at the whiteboard)) Bullying or () somebody died.
- 5 D: Hmm! ((eating the pen, they both look at each other)).
6 What do you do? (Videod)? Oh yeah, we are not videoing yet!
- 7 K: I know. Just get on with the thing. ((patting Del on the shoulder, then both look at
8 the whiteboard))
- 9 D: OK. What would you do? Tell me Ken!
- 10 K: I said you choose.
- 11 D: You choose.
- 12 K: OK. ((looking at the whiteboard)) Dip-dip-do, out goes you, dip-dip-do, out goes
13 you. Bullying.
- 14 D: Let's do dying, it's better, ain't it?
- 15 K: OK. Do death then.

In this case, planning does not build on knowledge telling or knowledge transforming strategies. Neither of the children show any particular preference or motivation towards either theme set by the teacher. On the contrary, the boys relegate the task of choosing to one another (lines 9-11), until one of them decides to choose by playing a game of dip-dip-do. The only point where motivation to choose is expressed is line 14, in which the selected theme is contested by Del.

One could argue that the episode is indicative of the limitations of classroom based creativity, where the free flow of creative imagination is curbed by the prescribed nature

of the task, and children are asked to demonstrate creative thinking and closely follow instructions at the same time. Although the potential problems with such *controlled creativity* are obvious, total freedom may make the creative writing just as problematic, providing no guidelines to work with. The next two episodes show the emergence of creative ideas in similarly constrained planning sessions. However, the external constraints in these episodes can be seen as not only restricting, but in fact as facilitating and guiding creative imagination.

In Sequence 3.18 two boys are filling in a story planner, generating ideas for each section within (for a copy see Appendix 13). They are on the section on *setting*. The teacher introduced a constraint: the children need to choose a setting which is typical of the author whom they decided to use as a model. The initial free pooling of ideas for the setting is followed by a more careful selection, demonstrating the boys' ability to identify the constraints and their motivation towards satisfying them.

Sequence 3.18 – Robbie and Zak, story planning, literacy

- 1 Z: ((reading the instructions)) Think of a setting.
- 2 R: Think of a setting.
- 3 Z: **Zak Brown's house.** ((Robbie giggles)) *My house.* ((smiling at the camera))
- 4 R: **Australia.** I KNOW! **Paris and the Eiffel tower.**
- 5 Z: *Eiffel tower.*
- 6 R: Just don't do *the Eiffel tower, Paris.*
- 7 Z: *Paris. Eiffel tower.*
- 8 R: Uhhmm, What is it called.
- 9 Z: Think of ((reading))
- 10 R: ((simultaneous with line 9)) Where does the president live?
- 11 Z: What. You mean, the president ()
- 12 R: ((overlapping)) **The White house, The White House. The White House. Zak**
- 13 **is going to meet the president.**
- 14 Z: ((pointing at the instructions on the sheet)) Think of a setting that would be

- 15 TYPICAL-
- 16 R: ((interrupting)) What does it mean?
- 17 Z: Of the author you have chosen. Typical. **Italy.**
- 18 R: Yeah?
- 19 Z: Michael Morpurgo loves Italy.
- 20 R: Yeah, but where in Italy.

The boys' brainstorming session resembles collective pooling episodes, in the sense that unrelated ideas can freely enter into a collective pool and be shared by both partners.

They list a number of locations for the setting: Zak's family home, Paris and the Eiffel tower, the White House. However, Zak recognises the constraint the written instructions pose on the joint pooling, and directs Robbie's attention to it (line 14). Zak uses the instructions to justify why the previous ideas need to be rejected – including his own suggestion to set the story in his own house – and to support the next proposition, Italy.

The deliberate consideration of constraints in planning requires metacognition: thinking about one's own thinking. Similarly to the pair in Sequence 3.16, the young writers in episode 3.18 are able to halt the pooling of ideas for the plan and restart it again. The episode also shows that the children may have problems with making sense of the instructions (line 15: "What does it mean?"). This issue will be detailed further in Chapter 5.

In poem-writing (and other genres) such detailed planning did not occur. Rather, the general plan for the composition was either set for the children, or they quickly planned it at the beginning of the activity. The following sequence shows the quick planning of the theme of a poem, which did not have a set theme but had a set rhyming pattern.

Sequence 3.19 – Mike and James, poem-writing, literacy

- 1 M: Hobbies?
- 2 J: Hobbies. What are we gonna do first?
- 3 M: There's football, () ((inaudible because he is chewing his pen))
- 4 J: ((hand in mouth too)) Food?
- 5 M: Shall we just do food?
- 6 J: Yeah. ((They both look at the board, where there is a model-poem about a
- 7 chocolate cake))

These are the very first lines of this particular transcript. The boys are listing possible themes. Mike first suggests to write about hobbies, especially football, but he is happy to go with James's suggestion that they should write about food. Although there is no restriction with regards to the theme, they choose the *safe option* (or an option requiring less effort): the theme of the model poem they previously worked on in the whole-class activity. In contrast to 3.17, there is indication of engaged thinking. The boys pool some ideas and invite each other to consider particular themes (lines 1, 3 and 4). The distinction between this episode and Sequence 3.17 is that the children have free choice in terms of the theme, which makes imaginative planning more likely.

The next sequence further highlights children's potential problems with the constraints imposed on the content, raising the issue of authorship in classroom based writing activities. In this sequence two girls are developing ideas about the characters of their story, working within the constraints set out by their form teacher. Although they can write about personal experiences, they are not allowed to use their own names or any other children's names in the classroom.

Sequence 3.20 – Lisa and Julie, story planning, literacy

- 1 L: **Fluffy the wonderful hamster.**
- 2 J: *((overlapping))* Hamster.
- 3 L: **Who dies in the end.** That's what it's about. Then, it's number 2, the characters
- 4 *((bullet point on the white board))*. The characters are, *((pause))* Now we have to
- 5 think of Fluffy's two owners. Can't be your name, so. Think of something that's
- 6 near your name.
- 7 J: Why can't it be my name?
- 8 L: Miss said that it's not allowed to be anyone here. Or next door(s). So can't have
- 9 like-
- 10 J: *((interrupting))* I want to be allowed to do my name. *((she puts her hand up))*

In this sequence the teacher's instructions on the avoidance of familiar names are challenged by Lisa (lines 7 and 10), who does not accept this as a valid constraint. The reason for this constraint was to enable children to write about personal experiences without exposing themselves or the others. Yet Lisa would like to see herself as a character in the story, which is based on an episode of her own life (line 10: "I want to be allowed to do my name"). This example shows the blurred boundaries of authorship in the context of classroom based writing, and the arbitrary nature of controlled writing tasks. The issues of who should decide on the content or the form of a creative composition, who the author of a school-based writing piece is, and to what extent teachers can be prescriptive when setting a creative writing task are clearly important. Teachers as *gatekeepers* may impose too much control on the children which may undermine creative efforts. On the other hand, as previous episodes highlight, working within a set of constraints may help channelling creative thoughts. Also, it may create a safe environment for creative expression.

An additional point to make concerns the transparency of metacognitive thinking ("Now we have to think of") and the use of explicit argumentation ("Why can't it be my name?")

or "I want to be allowed to do my name"), demonstrated in this episode and characteristic of the reflective phases of the observed writing sessions in general.

Process-linked thinking and planning

This section details discourse which was given process-oriented function, concerned with the development of strategies to employ in order to carry out the writing task set by the teacher. The next episode shows two partners' formulation of ideas about the procedure of their work, inviting children around the table to join the discussion. Claire and Jane are writing a poem. The teacher asked them to share ideas about what hands can do (e.g. *bend slowly*) and write a list of these, not the full poem. The teacher planned this brainstorm exercise to help the subsequent writing process. However, as the episode illustrates, the observed partners had some difficulties with grasping the difference between writing the poem and writing their ideas down about the poem.

Sequence 3.21 – Jane and Claire, poem-writing, literacy

- 1 C: So that, like write the poem in our book? ((Jane nods, they start writing))
- 2 J: ((finished)) I put Hands are bending slowly. ((Claire is still writing)) Slowly.
- 3 C: ((still writing)) Yeah. ((Now looking up, to the boy opposite)) Scott, hey,
- 4 Scott, are we-, uhmmm ((pause))
- 5 J: ((to Scott)) Writing a poem?
- 6 C: A poem in our book?
- 7 S: No, you are not meant a poem.
- 8 C: ((to Scott)) Oh, you are just doing how you are doing it.
- 9 S: ()
- 10 C: ((to Scott)) I just write words ((pause)) of how it's doing it. ((gesture with
- 11 hands))
- 12 J: ((mumbling to herself)) Hands are bending slowly.
- 13 C: ((to Scott)) Cheers.

Claire asks Jane first about what they are supposed to do, and they decide that they are "writing a poem in our book" (line 1). However, Claire is still confused, and so she consults Scott, who is sitting nearby. The interaction between Scott and Claire forms the basis of Claire's new understanding of the task at hand. She formulates her own unique interpretation in the form of a clear *action plan*: she's going to *write words* about *how it's doing it* (i.e. how the hand is doing things) (lines 8 and 10). Thus, such joint meaning-making (or possibly joint remembering) around the table promotes a deeper understanding of the task. This interpretive process is vital in planning *how* the writing task should be accomplished and sharing through negotiation is key in the process.

Micro planning

Planning also occurred at a micro level, when children engaged in the planning of the next line (or, in story-writing, the planning of the next event). Planning at a micro level often involved the application of set rules or previously generated story-plan ideas at one particular point of the writing process, as in Sequence 3.22 below. Here the boys are generating a line that would rhyme with their previous one, *Your eyes would go blurry*.

Sequence 3.22 – Martin and Alan, poem-writing, literacy

- 1 A: How about, ((looking at the whiteboard)) **it's so spooky,**
- 2 M: So ()
- 3 A: ((overlapping)) **You would go skooky.**
- 4 M: () Yeah, but we've got blurry!
- 5 A: No. Oh, yeah, we need to get one to rhyme with this! Something that has got an
- 6 R and Y in. It is going to be hard.

Alan starts a short content generation process (lines 1-3), coming up with ideas for the next line. Martin rejects Alan's suggestion, noting that it would not rhyme with the previous line, which ends with *blurry* (line 4). This evaluative comment leads to the joint

recognition that the generated line creates a constraint for the next line. Daniel explicitly states this (line 5: "Oh, yeah, we need to get one to rhyme with this"), listing the specific formal requirements ("Something that has got an R and a Y in"). This can be taken as a plan for the next line, which they will need to follow to satisfy the jointly recognised formal constraints. The plan is both content-related (what sort of a line is needed) and process-related (what needs to be done to come up with an appropriate line), revealing the difficulties with separating and distinguishing process-oriented talk and text-oriented talk. The partners take a general rule – *every two lines need to rhyme* – recognised and accepted at the beginning of the session, and apply it for the material they are working on. In the process, they build on exploratory talk, making reasoning explicit and available for the partner.

Similarly, in the next episode, evaluation leads to the planning of the next step. It is taken from the beginning of a limerick-writing episode, and shows the externalised reflections of one of the partners on some freshly generated material.

Sequence 3.23 – Carina and Jenni, poem-writing, literacy

- 1 J: Alright. ((pause)) **I dreamt about a Phil who had a friend called Jill. When**
2 **I went up the hill ((pause)) they went ((pause)) were ill.** No.
3 C: No, because, you have to do two lines that rhyme. So think of two lines that
4 rhyme, so- ((both thinking))

Jenni comes up with some ideas for the first lines of the limerick. However, she has created four rhyming lines in one row. Carina recognises this, and points out that they only need a rhyming couplet (line 3). Then she draws up a plan, inviting Jenni to generate ideas which meet the recognised constraints. (A similar episode was already shown in Sequence 2.3, in Chapter 2.) Again, Carina uses explicit reasoning (exploratory features) to provide feedback and plan the next step.

For some projects, the attempt to satisfy the formal constraints posed considerable difficulties, leading to lengthy discussions. For example, in limerick-writing children often had to restart the content generation-reflection cycle several times before coming up with pairs of lines. They also devised strategies, for example they counted the syllables on their fingers (see Sequences 2.1 and 2.3 in Chapter 2), or underlined syllables and rhymes on the draft sheet. These physical and visual aids were used to ease reflection.

I argue that the above instances of micro-planning support the definition of creative writing as problem finding. The reflective phases serve to evaluate the emerging material, and to identify the problems which the subsequent writing phase needs to solve. For example in Sequence 3.22, Alan's comment reveals his externalised thoughts regarding the next line, which can be seen as the formulation of a problem. By generating and shaping the next line, the partners will solve this immediate problem, which in turn will lead to the emergence of new problems to solve.

Note the explicitness of argumentation and thus the transparency of metacognitive processes in these sequences. During externalised and shared phases of reflection, the partners come to a joint understanding regarding what they need to think about (for example constraints about rhymes or syllables), and what exactly thinking about these aspects entails (e.g. that when building the next line they have to count the syllables, or check the ending of the last word).

In Chapter 2 Sequence 2.3 was used to exemplify the intellectual use of exploratory talk. It was argued that such transparent thinking aids reflection, and the reasoned dialogue helps these young writers to problematise the task and identify strategies (e.g. counting syllables on fingers, or marking syllables on the draft sheet). Indeed, as it will be seen in

the analysis of reviewing discourse, explicit argumentation is an essential tool in all reflective phases. This is a key feature differentiating reflective talk and content generation discourse.

In sum, episodes of macro and micro planning revealed the efforts of children to make sense of the task and jointly plan the content and the procedure in order to fulfil the constraints set for them by the teachers. They showed the problems with school-based creativity in terms of the accessibility and sometimes arbitrary nature of the rules set by the teacher, as well as the benefits of working within set constraints, which can channel creative imagination. In what follows, the analysis will continue with the function of shared reviewing.

3.4.2 Shared reviewing

Another integral part of the writing cycle is the process of reflecting upon the generated content (ideas translated into language), or on the writing process itself. In Chapter 2 reviewing was described as involving re-reading, contemplation, evaluation and modification. In this section the analysis of joint *evaluation* and *modification* episodes will be presented. As the sequences will highlight, it is difficult to separate evaluation from modification, or for that matter, reviewing from previous or subsequent phases, since these all seem interlinked and overlapping. In Sharples' model reviewing can be followed by phases of *contemplation* (forming ideas, exploring and transforming conceptual spaces), and planning (planning what material to create and how to organise it). Thus, reflection on the *existing* is directly linked to the generation of the *new*. The examples will support this model, showing the cyclical nature of the writing process.

As noted before, the analysis will depart from Sharples' formulation and will not restrict the concept of reviewing to that of the written material. On the contrary, the analysis is extended to verbally shared ideas before transcription.

It has already been pointed out that young writers are generally believed to have problems with switching between content generation and reflection. To aid the processes of joint reviewing, some of the writing projects were carefully planned to include separate editing sessions. In other genres these reviewing phases were integrated in one single writing session. In such instances, children were openly encouraged to edit the written material when they reported that they had finished. On the other hand, pairs frequently engaged in shorter reviewing phases, focusing on the currently generated idea, line or sentence. Thus, similarly to planning, we can talk about *macro* and *micro* level reviewing. The analysis will discuss joint reviewing at both levels. However, since the majority of reviewing took place at a micro level, most of the examples will show immediate reviewing.

During the observed writing activities, evaluative thoughts were often externalised by one or both partners. Reviewing was carried out using two criteria, one being *appropriateness* – whether the writing fitted the constraints of the task – and *appeal* – whether or not the writing pleased the writers themselves. These two appeared to be of equal importance, further highlighting the centrality of emotions in creative activities.

Appropriateness of language

The previous sections on content generation and planning provided plenty of examples of joint reviewing, both of generated content and of the generated plans. For example, the content generation episode in Sequence 3.10 contained the careful shaping of a freshly generated poem-line which felt inappropriate in its original form (*It's so scary and Mary is so hairy*). This episode showed the children's evaluation of the *appropriateness* of the

new material. Appropriateness here stands for the fulfilment of formal and content-related constraints (e.g., suitability to classroom context, meaning, grammatical correctness, rhythmic or syllabic pattern).

A similar example from the story-writing genre is presented in Sequence 3.24. It contains a short cycle, where content generation is both halted and fed by instant evaluation. The partners have almost finished the beginning of their story. Their plan for the beginning was: *Mrs Joy the Joker wakes up one morning; bangs her head; goes to hospital; has brain-surgery; her brain tells jokes to the staff; she wakes up as a joker*. The children in the episode are working on the part when Mrs Joy the Joker's brain starts joking with the hospital staff.

Sequence 3.24 – Lisa and Julie, story-writing, literacy

- 1 J: **Get me right?**
- 2 L: ((overlapping)) God, my hand is hurting! ((massaging her writing hand))
- 3 J: We could go, *Get me right?*
- 4 L: No, we could put **You get me?** Yeah.
- 5 J: **Yeah?** ((both start writing))
- 6 L: ((writing)) Yeah. *You get me?* Yeah. ((Looks up)) **Right then. My name is**
- 7 **Mrs. Joy, the Joker.** ((giggling, both start to write)) **Right then. Let's get**
- 8 **all over the crap!**
- 9 J: **Yeah. No, we are not allowed to do that!**
- 10 L: Oh, yeah. ((writing)) Right then. *Let's-, let's-*
- 11 J: **Settle that.**

This episode highlights the complexity of the children's work, showing different processes in a short episode. Lines 1-8 reflect joint content generation, the refinement and extension of shared ideas. The sentence suggested by Julie (line 1: "Get me right") is modified by Lisa (line 4: "You get me"), showing the strategy of joint crafting of creative ideas. Then Lisa starts generating some further material (lines 6-8), halted by Julie's

evaluative comment (line 9: "Yeah. No, we are not allowed to do that!"). The recognition that the idea is not appropriate in the classroom context results in its modification: the girls are trying to find an expression with a similar message but more appropriate format. This complex process involves searching for a substitute and reviewing its appropriateness. I would argue that the externalised evaluation observed in this sequence is that of a *shared* idea. It is also clear from this example that the externalisation of evaluative thoughts is necessary for the partners to jointly modify the line.

Thus, an important point to make is the use of externalisation to make reasoning transparent. The explicit evaluative comments are crucial in directing the partners' attention towards particular constraints in the writing, and helping them to be more selective in the process. Episodes from planning sessions have already demonstrated the children's reliance on such externalisation. Subsequent reviewing sections will support this observation, further strengthening the argument that different writing phases or processes may rely on qualitatively different types of thinking, resulting in different discourse styles.

Appropriateness of meaning

Sequence 3.25 is another key example for a short content generation-reflection-content generation cycle, from the beginning of the same story-writing session as 3.24. However, in this episode appropriate can be defined as *logical*. Here the pair is pooling ideas for the main events of their story about Mrs Joy the Joker, and looking for a culmination point.

Sequence 3.25 – Lisa and Julie, story-writing, literacy

- 1 J: **She jokes everybody around.**
- 2 L: **No, she has a husband.**
- 3 J: Yeah, but that's not, that's not really a joke.
- 4 L: **She has a, she has a joyful baby!**
- 5 J: **Yeah.**
- 6 L: Yeah.

When Lisa suggests that one of the main events should be that their funny character "has a husband" (line 2), Julie immediately challenges the idea, offering reasons why it should be rejected: "That's not really a joke" (line 3). This leads to further content generation on Lisa's part, and she comes up with a main event that they agree on: "She has a joyful baby" (line 4). This idea is accepted by both partners and becomes a part of the shared story plan. Similarly to Sequence 3.24, Julie uses explicit reasoning when reviewing and rejecting Lisa's suggestion. The critique is immediately accepted by Lisa, who uses the evaluative comment as a constraint to guide the pooling and selection of the main events.

The next example is also a poem-writing sequence, but it is taken from a session dedicated to the editing of a poem written previously. In this episode the partners evaluate the appropriateness of images conveyed in the poem, from the point of view of meaning and logic. They are working on the lines *Anchors always hold us down / When the pirates are around.*

Sequence 3.26 – Annabel and Mary, poem-writing, literacy

- 1 A: Down ((finished writing)) Right. So we have done that bit, done that down.
2 "When the pirates are around." Do you think that's alright?
3 M: No, we don't need pirates, the pirates are not really true.
4 A: Yes, they are, they used to be in the olden days.
5 M: Yeah, but not anymore. ((Annabel is smiling))
6 A: **When sharks and things like that are around.**
7 M: Yeah, that's better.
8 A: Right, *when the blue whale is around*, cause the blue whale is the most
9 dangerousest animal in the world.
10 M: And the biggest.
11 A: It's the biggest, which means it's the dangerousest. Because it means it's got the
12 biggest mouth. ((giggles))
13 M: They must talk a lot then. ((they both giggle))

First Annabel invites Mary to evaluate the line *When pirates are around*. Mary's response is that it is not a good image, because pirates are not actually *true*. They engage in a short debate with explicit reasoning, which feeds into a content-generation phase, to come up with a substitute for *pirates*. They decide that dangerous animals – such as *sharks* – should replace pirates. Annabel suggests *blue whales*, and then offers her reasons: the blue whale is the most dangerous animal, with the biggest mouth, so it would fit the context. The episode concludes with a joke, and they go on to note down the changes.

Appropriateness and instructions

The sequence below shows two partners' attempts at constraint satisfaction, where appropriate is seen as fitting the structure set up by the teachers. The sequence is from the beginning of an advertisement writing episode, in which children needed to write an ad luring people to Milton Keynes, listing five places of attraction using a *Go to the/visit the....* pattern.

Sequence 3.27 – Jane and Claire, advertisement writing, literacy

- 1 J: I know, **Everyone loves it here.**
- 2 C: No, we've got to write the same sentence, but with a different word.
- 3 J: Yeah, *Everyone loves it here.* So-
- 4 C: NO, we've got to write the same sentence! "Go to the something." ((pause))
- 5 **Milton Keynes city centre!**

In this sequence Jane's idea is immediately evaluated and refused by Claire, who refers back to the constraints imposed by the form teacher regarding style and structure. Again, this externalised reflection helps them build a shared understanding regarding the task at hand, and generate ideas within the imposed constraints. From this point on, the partners will come up with material following the required pattern. The joint understanding of the task – and the formulation of a clear plan for the composition – is achieved through explicit argumentation, which again reveals the involvement of metacognitive processes in reviewing and planning.

Appropriateness of form

So far I have concentrated on reviewing and modification which centred around the content of the emerging material. In the next section the focus will be on the appropriateness of the material in terms of formal constraints. The next episode is taken from two girls' poem-writing session. It shows that formal evaluative phases can be quite demanding and lengthy. In Sequence 3.28 we go back to the Preliminary Study, and look at Carina and Jenni's limerick writing activity. The sequence is a long evaluation phase, in which they review the formal (syllabic) appropriateness of their first line. In their attempts to count the syllables, they draw on the explanations of the teacher regarding a model poem, which was discussed in whole group prior to the activity.

Sequence 3.28 – Carina and Jenny, poem-writing, literacy

- 1 C: *There was a young girl from York.* So we have to (), I wonder, I want to know if
2 all that's one beat.
- 3 J: ((counting)) There was a young girl from- Yeah.
- 4 C: ((interrupting)) Young-e, young-e, young-e, young-e
- 5 J: Young.
- 6 C: Young-e, young-e young-e ((almost singing))
- 7 J: There was a young girl-
- 8 C: ((interrupting)) No-
- 9 J: ((interrupting)) There was a young girl-
- 10 C: ((interrupting)) There was a young-e
- 11 J: ((interrupting)) No, she ((teacher)) said young up on there ((whiteboard)).
- 12 C: girl
- 13 J: ((simultaneously)) She said up on there.
- 14 C: from York
- 15 J: Yeah but she said up there. Like it used to be young up there, and then we said
16 no because that's got one beat.
- 17 C: Oh, yeah, beat. So we do one beat.
- 18 J: Yeah.

Carina starts the evaluative process by externalising her thoughts about the newly composed line (line 1: "I wonder, I want to know if all that's one beat"). They both start to count out loud, comparing the beats they assign to words. The central issue is whether the word *young* has one or two syllables (*young* or *young-e*). First they try to convince each other just by sounding the word out repeatedly (lines 4-6). Then Jenni, who is convinced it is one syllable (or *one beat* as they put it), draws on previous classroom discussions to justify her argument (line 11: "She said up there"). During the lead-in group discussion the teacher put a sample limerick she had come up with on the white board. In this limerick, she replaced the word *young* with a two-syllable word to show ways in which problems with syllables can be sorted out. This is a strong argument, one which Carina has no choice but to agree with ("Oh, yeah, one beat. So we do one beat").

It is clear that the episode above benefits from the children making their views explicit to each other. Indeed, there is a discrepancy in views between the partners, which they bridge by making reasoning transparent and available for each other. Thus, shared understanding regarding a small point of the task is achieved in the dialogue. Jenni is using the strategy of bridging from known to new. The partners draw on previous experiences to solve the problem of syllables, demonstrating the complexity and recursive nature of the process of creative design.

Limerick writing is quite a complex task when compared with some other poem-types (such as for example, simple rhyming couplets). When writing limericks, each line needs to be planned to rhyme according to an AA-BB-A pattern and follow a strict syllabic structure at the same time. For a task demanding such careful planning and reviewing, externalisation appears to be vital. The reviewing of each line involves checking them against each of these criteria. Transparent reasoning promotes the sharedness of these evaluative processes, and creates the platform for mutually understood and accepted modifications. However, due to the difficulties of combining rhyme and rhythm, reflective phases in limerick writing sometimes dominated the discussion and took up a disproportionate amount of time and energy. What is more, the children sometimes found it difficult to keep track of both content and form.

The following sequence is an example of such *cognitive overload*. Annabel and Mary have been trying to construct the last line of their limerick, which needs to have 7 syllables. They have been generating and regenerating the line several times, with five variations being raised and rejected or forgotten. The following example shows another attempt and failure to come up with and remember a line with the appropriate number of syllables. They seem to try to generate the line and count the syllables at the same time, which proves very difficult.

Sequence 3.29 – Mary and Annabel, limerick writing, literacy

- 1 A: ((counting)) **That poor**
2 M: ((overlap)) **Looking**
3 A: ((counting)) **Fat-looking** ((pause)) **pork** ((pause)) **from York!** ((shows 7 fingers))
4 Yeah!
5 M: Yeah!!! ((they are both smiling happily))
6 A: ((with excited gestures and intonation)) Yes, yes, yes, yes, yes, yes, yes.
7 M: Write it down. Cause I don't know what it was. Ohhhh. ((to me)) We just found
8 out our last sentence! Pork from York.
9 A: ((starts to write on the draft sheet)) That poor look-, looking. What was it again?
10 Oh, () I've forgotten it!

Annabel and Mary are trying to reproduce material from previous attempts, selecting and combining words that may add up to 7 syllables and form a meaningful sentence. (The line with which they come up with in this sequence is actually the same as their last rejected version.) As they put the words together, Annabel is counting the number of the syllables on her hand. When they finally think they got the line with the right number of syllables and are ready to transcribe, their excitement at succeeding (lines 5-6), and the difficulty of sounding out and counting the words at the same time, prevents them from remembering the actual words. Both Mary and Annabel admit that they have forgotten what to write (lines 7 and 10). Thus, they do not even get to the point of drafting the line, which would allow them to use visual aids (such as underlining each syllable) in the further evaluation. Note, however, that following further attempts, the girls succeeded in finishing the poem.

The two sequences above have shown children's efforts to review emerging texts according to formal constraints. The next example further details the complexity of reflective processes, showing that the reviewing of a new idea can lead to the evaluation

and modification of previous, already drafted material. In Sequence 3.30 Jenni and Carina come up with a new line for their limerick, which will have an impact on their previous work. Their limerick has a pattern of 7-7-6-6-7 syllables in five lines. Catherine evaluates their new, fourth line, recognising that it has 7 syllables. Instead of modifying it, she suggests adding a syllable to each of the previous three lines, creating a 8-8-7-7-8 pattern. So far they have written: *There was a young girl from York / Who liked eating juicy pork / She grew fatter each day.*

Sequence 3.30 – Jenni and Carina, poem-writing, literacy

- 1 C: *Nobody went to her birthday. Noone went to her birthday.* ((counting the
- 2 syllables))
- 3 J: **That poor- that poor-**
- 4 C: ((overlapping)) If we change *young* to **little**. That's then 8 beats. And, *Eating*
- 5 **big juicy pork**, and then we have changed to seven, so we can have, can put-
- 6 J: ((interrupting)) Yeah, but I don't want to cross it out.
- 7 C: () isn't it?
- 8 J: Yeah, but look at the people who have actually done that.
- 9 C: ((giggling)) OK. So we just do that.
- 10 J: Yeah. Good idea.
- 11 C: She- So, who loves- she- a little, little- Little, so that we have two beats for that
- 12 one.
- 13 C: ((to me, as I am passing by)) We are changing *young* to **little** so that it has got
- 14 two beats, and then. ((Jenni is giggling with Annabel))
- 15 E: Sure!
- 16 C: And then we can put big so that we can fit more in that one, and then we only
- 17 have to do **much fatter** each day.

This episode is dominated by Carina. Her evaluations are well-grounded, and she is able to externalise them and explain the proposed modifications to an outsider (researcher) and to her partner. She changes *young* to *little* in the first line, to increase the number of syllables to 8. For similar reasons, she adds *big* to the second line (*big juicy pork*), and

writes *much fatter* instead of *fatter* in the third line. This way, she can accommodate the fourth line, which will have the same amount of syllables as the third line, but one less than the first and the second. Her reflections upon what she is doing and for what reasons reveal intense metacognitive processing and logical thinking. They also show her ability to verbalise these highly complex thoughts.

Carina's efforts further support for my central claim about the ability of younger writers to switch between content generation and reflection. She is engaged in a highly complex poem-writing activity, and is able to use knowledge transforming strategies to reflect on the writing process, monitor text production and re-arrange the generated material to satisfy the identified constraints. It is interesting though that the episode can be seen as an illustration of her individual efforts. Although she tries to engage Jenni in the modifications, Jenni is rather concerned about procedural issues: about crossing lines out (line 6), or that other people have already finished their poem (line 8). This may be due to the emphasis on *neatness* characteristic of classroom-based writing activities, and thus indicates that the two partners are concerned about different aspects of the classroom task. Yet, Jenni also gets distracted by the children around the table (line 14). It is possible that, regardless of Carina's efforts, Jenni cannot fully follow Carina's line of thinking. Even so, working with Carina may help develop her understanding of the constraints of limerick writing, pointing out the benefits of peer collaboration in this particular setting.

Sequence 3.31 moves the analysis towards the other aspect of evaluation, the reviewing of the material to check its appeal. In this sequence two boys are writing a rhyming poem about *Food*. Mike has three evaluative comments, two implicit and one more explicit.

Sequence 3.31 – Mike and James, poem-writing, literacy

- 1 M: **Squishy-squashy- squishy-squashy-** ((biting pen)) Shall we do *squishy-squashy*
2 **cake** or *squishy-squashy sweets* or something?
3 J: ((hand in mouth)) *Squishy-squashy vanilla ice-cream.*
4 M: *Vanilla?* ((disappointed, almost shocked tone of voice))
5 J: **Strawberry ice-cream.**
6 M: It's not very squashy, squishy, ain't it? ((biting pen))
7 J: ((overlapping with line 6)) Yeah, when you put it on your tongue!
8 M: *Squishy-squashy, squishy-squashy cake, chocolate cake*, that's squashy, ain't it?
9 J: *Squishy-squashy strawberry jelly.*
10 M: Yeah, that's good. ((they both start writing))

Mike's first, implicit evaluative feedback concerns James's idea of "Squishy squashy vanilla ice-cream". He simply responds with the question: "Vanilla?" with a disappointed tone of voice (line 4). It may be seen as an implicit rejection of vanilla as a desirable ice-cream flavour. If so, the evaluation takes place at an emotional level, testing ideas from the point of view of *appeal*. Mike's response supports this interpretation: he immediately changes *vanilla* to *strawberry* (line 5).

Mike's second evaluative comment is more explicit, relating to the meaningfulness – the logical appropriateness – of the image James created. He challenges the idea of ice-cream being squishy-squashy (line 6). James responds with another line of explicit reasoning – ice-cream may be squashy on someone's tongue – but does not convince Mike. They start a new cycle of content generation, thinking of *chocolate cake* and *strawberry jelly*, and finally agreeing on an image that they both like. Mike's third evaluative comment (line 10: "Yeah, that's good") can be interpreted in two ways. It can be seen as an appraisal of the meaningfulness of the image – it is good because strawberry jelly can be squishy – and as the evaluation of *appeal* – it is good because the line sounds good from an affective point of view.

Each time Mike expresses his doubts, James responds sensitively to his comments. This highlights the sharedness of the activity, and responsiveness of the partners to each other. They engage in the joint refinement and modification of ideas until both of them are pleased and the constraints of the poem are satisfied. The next section will focus on the emotive aspect of evaluation more closely, looking at how children review the generated content from the point of view of its *appeal*.

The evaluation of appeal

I use the word *appeal* to refer to the emotional response of the young writers to the material they generated: the affective value of the emerging text (i.e. whether it sounds good or not, whether they like it or not, whether it is exciting, pleasing, entertaining for them or not). Evaluation of *appeal* is hard to represent clearly in the transcripts, as it is very brief, and often implicit. Verbal evaluation of appeal is typically marked by short exclamations of "Yeah, that's good", like in the example above. Yet, it is the non-verbal message of such short utterances that makes them marked. There is often an excited tone, playful and exaggerated intonation. The remark is usually followed by grins and smiles on both sides. However, this is an aspect which is hard to represent with a tool focusing on the analysis of verbal discourse.

To illustrate this, Sequence 3.32 shows such an evaluative episode, in which intonation and non-verbal communication play a very crucial role. So far the girls have written two lines: *Horses racing, pigs snorting*.

Sequence 3.32 – Carina and Jenni, poem-writing, literacy

- 1 C: What shall we do? **Cows rough, pigs buff.** Arggggh.
2 J: We've already got pigs. *Cows rough.*
3 C: No.
4 J: Oooh. Look. *Cows rough, crocodiles tough!* ((They look at each other, heads
5 close, then Carina smiles and starts writing, Jenni giggles.))
6 J: That's good! ((both writing))
7 C: ((suddenly)) What is it? *Crocodiles?* ((looks over Jenni's shoulder)) *Tough.*
8 J: ((parallel)) *Tough.* ((Both continue writing, then look at each other.))
9 J: That's good! ((with a grin))
10 C: ((pen in mouth)) Yeah.
11 J: ((grinning)) I like that one.
12 C: Cows rough-
13 J: ((interrupting, reciting, head moving with the rhythm)) *Horses racing, pigs*
14 *snorting,*
15 J&C:((together, Carina beating the rhythm on the table with her pen)) *Cows rough,*
16 *crocodiles tough.* ((they look at each other, Jenni grinning))

Carina comes up with an idea for the next line, "Cows rough, pigs buff." First Jenni evaluates it in terms of appropriateness, and rejects part of the line (line 2: "We've already got pigs"). Then she switches back to content generation, and comes up with a modified line, "Cows rough, crocodiles tough." They look at each other and start writing, without any verbalised acceptance. The decision is made through the exchange of glances. This is followed by an immediate emotional appraisal by Jenni ("That's good", line 6), which is coloured by giggles, smiles and excited intonation. During the transcription of the line Jenni repeats her appraisal, highlighting the appeal of the line. In the end, they start to recite the poem, Jenni moving her head with the rhythm, and Carina beating it with her pencil on the table. There is good verbal evidence in this episode of reviewing at an emotional level (lines 6, 9 and 11). However, the children's non-verbal language (glances, smiles, giggles, grunts and grins) carries most of the evaluative message. Furthermore, the use of recital in the appraisal of the work is a feature which

further demonstrates the fundamental role of emotions in the process of creative writing. It is obvious from the above example that the children find great pleasure in repeating lines from the poem they have just written.

Whereas appropriateness is negotiated using explicit argumentation, leading to rejection or modification, appeal is simply *declared* in emotional terms without reasoning offered.

3.5 Summary

The chapter has outlined discursive and collaborative strategies associated with cognitive processes central to creative writing. I have provided an overview of the key features of children's discourse that reflected joint content generation and reflection (planning and reviewing). The analysis of discourse in different phases revealed young children's ability to achieve high levels of collectivity and sharedness. This, in turn, was seen as the indicator of collaborative productivity, leading to the joint composition and refinement of ideas which most probably would not have emerged in individual writing sessions. This conclusion – linking collectivity to productivity – is supported by Hartup (1996a), who provided empirical evidence for the strong interaction between mutual orientation (as opposed to individualism) and the better quality of compositions.

Another important finding of the chapter is the all-pervasive nature of emotions in the process of creative writing, clearly distinguishing this task from scientific problem-solving and hypothesis-testing tasks as defined in existing research (Mercer, 1995, 2000). Joint processes of content generation were shown to be supported by a rich repertoire of verbal and non-verbal discourse reflecting emotion-based thinking. Furthermore, the analysis demonstrated that reflective phases – *planning* and evaluation of *appropriateness* – benefit from, and typically involve explicit argumentation. This finding underlines the

differences between cognitive processes associated with the composition of creative ideas, and those involved in reflection upon (or thinking about) the creative text.

However, the differences found between children's evaluation of the *appeal* and *appropriateness* of the generated texts indicate that the clear-cut separation between content generation and reflection as emotion-driven versus intellect-driven processes does not hold. Evaluative phases were seen as equally driven by emotion (evaluation of appeal) and reason (evaluation of appropriateness).

Finally, the chapter demonstrated the partners' ability to switch between different phases of the writing process. This finding contradicts existing research (see Sharples, 1999), and shows the potential capacities of young writers at an earlier stage than expected.

However, in this chapter the analysis was restricted to productive uses of collaborative discourse. Thus, what has been presented so far was one end of the *collectivity-individualism* continuum, which did not show the variations between and fluctuation within the discourse of the different pairs. (This is the reason for the apparent over-representation of particular pairs in the illustrative episodes.) Yet, as the findings of the Preliminary study (Chapter 2) have already shown, the discourse of the observed pairs varied in terms of collectivity and individualism. Although they were all given collaborative writing tasks, different pairs displayed different levels of collectivity and individualism. Also, pairs did not necessarily exhibit the same level of sharedness for the whole duration of the research study, or for the duration of one writing episode. Thus, there were variations in the level of sharedness pairs displayed during different writing sessions, or even *within* a writing session. For example, in Chapter 2 the discourse of the acquaintanceship pair was described as more individualistic than that of the friendship

pair on the whole, but their developing sharedness (especially during later sessions) was also noted.

The analysis of Study 1 and Study 2 data revealed further variations, showing that the peers' collaborative and discourse patterns can be placed on an individualistic-collective continuum, and features of individualistic and collective approaches can be identified in all stages of the writing process.

The next two chapters will present this analysis in more detail, contrasting collective and individualistic working styles and attempting to identify contextual features contributing to the differences. Since some of the pairs were observed on a number of occasions, variations were studied both in the discourse of different pairs, and in the paired work of the same pair in different writing sessions. Thus, as the following chapters will show, the data were used to contrast the discourse of pairs in particular writing projects, as well as to test the stability of these comparative findings over time.

Firstly, the variations were interpreted using the friendship-acquaintanceship contrast, which was a comparison built in the research design. Another in-built comparison was the medium used for the collaborative writing episodes. Drawing on the central tenets of the socio-cultural theory and following the qualitative tradition of data-led inquiry (Tonkiss, 1998), the analysis identified further salient features of the context as influencing factors, such as task design, genre, the nature of instructions, or the research-context. Beyond the interest in investigating how these features affected patterns of paired interaction, the analysis was also aimed to explore how shared meanings were constructed within specific contexts. In other words, how discourse reflected sense-making, showing the integration and consideration of contextual aspects in the process.

CHAPTER 4 FRIENDSHIP AND COLLABORATIVE CREATIVE WRITING

4.1 Introduction and overview

Driven by the theoretical and pedagogical considerations outlined in Chapter 1, the present chapter explores the affective dimensions of classroom-based peer collaboration. In particular, it looks at the ways in which the nature of the relationship between partners impacts on the paired creative writing discourse. The aim is to identify individualistic and collective discourse features and, by linking them to differences in shared histories, examine the affordances and constraints of friendship pairing in the context of classroom-based creative writing.

Individualistic and collective discourse patterns - as defined in Chapter 2 - and collaborative strategies will be discussed in different phases of shared creative writing, thus integrating the analysis of talk with the analysis of the joint writing process. Thus, the discussion will provide a contextualised account of friendship and acquaintanceship discourse by considering the writing-related functions of the dialogue.

The first three parts of the chapter will examine in detail the *initial* differences and similarities found between the friendship and acquaintanceship discourse in the Preliminary Study and Study 1. The analysis will explore the potential benefits of friendship pairing over acquaintanceship pairing, and discuss whether - and to what extent - friendship can be employed to resource and enhance classroom-based creativity.

However, in Chapter 1 it was argued that, in order to understand the way different relationships shape cognitive development, we need to follow the evolution of the relationship and paired talk over time. To complement the analysis of initial contrast, the last section of the chapter will therefore move onto the longitudinal analysis, and will look at the dynamics of the discourse of the three observed acquaintanceship pairs over time. Through the combination of the contrastive analysis of initial discourse patterns and the analysis of the dynamics of paired discourse over time, the chapter will illuminate the complexity of the study of friendship-effects on development and learning. It will also show that the nature of relationship, the quality of friendship, motivation, collaborative experience and other contextual features combine to determine the quality and productivity of the discourse of the observed participants.

4.1.1 Contrastive analysis of friendship and acquaintanceship discourse

Chapter 2 highlighted the limitations of existing analytical frameworks and outlined a functionally driven typology. Using the transcripts it was shown that existing models do not allow the study of paired creative writing in its full complexity, as they cannot identify important features of the discourse linked to cognitive processes associated with creative writing. In Chapter 4 the findings of the Preliminary Study are discussed in terms of the initial differences found between the two participating pairs using the functional analysis. In addition, for an analysis of the initial contrast between friends and acquaintances, the discourse data from the first Study 1 writing project was also used.

As stated in Chapter 2, the comparative analysis of the products (compositions) was beyond the scope of the present study. Since the writing activities varied substantially according to the teachers' lesson plans, it was deemed impossible to devise an analytical

tool for the evaluation and comparison of compositions of such a wide range (e.g. compositions of different genre, content, length, nature, etc.)

Data used for the contrastive analysis

The Preliminary Study followed a two-week writing project in a Year 3 classroom, focusing on two female pairs of mainstream ability, one friendship pair (four recordings) and one acquaintanceship pair (three recordings). They were observed while carrying out paired poem-writing activities (limericks and acrostics). On the other hand, Study 1 involved 16 children, 6 friendship and 2 acquaintanceship pairs of the same gender. Each day of the week the children were presented with different types of poems, sharing and evaluating them in class. Compositions included free poems as well as alternate line rhymes, or poems aimed at redesigning or reshaping the ones shared in class. Themes were sometimes set, others were chosen by the children themselves. Some sessions were full composing sessions, while others were dedicated to editing and refining previously written ones. For the initial phase of Study 1, all the 8 pairs were observed during a week-long poem-writing project in literacy.

The shared work of the following participants formed the basis of the contrastive analysis of initial differences between friendship and acquaintanceship discourse:

Friendship pairs:

- Preliminary Study: Carina - Jenni
- Study 1: Carina - Jenni
- Linda - Dawn
- Zeena - Louise
- Zak - Robbie
- David - Chris
- James - Mike

Acquaintanceship pairs:

Preliminary Study: Annabel - Mary
Study 1: Martin - Alan
Jane - Claire

Aims of the contrastive analysis

The contrastive analysis of the transcripts explores the nature of paired talk – collaborative and discourse patterns – at different stages of the creative writing activity. It aims to establish whether one can link the differences in discursive and collaborative styles to the differences in the relationship of the partners. As before, *collectivity* in each phase is linked to other-orientation (*readiness to share*), reflected by collaborative strategies involving mutually accepted roles and democratic decision making. In contrast, individualistic styles are characterised by the lack of collectivity and sharedness (for example, parallel work, lack of attention towards the other’s ideas, refusal to share).

4.1.2 Longitudinal analysis of discourse

The repeated observations of Study 1 provided data for a detailed longitudinal analysis of four friendship discourses, as follows.

Table 4.1 Longitudinal data of friends

Project	Pairs	Number of sessions observed
Poem writing	Jenni - Carina Zak - Robbie Linda - Dawn David - Chris	one per pair
History project	Jenni - Carina Zak - Robbie Linda - Dawn David - Chris	one per pair
Story writing 1	Jenni - Carina Zak - Robbie	four per pair
Story writing 2	Linda - Dawn David - Chris	four per pair

In addition, one of the friendship pairs participated in both the Preliminary Study and Study 1, providing data of their paired work in both Year 3 (aged 7-8) and Year 4 (aged 8-9).

On the other hand, the acquaintances in Study 1 - Martin, Alan, Jane and Claire - were observed on four occasions during a six-month period, working on four different projects (poem writing, history project, predicting the next chapter and advertisement writing). The Preliminary AP - Mary and Annabel - were observed in three poem-writing sessions over a two-week period. The chapter will focus on the longitudinal analysis of the pairwork of the three observed acquaintanceship pairs in detail.

The contrastive analysis of initial differences will start with the examination of friendship discourse.

4.2 Friendship discourse

First, the analysis of friendship discourse, as observed during the initial writing sessions of the Preliminary Study and Study 1, will be presented. Since the pairs' discourse was consistent in terms of the collectivity-individualism they displayed in each function, the discussion will centre around processes of shared *content generation* and shared *reviewing*. I will offer a profile of each pair, going through the analysis of their talk linked to each function and trying to interpret the data in terms of the nature of their relationship and previous experiences.

4.2.1 Content generation and friendship discourse

Five of the six observed friendship pairs were highly motivated to share their ideas with each other, and oriented themselves towards the other. Four of these pairs geared these collaborative resources successfully to jointly generate creative content, while the collaborative work of the fifth pair was found problematic. I will start the discussion with the four *effective* friendship pairs. (Note that *effective* is only used as a descriptor of the collaborative processes, and in no way reflects the analysis of the final product.) Chapter 3 has already shown collaborative episodes of some of these pairs, which were used to describe strategies for collective content generation. Some of these episodes, as well as new examples, will be used here to demonstrate the competencies, skills and motivation of the friendship pairs, and explore links between *friendship talk* and the discourse of classroom-based joint creativity.

The first friendship pair, Carina and Jenni, participated in both studies. As noted in Chapter 2, they were long-term close friends, spending a lot of time together both at school and outside school hours as well. At school they were not typically paired to work together but sometimes they did homework together, and played with the computer too. Also, they liked reading poems together, and did write poetry together in their free time.

Their distinctive approach to content-generation was well documented in Chapter 2 (Sequences 2.2 and 2.4) and Chapter 3 (Sequences 3.1, 3.2, 3.6). The pair was highly successful in sharing creative ideas, displaying the highest level of collectivity in content generation phases. Previously presented episodes of the pair's content generation discourse – such as forming a joint chain of association, joint pooling and growing a story together – demonstrated their ability to engage in collective thinking. The present discussion moves the analysis further by highlighting links between the pair's collective

content generation style and the nature of their relationship. Examples from both the Preliminary Study and the poem-writing project of Study 1 will be used here to elaborate this discussion.

The first sequence shows the partners' ease with which they play with each other's thoughts. It is taken from the acrostics writing session of the Preliminary Study. The children are working on the line starting with N.

Sequence 4.1 – Carina and Jenni, poem-writing, literacy

- 1 C: N. Think of that: **Nature's best under the sea**. Yeah?
- 2 J: Hang on, shall we do a little bit more like that: *Nature's best under the sea,*
- 3 **happiness is- happiness is good for me!**
- 4 C: ((happy tone)) Yeah! *Happiness- under the sea, happiness is good for me.*
- 5 ((they are writing))
- 6 C: *Happiness- happiness is **right** for me.*
- 7 J: Yeah! Hang on! **JUST** right.
- 8 C: *Just right for me.*

Carina starts the content generation cycle, offering her ideas for the line starting with N (line 1). This is immediately taken on board and extended by Jenni (lines 2-3), which Carina happily accepts. While transcribing, further changes are suggested by Carina (line 6), which Jenni accepts and then modifies further (line 7). Carina repeats the line in agreement (line 8), and they continue the transcription. The partners share and generate creative ideas swiftly and effortlessly together. The friends' ease at jointly *crafting* shared ideas – similarly to their ability to form a joint chain of associations in Sequence 3.1 – demonstrate that they are skilled at joint imaginative thinking and are experienced in drawing on a shared imagery.

The episode shows the children's mutual orientation towards each other, their willingness "to influence and to accept influence" (Gottman, 1986, p.156). The importance of such mutual involvement and orientation is well-documented in research on young friends' shared fantasy play (Gottman, 1986), and can also be seen as a central ingredient of coordinated play in later years. Also, Chapter 1 explored the overlap between play in younger years and creativity at later stages, underlining the long-term benefits of joint engagement in shared imaginative activities. The pair's discourse is indicative of the potential facilitative effects of the shared imaginative experiences of friends and playmates for shared imagination in formal contexts. My aim with the next sequence is to highlight the continuity between friendship talk and classroom-based creative discourse by exploring the pair's use of simultaneous talk, overlaps and interruptions (or *collaborative floor*, Coates, 1996) in more detail. I again use Coates' (1996) transcription method (introduced to present Sequence 3.2), which she developed for the study of female friends' use of collaborative floor. It is therefore an excellent tool to study the temporal and sequential aspects of paired discourse, which are central in the particular analysis that follows.

Sequence 4.2 shows an episode from the poem-writing project of Study 1. This sequence was used in Chapter 3 to describe the content generation strategy of *collective pooling*. The partners are writing a poem entitled *Animal wildlife*. So far they have written: *Horses racing / Pigs snorting / Cows rough / Crocodiles tough*.

It is an intense sequence of quick exchanges, with lots of interruptions and overlaps. Yet, this does not mean that the partners ignore each other's input. On the contrary, each suggested theme for the next line is considered by the other partner. Carina weaves Jenni's ideas – e.g. *sharks, whales and dolphins* – into her variations. They generate ideas *and* also monitor each other closely at the same time.

Sequence 4.2 – Carina and Jenni, poem-writing, literacy

1 J: What shall we do? Sharks swimming.

2 C: Done it.

3 J: No. No, no, done that.

4 C: Yeah.

5 C: Darks, hmm/ [Darks, oh, no. Sharks plaits/ [cows poop/

6 J: Sh[arks swimming/ No, sh[arks wailing, wail, wail/

7 C: ((giggles)) Whales/ Whales/ =No, I've got one/

8 J: ((giggles)) Whales wail/ wail/ Dolph=

9 C: [OK, sharks/] Sharks die, dolphins/ =No. Darks fly, da/ [Da/ ((giggles))

10 J: [Dolphins/] ((giggles)) survive= ((grins)) ((frowns)) [What? ((grins))

11 C: Sharks/ No, sharks/ Sharks die/ Birdies fly/ ((giggles))

12 J: Darks! ((teasing tone)) ((giggles))

13 C: ((giggly voice)) We do that one! Cool! ((starts writing))

14 J: ((happy)) Alright then! ((starts writing))

This is indicated by Carina's repetition and incorporation of Jenni's ideas, and Jenni's extension of Carina's theme (C: Sharks die, dolphins J: Survive). The children use simultaneous or overlapping speech to combine and merge ideas, to fuse thoughts together, and thus create a shared text. The lines (*Sharks die/Birdies fly*) emerge from their almost simultaneous efforts. Thus, although seemingly working in parallel, the partners pay careful attention to each other's ideas.

Jointly constructed utterances, simultaneous and overlapping speech are characteristic features of this partnership. In Chapter 3, such *fuzzy* dialogue was described as the use of *collaborative floor*, characteristic of personal discourses such as female friendship and bonding (Coates, 1996). Coates argues that the collaborative floor requires a very close monitoring of each other, creating a shared space where the "group takes priority over the individuals" (1996, p.133). Collaborative floor is generally regarded typical of informal

situations, or when the purpose is to maintain good social relations. However, Sequences 4.2 and 4.3 reveal that collaborative floor also supports the sharing and joint development of creative ideas. Carina and Jenni, similarly to the female friends observed by Coates, speak a *single voice*: “two speakers combine with each other, blend their voices to produce a single utterance” (Coates, 1996, p.119).

I would argue that the pair uses jointly developed and mutually accepted collaborative strategies to structure the activity of content generation. They interrupt each other, use overlaps, or say the same thing at the same time, without either of them dominating the other, showing frustration, or without these discourse features negatively effecting their work. The way they relate to each other (*we* as one single entity) and address the task (externalising plans and decisions as in “We do that one! Alright then!” or asking for reinforcement and suggestions as in “What shall we do?”) shows the partners' efforts to establish and maintain equality, mutuality and reciprocity. Although Coates' observations were of spontaneous get-togethers, it is easy to see that such ability to hold a collective floor and blend with the others in informal contexts may help to blend creative ideas together in formal settings. This, in turn, indicates the continuity between the discourse styles prevalent in informal contexts (such as friendship talk or play talk) and the discourse of classroom-based creative content generation. To support this argument, an episode will be presented from the end of the pair's ICT-based acrostics-writing session.

We are joining the friends just as they have printed and collected their finished poem. They start to play with the keyboard: Carina covers it with the paper, while the yellow lights of *caps lock* and *num lock* are flashing. Then they start a fantasy-like game, involving the children around them.

Sequence 4.3 – Carina and Jenni, poem-writing, ICT

- 1 C: Where is scroll lock, look for scroll lock. ((She presses scroll lock and places
2 the paper above the yellow lights))
- 3 J: Three eyes. ((both giggling)) Do one eye. No, do two eyes ((Carina is
4 pressing keys on the keyboard to have 2 yellow lights on))
- 5 C: Hello! How do you do! ((both giggling)) Are you all right?
- 6 J: ((pointing at the paper)) Got big mouth.
- 7 C: ((inviting the neighbours)) Look what we've got. You can have two eyes if
8 you want. Wow, I've got three eyes, I am an alien ((giggling)). I live under the
9 sea. ((patting Jenni on the shoulder)) Jenni, under the sea, under the sea.
10 ((giggling)) An alien under the sea, under the sea ((almost singing, then
11 patting Jenni on the shoulder again)) Jenni, Jenni, under the sea, under the sea.
12 ((giggling)) I've got one eye.

The first couple of turns show the children getting into the game. They arrange the props (computer keyboard, paper) and then start a fantasy-like sequence. The lights behind the sheet of paper become personified, resembling eyes (line 3). This game of make-believe is extended in line 6, when Jenni identifies other body parts in the created image (*mouth*). Also, Carina starts a dialogue with the imagined creature (line 5: "Hello! How do you do? Are you all right?"). Note that this is not simply an off-task banter. In the ensuing game they actually incorporate the theme of the poem, the world *under the sea*. In line 7 Carina starts a lengthy monologue which reveals that she weaves the theme of their poem into the post-task play, sort of extending the flow of free association beyond the poem-writing activity. She identifies the image as a sea-dwelling alien (line 8), which then leads to the recital of a poem line (lines 9-10: "Under the sea, under the sea"). Thus, one can see the episode as a free extension of the creative ideas they deployed for poem-writing.

The fact that the theme of the poem is used in the post-task game shows the strong appeal of the created images. This, in turn, underlines the centrality of emotions in creative writing. The episode also reveals that there is a very fine line between task-oriented

creative thinking and the cognitive processes involved in free-flowing play (or between creative discourse and play-talk). The girls' ease to shift from one type of activity (work) to the other (play) indicates the similarity or intermingled nature of the two. If so, this further highlights the importance of shared histories, such as friends' shared experiences of co-ordinated play.

It is possible that the pair's well-established collaborative strategies, the mutual trust and the motivation to work together displayed in both studies were grounded in their shared histories as friends. The collective pooling strategies they employed reflect strong intersubjectivity: intimate knowledge of the other, a common frame of reference and the ability to *think together* effectively. Their discourse served the function of *melding together* (Coates, 1996), a feature associated with female talk. (Coates describes this process as similar to jazz musicians' *jam sessions*.) They may have built on a shared language and possibly drew on previous shared experiences, which enhanced their mutual understanding and strengthened their bond.

It is important to note that this pair showed the strongest intersubjectivity among all the participating friendship pairs. The content generation strategy associated with the highest level of sharedness – collective stream of consciousness – was only displayed by them. This may be due to the fact that they liked reading and writing poems in their free time, sometimes together. Thus, the benefits of being close friends were combined with the benefits of a mutual pastime of reading and writing poetry: their shared histories as friends included joint creative writing experiences in informal contexts.

The next excerpt shows a content generation episode of a top ability female pair (See Appendix 9). It is similar to the previous one in the extent of collectivity it displays. The strategy they use was described in Chapter 3 as *crafting* (the joint shaping of an idea).

Crafting is slightly different from collective pooling in the sense that the ideas are used as *intermediate products* (Sharples, 1996), which the partners modify or extend in one way or the other. The episode shows the partners' orientation towards each other, and their skills at joint crafting. In this session, the girls are writing a poem with rhyming couplets, in which the first line of each couplet was set by the form teacher. The set line that they are working on in Sequence 4.4 is *Oh Lordy, Oh Lordy, it pains me such...*

Sequence 4.4 – Dawn and Linda, poem-writing, literacy

- 1 L: What shall we do? ((reading)) "It pains me such."
- 2 Teacher comes round and hands out sheets.
- 3 T: (to Linda and Dawn) That's just for you when you need them.
- 4 D: Ahhh.
- 5 L: *It pains me such.*
- 6 D: **I broke my knee, and fell down ()ful.**
- 7 L: ((interrupting)) **And it hurts so much.** ((they look at each other))
- 8 D: Yeah.
- 9 They both start writing.

The episode starts with Linda's initiation (line 1: "What shall we do"), introducing the set line which they have to continue to write a rhyming couplet. Dawn responds to this invitation with an idea in line 6 ("I broke my knee, and fell down"), which Linda modifies and extends, interrupting Dawn ("And it hurts so much"). The line they create ("I broke my knee and it hurts so much") is the product of shared creativity, showing the openness of the children towards each other's ideas, and their flexibility to weave them into one. Linda uses Dawn's idea both as an *intermediate product* and as the *generator of a new idea* (Sharples, 1996). She incorporates it, and uses it as a trigger to generate new material and complete the line. Again, my argument is that such care and close attention paid to each other's ideas springs from their shared histories and discursive styles as friends. The

togetherness and orientation towards one another is also signalled by the consistent use of *we* throughout the session, describing themselves as joint agents.

The sociometric questionnaire depicts the girls as mutually nominated friends, who like lots of things together: talking, walking and playing with each other at school, talking on the phone, having dinner together, going out to play and shopping when out of school. Furthermore, Linda also notes that she likes sitting next to Dawn and helping her at school. This is a crucial point: although they are both in the top ability group for literacy, Dawn has just been moved up to Linda's group in the year of the observations. The episode may be interpreted as Linda structuring the activity for Dawn. (She initiates the discussion by inviting Dawn to share her ideas, and also introduces the line they need to finish, helping her to focus.) Interestingly though, by the end of the summer term, Dawn's literacy scores were slightly higher than Linda's, indicating her speedy progression (see Appendix 9).

The next two sequences will show the strategy of *crafting* used by two male pairs. Sequence 4.5 is taken from the poem-writing session of a lower-mainstream ability male pair. (The sequence was used in Chapter 3 to illustrate the strategy of crafting.) The theme they chose for the poem they are working on is *football*. Note that in the sociometric questionnaire they both identified each other as the friend they like playing football with. Their shared interest in football is evident from the episode, and it is most probably a topic of heated discussions between the two of them outside the classroom, as well as an activity they enjoy doing together.

Sequence 4.5 – James and Mike, poem-writing, literacy

- 1 M: Hobbies. **Football, football, running into post.**
- 2 J: *Running into mud.*
- 3 M: Yeah.
- 4 J: *Football, football, running*
- 5 M: ((interrupting)) NO, **sliding in mud.** *Football, football sliding in mud.*
- 6 J: ((repeating)) *Football, football, sliding in mud.*

The episode opens with Mike starting a new cycle of content generation for the first line. The idea he comes up with in line 1 is quickly modified by James, which Mike accepts first (line 3), but refines later (line 5). The smooth shift from the image of *running into post*, to *running into mud*, and then to *sliding in mud* demonstrates the boys' skills in sharing ideas and jointly shaping them into something different. The boys' orientation towards each other is apparent from this sequence, they closely monitor each other's input and build constructively on each other's ideas through paired talk.

I will argue that, similarly to the two previous pairs, the boys draw on pre-established collaborative strategies. The theme is a shared topic, and the mutual understanding they display is grounded in shared experiences. Their ease with crafting ideas together can be explained by a *shared frame of reference*, the shared language of friendship and of football. Note that, although the exchanges are quick, their talk does not overlap. Although they may interrupt each other, they take turns, following a single-floor pattern. This finding would fit nicely in the findings of previous research, revealing male speakers' preference for single floor talking style, regardless of their relationship (Coates, 1996). In this sense, Carina and Jenni's discursive repertoire could be defined as specific to *female friendship*.

However, this gender-specific description of the boys does not fully hold. Their discourse styles do not fit existing theories of gender-specific use of high and low affiliation strategies (Strough and Berg, 2000). The boys in Sequence 4.5 are very attentive to each other's ideas and use high-affiliation collaborative strategies – e.g. elaborating on the peers' proposals – which are typically attributed to girls. This sequence – which is a typical sample of the boys' discourse – has only one seemingly low-affiliation feature, *contradiction* (line 5). Note however, that the line does not actually reflect outright rejection, rather the incorporation and modification of the other's idea. Consequently, the analysis of the key characteristic features of their discourse (and that of the observed discourse in general) needs to go beyond gender-related categorisation.

Sequence 4.6 below shows similar discourse features. It is taken from a top-ability male pair's poem-writing session, whose highly collective content generation strategies were already introduced in Chapter 3, in the section on crafting (e.g. Sequence 3.9). Sequence 4.7 is another episode of *crafting*. The boys here are working on the next line of their poem about racing dogs, to continue the previous line, *Tails waving*.

Sequence 4.6 – Zak and Robbie, poem-writing, literacy

- 1 R: ((reading)) Tails waving. ((pause, both contemplating)) **muscles struggling.**
- 2 Z: No. ((shaking his head)) *Muscles-*
- 3 R: ((overlapping)) Cause you have to go around the track.
- 4 Z: *Muscles, muscles, muscles working!*
- 5 R: Yeah! ((both start writing))

The development and refinement of the first line is a joint effort. The boys are highly attentive towards each other's ideas. Robbie starts the discussion, reciting the previous line, which triggers contemplation on both sides. After a short pause he suggests a new line (*Muscles struggling*), which Zak rejects, although repeating the first part of it (line 2).

Robbie responds by trying to justify his idea (line 3: "Cause you have to go around the track"), but Zak has already started to modify the line into *Muscles working*. Robbie quickly and happily accepts this (line 5). Note that Robbie's happy "Yeah!" is a characteristic feature of their discourse, expressing both acceptance and enthusiasm.

Similarly to James and Mike, the pair appears to be skilled at sharing ideas. They take individually presented ideas as shared *intermediate products*, open to modification and refinement. In this sense, individual ideas become a shared property, which when modified, cannot be attributed to either partner.

The discourse features in Sequence 4.6 (and in other content-generation episodes such as Sequence 3.9) are very similar to those of Jenni and Carina. There are overlaps and interruptions, which seem to indicate that the boys occupy a collaborative floor. Also, their discourse has only one seemingly low-affiliation feature, *contradiction* (line 2). However, similarly to the previous episode, *no* does not correspond to the rejection, but to the modification of the partner's idea. Again, these observations point at the need to go beyond gender-specific categorisations when looking at the data. Alternatively one could argue that the boys selected for the current study form an unusual group in contrast with other studies, reflected in their high affiliations based on talking about and sharing intimacies, as described below.

I will argue that the pair builds on collaborative and discourse strategies that were established prior to this activity, in the course of their friendship. According to the sociometric questionnaire Zak belonged to a friendship formation of four friends. Robbie was linked to this formation by being Zak's third mutual nomination. In informal discussions with the teacher and the children I established that the group of boys belonging to this formation were keen on football, regularly playing together. However,

the sociometric questionnaire revealed that Zak and Robbie's affiliation went beyond doing sports together. Apart from playing football in and out of school, they liked sitting next to each other and "telling private stuff", doing Art, Maths, History and Religious Education together, WWF and playstation games. Out of school they liked going around to each other's houses, playing football and swapping. In addition, they listed talking and phoning each other as activities they enjoyed doing together out of school.

Although one cannot disregard the importance of physical activities in young boys' friendship choices, I would place the emphasis on the enjoyment of talking and sharing private thoughts in this relationship. I will argue that these experiences form the basis for the discourse strategies the boys used in the content generation phases, reflected in the sequence above (and in Sequences 3.3-3.5 and 3.9). The section on reflective processes will support this argument. Although there were some differences in their literacy abilities (with Zak achieving a low 4 at the end of the year, while Paul a mid 3), these differences did not result in any significant imbalance in their power-relationship during the tasks.

The content generation episodes of the discourse of four FP pairs so far show high levels of collectivity and the confident use of collective content generation strategies such as collective pooling and joint crafting. The discussion will continue with the analysis of reflective phases in the discourse of these four pairs.

4.2.2 Reflective phases – Planning and friendship discourse

As pointed out before, discourse centring around the overall planning of the content was quite infrequent in poem-writing sessions, as the general plan for the composition was set for the children. Thus, if at all, planning for poems only took place at a micro level. When micro planning occurred in the FP discourse, it was typically collective. Those friendship

pairs who engaged in explicit micro planning, showed a high level of other-orientation, either by inviting the other to share, or offering their own suggestions for consideration. The three episodes are taken from the poem-writing sessions of three different pairs, and share these characteristics.

Sequence 4.7 – Jenni and Carina, poem-writing, literacy

- 1 J: Shall we make up another verse?
- 2 C: OK, let's try.
- 3 J: Right. ((pause)) What about rhinoceros?

Sequence 4.8 – Mike and James, poem-writing, literacy

- 1 J: Should we just do hobbies now?
- 2 M: Yeah.

Sequence 4.9 – Robbie and Zak, poem-writing, literacy

- 1 R: ((they have finished the poem)) We've got to think of a title now.
- 2 Z: Yeah.
- 3 R: You've got to think of a title last, when you finished it.

In each sequence, one of the partners initiates a short discussion, inviting the other to plan the next line or verse (4.7 and 4.8), or suggesting that they think about the title next (4.9). Each of these initiations refer to the partnership as *we*, implying that this micro planning should be a joint effort. Indeed, each little planning cycle involves both children, ideas are shared and accepted before action is taken. In Sequence 4.9 the children also offer reasons to justify the plan. As was argued, explicit reasoning was a characteristic feature supporting reflective phases. Also note that the use of *you* in Sequence 4.9 (line 3) does not indicate individualistic decision making. Rather, it is used in a *generic* sense, similarly to the *you* of transcription-related exchanges, such as "How do you spell ocean?"

4.2.3 Reflective phases – Reviewing and friendship discourse

As detailed in Chapter 3, individualistic and collective discourse features were identified using the other-orientation/self-orientation contrast. Other-orientation in reviewing phases was seen in the explicit offering of evaluative comments, the consideration of those coming from the other person, and the integration of the shared evaluative input in the joint modification, acceptance or rejection of the material. Therefore, emphasis was placed on the use of externalisation to make thinking transparent and reasoning explicit. Thus, evaluative comments on appropriateness which offered reasons were regarded as promoting sharedness. (This feature was not regarded as necessary in the evaluation of the *emotional fitness* of the created material though.) The other important feature was the responsiveness of the partners to the other's evaluative comments. In contrast, the discourse strategies were regarded as individualistic when evaluation was offered but was not considered by the other, or when there was no sharing of evaluative comments, and the process was carried out by each individual in parallel, simultaneously. Thus, the lack of evaluative discourse was actually associated with the lack of sharedness.

When looking at the friends' reviewing discourse, the analysis showed a pattern similar to joint content-generation and planning phases. The discourse of five out of the six FPs contained frequent and explicit evaluative exchanges, revealing other-orientation and strong motivation for sharing. However, one of these five FP's was problematic in terms of task-orientedness. In what follows, I will elaborate on the discourse of *effective pairs* exhibiting collective evaluative strategies, and discuss the two problematic pairs subsequently. Again, I will start with Jenni and Carina, the pair showing the highest level of collectivity.

In Chapter 3, Sequence 3.28 was used to illustrate the high level of collectivity Jenni and Carina displayed in joint reviewing phases. Sequence 4.10 shows their joint efforts in another content generation – evaluation cycle. They have come up with the first line of a rhyming couplet, *Fish fail*, and are trying to develop ideas for a matching line.

Sequence 4.10 – Jenni and Carina, poem-writing, literacy

- 1 C: **Dogs collect the mail.** ((both burst out laughing))
- 2 J: It's gotta be two words.
- 3 C: *Dogs collect the mail.*
- 4 J: *Dogs* ((pause)) **fail.**
- 5 C: No, because that's what we said.
- 6 J: I know. *Fish fail-*
- 7 C: ((interrupting)) *Dogs fail.*
- 8 J: *Fish fail.*
- 9 C: ((looking at the camera, I am just checking the equipment)) She is looking
- 10 at the telly. Don't look, don't look! Oh, she is deciding how to () it! ((I am
- 11 leaving)) Ermmm ((pause))
- 12 J: *The dogs, erm fish fail* ((looking at Carina)) *dogs tail?*
- 13 C: Noooo. ((giggles, eyes on the ceiling)) Ermmm ((contemplates))

The children work as a team and monitor each other's input closely. They offer instant evaluation of the other's input (line 2: Jenni on Carina's idea, lines 5 and 13: Carina on Jenni's suggestions). Instant evaluation here serves to filter the generated content and check it against the (presumed) formal constraints. Their other-orientation is shown in their readiness to offer evaluative comments, to make reasons explicit (lines 2 and 5) and their openness to consider the other's critique. They also try to incorporate each other's ideas. For example Carina repeats Jenni's variation "Dogs fail" (line 4) a couple of turns later (line 7), and Jenni attempts to refine Carina's ideas in lines 4 and 12. Although in the end they abandon these ideas and start a completely new phase of content generation,

their exchanges demonstrate their success in sharing ideas and working on them in close collaboration.

In the next sequence two male friends are writing a rhyming poem about *Food*. They have already written *Squishy-squashy strawberry jelly*, and are about to continue with the next line. They instantly review the generated ideas, which leads to further, short, planning-generation-evaluation cycles.

Sequence 4.11 – Mike and James, poem-writing, literacy

- 1 J: ((reading last line)) Strawberry jelly.
- 2 M: Strawberry, yeah. Strawberry jelly ((pause)) **on your plate**.
- 3 J: Yeah. *On your*
- 4 M: *On your head* ((giggles))
- 5 J: *On your*, ermmm ((thoughtful, pen in mouth))
- 6 M: *Plate*.
- 7 J: No, *on your something plate*.
- 8 M: *On your slippery, slippy plate*.
- 9 J: I was thinking of, *on your something-to-do-with-food plate*. ***On your food***
- 10 *plate*, on your-
- 11 M: (eating his pen) *On your*, ermmm, squishy-squashy-
- 12 J: *On your jumble plate*.
- 13 M: ((with excitement)) Yeah! *On your jumble?*
- 14 J: On, yeah. ((both start writing)) **Jumbled**. You've got a load of food on there.

The boys first re-read the previous line, then Mike starts the content generation-evaluation cycle with a new idea. James first accepts (line 3) then repeats and modifies (line 7) this idea, indicating that they need an extra word in the line. In response, Mike offers a variation containing an extra word (line 8). James evaluates and rejects this, making his reasons explicit (line 9: "I was thinking of, on your something-to-do-with-food plate"). This leads to further content generation, and the development of new

alternatives (*food plate* in line 9 and *jumble(d) plate* in line 12). The latter version is then accepted. The short evaluative cycles are embedded in this content generation episode.

The crucial aspect of the episode is the boys' responsiveness to each other resulting in the complete sharedness of the activity. Their other-orientation in reviewing phases was already demonstrated in Chapter 3 (Sequence 3.31). This is another clear example of their collective efforts: James offers prompt feedback to Mike's proposals (lines 7 and 9), whereas Mike shows sensitivity to the feedback he receives by instantly modifying his proposals in the way James has suggested. Again, I will argue that the sensitivity and attention they display – maintained throughout the activity – and their eagerness to orient themselves towards the other is rooted in their close friendship.

I will continue with a similar content generation-evaluation cycle from the poem-writing session of Linda and Dawn, demonstrating a similarly high level of other-orientedness. They are trying to write the second line of a rhyming couplet, to match the set first line:
Oh Lordy, oh Lordy, I think I'll retire.

Sequence 4.12 – Linda and Dawn, poem-writing, literacy

- 1 L: ((reciting)) Retire.
- 2 D: **Because I was late and that I threw my credit cards in the fire.**
- 3 L: *And I, and I-*
- 4 D: *And I, and I-*
- 5 L: *And I, I know, and I something. And something something fire.*
- 6 D: *And I ((writing))*
- 7 L: *And I got burnt in the fire!!! Yeah, that's good.*

In this sequence the girls are generating ideas together for the second line. It involves a swift, shared evaluation-planning-modification cycle. First Dawn comes up with an idea for the line (line 2: "Because I was late and that I threw my credit cards in the fire").

Linda contemplates over and evaluates the line. In her response she offers a plan to modify the line, indicating the number of words or syllables needed (line 5: "And something something fire"). This in the end helps her modify and refine Dawn's suggestion as "Because I was late and got burnt in the fire" (line 7). The episode is a good example of other-orientation: the use of each other's ideas as *intermediate products* through shared evaluation and modification.

Finally, the next episode presents a successful joint content-generation - evaluation - modification cycle by Zak and Robbie. They are writing a poem of rhyming couplets, consisting of two word lines. They have written *Ears flapping* and are developing ideas for the subsequent line.

Sequence 4.13 – Zak and Robbie, poem-writing, literacy

- 1 R: **Feet dragging?** ((looks at Zak))
2 Z: ((shaking his head)) No, it's like *Legs sprinting*. ((a previous line))
3 R: **Nails scratching.** *Nails-*
4 Z: ((overlapping)) **Nails squashing in the mud.**
5 R: ((shaking his head)) Feet would be squashing, you don't get the nails, you would
6 not put the nails back in (). If it is on a dog track.
8 Z: **Nails scraping.**
8 R: Yeah.

Robbie comes up with the first idea (line 1: "Feet dragging"), which is immediately evaluated by Zak. He points out the similarities with a previously generated and transcribed line (*Legs sprinting*). Robbie then comes up with a new idea (line 3: "Nails scratching"), which Zak modifies and extends (line 4: "Nails squashing in the mud"). This triggers explicit argumentation on Robbie's part regarding the plausibility of the image, prompting Zak to modify the line to "Nails scraping" (line 8). The partners' other-orientation is marked by their motivation to share ideas, to offer instant feedback and

explicit evaluation, and to consider the prompted feedback in the modification of the line. Again, note the boys' motivation to externalise and share their thoughts, as was already seen in Sequences 4.6 and 4.9. I argue that Robbie's comments on the appropriateness of the created image (line 5-6) are closely linked to the construction of a shared world, a process referred to as prolepsis (Rommetsveit, 1979; Stone, 1993; Stone and Wertsch, 1984, cited in Göncü, 1998, p.119). Thus, when describing their friendship as a context for sharing "private stuff", the boys demonstrate their strong motivation to construct a shared world together. Their motivation to understand each other's perspective in informal context permeates their school-based collaboration. It can be seen as a distinctive feature of their paired discourse in general, from which their shared creative writing clearly benefits.

The four friendship pairs discussed so far exhibited consistently high levels of collectivity in all the phases central to creative writing. As the analysis of acquaintanceship discourse will demonstrate, in this sense there is a clear distinction between friends and acquaintances at the initial stages of working together. This argument highlights the value of friendship in the context of paired creative writing. However, two friendship pairs out of the six proved problematic in terms of their discourse strategies and collaborative styles. The analysis will continue with a discussion of these *problematic* friendship pairs.

4.2.4 Friends *mucking about*

So far I argued that affect-linked thinking, such as *musings*, *acting out* or the use of *humour*, takes a central role in content generation and in the writing process on the whole. Nevertheless, in Chapter 3 I noted that humorous, playful discourse can go beyond the purposes of the task, and can result in pointless *mucking about*. To support this argument, I chose a sequence from David and Chris's discourse from the poem-writing project

(Sequence 3.11). The sequence illustrated the boys' highly imaginative content-generation discourse, which however was not used constructively to support the task at hand. The next example further supports this argument, showing a highly imaginative brainstorming sequence that is no longer linked to the task. The two boys are editing their poem about *Hands*, trying to modify the line *At nights hands are as stiff as concrete*.

Sequence 4.14 – David and Chris, poem-writing, literacy

- 1 C: As stiff as pie-, as stiff as pie-crete.
2 D: Ha-ha!
3 C: Yeah, Pie-crete is a mixture, sawdust and water frozen to make a material
4 tougher than concrete. Ships are made out of it are unsinkable. I have read it in
5 my book in your book. You can buy it at some place. I said it into the
6 microphone.
7 D: Nooooooooo. ((mocking-singing tone))
8 C: Sorry. All that blah-tee-blah stuff was an accident, honestly. I was just talking.
9 Like this. Now, then. What. As stiff ass- ((David is now sharpening his pencils
10 and talking to the girls opposite)) What could it be.

Starting off with the simile of *As stiff as concrete*, Chris comes up with an alternative, "As stiff as pie-crete" (line 1). This could be his own novel idea, although he claims to have read about it in a book (lines 4-5). The episode is a monologue by Chris, describing pie-crete as an innovation, which could very well be a good alternative for *concrete* or *rock* in terms of its physical attributes. Yet, the idea is not used for the refinement of the poem. The brainstorming session takes the form of an imaginative fantasy-game, like coming up with ideas for a James Bond movie (the name of James Bond has occurred several times in the transcript). The boys are very far from the context of poem-writing, and in a way, removed from the classroom-setting as well.

So, although joint content generation does take place, showing the boys' skills at sharing ideas – and crafting ideas, as in Sequence 3.11 – the purpose of this episode is questionable. The metaphors they come up with are highly imaginative, reflecting their excellent literacy skills (they are in the top literacy group). The boys show other-orientation and strong interest in each other's ideas. The affective side of this content generation reveals a high level of involvement. However, joint creativity is not used to reshape the poem, neither in this episode nor later. Brainstorming episodes such as the one above have one main purpose: to *muck about* and entertain themselves (note David's appreciative responses in lines 2 and 7). Thus, the pair's shared work is problematic in terms of task-orientedness. I argue that, although humour is useful to bond with the partner and facilitate involvement in the task, the boys seem to only succeed in the first.

Using Sharples' (1996) distinction between novelty and creativity, I would argue that the apparent lack of task-orientedness in the boys' discourse makes the generated material novel but not creative. The boys lack motivation to harness their imagination to serve the purposes of the task and meet the constraints works against productivity. The content generation episode gets separated from its ultimate purpose – to build a poem together – and becomes an associative game for its own sake. Also, the boys often engaged in mock disputes and debates. In the following sequence they are evaluating and modifying the expression *Lonely and lifeless*, which is a line used to describe the status of hands at night. The session is highly disputational, full of challenges and counter-challenges without any reasons offered.

Sequence 4.15 – David and Chris, poem-writing, literacy

- 1 D: ((mocking intonation)) *Lonely and dead.*
- 2 C: ((mocking intonation)) **Abandoned.**
- 3 D: No.

- 4 C: Yeeeee.
- 5 D: *Lonely and quiet.*
- 6 C: *Abandoned.*
- 7 D: No, *quiet and lonely.* ((changed word order)) Which one makes more sense.
- 8 C: Yeah, but I am saying *abandoned.*
- 9 D: No.
- 10 C: I just write it down now. So you have to go with it. Argghhhh.
- 11 D: Noooooo.

Dave repeats his suggestion in lines 1, 5 and 7, slightly modifying it each time ("Lonely and dead", "Lonely and quiet", "Quiet and lonely"). Chris repeats his idea ("Abandoned") in lines 2, 6, 8. Both boys reject the other's alternatives, with only one attempt to offer reasons (line 7: "Which one makes more sense.") On the surface, this sequence could be read as the clash of wills, one which Chris wins by having control over the pen and paper (line 10: "I just write it down now. So you have to go with it"). It appears to be a highly individualistic modification strategy. However, the mocking intonation they both use (high pitch, exaggerated, playful tone) indicates that there is not much at stake, that they do not really care what the outcome is.

It is almost like a staged debate, using the sort of arguments – "Which one makes more sense", "I just write it down now. So you have to go with it." – which real conflicts would have. Yet, the final copy shows that Chris – who was the scribe for the activity – wrote *Quiet and lonely*, abandoning his idea and following David's suggestion. There was no reference to the conflicting ideas at later stages, the debate was dropped completely in favour of David's idea.

I would argue that the problematic features of the discourse can be linked to the relationship between the partners. Both boys were fairly popular in the class, each having two mutually nominated friends. David appeared to be more popular, being nominated by

three other classmates (these were uni-directional choices). The boys belonged to an extensive and intricately linked formation which included virtually all the boys in the class. Their end-of-term test results reveal that this pair was the most able pair among the participant children. My observations of other school-based activities throughout the year and informal chats with the boys confirmed that they were two people with excellent verbal skills. In the sociometric study they identified each other as friends with whom they liked having a chat, working together and watching TV at school, whereas outside school they especially liked playing together and playing computer games. It is possible that the act of inventive, playful *talking* and *thinking together* was the feature that cemented their friendship, and verbal playfulness and creativity was what attracted them to each other in the first place.

When they worked together at school, they brought their shared experiences, collaborative patterns and discourse styles. Thus, their enjoyment of smart *mucking-about* dominated the paired writing activity, and made their collaboration problematic. There is compelling evidence to support this interpretation, provided by the boys themselves. In another sequence from their poem-writing session, they are talking to the two girls opposite, who tell them off for being silly. Here is what the boys have to say:

Sequence 4.16 – David and Chris, poem-writing, literacy

- 1 C: ((to the girls)) I know, we can be really silly.
- 2 D: ((to the girls)) Yeah.
- 3 C: ((to the girls)) () when I want to!!!!
- 4 D: ((responding to the girls)) Yeah, that's what we always do. Yeah.
- 5 C: ((elbowing D to warn him of me coming near)) Eva is here.
- 6 D: It is us two. We are always mad.

The episode above demonstrates that the boys are aware of what they are doing: that they are being "silly" (line 1), or "mad" (line 6). They actually claim to want to be silly (line 3), and that they "always are" (lines 4 and 6). In this episode they describe both their approach to the ongoing writing activity, their perception of themselves as pupils and boys, and the nature of their friendship. Although I would not regard their relationship as problematic in itself, this particular friendship did not support the process of school-based creative collaboration as well as it could have. My interpretation is that the boys would have benefited more from working with another friend-partner, or from working on their own. The analysis of subsequent sessions supported this argument, demonstrating the consistency of the boys' joint working style.

4.2.5 Friends working in parallel

The following section introduces the other problematic friendship pair, Zeena and Louise. Louise had other mutual nominations in addition to Zeena, while Louise was Zeena's only mutual nomination. According to the questionnaire at school they liked working, working out sums, talking, sitting next to each other and eating lunch together, while they listed playing and talking (for) a long time as outside-school activities they liked doing together. They were in the low-ability group.

Although close friends, the episode chosen demonstrates individual planning and content generation – parallel processing – reflecting the lack of collaboration between partners. They are writing a special poem, one made up solely of questions about animals. (The model poem *Hiawatha* was discussed in the whole class prior to the paired activity and was presented on the OHP during the session. The children were asked to write something similar, working with a partner.) At the beginning of the episode the partners are working individually, and Zeena is writing in her preparation book.

Sequence 4.17 – Zeena and Louise, poem-writing, literacy

- 1 Z: **Why do deers go out at night.** ((starts writing))
2 L: OK. Ermmm. ((looking at the OHP))
3 Z: ((overlapping)) **Why do owls ().**
4 L: ((overlapping)) I haven't. Oh, god. ((Zeena starts writing)) I haven't got
5 one!!! Help! ((mock distress))
6 Z: ((writing)) *Why* ((giggles))
7 L: ((into the mike)) Pleaaaaase! ((mock distress)) Help!!!
8 Z: The tape. I've- ((pause)) Right. What do you need. Look at my list to see if
9 you can work something out anyway. ((shows her book to L, lifting it in the
10 air))

The exclusive use of the first person singular ("I haven't got one" in line 4 or "Look at my list" in line 8) indicates that ideas are individually generated and owned. There is no attempt to come up with a line together, or to modify the other's suggestion. In fact, the process of content generation runs in parallel. But still, there is some evidence of comradeship: in the end Zeena offers her work for Louise to aid her content generation (lines 8-10). They do talk to each other, and discuss what they are doing, but it is more like two individuals working side by side and *reporting* to one another than joint work. There is a lack of sharing between Zeena and Louise, without any evidence that they are supposed to work together and come up with a joint composition. As Sequence 4.18 indicates, the pair's discourse reflects individualistic approaches to micro-planning as well.

Sequence 4.18 – Zeena and Louise, poem-writing, literacy

- 1 L: Next I am doing rabbit. no.
2 Z: ((mumbling her next line to herself while writing))
3 L: Next I am doing bears. ((writing))

Sequence 4.18 is an example of individualistic micro planning. The girls do not work together to plan their next line. Although Louise externalises her plans ("Next I am doing rabbit", "Next I am doing bears"), she does not attempt to engage the other in the planning. Rather, she is merely reporting what she is going to do. Indeed, Zeena does not respond at all, she continues writing and mumbling to herself. Note the use of first person singular to mark individual decision making in planning. Similarly, Louise and Clare showed no attempts to engage in shared reviewing either. There were no externalised evaluative comments on either side, not even in the form of *reporting* back to each other, or in the form of externalised monologues.

The question is, whether this partnership was inadequate for the purposes of classroom-based collaboration – reflected in the lack of motivation to collaborate or the lack of orientation towards each other – or whether there were some other reasons for the apparent lack of collectivity. The fact that they were mutually nominated friends seems to point towards the latter interpretation. For example, their interpretation of the task on this occasion may have been that paired work was a vehicle to provide occasional help when one got stuck. Such interpretation of the task is sensible in the context of school-based collaborations, for two reasons. On the one hand, this solution resolves the contradiction between the culture of school-based assessment and between the collaborative task. Second, paired (or co-operative) activities where children work in parallel, but are allowed to discuss the task with a partner are well-established in educational practice. Ambiguities in the instructions – i.e. the lack of emphasis on a *joint product* – would lead to this *default* interpretation of the paired writing activity. In other words, it is possible that the degree of sharedness displayed in their discourse is influenced by the pair's prior experiences in classroom-based collaboration, or their interpretation of the instructions, and does not fully describe their collaborative capacities. Unfortunately, the instructions for this particular session were not recorded, therefore there is no evidence which would

provide an answer. Also, no further recordings are available of the pair, due to repeated absences during subsequent writing projects, as well as the change in the research focus to follow the work of selected pairs more closely. Thus, the circumstances limit the range of interpretations that could be drawn from this problematic session.

Since the observations were carried out in different classrooms, following parallel sessions with different teachers and different children, it was unavoidable that the tasks and instructions had slight variations. On the whole, this did not result in incomparable data, as the variations provide a broad range of collaborative writing activities. However, there are a few cases when instructions made a significant difference, which needs to be addressed in the analysis. The role of instructions and task design in children's meaning-making and interpretation of the task will be further detailed in the next chapter, drawing on episodes where recorded instructions were available.

4.3 Process-oriented talk in the Preliminary data

Process-oriented function was used to label discussion about the step-by-step procedure, management issues, role division, sharing, strategies for collaboration, or the use of technical equipment. Thus, process-oriented discourse was not viewed as centring around the form or the content of the text, but around ways in which it needs to be developed. Although not relating directly to the creative composing process, discourse with this function reveals a lot about the partners' orientation towards each other, and their approach to the task of collaboration. Also, this is an aspect which can ground the contrastive analysis of friendship and acquaintanceship talk, leading in the analysis of acquaintanceship discourse.

The following section will explore the differences found between the process-oriented talk of the AP and FP of the Preliminary Study. The reason to restrict the contrast to this particular group was that, observed as working on the same task in the same class simultaneously, they received identical instructions and guidance for all the observed sessions. Thus, their process-oriented talk describes their personal take on the procedural and collaborative necessities of the *same* collaborative writing tasks. (Whereas Study 1 sessions took place in three different classrooms, involving different writing tasks, which were also *tailored* to the needs of the ability groups.)

As was argued in Chapter 3, process-oriented talk in general involved explicit reasoning, with the partners offering justifications and reasons for the suggestions or challenges. It was argued that such explicitness aids reflection, and the reasoned dialogue helps young writers to problematise the task and identify strategies (e.g. counting syllables on fingers, or marking syllables on the draft sheet). However, when comparing the two pairs' process-oriented dialogues, there were some striking differences.

4.3.1 The process-oriented talk of friends

When engaging in process-oriented talk, the friendship pair was exclusively concerned with the technical details of the task and the step-by-step procedure to follow during the activities. The next episode shows the friendship pair discussing a technical issue, namely, which computer application they are going to use for the writing activity. They are sitting in front of the computer, have turned it on, logged on, and now they are about to choose the programme.

Sequence 4.19 – Carina and Jenni, poem-writing, ICT

- 1 C: What do we need now?
- 2 J: Clicker.
- 3 C: Microsoft Word.
- 4 J: I thought it was Clicker.⁷ ((looks around to see what other people are doing))
- 5 T: Listen, some people have gone in and found their pages reduced. If it is
- 6 reduced, there is a, on the right hand side, let me show you ((runs to the
- 7 *teacher PC* connected to the overhead screen, and continues instructions))

Their explicit discussion on the software application is interrupted by the teacher, who is giving further instructions. The friendship discourse contained no discussion about collaborative strategies or problems with sharing at all. However, this does not mean that their collaboration lacked systematic strategies for sharing and role division. As previous sequences highlighted, the friends' discourse had a *well-established* collaborative pattern, revealing their heightened sensitivity towards each other. Therefore, rules of collaboration or role division must have been established, mutually accepted and practised prior to the writing activities, and as such, were left implicit throughout.

4.3.2 The process-oriented talk of acquaintances

Whereas the *effective* friendship pairs used process-oriented talk to sort out technical issues, or agree on the step-by-step procedure, the main purpose of the acquaintances' process-oriented discourse was to resolve conflicts and to develop strategies for sharing and collaboration. They were frequently engaged in devising collaborative strategies and were constantly renegotiating the roles. Management problems resulted in frequent disputes regarding every possible aspect of the activity, as shown in Sequence 4.20 below. The sequence is taken from the first writing episode of the acquaintanceship pair,

⁷ Clicker is a software application that allows early writers to extend their writing, using pictures as well as words, combined with a talking word processor.

and concentrates on the introduction of the swapping rule: the suggestion that they alternate (and swap seats as well) each time they come up with and type in a line.

Sequence 4.20 – Annabel and Mary, poem-writing, ICT

- 1 M: Can we swap around once you've done the two Is?
- 2 A: ((typing)) OK.
- 3 M: ((mumbling to herself)) Swap seats.
- 4 A: ((typing)) Always holds us down.
- 5 M: ((with funny intonation)) Down.
- 6 A: ((typing)) When the pirates come around.
- 7 M: Ok, down, round ((mumbling to herself))
- 8 A: ((typing)) D, where's the D. Us ((pause)) when ((pause)) where's the H, where's
- 9 the H. When-N the ((pause)) Whoops! Pirates come around! Do you know how
- 10 to spell pirates?

At the beginning of the episode Annabel is typing, wrapped up in the process of transcription. Mary initiates the dialogue by suggesting the swapping rule (line 1).

Although Annabel accepts her suggestion, one wonders how much attention she pays to what is actually being said. Mary repeats her suggestion another time, possibly to reinforce it as a rule (line 3). The rest of the sequence contains Annabel's externalised monologue about transcription (lines 4, 6 and 8-10) and Mary's repetition of some words of this monologue (lines 5 and 7). While Annabel is reciting and typing the lines that she herself came up with – thus dominating the activity – Mary is sitting with her hands in her lap, mumbling to herself and waiting for her turn. There are two distinct functions here: Annabel's utterances are text-oriented, accompanying her transcribing efforts, whereas Mary's turns are either process-related, or not categorisable.

The next sequence also includes some process-oriented thinking. It is taken from a later session on limerick writing. In this episode the partners are negotiating to appoint a scribe

for their draft page. Again, the sequence shows the centrality of role division and strategies for sharing in the process-oriented discourse of the AP. Although these are unquestionably central issues for pairs who have no joint history of working together, their centrality in the children's discourse indicates an imbalance in the attention paid to collaborative strategies as opposed to the content and form of their composition. The frequent need to negotiate roles has the danger of marginalising discourse focusing on the creative process itself.

Sequence 4.21 – Annabel and Mary, poem-writing, literacy

- 1 A: Where- ((looking for the draft sheet)) Here it is. ((tapping on the
- 2 microphone)) I'll write it down.
- 3 M: No, I wanna write.
- 4 A: Oh, but I want to write it down.
- 5 M: And so can I. (What's) my idea, I'm gonna write it down.
- 6 A: Yeah, but you go down in slopes.
- 7 M: Yeah, but it's because I can't read, I can't do it that way ((the draft paper is
- 8 in front of Annabel)) Come on, let me see it too.
- 9 A: Let me write. There was a young ((Mary is still holding the pen)) Yeah, but
- 10 you should do it sideways.
- 11 M: Oh, that's easy, I can do that.
- 12 A: ((takes over)) I will write.
- 13 M: Let me write, too. I had an idea but I won't tell you now.
- 14 A: OK, but you have to write on that line. And if you go up or down, then
- 15 ((pause)) I am not letting you write.
- 16 M: OK. ((pulls the paper towards herself))
- 17 A: ((pulls paper back)) Wait, let us both think. First I'll have it otherwise
- 18 you're writing your ideas down.

This is a lengthy argument, forcing the partners to resort to explicit reasoning in order to persuade the other to let them be the scribe. For example, in line 6 Annabel argues that Mary would not be a suitable scribe, as she is "going down in slopes". Mary defends

herself by offering reasons (line 7: "Yeah, but it's because I can't read, I can't do it that way"). Finally they reach an agreement in lines 14-15. Annabel lets Mary transcribe on the draft sheet, but only if she writes on the line. Although they have agreed, Annabel still cannot let go. She pulls the draft sheet back, arguing that for the duration of the brainstorm she should have it, otherwise Mary would write down her ideas only (lines 17-18). The argument reveals the partners' individualistic views on the ownership of ideas – they are not *ours* but strictly *yours* or *mine* – and the authoritative power attributed to the role of the scribe. It is possible that such approach is driven by individualistic models of assessment they are used to in the classroom context.

Also, the negotiation and re-negotiation of roles using explicit reasoning may be necessary between partners who have no prior collaborative experience and sense of how to work together. Less experienced collaborators need to focus a higher proportion of discourse on the explicit negotiation of roles and sharing. Thus, explicit reasoning can be seen as the means to establish patterns of collaboration, and to *learn to learn collaboratively together* (Littleton *et al.* 2000). Taking this view, the amount of process-oriented talk centring around collaborative strategies and the sharing of roles may be linked to the nature of relationship (collaborative or otherwise) between the partners.

The point to make here is that, although such discourse patterns are not unreasonable or necessarily problematic at an early stage of the working relationship, they may not reflect an appropriate balance between attention paid to the process of collaboration and to the collaborative task. The differences between the two pairs' discourse patterns in terms of the frequency and purpose of process-oriented discussion highlight the complex relationship between shared experiences, discourse styles and productivity. The strong emphasis on collaborative processes, which may be typical for new collaborators, leaves less space for engagement with the task itself (e.g. content generation or reflection),

making the collaborative activity challenging and less productive in the initial phases. Thus, although the explicit discussion of management problems in the AP discourse is vital in the development of collaborative strategies and patterns of shared work, the immediate gains of such discourse – marked by the level of attention paid to the creative process itself – are not so apparent. In contrast, by pairing the close friends in the Preliminary Study, the teacher created a context for collaborative writing in which collaborative strategies and patterns of shared work have already been established. This is an advantage which is often overlooked by educational researchers and practitioners. Also, these observations highlight the need to look at the nature of collaboration as it develops between partners, and changes with growing shared experience.

In what follows, the discussion of the acquaintanceship discourse will follow, building on the Preliminary data and the initial project of Study 1.

4.4 Acquaintanceship discourse

There were three acquaintanceship pairs participating in the current research, one pair in the Preliminary Study and two pairs in Study 1. All the three pairs were selected on the teachers' recommendation. The selected children were not considered and did not consider themselves as friends. Yet, they were happy to work together. In Study 1 the choices were also supported by the findings of the sociometric questionnaire, where acquaintanceship status was reflected in the lack of mutual nomination.

Although during the initial sessions the three pairs exhibited less collective discourse patterns and collaborative strategies than the *effective* friendship pairs, they also varied in the collectivity they displayed among themselves.

4.4.1 Content generation and acquaintanceship discourse

When generating content, all three acquaintanceship pairs adopted fairly individualistic discursive and collaborative strategies during the initial writing sessions. Although the collaborative context *forced* them to consider each other's ideas, resulting in a certain degree of sharing, they did not typically use them as *raw material* for joint association. The analysis will start with the acquaintanceship pair of the Preliminary Study, Annabel and Mary. As Chapter 2 has shown, during the initial sessions the collaboration of the acquaintanceship pair was markedly different from that of the friends'. Episodes of content generation were highly individualistic: the children developed ideas individually, often in parallel. The next sequence has already been used in Chapter 2 to examine the contrasting uses of parallel and overlapping talk by the AP and FP. Here I will re-introduce it with the aim of studying these features in the light of the relationship between the partners. The girls are writing an acrostics poem, in which the first letters of each line vertically read SAILING. They are on their first line, starting with S.

Sequence 4.22 – Annabel and Mary, poem-writing, ICT

- 1 A: I wanted to () **ship, ship, ship.**
- 2 M: I think-
- 3 A: ((interrupting)) **Sailing away on a ship-, on the sea ()**
- 4 M: I, I, I was going to say, s-
- 5 A: ((interrupting)) *Sailing away-*
- 6 M: No, I was going to say s-
- 7 A: ((interrupting)) **Sailing away to the seven seas.**
- 8 M: Listen to what I was gonna say. I was gonna say: **Salty sea on the sea shore**
- 9 ((pause)) what about-
- 10 A: **She sells**, what about **sailing well**, what about **she sells she, sea sells, shells on**
- 11 *the sea shore.*
- 12 M: OK, you can put that down.
- 13 A: OK.

In Sequence 4.22 Annabel and Mary often engage in simultaneous, *unrelated* talk. This sequence is characterised by interruptions (lines 3, 5 and 7) and the simultaneous development of individual ideas. The interruptions are indicative of communication problems and the lack of collectivity. The girls develop their ideas in parallel, and want to get them across, but fail to listen to each other. Annabel generates an idea in line 1, which she elaborates and edits in lines 3, 5 and 7. Mary does not get involved in the shaping of this creative material, as she is busy trying to get her idea heard (lines 2, 4, 6 and 8). Thus, although they show eagerness to share, this is eagerness *to be heard* rather than willingness to "influence and accept influenced" (Gottman, 1986, p.156). Finally, Mary succeeds in her attempts to get Annabel's attention (line 8: "Listen to what I was gonna say"), who, in the end, incorporates Mary's suggestion in the final version of the line (lines 10-11). This movement from parallel processing to other-orientation reflects a development within one episode.

Such discourse was typical of this acquaintanceship pair. The overlapping and parallel features of this discourse may be linked to individualistic approaches to the collaborative activity. The reasons for the individualistic style can be explored by looking at the relationship between the children. The pair did not have much experience in either working or playing together. Thus, their initial difficulties with managing and carrying out the collaborative task may be explained by their lack of shared histories, shared language and shared collaborative strategies. Without collective memories and collaborative experience the partners first needed to learn to work together, to establish a shared language and the rules and strategies of collaboration, and develop a mutual interest in sharing ideas.

The content-generation discourse of the female AP of Study 1 was also highly individualistic. The girls – Jane and Claire – were fairly popular according to the

sociometric questionnaire. Jane had two mutually nominated friends, and has been nominated by two other people as well. She listed *helping* and *doing stuff with* her friends as the activities she liked to do at school, and liked *playing* and *being silly* with them outside school. Claire was neither popular nor isolated: she had a mutually nominated friend, and made as well as received a few one-directional nominations. In the questionnaire she listed *playing tag*, *getting stuck in the mud* and *chasing boys* as activities she liked doing with her friends at school, and *going to the sweet shop*, *playing games* and *going horse-riding* outside school.

Jane and Claire showed very strong individualistic traits, their discourse lacking in togetherness. Although at the start there was some attempt to share individually developed ideas, this was at the level of *reporting* rather than *pooling*, as shown in Sequence 4.23 below. The girls were asked to brainstorm together, and come up with pairs of words that they could use in their poem about *hands*. (That is, they were asked to collect expressions that could be used to describe actions with hands, such as *wave swiftly*, *knock gently*, etc.) This short session preceded the actual writing task.

Sequence 4.23 – Claire and Jane, poem-writing, literacy

- 1 J: I've done three. ((Claire leans over to look at Jane's page, she is reading))
- 2 J: ((reading)) Pointing sharply, hands wave swiftly.
- 3 C: ((mumbling to herself, she is copying what Jane has)) Pointing sharply.

In this sequence Jane reports to Claire that she came up with three word-pairs, which Claire examines, accepts without acknowledgement and then copies. There is no attempt to pool ideas for joint acceptance *before* they are transcribed. Rather, this sequence is indicative of parallel processing: individual brainstorming and content generation. Sharing only occurs in the form of reporting back after individual transcription, and offering ideas to be copied by the other. The process of knowledge telling is not

externalised in the way that would allow the other person to join in (or the observer to follow). The highest level of collectivity in content generation is illustrated in the example below.

Sequence 4.24 – Claire and Jane, poem-writing, literacy

- 1 J: I know one. **Hands-** ((they both seem to turn to their sheet and start to write
2 something)) **Hands hold stuff.**
3 ((There is a cut in the film, probably the teacher's instructions have been cut out.))
4 C: **Hands squeeze slowly?**
5 J: Yeah. No. Quick. Stuff. ((pointing at her writing, she already put "Hands
6 squeeze quick" and "Hands hold stuff down", Claire looking)) *Hands*
7 *squeeze slowly, yeah. Hands hold stuff.* ((Claire starts writing))
8 J: ((whispering)) Miss is over there now.
9 C: ((writing, mumbling to herself)) Squeeze. (looks at Jane's work) What else?
10 J: *Hands* ((pause)) *slowly* ((pause))
11 C: *Hold.*
12 J: *Hands hold stuff.*
13 C: *Hands hold stiffly. Hands hold stiffly.* ((both start writing, Jane changes
14 "stuff" to "stiffly"))

The content generation sequence starts with Jane suggesting an idea (lines 1-2: "Hands hold stuff"), which she then writes down, but Claire does not. Then Claire has an idea (line 3: "Hands squeeze slowly"), which Jane considers and accepts, although she has already written down *Hands squeeze quick*. Note however that she does not change it in her literacy book, only accepts Claire's idea as an alternative. This is not simply reporting and copying as in the previous example but the sharing of individually formulated ideas, even though the generated material is kept at an individual level, with co-existing alternatives.

Then Jane's repeated idea (line 12: "Hands hold stuff") is considered by Claire (although she has to repeat it three times before this happens). Claire modifies this expression to "Hands hold stiffly" (line 13). Jane accepts Claire's modification, crosses "stuff" out and writes "stiffly" instead. On this occasion they came up with a shared and mutually accepted alternative. This indicates that there was some orientation towards each other at this particular point of the session, although in general such level of sharing and mutual influence was highly atypical.

Finally, the male AP of Study 1, Alan and Martin, were both of mainstream ability. They each had a mutually nominated friend, and were fairly popular. Alan liked *playing football* and *talking* with his *friends* both in and outside school. Martin listed *playing* as the main activity to enjoy with friends at school, *talking*, *walking around* and *going bike riding* outside school.

When generating content, the boy AP's discourse was characterised by overlaps and interruptions. The following sequence is presented to show the AP's individualistic style, with two distinct and competitive ideas being introduced simultaneously. For this poem-writing session the boys were given a set title (*Haunted house*), which set the theme as well.

Sequence 4.25 – Martin and Alan, poem-writing, literacy

- 1 M: **If you go in there, you want to come out.**
- 2 A: **There is loads and loads of potions, but there are-**
- 3 M: *If you go in there,*
- 4 A: **There is not enough lotion.**
- 5 M: *If you, if you go in there, you want to come out.*
- 6 A: No, what you gonna get to rhyme with out? Shall we do my one?

During this sequence the boys stick to their ideas for two *rounds* (Martin: lines 1, 3 and 5; Alan, lines 2 and 4). Initially the partners show no indication that they are listening to each other or considering the other's contributions. Rather, they simply state their own individual ideas. They seem to work on the task in parallel, and keep repeating their own ideas in a sort of competitive manner until one or the other finally gives in. It is only the third round that brings about explicit confrontation leading to the resolution of the conflict, when Alan finally offers a critique of the other's idea and invites him to consider his suggestion (line 6). It is important to note that Alan's dismissal is accompanied by sensible reasons ("What you gonna get to rhyme with out?"), and only then followed by a suggestion to accept his idea. This implies that he actually thought the other's idea through and found it problematic from the point of view of rhyming. Also, it shows that he is trying to influence the other, and to convince Martin that his suggestion is better. Although the individually developed ideas do not become collective property in the ideal sense – the partners will eventually challenge or accept them, but will not extend or modify them – the children start sharing, discussing and evaluating the individually developed ideas.

Thus, in contrast to the two female APs, the need for other-orientation was recognised very early in the male AP's collaborative history. Neither of them tried to dominate the other. This was evident from the way they used expressions of *invitation* when generating content during poem-writing, such as:

- What shall we write then?
- Shall we put...?
- Anyway, what shall we...?
- What about...?
- I said how about we do...
- What shall we do?
- Let's put...

The expressions and phrases above are open invitations to bring the other in or ask their feedback. As the examples indicate, the boys characteristically referred to the partnership as *we*. This could be seen as a conscious attempt to build alliances, by emphasising togetherness. Thus, although the boys were not experienced in working with each other, and did not use content generation strategies of high collectivity (e.g. collective pooling), their orientation towards each other, and the acknowledgement of their partnership was evident. The motivation was there, but the partners may have lacked effective strategies to share and jointly develop creative ideas.

Although characteristically individualistic, a couple of successful attempts at shared content generation can be found in their first session. The *emergent* as opposed to *prevalent* nature of such collectivistic features needs to be emphasised. The following episode shows one such successful attempt, where one of the partners introduces an idea, the other immediately modifies it, creating a joint and mutually accepted line.

Sequence 4.26 – Martin and Alan, poem-writing, literacy

- 1 M: **Straight after you get out, your mind would go blurry.** Yeah, *straight-*
- 2 ((pause)) **As soon as you go in your eyes will go blurry.**
- 3 A: I was gonna put, *As soon as you go in, your eyes start to go blurry.*
- 4 M: Yeah. ((both start writing))

This episode shows that Alan is successful in orienting himself towards Martin, and responding to the ideas Martin comes up with. (He modifies *Your eyes will go blurry* to *Your eyes start to go blurry.*) As we saw in the Preliminary data, such other-orientation does not come easily, as the child's own interest in getting their ideas across may conflict with the need to consider the other's thoughts. It requires even more skill and shared experience to actually generate ideas together. The slight, but immediate modification on Alan's part shows that he made the first step in overcoming the difficulties, and he is

using the other's idea as a shared, intermediate product. This is a feature of the collective content generation strategy described in Chapter 3 as *crafting*. Apart from a few successful attempts at collective content generation, however, the boys typically generated and presented individual ideas. Nevertheless, among the three acquaintanceship pairs, they showed the strongest other-orientation and mutual will to share.

4.4.2 Reflective phases and acquaintanceship discourse

Acquaintanceship discourse linked to reflective phases – planning and reviewing – was also less collective than that of the *effective* friendship pairs. However, just as in content-generation phases, the acquaintanceship friends varied in the level of individualism or collectivity they displayed. For example, the Preliminary AP showed highly individualistic micro planning, as Sequence 4.27 demonstrates. In this episode Annabel is typing the line for the first I in their acrostics (SAILING), *I swallow up ships that come near me*.

Sequence 4.27 – Annabel and Mary, poem-writing, ICT

- 1 A: ((typing)) Ships. ((pause)) where's the H?
- 2 M: I've got a good one for L.
- 3 A: ((typing)) Ships. PPPP, ships.
- 4 M: I've got a good one for L.
- 5 A: ((typing)) That come near me. So. that come near me, so listen to me, listen
- 6 to me.
- 7 M: No, don't do the L, don't do the L.

In this sequence Annabel is typing, while Mary is trying to plan the next line, starting with L (lines 2 and 4). However, Annabel is wrapped up in the transcription, and does not respond to Mary's repeated offers to work on this line. In fact, she generates the content for the line herself (lines 5-6: "Listen to me, listen to me"), without waiting for Mary to

share her ideas. Thus, Mary fails in her attempts to contribute to the planning or generation of the line, and the sequence shows Annabel's domination over the activity. Reflective phases were similarly individualistic, dominated by Annabel. The next sequence shows the individualistic approach of the female acquaintanceship pair of Study 1, Jane and Claire, towards planning.

Sequence 4.28 – Claire and Jane, poem-writing, literacy

- 1 C: I am just gonna write Poem. Are you?
- 2 J: Yeah. No. You have got to write something (about) hand first.
- 3 C: ((interrupting)) You don't have to. That's. You can do it two ways, Jane.

- 4 J: What are you gonna write? ((pen in mouth)) I've got one ((starts to write))
- 5 C: I am writing poem.

The pair mainly uses first or second person singular in this sequence, discussing plans as their *own*, without any overt suggestions that they should be shared and shaped together (e.g. in lines 1,2, 4 and 5). Instead, these plans are reported, but kept on an individual basis. As Claire points out in line 3, "You can do it two ways, Jane." Furthermore, instances of shared evaluation were highly infrequent.

Finally, after this brainstorm session, the teacher asked the children to build the poem on the basis of the generated ideas. At this point the collaboration broke down completely. Although earlier in the session they actually showed some attempt to share ideas, this was not extended to the actual writing phase. In the next sequence the pair, drafting the poem, appears to be working completely in parallel, in quiet (or mumbling to themselves). At one point Jane looks at Claire's work, checking what Claire has written while she was talking to people around the table. Claire's reaction is extremely negative, surprising Jane.

Sequence 4.29 – Claire and Jane, poem-writing, literacy

- 1 J: ((reading Claire's work)) Is-
- 2 C: Jane, you are not allowed to copy.
- 3 J: ((looks astonished)) Yes, you are!
- 4 C: OK you can copy mine, but it's my idea OK? ((pointing at her chest for
- 5 emphasis))

The children have been working in parallel for some time. In this episode Jane tries to check on Claire's work and use her ideas. Claire first refuses to share, implying that it would constitute *copying*, and that's not allowed (line 2). Then, as a response to the astonished look she gets from Jane, she modifies her argument slightly, saying that Jane can copy her ideas – as a special deal between the two of them – but stresses her ownership over them. Note that for the rest of the session they continued to work in parallel, Jane copying and Claire sometimes dictating, but without discussing any aspect of the poem.

Claire emphasises her exclusive rights over the ideas she put down on paper, and that she is not willing to share, not even at the level of transcription. Such a heightened awareness of and sensitivity towards ownership is appropriate (and often desirable) in the classroom context, but is not in line with the ground rules of collaboration. Their individualistic style may also be explained by the specific instructions by their teacher. As described in Chapter 2, the teachers taught the different ability groups using the same weekly planner but modifying it to suit the needs of the learners. Thus, instructions regarding collaboration may have differed with each class or activity. The available records of the verbatim instructions for this particular writing session (which, as Chapter 5 will detail, are not complete and exhaustive) reveal that the emphasis was on providing children with guidance regarding the act of writing (e.g. "Now I want you to read out to me what you have managed to work out, what words have you come up with" and then "Start to build

the poem now in your preparation books"). This may have led to the vagueness of what the children in this particular class, for this particular session needed to do in terms of collaboration.

An alternative interpretation is that Claire has come up with a highly imaginative and original idea, introducing rhyming and syllabic pattern into the poem. (The original instructions asked for a free poem.) It is this unique idea which she does not want to share with Jane. Her poem is going to be different from other children's, and she guards this uniqueness with pride. This interpretation points at another potential difficulty with collaborative creativity: the issue of shared authorship. In this sense, the desire to receive individual claim or credit for original material stands in the way of sharing creative ideas and thus using the collaborative context as a platform for perfecting and extending them.

In contrast, the male AP of Study 1 was more successful in sharing reflective thoughts. A good example of shared micro planning was Sequence 3.22 in Chapter 3, presented here as 4.30. Here the boys are generating a line that would rhyme with their previous one, *Your eyes would go blurry.*

Sequence 4.30 – Martin and Alan, poem-writing, literacy

- 1 A: How about, ((looking at the board)) **it's so spooky,**
- 2 M: So ()
- 3 A: ((overlapping)) **You would go skooky.**
- 4 M: () Yeah, but we've got blurry!
- 5 A: No. Oh, yeah, we need to get one to rhyme with this! Something that has got an
- 6 R and Y in. It is going to be hard.

Again, we see an individually formulated and presented idea (lines 1-3: "it's so spooky / you would go skooky"). Martin evaluates Alan's suggestion in line 4, noting that it would

not rhyme with *blurry*. This leads to the joint recognition of the constraints that the previously generated line creates for the next line. Alan explicitly states this (lines 5-6: "Oh, yeah, we need to get one to rhyme with this"), listing the specific formal requirements ("Something that has got an R and a Y in"). This can be taken as a well-defined, shared plan for the next line, which builds on the jointly recognised formal constraints. By doing so, they apply a general rule for the specific lines they are working on. Note the explicitness of argumentation and the transparency of metacognitive processes, which in Chapter 3 were described as supporting reflective phases in the writing process.

Reviewing phases show similar other-orientation, benefiting from the externalisation of arguments and explicit reasoning in talk. In the sequence below such explicit argumentation can be found, regarding the planning and generation of the next line. This is motivated by Martin's suggestion of a line, and can be read as an evaluation of it.

Sequence 4.31 – Martin and Alan, poem-writing, literacy

- 1 M: **It's not that pleasant.**
- 2 A: ((dismissing facial gesture and tone)) Phew.
- 3 M: *It's not so pleasant.*
- 4 A: Look. Try to think of ones that come off that board. ((pointing at the
- 5 whiteboard, which has words they collected during the whole group
- 6 brainstorming session))

In this sequence Martin suggests a line with the word *pleasant* in it – not a particularly well-chosen adjective for the theme of *Haunted house*. In rejecting his idea, Alan suggests that they should use the words from the whole class brainstorming session. Although not explicit, his reaction contains evaluation regarding the word choice: he suggests ways to generate alternatives which would be more fitting. In this case,

difficulties with generating the next line, or the problems with a new idea make Alan reflect not only on the material, but on the processes involved as well. He does not stop at assessing the suggested material, but devises a shared plan triggered by the shortcomings he found with it.

Reflective phases in the male AP's discourse seemed more collective than attempts to generate creative content together: there were no instances of individualistic planning, evaluation or modification. Shared reflective phases were also facilitated by expressions demonstrating other-orientation:

- What can we / What you gonna get to rhyme with...?
- But we've got...!
- We need to get one to rhyme with...
- We could get one to rhyme with...
- We've only got 25 seconds, so we might as well write it.
- We need to think of another one to rhyme with...

Such expressions – similarly to the ones listed in the content-generation section – invited the other to consider some aspect or the other, to plan or evaluate together, to think together. The use of *we*, the explicitness of plans and suggestions show the motivation to share and to join forces. Thus, although the boys may have lacked collaborative experience, they did not lack motivation to orient themselves towards the other and invite the other in. There was evidence for attempts to share in all text-related phases. Although content was typically individually generated and presented, and simultaneously generated *rival* ideas were often *competed*, there was willingness to consider each other's input. Thus reflective phases – planning and reviewing – shaped the individually generated ideas into a shared product. There was plenty of opportunity to develop intersubjectivity, due to the willingness of the partners to share opinions.

Summary

The three acquaintanceship pairs' discourse styles revealed individualistic approaches to content generation, and a reduced level of collectivity in other phases as opposed to the effective friendship pairs. This highlights the positive effects of friendship pairing in the context of the observed collaborative creative writing activities. However, the acquaintances themselves varied in terms of the other-orientation they demonstrated. In this respect the male AP's discourse styles were the closest to friendship discourse. Their talk demonstrated other-orientedness from the start, and clear efforts to work together. Although their ideas were largely individually generated and presented, they became shared through reviewing and subsequent planning. Their process-oriented discussion was also similar to that of friends, centring around technical and procedural issues.

Thus, the distinction between the discourse styles of friends and acquaintances did not prove to be clear-cut. The observed acquaintanceship pairs did not form a homogenous group. Although the friendship pairs in general showed a considerably higher level of collectivity, the different pairs are better described by plotting them on a collective-individualistic continuum than by assigning them to two opposing categories. Their discursive and collaborative styles ranged from the high level of collectivity displayed by the *effective* friendship pairs, to the obvious efforts but less successful sharing of the male acquaintances of Study 1, the highly individualistic patterns of the Preliminary AP, and the complete break-down of collaboration between the third acquaintanceship pair.

4.5 Longitudinal analysis

So far, the discussion of friendship and acquaintanceship discourse has been presented from a static view, approaching friendship and acquaintanceship as two opposing categories of a dichotomy. In Chapter 1 I argued that, in order to understand the way

friendship shapes cognitive development, we need to follow how interaction patterns of children change as they go through different phases of their relationship. The conclusion was that the study of the temporal dimensions of peer relationships needs a more longitudinal approach, to allow the analysis of the evolution of the relationship and paired talk over time.

Since the current research built on repeated observations of most of the participating pairs, the observational data allowed for the analysis of the development of discourse styles over time. However, when attempting to explore these developments, I faced the methodological difficulties of showing changes (progression or regression) or some sort of a status quo using qualitative analysis. How does one capture movement on the individualistic–collective continuum in the collaborative efforts through the qualitative analysis of paired discourse? Where is the line between friend-like patterns in the acquaintanceship discourse, and friendship discourse? In other words, at which point of the continuum do acquaintances become friends? Equally, if there are any observable improvements in the longitudinal analysis, will they reflect the benefits of growing collaborative experience, or the development of the relationship between partners? Also, to what extent do instructions and task design (for example genre or technical equipment used) contribute to the differences? Due to these considerations, the analysis presented here is rather tentative. Instead of presenting conclusive evidence, the aim is to outline general shifts in the collaborative discourse.

4.5.1 Longitudinal analysis of friendship discourse

The repeated observations of Study 1 allowed the detailed, longitudinal analysis of four friendship discourses as Table 4.1 detailed. In addition, one of the friendship pairs

participated in both the Preliminary and Study 1, providing data of their paired work in both Year 3 (aged 7-8) and in Year 4 (aged 8-9).

The stability of the discursive and collaborative styles of this particular pair (Carina and Jenni) has been well documented in the previous analyses. All of the other friendship pairs maintained the level of sharedness and other-orientation they displayed in the initial poem-writing session, in their use of collaborative and discourse strategies to serve text-oriented discourse functions and process-oriented functions. When differences were found, they were linked to the task design and not to possible changes in the dynamics of the relationship. In particular, three task-related aspects proved to be crucial: i) the level of prescriptiveness in the task design, ii) working on a single sheet or using separate copies, and iii) pen-and-paper or computer-supported writing. These differences will be discussed in detail in Chapter 5.

4.5.2 Longitudinal analysis of the acquaintanceship discourse

The acquaintances of Study 1 were observed on four occasions during a six-month period, working on four different projects, whereas the Preliminary AP were observed on three occasions over a two-week period. In what follows, the most central changes will be outlined.

Developing other-orientation

The relationship between the Preliminary acquaintances (Annabel and Mary) was not static, and the dynamics of their collaboration changed within the short period of two weeks. So far I have argued that there were marked differences between them and the Preliminary friendship pair in terms of collaborative strategies, which were rooted in the differences in shared histories and collaborative experiences. Sequence 4.22 illustrated

the acquaintances' individualistic approach to content generation, where sharing meant imposing one's ideas on the other, and coordination of ideas was not successful.

Sequences 4.20 and 4.21 showed the pair's struggle to manage problems of role division. All these features were indicative of the lack of pre-established collaborative strategies.

Nevertheless, during the two weeks there were observable changes in the AP discourse. The first step towards collective thinking was to move from self-orientation to other-orientation: to learn to listen to each other and make one's own ideas accessible for the other. Such movement was seen both within activities (as in Sequence 4.22) and across activities. The following episode illustrates a successful attempt at other-orientation. The sequence is from the second writing activity, during which the girls decided to edit the poem they wrote in ICT, instead of starting a new poem. In this sequence there is a conscious attempt on both sides to understand the other person's point of view, and to make one's own views explicit. As a result, the evaluation and modification of the poem becomes a joint effort, and there is also a growing shared understanding between partners. There is a distinct move from the individualistic AP episodes presented previously.

Sequence 4.32 – Annabel and Mary, poem-writing, literacy

- 1 A: ((reading)) 'When the pirates are around' Do you think that's alright?
- 2 M: No, we don't need pirates, the pirates are not really true.
- 3 A: Yes, they are, they used to be in the olden days.
- 4 M: Yeah, but not anymore (A is smiling at her).
- 5 A: **When sharks and things like that are around.**
- 6 M: Yeah, that's better.
- 7 A: Right, *when the blue whale is around*, cause the blue whale is the most
- 8 dangerousest animal in the world.
- 9 M: And the biggest.
- 10 A: It's the biggest, which means it's the dangerousest. Because it means it's got
- 11 the biggest mouth. ((giggles))
- 12 M: They must talk a lot then. ((they both giggle))

First, Annabel reads a line, and asks Mary's opinion (line 1: "Do you think that's alright?"). This inviting question is in contrast to the individualistic openings of previously discussed episodes, showing an interest in the other person's thinking. Mary – who in Sequences 4.20 and 4.21 had to fight to be heard – evaluates the line, offering clear reasons for her critique. This prompts the modification of the line by Annabel (line 5), whose response clearly demonstrates that she considered and accepted the critique. *Pirates* – deemed to be *out of date* – are replaced by "sharks and things like that" as a more realistic threat on the sea. Annabel then further develops and refines this idea, offering justification. The *blue whales* are chosen as a more appropriate contemporary threat (line 7: "Right, when the blue whale is around, cause the blue whale is the most dangerousest animal in the world"). They then engage in a discussion of the characteristics of the blue whale (lines 7-12). This discussion points beyond the immediate goals of the task. The girls are building a shared knowledge of the world, bridging what they have already known with the information received from the other, combining their individual understandings.

Also note the use of humour, which further bonds them together as partners. The argument is concluded by a joke by Mary in line 12 ("They must talk a lot then"). The joke is shared, they both giggle. Humorous comments and jokes were a characteristic feature in the AP discourse, sometimes openly used to diffuse tension arising from intense negotiations on roles and collaborative strategies. I would argue that the emotional aspects of language use (e.g. humour) were an indication that the acquaintances were eager to get on with each other. I would also argue that in the process of getting to know each other and building a shared understanding of the task, transparent thinking (explicit argumentation) and emotional language were of equal importance.

The next sequence shows developments in joint content generation, taken from the last session with the pair. It shows the pairs' attempts to co-ordinate individual ideas, and integrate them in the shared composition.

Sequence 4.33 – Annabel and Mary, poem-writing, literacy

- 1 A: Right. What do you want?
2 M: I thought we could have. **The pork was so fat.**
3 A: Remember, you are not supposed to end with ork, you are supposed to end with
4 another sound.
5 M: ((mock-anger)) I said the pork was so FAT, ((spelling it out)) F-A-T!
6 A: Fat. ((both giggling))
7 M: **It was like a cat.** ((giggling again))
8 A: **And it would shake like a cat!**
9 M: Yeah. You write it down.
10 A: The pork was so fat. ((writing)) The ((pause)) pork ((pause)) was ((pause)) so
11 ((pause)) fat.
12 M: That it would shake like a cat!
13 A: That it would shake like a cat, now we do that, we do that in the next (line)!

Again, the sequence starts with Annabel inviting Mary to share her ideas (line 1). Instead of fighting to be heard, Mary is given the opportunity and space here to freely express herself (line 2). Her idea "The pork was so fat", is considered, challenged (lines 3-4) – which she refutes easily (line 5) – and then accepted (line 6). The next idea she suggests in line 7 ("It was like a cat") is also considered and modified by Annabel (line 8). The whole process is a joint effort, the children appear here as equal partners who show mutual respect and consideration towards each other. The jokes and giggles indicate a growing bond and trust between the two of them. This content generation episode is very similar to that of the Preliminary friends. Finally, their expanding trust and comradeship is evident from the sequence below, taken from the last writing session with the pair.

Sequence 4.34 – Annabel and Mary, poem-writing, literacy

- 1 A: ((Jenni whispers something to Annabel, both giggling)) No, not again, We
- 2 are never going to give up!
- 3 M: Even if we do, we'll survive, we'll keep surviving?

In this sequence the children openly declare their commitment towards working together on the writing tasks and their motivation to succeed. This is the sort of task-orientation and other-orientation needed for successful collaboration. Note the emphatic use of *we* in the sequence, as opposed to the *you*'s and *I*'s in the previous episodes.

The AP episodes presented above indicated a shift from individualistic patterns towards sharedness and other-orientation. There were signs of emerging willingness to influence and be influenced, and to listen to each other and share ideas in an accessible manner. We also saw the use of humour to bond with each other. The recognition that they need to join forces and commit themselves to succeed together was also apparent from the last episode. What they gained during these sessions is the motivation *to collaborate to learn*, which in turn started the development of more effective collaborative and discursive strategies. The observed improvements in AP discourse reflected growing competence in working with each other as well as developing friendship bonds. Their interactions were not restricted to the collaborative writing sessions. Unstructured observations of other school-activities revealed that the AP started to spend more time with each other (e.g. sitting next to each other during whole-class sessions.) The children actually became friends. Both the children and the teacher confirmed this during informal discussions towards the end of the study, and during subsequent school visits.

The swift improvements in the AP discourse may lead one to question the all-pervasive effects of friendship pairing. Note however that the changes in the AP discourse marked the development but not the prevalence of more collective patterns. They were seen

mostly in terms of *attempts* at other-orientation, and not in terms of *achieved* intersubjectivity in the creative process. (For example, highly collective content-generation strategies, such as collective pooling or joint association were not found in the AP discourse.) In contrast, the friends maintained a high level of collectivity throughout the study. Thus, the long-term benefits of friendship pairing can be seen in the effortless and easy maintenance of high levels of collectivity and intersubjectivity throughout.

Becoming mates

A similarly positive shift was noted when examining the male acquaintances' (Alan and Martin) discourse in subsequent projects. A central development was the emergence of the theme of *comradeship* in the boys' discourse. In the next episode Alan and Martin are working on an advertisement for Disneyland Paris. They need to search their memories to list and describe the attractions they have seen. This proves quite difficult for both of them.

Sequence 4.35 – Alan and Martin, advertisement writing, literacy

- 1 M: Erm. this is a hard question.
- 2 A: It is a hard question, mate.
- 3 M: When I say hard question I mean a really hard question. ((pause)) The flying
- 4 elephants.

In the episode the boys reflect upon the task, confiding in each other and discussing how difficult it is to do it. Joint reflections on hardships, and the reference to each other as *mate* indicate their growing intersubjectivity and their developing camaraderie. Their growing closeness is also revealed in the next episode within the same writing session, both through physical gestures and verbal signs.

Sequence 4.36 – Alan and Martin, advertisement writing, literacy

- 1 A: I need the toilet.
2 M: ((mock-desperate tone)) Oh, don't go!
3 A: Think of an opening statement, OK? ((stands up, and puts his hand on
4 Martin's head then he leaves))
5 M: OK, see you in a minute mate.
6 A: See you in a minute mate.
7 M: See ya, see ya.
8 A: See you in a minute.

In this sequence the boys relate to each other as if they were old friends. Martin expresses his despair at Alan's departure (line 2), who in return strokes his head and tells him what to do while he is away (line 3). Then they exchange greetings, referring to each other as *mates*. The episode reveals the strong bond that has developed between the two boys over the months, clearly marked by the body language and the verbal exchanges. (They too started to spend more time with each other at school, for example sitting next to each other in whole-class phases.) The observed changes were attributed to the development of other-oriented language – the emergence of a shared language to describe their partnership and to relate to each other – and not in terms of task-oriented collaborative discourse strategies. Yet, although not directly related to the discourse of collaborative creative writing, these changes are seen in a positive light: this relationship has developed into a supportive context for sharing and collaboration in general.

Giving up dominance

In the analysis of the initial session the discourse of the female AP of Study 1 was described as highly individualistic, marked by the complete break-down in communication and collaboration during the activity. During the three, subsequently observed sessions the pair has moved somewhat towards sharedness, but the changes were not as dramatic as in the case of the other two APs. While Claire typically worked

on her own, without externalising her thoughts, Jane was often seen trying to be *let in* and to work on a shared basis. Thus, it was Claire's individualistic working style, above all, which led to the imbalance in the input. The following features in her discourse styles were prevalent in all the observed sessions, for all discourse functions (although to a lesser degree towards the end):

- individualistic decision making and work
- disregard of partner's ideas or evaluative feedback
- outright rejection of partner's ideas and feedback
- dictating what partner should do

Since the pair worked with all the three Year 4 teachers in the different writing projects during the study, this cannot simply be attributed to the ambiguity of instructions. Indeed, recorded instructions openly encouraged sharing through talking to each other. Thus, I would argue that the difficulties of this particular pair were due to individual working styles and preferences as well as the lack of shared collaborative experience or close relationship. In what follows, the key features will be elaborated on, with an indication of development towards the end of the observational period.

In the following sequence the girls are writing about their predictions of the next chapter in Roald Dahl's book (*Charlie and the Chocolate Factory*). Although Jane tries to share her ideas, Clare shows no attention and makes no attempt to discuss or negotiate. This leads to a highly imbalanced collaboration, with Jane copying what Claire comes up with.

Sequence 4.37 – Claire and Jane, predicting the next chapter, literacy

- 1 J: **The golden ticket is something that you win in**, erm-
- 2 C: No, we are writing a story of ((pause, she starts to write something)) In.
- 3 J: What?
- 4 C: ((writing) A.
- 5 J: What? Why (do) you do that? ((Claire is still writing and mumbling, no
6 response)) Let's write the same thing, Claire!
- 7 C: ((still writing)) **In a Wonka.**
- 8 J: Let's write the same thing!
- 9 C: ((now stops writing)) *In a Wonka bar,*
- 10 J: ((to herself)) No. Cross all this out. ((she is crossing her line out))
- 11 C: ((writing again)) **gets a**
- 12 J: ((copying C)) *Wonka.*
- 13 C: ((writing)) **a big golden, have** ((pause)) *a big golden ticket.*

Jane starts the discussion, talking about the *golden ticket*, the theme introduced in the previous chapter of the book. (Golden tickets can be found in Wonka bars, with which the lucky finder can go on a trip in the chocolate factory.) Claire refuses Jane's idea, arguing that they are not writing a description, they are writing a story (line 2). However, from this point she continues to contemplate on her own, without externalising her thoughts. She puts them down without discussing them with Jane. In turn, Jane first asks her to "write the same thing" (lines 6 and 8), then crosses her own efforts out (line 10) and starts to copy Claire. The episode shows Claire's disregard of Jane's thoughts or comments, she does not respond to any of them except in line 2. She is working on an individual basis, ignoring Jane's repeated attempts to get involved and work collaboratively.

It is evident from these examples that Claire's approach did not support collaboration. However, it is also clear that Jane did not give up and tried to join in every possible aspect (talking about the writing process, reminding Claire that they need to collaborate, or offering ideas and feedback). Jane's systematic and patient efforts paid off in the end.

During the last observed session – advertisement writing – there were episodes of increased sharedness and collectivity.

In the episode Jane and Claire are composing an advertisement about Milton Keynes, their home town. Following their teacher's advice, they decide to write a sentence about the *parks and lakes*.

Sequence 4.38 – Claire and Jane, advertisement writing, literacy

- 1 T: ((to everyone)) If it helps you, I would like one sentence about the shopping
2 centre,
3 J: ((to C)) You see?
4 T: one about the theatre, one about the parks and lakes.
5 C: Parks and lakes.
6 T: Five sentences.
7 J: Parks and lakes. Willen lake. ((pause)) **You should go to the fabulous Willen**
8 **lake. Everyone loves it there?**
9 C: Or, *Go to the fantastic Willen lake?*
10 J: I think *fabulous* is a better word. So you wanna put *Go to the fabulous Willen*
11 *lake, everyone loves it there.* ((both start writing))

In this sequence Jane has an opportunity to share her idea (lines 7-8), and Claire actually listens to her, reviewing and modifying the line Jane came up with (line 9). What is more, Jane's rejection of Claire's modification – supported with externalised argumentation in lines 10-11 – is accepted, and her version is the one that gets transcribed. There is an observable difference in Claire's attitude, who moves from self-orientation to other-orientation and shows attempts to work collaboratively on this particular task. This is not an isolated incident, but a feature of this particular writing session, observed in both text-related and process-related discourse functions.

4.6 Summary of chapter

The analysis in this section concentrated on joint content generation, planning, reviewing and process-related discourse, and contrasted individualistic and collective discourse features. The identification of discourse functions linked to processes of writing, and the study of how these discourse functions are reflected in paired talk, helped to make interesting distinctions between friendship and acquaintanceship discourse. These can be summed up as the display of different levels of collectivity, indicative of the differences in the existing *collaborative repertoire* of the partners and in the *motivation* to collaborate with each other. These, in turn, were linked to the differences in the shared histories and collaborative experiences of friends and acquaintances. In other words, shared histories and collaborative experiences in informal (friendship) settings were seen as providing both the skills and the motivation to collaborate on classroom-based tasks.

The (*effective*) friendship pairs' discourse was described as reflecting more collective thinking in all phases, which was regarded as an advanced form of mutual engagement and the possible key to productive collaboration in the context of creative writing. Thus, the study of the paired discourse in the poem-writing project showed the benefits of friendship pairing. However, there were two friendship pairs whose work did not completely follow this pattern. One of these pairs showed problems with using the shared talk constructively for task-related purposes, while the other displayed no attempt at creating a shared composition at all. The problems were linked to the lack of task-orientedness, and the interpretation of (or ambiguities in) the instructions. The conclusion was that, when looking at the children's success in sharing creative ideas, we need to look at other contextual aspects, such as the nature of friendship or the instructions and task design.

On the other hand, there were variations in the individualism or collectivity displayed by the acquaintanceship pairs. The gap between friends and acquaintances seemed to be moderated or intensified by other factors, such as the initial level of other-orientation and motivation to collaborate. Although transition from acquaintanceship to friendship was not seen as inevitable, there was an observable development in the AP discourse. This was associated with their growing competence at working together, and also to their developing relationship.

These findings support the argument that friends and acquaintances do not form distinct and homogenous groups. The fact that two APs have clearly moved towards the friends in collaborative styles does not undermine the arguments about the benefits of working with a close friend. Close relationships proved to provide a stable, supportive basis for collaborative creative efforts.

On the whole, the findings indicate that friendships may potentially afford great advantages for school-based collaborative creativity (reflected in the well-established collaborative strategies and the lack of parallel processes in most of the friends' discourse), but point at the complexity of the issue. This implies that my initial hypothesis about the beneficial effects of friendship pairing over acquaintanceship pairing is too simplistic. Friendship effects appeared to interact with other aspects of the collaborative context, calling for a more careful analysis of other contextual features – such as the instructions, task design, individual skills and competencies or the nature of the friendship. Some of these aspects will be discussed in Chapter 5.

5.1 Introduction and overview

The current research has approached development and learning from a socio-cultural perspective, viewing these processes as embedded in the immediate and wider physical, social or cultural context. The implications of such a theoretical approach to empirical work were detailed, and the need for a context-sensitive perspective emphasised. Thus, the special role of context has been highlighted throughout this thesis, both in relation to the processes of learning and regarding the empirical study of such processes. The *layeredness* of context was also emphasised, and the strong interest in exploring the layers through which it is constituted underlined. Thus, context was not seen as a single variable but as a set of inextricably linked contextual features, embracing both the immediate social and cultural setting and the wider socio-cultural niche.

Contextual aspects relating to the task (*creative writing* and peer collaboration) and the immediate social context (*collaboration* with friends and acquaintances) have been discussed in Chapters 3 and 4. The present empirical chapter goes one step further, looking at how features in the context of *classroom-based* joint creative writing – such as the genre, the task design, instructions and the writing medium – and the research context impact upon the observed collaborative creative writing activities. Also, the chapter explores how the participants build on the context in order to make sense of and carry out the task. While the study of some of these features – for example genre or the writing medium – was built into the research design, the chapter also discusses other contextual aspects of the observed activities which were found to be central during the process of

analysis. As Chapter 2 has already noted, such data-driven analysis is well documented in the qualitative tradition (Tonkiss, 1998).

5.2 Task design

The first section concentrates on the contrastive analysis of one aspect of the task design, the use of a shared copy or a separate copy in collaborative creative writing. The analysis will focus on the story-writing project of Study 1. This was a week-long project with two planning and two writing sessions (see Table 2.5 for details). This was the only observed literacy project where the children produced a single copy of their story planner and their compositions. For the rest of the literacy-based writing tasks children were allowed to have an individual copy of the work they jointly developed.

5.2.1 Alternation of the scribe

During this project, the collaborative activities of two friendship pairs (one male and one female FP) were observed (four sessions each). First of all, in the shared-copy context, the two observed pairs adopted a turn-taking strategy when transcribing their jointly developed ideas. They discussed the rules for swapping explicitly and often referred to them during transcription. The following three short episodes show the recurring theme of swapping, with three different alternatives as swapping rules.

Sequence 5.1 – Robbie and Zak, story-writing, literacy

- 1 Z: So, who's gonna start writing.
- 2 R: YOU. You've got neater.
- 3 Z: Go on! You! ((Robbie reaches for the sheets, arranges and puts them down
4 in front of him)) Alright then. OK me. ((Robbie hands the pile over to him))
5 I don't mind. It's up to you.
- 6 R: ((overlapping)) I don't mind either.
- 7 Z: You write for 15 minutes and I-
- 8 R: ((overlapping)) You write for 15 minutes.
- 9 Z: ((singing Beatles song)) Just a little help from my friend.

In Episode 5.1 the boys are at the beginning of the writing session. After some hesitation and *ceremonial* exchanges – in which both boys delegate the job of the scribe to the other – they decide to write 15 minutes each. However, after some brainstorming and shared pooling of ideas, they come back to the question of turn-taking again.

Sequence 5.2 – Robbie and Zak, story-writing, literacy

- 1 R: You do the first bits of writing,
- 2 Z: And-
- 3 R: I decide what to write, yeah? And you write it.
- 4 Z: ((writing)) Yeah.

In this sequence they decide on a different type of role division, where Zak does the writing, and Robbie dictates. The unit of a turn is not specified in this episode. They seem to alternate throughout the activity, but it is left implicit what marks the end of a turn for them. In contrast, the female pair was more strategic about turn-taking, and through a series of similar episodes, they agreed to write two sentences each. They explicitly marked the process of swapping by declaring whose turn it was next. When one broke the *two-sentences-each* rule, the other was quick to point it out and take over.

Such attention paid to swapping rules in transcription points to the importance of the role of the scribe. This may be linked to issues of power, determining whose ideas will be put down on paper. The reason behind swapping could also lie in the complexity of school-based collaboration: it is the most convenient strategy to share ideas and work together and mark individual contributions at the same time. Thus, alternated transcription ensures that the teacher can see that the children worked together. It provides a record of individual input, allowing the assessment of both partner's contributions. Furthermore, alternated transcription may be the result of the perceived expectations of the teacher, as the following sequence demonstrates. (Note though that one could consider assessment and the teacher's expectations as closely linked and inseparable.) In this example the two female partners are talking about whose pen to use.

Sequence 5.3 – Carina and Jenni, story-writing, literacy

- 1 C: Shall we just use your pen? Cause your one does not smudge hardly. And
2 mine does. ((She takes Jenni's pen))
3 J: Go like that though, ((takes pen back from Carina)) like that. ((shows angle))
4 C: No, I am not gonna use your pen. Cause we have to tell, so that both of us
5 have done a different piece of writing. I'll try not to smudge.

First Carina asks Jenni whether they should both use Jenni's pen, since that one does not smudge. This shows considerations of neatness – regarding the teacher's expectations in terms of appearance. However, later she decides otherwise, and wants to use her own pen. She argues that this way the teacher can differentiate between the two writings and can see that "both of us have done a different piece of writing" (lines 4-5). Thus, she wants to distinguish their hand-writing by using different pens. That both of them should have a piece that is recognisably written by them, and so the teacher can see that both of them have contributed, is crucial. I would argue that, by swapping the role of the scribe, these children are trying to fulfil the assumed expectations of the teacher (who did not

specifically ask them to alternate, only asked them to share ideas and allow each other to contribute). Sharing and balanced input does not necessarily mean balanced transcription. However, the observed children saw it as a proof that they did what they were asked to do: to share the task in all possible aspects and to make their work visible for the adults.

5.2.2 Turn-taking and joint creative writing in literacy

The question is whether turn-taking in transcription affects other processes involved in joint creative writing. As the next sequence reveals, alternation does not necessarily change the processes of joint content generation. Jenni and Carina – who have been seen in the previous chapters as highly successful collaborators – maintained a high level of sharedness in phases of content-generation.

Sequence 5.4 – Carina and Jenni, story-writing, literacy

- 1 J: **They, they, they** ((Carina starts writing)) **found a shop-**
- 2 C: **Toyshop.**
- 3 J: *A toyshop* yeah. *A toyshop* **called.**
- 4 C: Called what?
- 5 J: **Toy palace.** ((Carina is writing, Jenni is looking at the people opposite))
- 6 J: ((referring to the opposite pair)) Look at theirs.
- 7 C: (I wrote that) bigger. Toy palace.

In this episode Carina is the scribe. Yet, the content generation is shared, with both of them contributing to the content: *shop* (Jenni), *toyshop* (Carina) and *a toyshop called Toy Palace* (Jenni). However, when initiating content generation, Carina and Jenni switch to first person singular – a feature highly atypical of them in other projects.

Sequence 5.5 – Carina and Jenni, story-writing, literacy

- 1 J: Come on, it's your go.
- 2 C: Now, what I write.
- 3 J: Ermmm.
- 4 C: **The babies started screaming.**

Here we see Jenni marking the new turn, and handing the role of the scribe over to Carina. Although Carina initiates a brainstorm about the next line in the story, she uses the first person singular, in contrast to their usual opening line of "What shall we do?" Indeed, in the shared-copy session, both of them uses the first or second person singular when initiating a new writing cycle ("What shall I write?" or "What are you gonna write?"). They develop the content together, but the process is fragmented by swapping at regular intervals, marked by expressions such as "It's your go" (line 1). As noted before, the implicit reason for such *dutiful* swapping may be the perceived expectations of the teacher. The children's aim is to make individual contributions equal and recognisable to the teacher.

On the other hand, for the male friendship pair's shared content generation, turn taking proved to be more problematic. The first problem was that, due to the alternation, the person who was not writing went off-task, and often started to talk to the people around the table.

Sequence 5.6 – Robbie and Zak, story-writing, literacy

- 1 Z: Here. You go. Write about "**It was getting later in the evening, and the**
- 2 **doge wasn't speaking.**" ((Robbie is listening to the boy opposite, pays no
- 3 attention))
- 4 R: ((to the boy opposite)) Have you seen My stepmum is an alien?
- 5 Z: ((overlapping)) *It was getting late.* Hey, ((pats Robbie on the arm)) *It was*
- 6 *getting later.*

- 7 R: ((to the boy opposite)) Have you?
8 Z: ((overlapping)) *It was getting later.*
9 R: Have you seen My stepmother is an alien?
10 Z: ((hitting the page with his index finger repeatedly as he speaks)) *It was*
11 *getting later and the doge wasn't speaking.*
12 R: ((to Zak, giggling)) It doesn't make sense.
13 Z: *It was getting later now, and the doge was-*
14 R: ((overlapping)) in the evening,
15 Z: *and the doge stayed up all night, probably thinking about the golden*
16 *horses.* ((Robbie starts writing))

In the episode above, Zak attempts to pass the task back to Robbie. But, instead of inviting Robbie to jointly generate ideas with him, he starts to dictate to him what to write. Also, while Zak was writing, Robbie started to chat with the boys around the table, and he is still engaged in a lively discussion with them, ignoring Zak. Zak needs to nudge him and repeat his ideas several times before Robbie actually responds (lines 1-2, 5-6, 8, 10-11). And, although he thinks Zak's idea "Doesn't make sense" (line 12), Robbie still writes it down dutifully. Thus, there is no attempt to evaluate, modify or extend the ideas presented by Zak.

The episode above shows an individualistic approach to content generation as well as reviewing. By taking turns in transcribing the ideas, the boys actually tend to take turns in the generation of ideas as well, leading to the *alternation of input*. During the pair's story-writing sessions, turn taking went to such an extreme that in certain cases the scribe would simply write down his ideas without consulting the other. The only aspect of the process where sharedness was maintained was *formatting*.

Other sessions of the pair (e.g. the poem-writing session discussed in Chapter 4) demonstrate the pair's collaborative skills and a high level of collectivity in all phases

involved in creative writing. I argue that the reduced level of collectivity and sharing in the story-writing sessions is not due to changes in their relationship or attitudes towards each other. It is simply due to the turn-taking strategy they adopted for the shared writing. In sum, in the shared-copy setting the boys did not make full use of the opportunity to share. Their composition was the sum of individual contributions, and did not fully reflect jointly developed and edited material.

In contrast, Carina and Jenni were more successful in keeping all phases shared. They also discussed transcription and formatting. In the following sequence Carina is fine-tuning and dictating a line that has emerged through previous discussions: *One day Claire was riding in the car, with her children, Jake, Becky and Aaron.*

Sequence 5.7 – Carina and Jenni, story-writing, literacy

- 1 C: ((dictating, Jenni is writing)) Jake, Becky and Aaron, Becky.
- 2 J: How do you spell that?
- 3 C: B-E, B-E-C-K-Y.
- 4 J: What?
- 5 C: C-K-Y. Aaron. You need to put a comma ((after "Jake"))
- 6 J: There or where?
- 7 C: On the line.
- 8 J: ()
- 9 C: OK. Another AND ((pointing out where it is missing))
- 10 J: ((reading)) Claire and her children, Jake, Becky
- 11 C: AND.
- 12 J: ((writing)) and Aaron.
- 13 C: A-A, **were driving,**
- 14 J: Shall I do it there? Yeah?
- 15 C: No, **were going out for a ride. In their new car.**
- 16 J: ((writing)) Were
- 17 C: Going

- 18 J: ((asking whether to continue in the same line or start a new line)) Shall I do
19 it there, yeah?
20 C: If it will fit.
21 J: What?
22 C: Yeah. It would fit.

This episode indicates that they are sharing both spelling (lines 2-5) editing (lines 5, 9 and 11) and formatting problems (lines 14 and 18-22). Carina acts as an editor, closely monitoring the transcription of the text, and offering help whenever its necessary. This scribe-editor role division will become an important point of discussion in section 5.3, on computer-supported collaboration. With this particular friendship pair, the analysis further demonstrates the stability of the discourse patterns and collaborative strategies over time. It highlights that the high level of collectivity is maintained across tasks, settings and genres. I would argue that this is a good indicator of the *durability* and *flexibility* of this collaborative partnership, and marks it as a potentially productive and reliable pairing in educational contexts.

Summary

The single-copy task-design requires a high level of sharedness, allowing no space for individual variations, and resulting in a fully joint product. Thus, although in principle it epitomises collaboration in its purest form (where both composition and display are shared), it is more *rigid* and in educational contexts more problematic than the two-copy design. It makes the discrepancy between what is expected of the children within the task of collaboration (to share and join forces) and at school in general (to have an individual contribution that can be assessed) more marked. Turn-taking appears to have allowed both, resulting in a shared product with recognisable individual contributions. At the same time, the *separate-copy* mode offers a less contradictory context for children, where ideas can be freely shared, but the final copy may be individually owned and assessed.

It was shown that the single-copy task-design led to turn-taking in transcription, which had an effect on the pairs' approaches to content-generation and reflection. Although the female pair observed in the shared-copy story-writing project maintained collectivity, their text-related discourse was segmented by the alternated transcription. The effects of turn-taking were even more distinct in the case of the male friendship pair, whose discourse revealed a shift towards individualistic approaches to content generation and reflection (turn-taking in each phase).

The next section discusses sharing and collaboration in ICT-based creative writing, exploring ways in which the computer mediates this activity.

5.3 Computers and collaborative creative writing

Observational phases

The following projects were used for the analysis of computer-supported writing. All of the observed ICT-based collaborations were of ongoing activities, where all the children in the class were asked to share a computer with a partner and produce a shared copy of their work. As Table 5.1 indicates, four observed projects in the Preliminary Study, Study 1 and Study 2 involved computer-use, the ICT-based sessions typically taking 30-45 minutes. 10 pairs were observed in ICT (some pairs more than once). (For a list of participants, see Appendix 9.)

Table 5.1 Observations in ICT

Project	Observed setting	ICT-based observations	Focus of ICT-based writing
Preliminary study			
Genre 1: Poems – acrostics, limericks	Both ICT and literacy	<ul style="list-style-type: none">• 2 pairs• 1 recording/pair• about 45 minutes each	Full writing process
Study 1			
Writing session in ICT linked to history project (NOT creative writing)	Only ICT	<ul style="list-style-type: none">• 6 pairs (4 FPs, 2 APs)• 1 recording/pair• about 30-45 minutes each	Editing and typing up written material
Genre 2: Window-story	Both ICT and literacy	<ul style="list-style-type: none">• 2 pairs (2 FPs)• 1 recording/pair• about 45 minutes each	Editing and typing up written material
Study 2			
Genre 2: Story-writing	Both ICT and literacy	<ul style="list-style-type: none">• only 3 pairs out of the 4• 1-2 recordings of each pair• about 45 minutes each	Story 1: full writing process, Story 2: Editing and typing up written material

Some of these activities centred around the editing and typing up of already written material, but in some projects the full cycle of ICT-based creative writing could be observed (Study 2). The analysis cannot address the issue of the long-term benefits or constraints of computer use for creative writing collaborations. However, since the research samples from a range of projects at different points in the school year – and is not constrained to one school only – the analysis attempts to draw a general picture of ICT practices for shared creative and descriptive writing purposes in the observed Year 3 and Year 4 classes. In what follows, the analysis will be presented, centring around the following question:

- *What are the constraints and affordances of computer mediation in the context of collaborative creative writing?*

5.3.1 Sharing the equipment in ICT

When sharing a computer to write collaboratively, the observed pairs typically adopted some role-division strategy: they either alternated the duties (sometimes accompanied by

the act of swapping seats), or they assigned and kept these roles for the whole duration of the activity. Seven of the ten observed pairs showed some attempt to take turns, while two adopted specific roles for the duration of the activity. Three of the pairs actually swapped seats to mark their turns. There was only one pair who showed no observable attempts to share duties and co-ordinate roles. This finding was not unexpected, as turn-taking is reported in other collaborative problem solving contexts building on the sharing of tools or equipment (Light & Littleton, 1999).

The pairs typically set the rules of alternation at the beginning of the session. This was characteristically a very brief episode, the partners stating and agreeing to the fact that they will take turns, and defining what constitutes a fair turn. However, some pairs took a more flexible approach towards the sharing of duties. For example, Martin and Alan first decided to share the equipment, Alan controlling the mouse, Martin the keyboard.

Sequence 5.8 – Martin and Alan, history project, ICT

- 1 A: Martin, do you want to use the keyboard and I use this ((pointing at the
- 2 mouse)), yeah?
- 3 M: But we write it together.
- 4 A: Yeah.

The role-distribution the boys decide on is very similar to that of the focal pair of the preliminary observations. They choose the distribution of the use of equipment, with the condition that they "write it together" (meaning most probably that they will share their ideas). Such role-distribution, however, was not evident from their work on the computer. Instead, they frequently attempted to co-ordinate work on the keyboard, for example one pressing caps lock so that the other could type capital letters, or they each pressing a key in alternation. And, as the activity progressed, they actually tended to alternate the use of the equipment.

But what did children do when it was not their turn to type? How did they utilise the physical properties of the computer (keyboard, mouse, screen) and the features of the word-processing software application to aid sharing through alternation? Role distribution as a technique has been reported by previous research on young children's collaborative writing sessions. For example, Pontecorvo and Morani (1996) reported alternation between the *ideational* role and the *writing* role. The next section attempts to unpack this issue further.

5.3.2 Monitoring and discussing spelling

Although typing may be slower than hand-writing for inexperienced keyboard users, re-reading typewritten work is easier for collaborating children than that of hand-written drafts. This is especially so in the early stages of literacy development, when even reading one's *own* writing can posit serious difficulties. Indeed, when engaged in paired writing in literacy, the children sometimes showed difficulties in reading each other's handwriting. In comparison, computer-support had the advantage of a clear display of the text, readable for both partners. Interestingly, most of the pairs choosing turn-taking as a strategy made attempts to utilise these physical advantages of the computer. The partner who was not typing often adopted the role of the editor, checking the spelling and formatting of the text on the screen, and working with the additional props, such as schoolbooks. This was not done upon explicit instructions from their teachers, who only instructed them to share the work and allow each other to contribute. The following episode shows the children's attempts to negotiate the roles of the scribe and the editor. This episode is taken from the beginning of the pair's writing session.

Sequence 5.9 – Mark and Simon, story-writing, ICT

- 1 S: We are doing a sentence each.
- 2 M: OK.
- 3 S: ((typing something)) Oh, done it again. ((in response, Mark presses
4 backspace a couple of times))
- 5 M: I correct the mistakes.

The boys first agree on taking turns and writing a sentence each. Then Simon expands the rules to include role division in editing spelling (line 5: "I correct the mistakes"). The role of an editor is a unique feature specific to ICT-based collaborative writing sessions. It was never explicitly negotiated or implicitly allocated or taken up by the partners when working in literacy. The allocation of the role of the editor reflects the active search of the children for possible duties.

Thus, computer-supported collaborations on a shared writing product can benefit from the physical features of the computer medium, enabling the partners to engage in the spelling and correction of the text their partner has written or is writing. Turn-taking in this sense is not restricted to that of the scribe, but the partners can also swap the role of the editor. This can be especially useful as a strategy among less experienced users of the word-processor, who this way do not have to split their attention between the keyboard and the monitor. This role differentiation is very similar to the *driver-navigator* role distribution reported in computer-supported joint problem solving (Blaye *et al.*, 1991, in Light & Littleton, 1999), described in Chapter 1. The benefits of such role distribution were associated with the creation of new metacognitive space for reflection, allowing the partners to engage in some sort of *metacognitive monitoring* of the processes.

The next sequence is a good example of such effective sharing of duties. The two partners are working on the transcription of a jointly composed line about Henry VIII (*He didn't*

wear a crown). Dawn is typing – with eyes on the keyboard – while Linda is looking at the screen, dictating and editing.

Sequence 5.10 – Dawn and Linda, history project, ICT

- 1 L: No! ((Dawn keeps on typing though)) He didn't. That's not right, Dawn, you
2 didn't write, you didn't write, it's n't ((types it for her))
3 D: Oh, yeah. ((continues typing))
4 L: N't.
5 D: ((typing)) didn't.
6 L: ((dictating)) Didn't ((pause)) have to ((pause)) wear ((pause)) that's not how
7 you spell wear! ((Dawn giggles and starts to correct it)) It's W-E-A-R.
8 ((Linda looks at the camera, Dawn is typing)) A-R. ((into the microphone))
9 A crown.

Dawn's physical actions prompt a verbal critique from Linda (lines 1-2). When Dawn does not respond by correcting the spelling, Linda intervenes and corrects it herself. Similarly, when Dawn types *wear* incorrectly, Linda points this out, and in turn Dawn corrects the spelling. Such close collaboration is clearly beneficial for the formal quality of their shared composition. Sharing the tasks of the *scribe* and the *editor* means that the mechanical and mental aspects of transcription can be separated and shared.

This episode also reveals how interwoven verbal and non-verbal means of communication are in this setting. Through the physical act of correcting *wear*, Dawn communicates that she accepts Linda's evaluation of its spelling. Equally, by offering evaluative comments on the transcription of the text, Linda shows her involvement in the process, emphasising the jointness of their work. Such a mixture of verbal and non-verbal exchanges makes it very difficult to study computer-supported collaboration solely by focusing on the verbal input.

5.3.3 Monitoring and discussing software use

The editor's role did not seem to be restricted to sorting out spelling issues. It was used for an equally important purpose, to oversee the use of the software application to get things done. The children participating in the study were beginner users of word processing packages, who were just learning how to manoeuvre within a word document, and to use the word processor for writing purposes. Also, they were beginning users of computers in general, with limited but growing competence in using the keyboard. As a result, they were less experienced with the computer medium than with the pen-and-paper mode.

Thus, the pairs benefited from working together and jointly working out the possibilities and constraints of the word processing software application. Such discussions typically built on a mixture of verbal and non-verbal exchanges, and centred around three aspects: finding keys on the keyboard, doing formatting with the word processor and using the spell check and spell correcting functions.

The next two sequences focus on formatting issues. In the first sequence, the editor-partner (Robbie) is giving instructions to the scribe (Zak) about navigating on the screen. The boys' aim is to move down the page, and write the title in the middle, after having typed in their names in the top left hand corner.

Sequence 5.11 – Robbie and Zak, history project, ICT

- 1 R: Un-highlight it. ((Zak is working with the mouse)) Click down, down, down,
- 2 down. ((Zak presses *down* key repeatedly)) Down one. That's it. Then go
- 3 across. ((Now Robbie is pressing some keys on keyboard, while Zak is
- 4 grabbing the mouse)) That's it.

Robbie offers detailed, step-by-step instructions. Zak follows Robbie's verbal prompts on the keyboard, without any verbal response. Sharing the equipment means that they can navigate more easily together than individually, one of them focusing the keyboard and the other checking the screen for the results.

The next sequence captures the same process in another pair's collaborative efforts in the history-writing project. Linda is typing the title (*Why was Henry VIII such an important king?*) and Dawn is working as an editor.

Sequence 5.12 – Linda and Dawn, history project, ICT

- 1 L: Title. Can't remember what it was. Why ((typing))
- 2 D: No, no! ((trying to intervene on the keyboard))
- 3 L: Do it in bold. ((to Dawn's actions)) NO!
- 4 D: You've got to go into the middle! ((presses some keys on the keyboard))
- 5 L: That's not how you centre! You centre like this! ((pressing space many
- 6 times)) Do the title. Why ((typing))

When Linda starts to type the title, Dawn quickly intervenes, arguing that the text should be centred (lines 2 and 4). She also tries to do it herself, which move is evaluated by Linda (line 5: "That's not how you centre! You centre like this!"). The strategy she uses – pressing space several times – is identical to the one adopted by the previous pair. It is not necessarily the best solution, yet it shows the children's emerging word processing skills, mediated by social interaction. These two episodes show how the computer structures and resources joint formatting processes, allowing quick and easy editing but requiring specific word-processing knowledge.

The difficulties with the use of the word-processing application highlight the constraints of writing with the computer tool by less competent users. The benefits of a more

readable text – accessible for shared transcription and formatting by both partners – are counterbalanced by the difficulties of these children due to their lack of experience. Thus, there is a danger that sorting out problems with the software application takes up too much time and effort, taking away valuable space from creative processes.

The third aspect of software application which was a frequent topic in the observed dialogues between editors and scribes was the use of spell-check and automatic correcting features. The following two episodes illustrate the children's growing understanding of these features. Sequence 5.13 shows the partners' special interest in the auto-correct feature (e.g. *capitalise first letter of sentences*). This is a feature which comes up in many transcripts, showing that the children are testing its generalisability. In this episode Robbie is dictating a line they have just agreed on: *Henry could speak four languages, English, French, Latin and Spanish.*

Sequence 5.13 – Zak and Robbie, history project, ICT

- 1 R: ((dictating)) Languages. Ermm.
- 2 Z: ((typing)) Lang-U-ages.
- 3 R: That's it. ((dictating)) English, comma-
- 4 Z: He could speak four languages. ((typing))
- 5 R: English,
- 6 Z: I was gonna put English ((typing)) Cause it will change it, won't it?
- 7 ((meaning that he did not want to use a capital letter, expecting the
- 8 programme to automatically correct the spelling))
- 9 R: Full stop. Arghhh! ((Zak uses backspace)) No, don't do that! Just click it
- 10 on left and it will-
- 11 Z: It didn't change it this time though. ((typing again))
- 12 R: I know, it never does if it is in the MIDDLE of a sentence! ((looking at Zak
- 13 who is typing))
- 14 Z: True!

In this sequence Robbie dictates and Zak types the sentence. When typing the word *English*, the scribe (Zak) decides to try to write the word without a capital letter, expecting that the programme will automatically correct the spelling. This is a feature of the programme he seems to be consciously using (line 6: "Cause it will change it, won't it?"). Naturally, the automatic spelling does not work. First, the editor (Robbie) instructs Zak to left click with the mouse on the word *english* to get spelling options and change the spelling (line 9). Then they discuss the reasons why the automatic feature did not work this time. Robbie comes to the conclusion that it does not apply in the middle of the sentence, only at the beginning. This is an appropriate description of the software feature, showing progress in their understanding.

Finally, an episode will be presented focusing around the spell-check function. One of the biggest concerns the children had in ICT-based writing sessions was the automatic spelling and grammar check function, which frequently marked their texts with red and green underlines. Informal discussions with teachers revealed that it was seen as a good opportunity to raise children's awareness to typical spelling mistakes (which otherwise would go unnoticed in hand-written texts). Therefore, children were encouraged to try to sort out the problems indicated by the automatic spell-check, and to try to produce their neatest possible work. All pairs showed knowledge of the *Grammar and Spelling* option, which they used to correct the underlined words.

In the episode below the partners are trying to type in their first names, neither of which is recognised by the in-built spell-check feature. The partners decide against the assessment of the spell-check function.

Sequence 5.14 – Carina and Jenni, history project, ICT

- 1 C: It doesn't know your- ((reaching for the mouse to go to spell check))
2 J: Don't know my name.
3 C: ((giggles)) Jennie, Jeanie. Ignore please! ((playful intonation, pressing ignore,
4 then starts typing her own name, which gets underlined)) I think I know my
5 name.
6 J: No, ((grabbing the mouse)) cause you didn't do, you ain't done-
7 C: Left click ((goes to spelling options))
8 J: Yeah.
9 C: ((reading options, comic intonation)) Catherine, Katherine, ignore all!

The episode shows the children's understanding of the limitations of the automatic spell-check function. They are clearly aware that the vocabulary of the software is not infinite (line 2: "It does not know my name"), and they have surely seen their names underlined before. They go to the Spelling and Grammar option in order to remove the line from under their names. (By clicking on ignore they mark these names as not conforming but accepted by the user.) This is a routine procedure for both of them, which they perform with mock indignation. When Carina fails to go through this process for her own name, Jenni reminds her to perform the routine (line 6: "No, cause you didn't go, you ain't done").

It is obvious from these episodes that collaborative writing activities in ICT offer plenty of potential for the partners to share their existing knowledge and build a shared understanding of the use of the word processor. It is also clear that the scribe-editor role division has potential benefits for the children's development in spelling and formatting. The computer tool offers a platform for more shared transcription phases, due to the increased readability and accessibility of text for both partners. It allows children to show greater sensitivity towards aspects of writing typically emphasised by the teachers (spelling and neatness).

However, the analysis of the interaction also indicates potential problems with computer-based transcription. Young, inexperienced writers and word-processor users may become too preoccupied with spelling and formatting, which can hinder the actual process of creative text composition. In other words, the benefits of using the computer tool (clearer display and spelling functions allowing neater work) can undermine the creative process by leading to an over-emphasis on formal representation. Thus, the affordances in terms of transcription and formatting can also mean constraints in terms of the creative flow. Previous work which reported the beneficial effects of the word processor regarding lexical density and cohesion (Jones & Pellegrini, 1996), was carried out in educational settings, but not necessarily as part of ongoing classroom practices. In these studies children were encouraged to use *inventive spelling* and concentrate on the content of their composition (Jones & Pellegrini, 1996). Such a content-centred approach, as indicated earlier, is in opposition to the observed ICT-based educational practices.

Also, the same benefits of the word processing software (e.g. easier editing, cutting and pasting) can be *masked* by the complexity of using a new writing medium, indicated by the strong emphasis on technical issues. Those who found longer texts of higher quality in computer-based settings (Jones & Pellegrini, 1996), worked with a word-processing software specifically designed for, and thus easily mastered by young children (*Kid Works 2*). Since the word-processing software used in the current study (*Word for Windows*) was developed for general use, it may be more difficult for children to learn to work with. Therefore, I would argue that the benefits would be more evident when sufficient experience in using the software application is achieved.

The next section discusses how turn-taking in ICT impacted on processes of joint creative writing, affecting the success of the partners in combining their efforts and producing a

shared creative product. The analysis concentrates on the ICT-based data, excluding the history project (where children did not engage in creative text composition but wrote a factual description).

5.3.4 Turn-taking and joint creative writing in ICT

When discussing Study 1 story-writing project, it was shown that the single-copy task-design led to turn-taking in transcription and towards more individualistic approaches to collaboration. Similar effects were found in ICT-based shared creative writing. In what follows, two problematic aspects will be discussed, *rigid turn-taking*, and *turn-taking leading to domination*.

Rigid turn-taking

Some children adopted a rigid turn-taking strategy in ICT, characterised by highly externalised rules, conscious efforts to maintain fairness – sometimes with a competitive edge – and carefully balanced contributions. For example, Mark and Simon of Study 2 decided to swap seats to mark their turns. They showed sensitivity towards fair contribution, with a slight competitive overtone. So much so, that breaking the rules led to verbal disputes and some physical squabbles over the keyboard.

Sequence 5.15 – Mark and Simon, story-writing, ICT

- 1 M: ((Simon is typing)) Ok, I've got to do, I've got to do-
- 2 S: ((interrupting)) No, I'll do it, we do a sentence each! ((small fight over the
- 3 keyboard, Simon wins))

While it is Simon's turn to type, Mark suddenly tries to take over and work on the keyboard. Simon reminds him of the rule they have decided on (line 2), and a dispute ensues, with each child trying to push the other's hands away from the keyboard and take

control over the equipment. This sequence shows that the issues around alternation rivalled in importance with issues of content. It demonstrates how careful the boys were about maintaining the balance, and having an even share of the computer use. Such process-oriented discourse formed a central part of their interaction, taking up a considerable amount of time and effort. Furthermore, the physical act of turn-taking on the computer often broke the flow of the activity, as Sequence 5.16 highlights.

Sequence 5.16 – Mark and Simon, story-writing, ICT

- 1 S: Magic. Full stop! ((non-verbal sign for swapping seats))
- 2 M: Swap seats! ((They are swapping seats. Mark is pressing some keys,
- 3 trying to get to the end of the line Simon has just finished. He seems to
- 4 press enter at the end.))
- 5 M: What? ((he doesn't like what he sees on the screen))
- 6 S: Go back! ((presses some keys)) Then carry on!
- 7 M: I don't want it like that! ((pressing keys))
- 8 S: Put 'full stop'.
- 9 M: ((reading last line)) Asked for magic.

It is apparent from this episode that Mark finds it difficult to get to the end of the line which Simon has just finished. Swapping halts the activity both at the level of transcription and at the level of creative content generation. Thus, the strategy of swapping halts the flow of the creative process. There was a further problem arising from turn-taking for this particular pair. The partner not working on the computer often got distracted by other people, or simply went off-task (and, for instance, started to play with a rubber), only showing interest when it was his turn again. As a result, turn-taking frequently led to *alternated input*. That computer-supported content generation was not always fully shared is highlighted by the following extract. Prior to this episode Simon was typing a line, while Mark was talking to the boys on his right.

Sequence 5.17 – Mark and Simon, story-writing, ICT

- 1 S: ((finished writing)) Come on then, give me a sentence. ((Mark presses
2 some keys then they swap seats.))

In this episode Simon is doing some individual typing. Mark does not monitor the transcription. Instead, he is chatting to people around him. Thus, the editor-scribe roles are not shared in a way that would allow them to benefit from the skills and attention of both partners. Furthermore, when Simon finishes, he invites Mark to "give him a sentence", meaning that it is his turn now to come up with some ideas. Thus, the boys seem to feel responsible for their own turns only, and the individual contributions do not necessarily become fully shared.

Although turn-taking was seen as potentially beneficial for joint processes of transcription, this section highlighted the problems with *sharing through alternation*. It was noted that the systematic and rigid maintenance of balanced contributions took up a lot of time and effort, and often broke the flow of the activity. Deleting writing or refusing the other the opportunity to contribute because it was not their turn were typical features of such conscious, *rigid* turn taking. Also, the problem of going off-task as a result of alternation –leading to individualistic content generation, editing and transcription – was also noted. Again, the contradiction between the need to take turns as a scribe and the need to keep the creative process as a fully shared enterprise has to be emphasised, as a potential drawback in this particular context.

If our ultimate aim with collaborative activities is to facilitate children's shared understanding and their joint engagement in meaning-making and knowledge construction, turn-taking in generating and translating ideas cannot be taken as an ideal strategy. Especially so, if we define content generation as a free-flowing, open-ended and

non-linear process, which will suffer from the activity being broken down into linear segments. When each partner becomes the owner of his or her turns, stopping the other from getting involved, the composition they are writing is not the fusion of shared ideas, but the ad-hoc compilation of individual ones. In sum, turn-taking on the computer (or in the pen-and-paper mode) can make collectivity in creative thinking difficult to achieve.

This does not mean that collectivity and sharing was not achieved in ICT-based creative content generation and reflection. When discussing the stability of discourse styles and collaborative strategies, one particular friendship pair's collaborative repertoire has already provided examples for highly *collective* efforts in ICT (Carina and Jenni, Sequence 3.14). Their work shows that turn-taking is the most useful when taken as a guideline but not as a rigid structure imposed on the collaborative process. In the next section more problematic collaborations will be discussed.

Inadequate application of swapping rules

With some partnerships, there was a mutual decision to take turns, but rules were not kept, leading to domination and imbalanced contributions. The domination went unchallenged or resulted in the constant re-negotiation of roles. The problems domination can lead to have already been noted in Chapter 4, with regards to the acquaintances of the Preliminary study. Their ICT-based discourse reflected management problems, resulting in frequent disputes regarding every possible aspect of the activity (Sequence 4.22).

The next pair's discourse also reflected an imbalance in contribution. In the session discussed here, they were jointly composing the ending of their story, the plan for which they had drawn up in literacy. Although at the beginning they decided to take turns and write a sentence each, one of them (Lisa) gradually took over and dominated most of the activity. As a consequence, Julie felt that the *swapping rules* needed to be re-negotiated.

Role division became an issue of frequent debate, resulting in a lot of process-oriented talk and taking a lot of attention away from the actual writing process. The next three sequences show the frequent re-emergence of the issue.

Sequence 5.18 – Lisa and Julie, story-writing, ICT

- 1 J: Is that the end of the sentence?
- 2 L: ((typing)) As she finished. NO!
- 3 J: OK. Hurry up then. You have to go up there and then it's my turn. ((pointing
- 4 at the end of the line))
- 5 L: You don't know where my line is stopped. ((giggles, looks at camera))

In this sequence Julie initiates a short discussion, trying to clarify when the other is going to finish her sentence (line 1), and stating that it is her turn to write next (line 3).

However, from Lisa's response it is obvious that Julie is not taking part in the process at the moment, she does not know what Lisa is writing and how long her line is going to be (line 5). It is apparent that content generation is not fully shared but individualistic.

Indeed, Lisa dominates the activity by monopolising the keyboard, and by sidelining Julie in the generation and shaping of ideas. At a later stage, Julie raises the issue of turn-taking again.

Sequence 5.19 – Lisa and Julie, story-writing, ICT

- 1 L: **She got, she found herself a baby boy called Junior, popped out!**
- 2 J: Yeah, but when is my turn? I just have to do, 'she went', "till one day, she
- 3 lived happily ever after". That's all I get to do!
- 4 L: My God, Julie, we have to do at least ten lines!
- 5 J: Ah. ((she is smiling, Lisa is patting her on the arm, and moves close to her))

Reaching the end of their storyline (they are at the very end of their story plan), Lisa comes up with the next line. Julie responds by remarking that, the way it stands, she will

only get to contribute to the very last point in the storyline. She implies that so far she did not have much opportunity to do so (lines 2-3). She is reassured by Lisa that they will have to write a lot more, implying that she will have the chance to contribute. However, the extent of the imbalance is revealed by the next sequence, in which the partners are talking about reciting the story-ending that they have just finished.

Sequence 5.20 – Lisa and Julie, story-writing, ICT

- 1 J: We do it all together. Yeah.
2 L: No, I tell you what you read. I read, I read you what I write. And she
3 finished her worldwide travel and went into her palace, and she was eating
4 chilli con carne,
5 J: And you do-
6 L: And because, no, no, whatever we wrote!
7 J: I haven't wrote anything.
8 L: OK, I wrote, And she'd finished, 1-2-3-4-5-6-7- And she finished, Right, I
9 have those two, you have those 2, I have those 2, and both of us have that
10 one! So I have those 2, you have those 2, I have those 2, and both of us
11 have that one.

Although Julie wants to read the composition together, Lisa decides that they should each recite the lines that they have written. However, this is problematic, as Julie has not written much (line 6: "I haven't wrote anything"). In turn, Lisa distributes the lines in between them, so Julie gets to read about one third of the story (lines 3-4 and 7), and Lisa gets about two-third of it (lines 1-2, 5-6 and 7). By insisting that she has the sole right to recite the lines she has written, Lisa emphasises her individual ownership over her own ideas. Thus, ineffective turn-taking appears to have had an impact on not only the transcription but on processes of design and reflection, resulting in an unbalanced creative input, and individual ownership of the product. Note that, similarly to the male friendship pair in Sequence 5.6, this pair's highly individualistic approaches were restricted to the ICT-based writing, and were not observed in separate-copy literacy sessions.

Summary

This section looked at the role of the computer in structuring collaborative creative writing activities. It was shown that sharing a computer characteristically led to turn-taking in joint writing activities. This was seen as the platform for a unique role differentiation between the *scribe* and the *editor*, a role division highly beneficial for editing and spelling among less experienced writers. The benefits of such role distribution were associated with the creation of new metacognitive space for reflection. Thus, editing, formatting and transcribing were seen as processes for which computer-supported turn-taking could offer potential gains.

However, it was shown that the benefits of a more readable and accessible text – open for shared transcription and formatting by both partners – are counterbalanced by the difficulties due to the children's lack of experience with the particular software application and computers in general. The danger that sorting out procedural and technical issues takes up too much time and effort, taking away valuable space from creative processes, was noted.

This section also discussed the effects of turn-taking on collaborative creative processes. It was shown that swapping breaks the flow of creative text composition and that rigid alternation can lead to individualistic input. Thus, content generation does not necessarily benefit from sharing through alternation in ICT. Finally, it was highlighted that in some cases, sharing the computer could lead to domination, with negative effects on the collaboration. The partners who monopolised the equipment dominated the generation of ideas as well, with little consideration for their peers' contribution.

Research on collaborative problem solving has provided empirical evidence that participants do not benefit from partnerships involving a high level of dominance and individualistic decision making (Light & Littleton, 1999). In line with this argument, the current research demonstrated that creative collaborations which do not make use of the presence of both partners and do not build on active sharing can not have much practical impact.

It was demonstrated that the way partners approached the sharing of equipment and set up turn-taking had an impact on the nature and quality of the collaborative creative writing process. It was noted that flexible approaches to sharing had a beneficial effect on joint transcription and formatting, without negatively affecting the flow of creative content generation. These findings underline the need to carefully arrange the shared task for children in a way that we can keep both partners occupied. I would argue that, in order to make use of the features of the word-processing software in writing, the scribe-editor role distribution should be openly encouraged among students.

5.4 Making sense of instructions

Chapter 4 has already indicated that instructions may have an effect on the way children approach the task, choosing between individualistic and collective approaches to working together. In Chapter 3 we have also seen planning episodes which reflected the children's sense-making and their attempts to achieve a joint understanding of the task. The latter examples support Murphy's (2000) argument that the task is not given but negotiated and co-constructed by the children. Instructions can be seen as a starting point, the basis from which the shared construction of the task starts.

For example, in Episode 5.21, we can see the partners' movement from individualistic to collective planning, following the changes in the instructions. This episode illustrates how the use of first person singular (I) and plural (we) actually corresponds to individual and collective planning. During this activity, the substitute teacher first instructed all the children to work individually on their poems. However, recognising that due to the research context, the activity needs to be based on paired work, the observed children were later asked to continue in pairs.

Sequence 5.21– Robbie and Zak, poem-writing, literacy

- 1 Z: I don't know what I am gonna, what animal I am gonna do!!
2 R: I am doing a dog.

3 R: What shall we do?
4 Z: ((almost parallel)) A dog.
5 R: ((pointing at Zak)) Stick to yours.
6 Z: A dog.

In the first section of the sequence the boys share their ideas for the theme as *individual* plans, which is very similar to the *reporting style* of individualistic partnerships discussed in Chapter 4. However, when asked to continue together, they quickly switch to *we* mode, renegotiate the theme and decide to stick to Zak's theme. Therefore, the use of first person singular can be regarded as a feature linked to individualistic planning, whereas the use of *we* indicates togetherness. The instructions change the discourse from being the platform for reporting ideas about individual work to discourse being the context for the sharing of ideas for a joint product.

Although it is clear that instructions play a central role in classroom-based collaborative activities, the focus of attention in this chapter is not on the impact of instructions on the activity as such. Rather, I was interested in how the children make sense of these

instructions through paired talk or wider social interaction, and jointly negotiate and reconstruct the task for themselves. This section explores the children's sense-making. It looks at ways in which children try to understand the instructions through talk, the way they discuss problems (discrepancies and contradictions) regarding the instructions, and the way they jointly seek to resolve these problems.

5.4.1 Reconstructing the task through paired talk

Children frequently engaged in paired talk that reflected their conscious efforts to make sense of the task, and attempt to do exactly what they were asked to do. As demonstrated in Chapter 3 (Section 3.4.1), paired talk helped to clarify verbal instruction. There I also highlighted potential problems with *controlled* creative writing, such as the issue of ownership or the need to write for the teacher (as opposed to *spontaneous writing* in informal settings, which is driven by some sort of creative force).

The following episodes are used to elaborate this point further. For this session, the teacher asked the children to write a story involving strong emotions – loss, sadness or pain – and choose themes such as bullying or death. She openly encouraged the children to draw on personal experiences, but asked them to change the names so that the characters in the story would not be recognisable. The teacher explained that this was done to avoid confrontation or inconveniences, and to let children write openly about their own experiences.

Sequence 5.22 – Del and Kenneth, story planning, literacy

- 1 K: The teacher said we are allowed to use something real but make up
2 different names.
3 D: Yeah.
4 K: So, choose different names, but look up a story.
5 D: Yeah. Yeah.
6 K: I mean a real story but-
7 D: Yeah, do different, like, what's ().
8 K: ((overlapping)) Names.
9 D: Yeah, names.

Sequence 5.22 shows Del and Kenneth trying to arrive at a joint understanding of what exactly they are supposed to do. After a few turns, they succeed in reconstructing the task – *use something real, look up a story, real story with different names*. They are working hard to recapture what has been said, and *appropriate* the instructions by translating them in their own words and thus making them their own.

Naturally, the difficulty of recalling and following verbal instructions is that the children have no visual record and have to rely on their memory solely. In this respect, working with written instructions has some advantages. The next episode shows how children try to understand detailed written instructions, working together on a pre-designed story planner. The planner asked the children to plan the story in the style of a chosen author and i) think of the story title that would fit in with the other books by the author; ii) think of a setting that would be typical of the author; iii) choose the characters; iv) design the story opening; v) plan the main events; vi) think how the story will end (see Appendix 13). In the episode the boys are working on the second question, planning the setting of their story. (This episode already appeared in Chapter 3 to describe joint planning.)

Sequence 5.23 – Robbie and Zak, story planning, literacy

- 1 Z: ((reading the instructions)) Think of a setting.
- 2 R: Think of a setting.
- 3 Z: **Zak Brown's house.** ((Robbie giggles)) *My house.* ((smiling at the camera))
- 4 R: **Australia.** I KNOW! **Paris and the Eiffel tower.**
- 5 Z: *Eiffel tower.*
- 6 R: Just don't do *the Eiffel tower, Paris.*
- 7 Z: *Paris. Eiffel tower.*
- 8 R: Uhmmm, What is it called.
- 9 Z: Think of ((reading))
- 10 R: ((simultaneous with line 9)) Where does the president live?
- 11 Z: What. You mean, the president ()
- 12 R: ((overlapping)) **The White house, The White House. The White House. Zak**
- 13 **is going to meet the president.**
- 14 Z: ((pointing at the instructions on the sheet)) Think of a setting that would be
- 15 TYPICAL-
- 16 R: ((interrupting)) What does it mean?
- 17 Z: Of the author you have chosen. Typical. **Italy.**
- 18 R: Yeah?
- 19 Z: Michael Morpurgo loves Italy.
- 20 R: Yeah, but where in Italy.

At first, the boys start the joint brainstorming without any restrictions, and come up with a wide range of ideas for the setting, including Zak's house, the Eiffel Tower, or the White House. These are places they are familiar with, either from everyday life, or as the setting for films or books. When Zak re-reads the instructions, he notices that there is a constraint regarding the setting: it has to be typical of the author they have chosen as a model. They then start discussing what these instructions mean, Zak helping Robbie to understand the word *typical* by giving an example (line 17: "Typical. Italy"), and by rephrasing the question (line 19: "Michael Morpurgo loves Italy", therefore, he would set his story in Italy). The boys need to *translate* the instructions and apply them to their particular story. In this task it is important that they recognise how these instructions

constrain and guide their work. Paired talk (verbalisation) is vital in arriving at a mutually shared understanding of what the instructions are asking for.

However, the use of instructions in reconstructing the task was not always unproblematic. For example, in the other classroom observed simultaneously during this project, the teacher decided to modify the written instructions, and to give children more freedom. They were told that they did not need to write in the style of a chosen author. This she explained clearly and in great detail during the whole-class activity. However, when reading the instructions, children were still confused when trying to answer the written questions, some of which were related to the chosen author. (Question 1: *Think of a story title that would fit in with the other books by the authors you have chosen.* Question 2: *Think of a setting that would be typical of the author you have chosen.*) The next sequence shows the partners' efforts to try to come to terms with the discrepancies between the verbal and written instructions.

Sequence 5.24 – Carina and Jenni, story-writing, literacy

- 1 J: ((reading Question 1)) Think of a story title. Right.
- 2 C: Right. You needn't do that.
- 3 J: Ah, right.
- 4 C: ((reading Question 2)) Think of a setting that would be typical of the author
- 5 you have chosen.
- 6 J: ((disapproving facial gesture))
- 7 C: Hold on. ((She stands up, and walks to the teacher with the sheet. Then she
- 8 comes back.))
- 9 C: ((pointing at Question 1)) That's for the title and ((pointing at Question 2))
- 10 that's for the setting.

First, Carina decides that they don't need to answer the first question about the title (line 2), drawing on the verbal instructions that they don't need to *do the author*. However, when reading the second question, it is just as problematic (lines 4-5). The tension

between the two sets of instructions is obvious: ignoring the questions would mean no title and setting, but they cannot answer the questions as set out on paper. So Carina decides to go and ask the form teacher, and comes back with very clear instructions: "That's for the title and that's for the setting" (lines 9-10). The discrepancy is solved, and they get on with the task accordingly.

A further problem with the story planner was that its language posed potential difficulties for the young writers. We have already seen Robbie's difficulties with understanding the word *typical* in the context of story-writing (Sequence 5.23). Carina and Jenni had similar difficulties with the story planner. The following episode shows their efforts to jointly understand what the written instructions ask them to do. In this episode the children are working on Question 4: *Design the story opening*.

Sequence 5.25 – Carina and Jenni, story-writing, literacy

- 1 C: Jenni, hurry, hurry, hurry. Design a story opening.
- 2 J: Design a story opening. ((looking at the other intensely)) What does that
- 3 mean?
- 4 C: Driving. Just write, sta-, **driving in the car** ((Jenni is writing)) **Get lost in**
- 5 **the middle of nowhere.**
- 6 J: NO, **get lost in the toyshop.**

When Jenni asks Carina what the instructions mean (lines 2-3), Carina responds with a possible opening sentence (lines 4-5). She simply starts the process instead of describing it. Jenni joins in successfully in line 5, contributing her ideas about the story opening. This way, through shared talk, they overcome the difficulties with interpreting the instructions and re-constructing the task. These episodes provide further support for the re-constructed nature of classroom tasks (Murphy, 2000). They also show that the

instructions play a central role in this sense-making, and emphasise the facilitative power of collaborative discourse in the process.

5.4.2 Talk around the table and sense-making

The episodes above illustrated the development of shared understanding through paired talk. However, in some cases, talking to each other was not sufficient in the process of joint sense-making. The teacher played a central role in offering help when children got stuck. Talking to people around the table served similar functions. Actually, the children turned to other children just as often as to the teacher. The centrality of such *talk around the table* in the joint reconstruction of the task was evident from the analysis, which observation further highlights the importance of social interaction and sharing in classroom-based knowledge building.

Chapter 3 has already provided an example (Sequence 3.21) showing children's use of social interaction around the table in planning *how* the writing task should be accomplished. Similarly, children seemed to make use of social interaction to discuss the constraints on the content of their composition. In the next episode, Robbie and Zak are talking to two girls (Dawn and Linda) at a table next to theirs and discuss the plan they have come up with.

Sequence 5.26 – Robbie and Zak, story-writing, literacy

- 1 D: What's your title, Jo-Jo and the
- 2 Z: Broken ((pause)) No, no. It was Jo-Jo and the lost statue, but we are going to
- 3 change it to Jo-Jo and the broken gol-, and, and ((pause))
- 4 D: The broken horses.
- 5 Z: Yeah.
- 6 L: ((D's partner)) What?

- 7 Z: Four golden horses.
8 L: What?
9 Z: Jo-jo and the four golden broken horses.
10 L: Or you could do Jo-Jo and the four stolen horses.
11 Z: Yeah, but little kids won't understand what robbing means.
12 L: Yeah, yeah.

In this episode Dawn asks the boys about the title of their story. Then Linda, Dawn's partner joins in, offering her suggestions about the title (line 10). The change she suggests (from *broken* to *stolen*) is interesting. Earlier, the boys substituted *stolen* with *broken*, because Zak thought the young audience they were writing for would not understand what *stealing* means. (Sensitivity towards the audience was an important requirement in this task.) Indeed, Zak offers the reason why such a theme would not work (line 11: "Yeah, but little kids won't understand what robbing means"), and Linda agrees. Zak's argument shows conscious planning, with considerations of the rules set out by the teacher in terms of selecting the right material for a young audience. In externalising his concerns, Zak shows both the ability to select among possible alternatives for the plot, and the ability to reflect upon this process. The episode shows his externalised meaning-making, his efforts to understand and reconstruct the task of writing for a particular audience.

The strong motivation among the children to discuss their work with others is also demonstrated in this episode. The discussion helps them to learn to talk about and reflect upon their choices. Such discourse is a unique platform for reflection, beneficial for all people involved. This episode shows that social interaction with peers can be a valuable source in the creative process. Although in some of the other examples (for example Sequence 5.6) talk around the table signified distraction and off-task thinking, the

examples above remind us that we need to be careful about our judgements on unelicited peer talk.

Social interaction around the table was also seen as the platform to discuss problematic aspects of the activity which were due to discrepancies between classroom-based and unconstrained (self-initiated) creative writing. Chapter 3 has already touched upon the potential difficulties with controlled writing, or writing for the teacher. An aspect discussed here with respect to controlled writing is the visual presentation of the work. Illustration and text have an equally important part in deciding the appeal of a picture book. Illustration helps drawing and maintaining the attention of the very young readers and facilitates their understanding of the story line. Thus, the composition of a picture book for a young audience inherently involves the design of pictures. When preparing for the story-writing project for young readers, the children took part in whole-class activities, when the issue of illustration was discussed, through talking about favourite story-books or ones selected by the teacher. However, when it came to writing, children would only be allowed to indicate where they planned their illustrations, but did not actually design these illustrative pictures.

The tension between what they knew or learnt about picture books, and what they were asked to do, is obvious from the episode below. It is also an example of the ways in which social interaction with peers is used to ask for and offer help.

Sequence 5.27 – Robbie and Zak, story-writing, literacy

- 1 R: ((to the boys opposite)) Hhhh, have you finished? You are not supposed to
2 draw a picture.
3 Z: ((looks up too)) Not allowed to draw a picture.
4 R: ((overlapping)) Just write picture.
5 Z: It's a draft, it's not the real thing. You are not, you are not su- You are not
6 supposed to draw a picture.

In this episode Robbie and Zak are talking to the boys on the other side of their table. The microphone only picks up Rob and Zak's voice, so we only hear their side of the discussion. However, it is enough to understand the essence of the debate. They are talking about illustrations. Both Robbie and Zak argue that they are not allowed to draw a picture. This is in sharp contrast with real life story books, where pictures play a central part. Zak explains that their work is only a draft, and this is the reason why pictures are not represented (line 5: "It's a draft, it is not the real thing"). Robbie adds that, instead of drawing one, they need to indicate the place for an illustration: "Just write picture" (line 4). It is clear that social interaction around the table is focused on the task, and that it helps the children to follow the instructions. Again, paraphrasing the teacher's instructions facilitates a deeper understanding in the form of *appropriation*. Social interaction makes the rules of classroom-based writing more accessible for the children, who thus decide on the practical implementation of abstract rules, and reconstruct the task for themselves. This is in line with Donaldson's (1978) argument that working with others makes the task more accessible for children and changes their understanding.

The next sequence depicts a similar scenario. The boys in this episode are writing a story about a funny character: *Mrs Motor the Magic Mechanic*. Although they were asked to plan the whole story line, they only need to write up the beginning and the end of the story, keeping in mind what they planned for the middle. But, for the boys, the idea of a

story without the middle is difficult to grasp. The next episode starts with a discussion about the layout of the story in their literacy books, which soon leads to an argument about *the middle*.

Sequence 5.28 – Mark and Simon, story planning, literacy

- 1 S: I'm leaving, I'm going onto this page for writing. Look how much space I've
2 got.
- 3 M: (I am doing) the end.
- 4 S: Right. There, the end?
- 5 M: Yeah, I am putting it there.
- 6 S: I wouldn't. Cause you need the middle bit.
- 7 M: (You don't need to have) the middle bit.
- 8 S: You do.
- 9 M: You don't.
- 10 S: You need the middle. You need the beginning, middle and end. You need the
11 beginning, middle and end. You need a beginning, middle and end.
- 12 M: You don't. Carrie, Carrie, do you (need to write)? You don't.
- 13 S: ((to Mark)) Watch out, there is a microphone there. ((Mark looks at the girls
14 opposite, who are talking to them))
- 15 S: ((to the girls opposite) What?
- 16 M: ((to the girls)) Carrie, right you know when, you know when,
- 17 S: ((to the girls)) You need the beginning, middle and end.
- 18 Girls: No, you don't.
- 19 M: You see?

Simon is so taken aback by Mark's suggestion to leave the middle bit out, that he keeps repeating his views: "You need the beginning, the middle and end" (lines 10-11). His understanding is most probably based on the stories he has read – which all had a beginning, a middle and an end – and instructions for previous writing projects. His message is clear: there's no story without *the middle*. In contrast, Mark has the instructions in mind when he plans to write the ending right after the beginning. This argument reveals the difficulties of these young writers with doing something unusual,

and to *break the rules* of narrative writing. Simple narrative conventions may provide a safe path along which they can move confidently. So, when asked to abandon these rules, they feel uncertain. To decide, the boys turn to the girls on the other side of the table, who confirm that the middle does not have to be written.

5.4.3 Monitoring and social comparison

Another prevalent feature of the discourse around the table is the apparent urge to monitor and comment on other people's work. Social comparison has been widely reported by research on classroom-based learning, from early years to higher education (Littleton, 1999). In the context of the observed activities monitoring and social comparison had three main aims. First of all, children seemed to be highly motivated to offer their advice and insights to others in need. Thus, the people surrounding the peers were not simply seen as the source but also as the recipients of information. For example, we have already seen some of the collaborating partners asking for help, or offering feedback on the neighbouring pair's work (Sequences 3.21 and 5.26-5.28). Sometimes such monitoring was due to their strong interest in other people's compositions, simply because they found them exciting. The following extract shows *talk around the table* which reveals such an interest.

Sequence 5.29 – Lisa and Julie, story planning, ICT

- 1 L: ((to the boys opposite)) What are you doing? What are you doing? We are
- 2 doing Mrs Joy the Joker. What are you doing? Mrs. Motor the, what's the-
- 3 J: Mr Magic the Mechanic.
- 4 L: Oh, cool. ((excited-mysterious tone)) Magic. Prrrrr ((cat-like purr)) I can
- 5 tell you one thing. ((hands follow talk with gestures)) Rabbit, rabbit.
- 6 ((frog-like sounds))
- 7 J: ((urging tone)) Hospital! ((pointing at the page))

Lisa asks the boys around the table what sort of story they are working on. When they tell her the title, she gets really excited ("Oh, cool") and starts to purr like a cat, followed with strange gestures and noises. The idea of *magic* seems to appeal to her, sparking off her imagination. So much so, that Julie needs to bring her back to the story they are working on, involving a visit to the hospital (line 7: "Hospital!").

Apart from the motivation to help each other and to feed their natural inquisitiveness, the third reason for children to monitor other people was to assess their own work. Social comparison in this sense was used to make sure that they had done things appropriately and they had done *enough*.

In the first episode to illustrate such uses of social comparison, the children have already finished writing and the teacher is leading the plenary, asking them to read out and share their paired work.

Sequence 5.30 – Robbie and Zak, story-writing, literacy

- 1 R: ((to Zak, whispering)) What are you doing? You are not allowed to draw a
- 2 picture. ((Zak seems to have been scribbling on the sheet)) We can ask!
- 3 Don't draw now!
- 4 Z: ()
- 5 R: You are not allowed! Nobody else has, look around! ((he gestures around))

The point of discussion is, once again, drawing pictures to illustrate the story. While the others are sharing their stories with the class, Zak has started to scribble on the sheet. Robbie is worried that they will get into trouble, and asks him to stop ("Don't draw now", line 3). He also suggests that they should rather ask whether it is possible. When this fails, he points out that no-one else is drawing, so they should not either. This is a very

powerful argument, indicating the important role social comparison plays in self-assessment in school-based learning.

On the other hand, in the next episode social comparison is used to measure the success of the collaborative activity. The episode is taken from the last story-writing session. The partners reflect upon their work to assess how much they have done, and whether they have done enough for the task. To assess productivity, they count the lines and compare their results with those of people around them.

Sequence 5.31 – Carina and Jenni, story-writing, literacy

- 1 J: ((referring to the boys opposite)) They haven't done much, have they?
- 2 C: Neither have we! ((giggles))
- 3 J: We've done more than them!
- 4 C: ((coughing and shaking her head))
- 5 J: Yes, we have. Cause they have only done two, three lines. We've done-
- 6 C: () ((counts the lines of the opposite pair)) 1-2-3-4-5-6.
- 7 J: ((counts their own lines)) 1-2-3-4-5-6- no-
- 8 C: ((interrupting)) 1-2-3-4.
- 9 J: cause they have () on the story.
- 10 C: Oh, never mind, just carry on!

First Jenni evaluates the work of the opposite pair, with a negative remark (line 1).

Carina retorts with an evaluative statement of their own work, and a comparative line-counting ensues. It is interesting to note that in the assessment of productivity and success, the ultimate measure is the number of lines and not, for example, the completeness of their story. This again indicates the specific nature of classroom-based creative writing, with its own rules and rituals. The writing tasks are seldom self-initiated, and they are also punctuated by the start and the end of the lesson. Within these constraints, productivity can indeed be associated with length. In this context, the most

appreciated skill is to be able to perform regardless of how motivated and enthusiastic one is about the writing project.

Summary

This section looked at the ways in which children used social interaction with people around them to jointly re-construct the task, to offer and ask for help in making sense of the instructions. It was also shown that social comparison within the classroom served an important part in the assessment of success. Note, however, that peer interaction, talk around the table and social comparison served multiple functions, and were not always focusing around the task itself. For example, children around the table also engaged in off-task discussion, and social comparison also served personal purposes.

Nevertheless, the main conclusion is that the picture is far from being negative. The episodes in this section provided ample evidence for constructive, on-task debates both between the partners and around the table, which were seen as vital in translating abstract instructions into practical guidelines that made sense for the children. As indicated, this argument is compatible with available empirical evidence provided by research on the social aspects of learning in other contexts, for example on children's collaborative problem solving (Light & Littleton, 1999) or on the social basis of university-level learning (Crook, 2000).

Note that teachers did not encourage children to talk to pupils other than their partners, and some of them actively discouraged such talk. Thus, the observations may help reassess the status of social interaction around the table and put unfacilitated classroom talk in a more positive light. This way, it could serve to redefine our understanding of school-based learning, and encourage teacher practitioners to value and build more consciously on peer support in everyday classroom practices.

5.5 Storytelling in context

An unexpected discourse feature linked to the story genre (narratives) was the import of schematic dialogues from elsewhere in the development of the storyline. While generating content, partners would appropriate lines from books, songs, films, or TV programmes which were not directly linked to the story. Yet, the chosen lines themselves were oddly fitting. At other times, the partners would recount personal stories related to the main story line, engaging in *storytelling within storytelling*. This way, memory and imagination seemed to work hand-in-hand, with children drawing on personal stories or experiences from popular culture to spark off their imagination. Equally, their developing story-line was a *generator* evoking further memories and experiences to share. As the following section demonstrates, I found these features in many story-writing sessions, but not in the poem-writing ones.

5.5.1 Media and storytelling

The following episode was taken from a story-planning session, and was partially used to describe the content-generation strategy of *growing a story together* (Sequence 3.6). During the session the two friends were designing a story set in a *toyshop*. The story was about three small children who take some money from the toyshop till and then try to buy toys with it. The writers are at the point where the children are going to the manager (Phoebe) and attempt to pay with the stolen money. They are engaged in joint brainstorming, dramatising the scene together. In doing so, they bring in themes from current popular television programmes, demonstrating the creative use of media-language.

Sequence 5.32 – Carina and Jenni, story planning, literacy

- 1 J: And the little- And Phoebe goes, where is your money, and they go, here we
2 are. Arggggh, that's my money, I am not gonna give you all that ((playful,
3 mocking intonation)) We don't want to give you that!!!
4 C: ((overlapping)) Give you that! And then, and then, and then, Phoebe says,
5 'You are the weakest link, goodbye'. ((giggles))

In line 2, Jenni acts out the scene when the shop manager realises that the children want to pay with the money stolen from her. However, she finishes the manager's turn with a catch phrase from a popular game show in the UK called *Who wants to be a millionaire*. She even mimics the intonation used teasingly by the presenter, Chris Tarrant. Although the line is slightly odd and out-of-context, it is a very interesting extension of the story line. First Carina repeats this expression with a similarly theatrical intonation. Then she responds with a similarly creative turn, using a catch-phrase from another TV show (line 5: "You are the weakest link, goodbye!" – *The Weakest Link*). This is not an expression the manager-character would typically use in the given circumstances. The line is rather the continuation of a different activity: using media-language to extend the dialogue.

Such import of schematic dialogues from media shows the creative use of cultural resources. The language is layered: within the story-dialogue the children have created a different dialogue, where characters communicate with the catch-phrases from TV shows. In doing so, they draw on shared cultural experiences, and reinforce their mutual awareness of them.

The girls' inventive use of media-language tells us how immensely these creative activities are influenced by a wide range of media: storybooks, films or TV programmes. Note that, when discussing the role of singing in creative content generation (Chapter 3,

Sequence 3.15), I have already shown the importance of popular culture (pop songs) in classroom based creativity.

Theorising and research on the development of children's language skills (oral or written narration) emphasises the importance of familiarity with traditional stories (Pontecorvo & Morani, 1996). Indeed, traditional stories were also inspirational for the children when choosing the theme for their story. In the next episode, searching for the theme starts off a discussion of what they read to their younger siblings at home.

Sequence 5.33 – Carina and Jenni, story planning, literacy

- 1 J: **Funky monkeys.**
- 2 C: No, not monkeys.
((Long silence and contemplation.))
- 3 C: ((singing voice)) **Teletubbies.** ((she is leafing through the Collins Pocket
4 English Dictionary))
- 5 J: Yeah, I have to read him Teletubbies! But he really wants me to read him
6 the *Sleeping Beauty*. ((smiling)) He likes that.
- 7 C: Right, now what shall we do?

Jenni first suggests that they should write about Funky monkeys (she has a little soft toy monkey with this trademark). Then, Carina's mentioning of the *Teletubbies* triggers a contemplative monologue from Jenni. She explains to Carina that her little brother loves Teletubbies but he loves to be read the *Sleeping Beauty* the most. Although Carina seems to cut her short here, in the end they will call their story *The Sleeping Babies*, inspired by this short side-track storytelling. (Later on, in an informal interview, they confirmed this link.)

Finally, going back to experiences with younger siblings, the next episode illustrates the role of personal experiences outside school. In another short episode of *storytelling within*

storytelling, Jenni talks to Carina about the story she is writing at home, for her little brother.

Sequence 5.34 – Carina and Jenni, story-writing, literacy

- 1 J: ((C is writing)) My, my, my story at home is longer than this, it's three
2 pages at the moment. Cause it's got a big picture in the middle. Of Darren,
3 Michael and Josh. A baby. The baby is crawling out of the chair, the push
4 chair and, and, erm they have got cuddly toys that looks like them, so the
5 mum won't know they've gone. Shall we do it in this story?
6 C: Nai. Claire ((writing))

Again, Carina's first reaction to Jenni's suggestion to incorporate her personal story in the school-based one is negative. Yet again, features of Jenni's story, such as the three little children as central characters, or the main conflict of the children getting lost (not being found by mum), will get incorporated in the collaborative story-line. Indeed, the sharing of personal stories, and of personal experiences have had an impact on the development of other narrative compositions as well. For example, in the composition about *Fluffy the Wonderful Hamster*, the writing partners draw on personal experiences with pets.

Sequence 5.35 - Lisa and Julie, story-writing, literacy

- 1 J: ((writing)) And ((pause)) she ((pause)) wee-, wee-weed in the pool. Wee-
2 weed in the pool. ((giggles)) Done.
3 L: In the jam-jar.
4 J: In a
5 J&L: Jam-
6 J: Jar.
7 L: Yeah, that's what you have to do with (), got a little jam jar, empty it out
8 right, make it lie, so they can, put a little bit of sawdust in there, and they
9 wee in it. It's the way (). It's not, it's actually quite comfortable for them.
10 J: Jar, jam jar?

While transcribing a line within the story (*One day she had diarrhoea and she wee-weed in a jam jar*), Lisa starts recounting her experiences as a pet-owner, discussing the routine of looking after a hamster. Her practical knowledge, as well as her emotional involvement, is obvious throughout the writing session, and work as the *primary generator* (Sharpley, 1999) or driving force of the content generation.

Summary

Research on narratives has long emphasised the central function of reading or reciting traditional stories in learning how to recount, modify or invent stories (Pontecorvo & Morani, 1996). On the basis of the analysis presented above, I would go further, and emphasise the importance of modern day *fabulas*, ranging from pop-songs, cartoons and reality TV-shows to rituals on popular quiz shows and narratives in soap operas. Also, Pontecorvo and Morani (1996) remind us that oral narration in informal contexts (e.g. pretend play or family-based communication) is also a vital source in the development of narrative-writing skills. The presented analysis is in accord with this argument, but it also demonstrates the emotional dimension of such informal narrative practices.

Earlier I described creativity as emerging from the writer re-living and expressing emotional experiences in their mind. This description may explain the strong link between literary, cultural or personal experiences outside school and school-based narrative writing. In recreating these modern-day narratives, playfulness is absolutely crucial. The episodes presented above tell us about such playfulness – singing, storytelling, play-acting – mobilised for creative purposes. In educational contexts there is a reluctance to allow such playfulness into the classroom. Indeed, from the outside, it is very difficult to differentiate off-task chit-chat and on-task inventive thinking through *storytelling*. Similarly to the discussion on the role of humour in collaborative work, I would argue that it's incredibly difficult to judge from the outside whether the children are

engaged in a creative dialogue or are simply *mucking about*. This was especially so in the story-writing sessions illustrated by the examples above, since they had a lot of *extra talking* going on in comparison to the other genres observed in Study 1.

However, the careful examination of the transcripts shows us that there is a distinction between off-task playfulness and storytelling for story-writing purposes. Once again, it becomes apparent that creative brainstorm is a highly *fuzzy* and unstructured process. Particularly, ideas for the plot of a story do not necessarily come in a linear fashion. One needs to play with ideas, look at all kinds of directions, seek inspiration in all kinds of sources and check how one's own developing story links with other, existing ones. I see the frequent references to stories or schematic dialogues – in the form of singing, acting out or talking about them – as an attempt to *relate*. This way the created ideas (and the composition) are embedded in the cultural pool they are derived from. In particular, I would argue that the observed dialogues demonstrate the crucial influence of modern, popular culture surrounding the children, both in terms of the content they come up with, and in terms of how they approach the genre of storytelling and story-writing.

5.6 Collaborative creative writing in research context

The last contextual aspect to discuss is the effect of the research context on the observed collaborative activities. As Chapter 2 outlined, the observations concentrated on ongoing classroom activities, with the observed children working alongside the rest of the class. It was expected that such a setting would provide discourse data which are rich and unconstrained. However, in order to capture the dialogues as embedded in the lively classroom setting, video-recording equipment and microphones were used, which can be seen as tools that intrude upon and inhibit discourse. Therefore, this section explores the

effects of the research setting on the collaborative activities, analysing children's attitudes towards the technical equipment.

5.6.1 *The camera and I*

Patterns of social interaction between the participants indicate that they were trying to make sense of the research context. They interpreted the presence of the camera both as an *intriguing* contextual feature and as a means to impose *additional* constraints on their schoolwork.

Some children linked the presence of the camera to contemporary cultural phenomena, such as popular TV shows (*Popstars*) or reality television (*Big Brother*). This was reflected in the growing frequency of addressing the camera, talking into the microphone, *acting* for the camera (with exaggerated dialogues), self-revealing statements and monologues (sharing intimacies) and singing pop songs. Although some of these features have previously been linked to content generation, the important distinction to make is that in these cases they were used off-task. Such features were especially typical with children who were observed the most frequently. For example, while his partner is transcribing the next line in their story, Zak starts a monologue, talking into the microphone and addressing the camera.

Sequence 5.36 – Robbie and Zak, story-writing, literacy

- 1 Z: ((into the mike)) Do you want to phone a friend or ask the audience? Or go
- 2 fifty-fifty?
- 3 ((The boys on the opposite side of the table tell him something.))
- 4 Z: I am not a copycat. I am a popstar.
- 5 ((The girls on the left tell him something.))
- 6 Z: ((talking to the girls, quietly)) Yeah, I know. Eva doesn't. Eva doesn't mind.

- 7 R: ((to the boys opposite)) You've gotta make sure it's for the age group!
8 Z: ((to the girls)) You can do anything on there! ((now he turns back to Robbie))
9 *Went out for a trot and found the four golden horses broken. Yes!* ((Robbie
10 continues writing))

While Robbie is writing, Zak recites *ritualised* questions from a popular quiz-show, *Who wants to be a millionaire* (lines 1-2), acting as if he was the TV presenter of the show. Then he introduces another popular theme from the media (reality television), claiming that he is a *popstar*. He argues that by acting for the camera he is doing nothing wrong, because the researcher "doesn't mind" (line 6). Then he switches back to work and starts to generate content for the storyline. Note that this little interlude is very different from earlier examples demonstrating ways in which children *borrow* clichés and ritualised dialogues from contemporary culture in their story-writing. This episode is not a part of the development of the story line. Rather, it reveals ways in which the presence of the camera modifies the observed classroom activities: *talking to the camera* or *acting for the camera* becomes an additional feature of these sessions. A similar approach is demonstrated in the next episode, in which the children are telling secrets to the camera.

Sequence 5.37 – Carina and Jenni, story planning, literacy

- 1 J: ((to the boys opposite)) Ermmm.
2 C: ((to the boys opposite)) Yeah, but we said "James loves Heather".
3 J: ((pointing at the mike)) In there! ((they both move towards the microphone))
4 James loves Heather.
5 C: Loves Heather. ((takes the microphone in hand, to the boys opposite)) It works.
6 It's in there. ((pointing at the camera)) It does! ((smiling at the camera))
7 J: ((into the mike)) James Smith, heard of him? And Heather Graham, heard of
8 him? Her?

The girls are sharing intimacies with the camera, talking into the microphone. Then they tell the boys opposite that by talking into the microphone they recorded what has been

said on the video-tape (lines 5-6). Again, I would argue that such episodes show the children's meaning-making of the research context and the purpose of the camera, as well as their *appropriation* of the uses of the equipment. Such dialogues were seen as acceptable by the researcher (as demonstrated in the previous sequence). Note however that *camera-talk* or any off-task discourse was not seen as acceptable by the teacher. Neighbouring children were quick to question the behaviour of the observed participants. (It is quite likely that this is what happens in line 5 in Sequence 5.36). This indicates that such talk was typically deemed inappropriate in the classroom context. Indeed, the teachers typically walked around the tables to monitor the children's work, and the children never engaged in camera-related talk in the presence of their teachers.

Another aspect in the dialogues was the discussion of the technical aspects related to the camera or the microphone. The children were very interested in how the equipment worked, as indicated in the next three short sequences.

Sequence 5.38 – David and Chris, poem-writing, literacy

- 1 C: ((he stood up and noticed that the camera follows him)) It's on autopilot!
- 2 D: Oh, dear.
- 3 C: Look, it's moving on its own, Linda!

Sequence 5.39– Robbie and Zak, poem-writing, literacy

- 1 R: I am glad she put it there. Cause she's gonna get awesome views. Well,
- 2 the camera. ((they both giggle))

Sequence 5.40 – Mark and Simon, story-writing, literacy

- 1 M: Do you reckon the camera can hear me?
- 2 S: Yes, it probably can.

On the whole, the presence of the camera seems to have changed the meaning of the task for the children, but only to some extent. Writing with a partner in literacy was different from writing with a partner in literacy in front of the camera. Some of the discourse features (such as talking to or acting for the camera) may reflect recent cultural changes, which modify the status and purpose of the camera.

5.6.2 The camera as a constraint

In addition to discourse characterising the camera as an intriguing contextual feature, children's dialogues also revealed the status of the camera as introducing new constraints. Children saw the camera as restricting their physical movement (they felt they could not move about as freely as they otherwise would), and some children also thought that misbehaving or making mistakes was not allowed in front of the camera. For example, in the sequence below, one of the partners warns the other that her behaviour is inappropriate.

Sequence 5.41 – Julie and Lisa, story planning, literacy

- 1 J: ((looks at the camera and waves))
- 2 L: Stop, you don't meant to do that! Don't be silly! ((she is half-giggling, hiding
- 3 her face behind her hand)) You get us in trouble. She'll see it, ain't she?

Julie starts waving at the camera (a typical gesture among children). In response, Lisa tells her to stop, otherwise they will be told off by the researcher. Equally, Mark and Simon are concerned about whether they can leave their seats during the observations. (This issue was addressed by several participating pairs.)

Sequence 5.42 – Mark and Simon, story-writing, literacy

- 1 M: ((to the girl opposite)) Lisa! Are we allowed to get off of our seats? Are we
2 allowed to get off of our seats? Are we allowed to get off of our seats? Are
3 we allowed to get off of our seats? ((he gets no response))
4 M: OK, then, put your hand up. ((they both put their hands up, looking at the
5 camera))

Mark and Simon turn to the girls opposite (who are also participating in the study but presently not observed). They do not get a response, so they turn to the teacher for help, raising their hands for attention. It appears that the camera introduced an additional constraint. In addition to following classroom rules set by the teacher, they try conform to the *rules* of the research setting, trying to comply with the perceived expectations of the researcher.

5.7 Summary

This chapter explored the ways in which different contextual features shape processes of shared creative writing. In particular, the role of task-design, the writing medium, the teacher's instructions, the genre and the research context was examined.

On the basis of the analysis of paired discourse, it was argued that task-design had an impact on the way children approached collaboration. The turn-taking strategy typically adopted in shared-copy design in literacy and during shared computer-use in ICT was found to fragment the flow of creative text composition, and sometimes be extended to phases other than transcription, leading to more individualistic approaches towards content generation and reflection.

However, the benefits of the use of a word-processor as opposed to pen-and-paper mode were marked the emergence of the editor-scribe role division in several observed partnerships. It was shown that the computer tool offers a platform for more shared transcription phases, allowing children to consider aspects of writing typically emphasised by the teachers (spelling and neatness). It was also found that children often became too preoccupied with spelling and formatting, which hindered the actual process of creative text composition, leading to an over-emphasis on formal representation.

Also, it was found that partnerships varied in terms of the balance they demonstrated in sharing through alternation. This finding underlines the need to carefully arrange the shared task for children in a way that we can keep both partners occupied.

When moving on to the analysis of the role of instructions, the study found evidence that the complexity of the written instructions had an effect on children's success in narrative writing. Furthermore, it was shown that paired talk, wider social interaction, and social comparison were vital in the process of sense-making. The findings presented in this chapter provide very strong support for Murphy's (2000) argument that in educational settings the task is not simply given, but reconstructed by the children. The methodological and educational implications of these findings were outlined, highlighting the limitations of experimental studies in situating the learning experience in its social and cultural context, and the need to reassess the status of social interaction (especially unsolicited classroom talk among children).

Through the analysis of children's narrative-writing dialogues the specific features of this genre were detailed, and the highly embedded nature of narrative writing in the immediate socio-cultural context (oral narrative experiences at home or during play) and the wider cultural setting (quiz shows, media, popular art, etc.) demonstrated. Finally,

similarly strong influences of the socio-cultural milieu (e.g. popular culture or classroom culture) were reported when discussing the children's response to the research context. On the whole, the chapter provided ample evidence for the *embeddedness* of children's learning experiences in the social and cultural environment that surrounds them, and their active sense-making through social interaction.

6.1 Summary of research aims

The research reported here studied collaborative processes of joint knowledge construction, recognising the centrality of peer interaction in children's development and learning. The description of learning and development as mediated and situated led to an emphasis on the contextualised study of the learning processes.

The current research had a specific interest in peer collaboration as the immediate social context, and aimed to examine how children use talk to get things done together when collaborating on school-based tasks, and how paired talk can support joint processes of learning. However, grounded in the critical review of existing literature, the need to expand the debate to peer work in creative contexts was underlined. Therefore, the research examined processes of classroom-based collaborative creative writing, exploring the nature of productive paired work in this particular setting. Furthermore, the need to consider the affective aspects of collaboration, such as the nature of the relationship between partners was emphasised. The research investigated the role of friendship in mediating the processes of joint creative writing. It also explored the effects of other key contextual features of the learning context – task design, instructions, genre, writing medium and research setting – in structuring and shaping the observed collaborative activities. These contextual features were seen as interdependent and inextricably linked. Yet, in order to offer a structured analysis, they were approached separately.

6.2 Summary of findings related to the research aims

6.2.1 Collaborative creative writing

Phases and functions

When approaching the study of contextual effects linked to the nature of the task, the following questions were identified:

- *How do cognitive and social processes of paired creative writing differ from those reported as being associated with collaborative problem solving?*
- *How is paired discourse used to support different processes linked to creative writing?*
- *What does sharedness mean at different phases of the collaborative creative writing process?*

To address these issues, an analytic tool was developed, by which distinctive features of paired writing discourse – reflecting emotion-driven and intellect-driven processes involved in creative text composition – were identified and analysed. The analytic tool proved useful in differentiating phases of the writing process, and in the identification of discourse styles and collaborative strategies characteristic of each phase, thus distinguishing different writing-related functions within the paired talk.

Chapter 3 has shown that at different stages of the writing process the collaborative partners engaged in different types of talk. They exhibited a variety of discourse strategies clearly linked to processes central to creative writing: content generation (e.g. *collective pooling* or *joint crafting*) and reflection (e.g. the *joint evaluation* of *appropriateness* or *appeal*). Such a rich discursive and collaborative repertoire shows the complexity of the task of creative writing. The iterative, non-linear nature of the creative process was also demonstrated through the analysis of paired discourse, further emphasising its

complexity. Such complex discourse patterns highlighted the methodological limitations of coding schemes based solely on linear turn-taking.

Yet, one could go even further and argue that creative writing as such is not a homogenous task. Different types of compositions (different genres) may differ substantially in nature, which may be reflected in the genre-specific features of collaborative discourse. Unique features of the story-writing design – not characteristic of other observed genres – were identified, a finding which supports this argument (for example the import of schematic dialogues from media or storytelling within storytelling). Due to the predominant focus on narrative writing in existing research, contrastive analyses of paired talk in different genres are not yet available. Note that the current research did not provide a large enough data set of other genres (e.g. poems or advertisements), and therefore this issue was not pursued. Future research needs to unpack this issue, and provide a comprehensive overview of how genre-specific differences impact on the processes of creative writing.

Emotion-driven thinking

The current research also demonstrated the centrality of emotions (affect-based thinking) in creative writing. This was not restricted to the associative process of creative content generation, but was rather seen as a general feature of all phases involved in creative text composition. This finding was used to demonstrate the differences between processes central in creative writing (or creative design in general) and scientific or mathematical problem solving. It was posited that the two types of activities are positioned at two different points on the emotion-intellect continuum. This does not mean that creative writing relies solely on emotion-driven thinking, or that scientific problem solving is purely intellect-driven. Rather, it implies that they differ in their emphasis on emotion-driven and intellect-driven thinking. This interpretation underlines the necessity to

consider the emotional aspects of cognition. It also underlines the need to shift the emphasis from logic (rational and intellect-driven thinking) towards more complex models for the study of human learning and development. This interpretation is in accord with accounts highlighting the undervalued status of emotions in educational research, and stressing the need to consider *both* logical *and* intuitive thought (Bruner, 1986).

One limitation of the current research is that it does not provide an exhaustive analysis of non-verbal behaviour expressing emotions. However, joint processes of creative writing (joint association and emotion-driven evaluation especially) have been supported by a rich repertoire of non-verbal discourse: smiles, grimaces, nods, squints and other facial, physical or vocal features. This finding shows the problems with the overemphasis on talk, a feature predominant in collaborative learning research.

This critique is further supported by the analysis of computer-supported collaborative writing data, revealing how interwoven verbal and non-verbal means of communication are when working with this medium. It was concluded that the children's reliance on both verbal and non-verbal exchanges in the ICT context makes it very difficult to study computer-supported collaboration solely by focusing on the verbal input. Research on computer-supported collaboration needs to consider the phenomenon of *argumentation through the use of equipment*: where partners may respond to a verbal prompt with a non-verbal act, or the other way around. Future work needs to extend the analysis of children's joint activities by placing more emphasis on their non-verbal communicative repertoire, when such communicative means play a central part in the collaboration.

Switching between phases of the creative writing process

Chapter 3 has also demonstrated the observed children's ability to switch between different phases involved in the writing process. This finding shows the potential

capacities of young writers, contradicting existing research reporting the difficulties of young writers to switch between content generation and reflection (e.g. Sharples, 1996, 1999; Bereiter & Scardamalia, 1982).

It is possible that this finding is attributed to the collaborative context, which enables the children to share the cognitive load. Such sharing was the most evident in computer-supported collaborations, where children typically adopted a role-division strategy, working as *scribes* and *editors*. This finding supports the socio-cultural perspective of collaboration as a learning context where the coordination of individual efforts enables the partners to carry out a task which they may not necessarily be able to perform individually.

The contradiction between the existing literature and the findings presented here may also be due to the fact that previous studies typically evaluated the writing skills and expertise of young children as reflected in the quality of the writing product (creative outcome), or used think-aloud protocols of individual writing sessions (e.g. Bereiter & Scardamalia, 1982). However, the limitations of the use of protocol analysis with very young children (or inexperienced writers), due to the high level of cognitive activity it requires, were noted. Also, it was argued that protocol analysis is not a particularly reliable way to verify models of cognitive processes (Hyland, 2002). A similar argument was made regarding the analysis of creative outcomes. On the whole, it was concluded that creative products and think-aloud protocols provide data which is ambiguous regarding younger writers' capabilities. It is not clear whether they show the children's inability to *identify* or to *keep* the constraints inherent in or imposed on the writing task.

In contrast, the current research studied ongoing cognitive processes through the analysis of paired discourse. It was claimed that the transcribed dialogues reveal more about the

processes of writing than the creative products. Paired discourse was used to detail the step-by-step procedure of a writing session, showing trial, success or failure in the use and combination of knowledge telling and knowledge transforming strategies. Thus it could be used to document *emerging* writing skills which may not be reflected in the writing product. Indeed, the analysis of paired discourse demonstrated the children's ability to identify, to interpret and to make sense of constraints. This, however, does not necessarily mean that the partners were successful in satisfying the constraints they recognised. One limitation of the current research is the sole focus on studying the processes of collaborative writing. The narrow scope was justified by the wide range of different writing tasks, task designs and genres observed during the current research, which made the development of a general analytic tool for all the creative outcomes problematic. Future research needs to link the analysis of collective-individualistic discourse features to the analysis of the resulting compositions and illuminate the links between collaborative processes and outcomes further.

It is also possible that the differences in the findings may be due to the differences in the complexity of the tasks. On the basis of the findings, I argue that the constraints in some types of poem-writing (e.g. free poems) were less complex than in others (e.g. *limericks*) or those in narrative writing. Similarly, writing stories building on pre-designed story planners proved to be more difficult for the children than writing stories with a simpler, self-developed plan. Thus, some creative writing tasks may have provided a better context for young writers to proceed through the full cycle of writing than others. Simpler and more accessible constraints may be easier to recognise, comprehend and adhere to, thus making the process of switching in between content generation and reflection easier, and reflective phases more successful.

I therefore argue that young or inexperienced writers need simple and accessible constraints (for example regarding audience, rhyming, syllables or plot) to support and structure phases of knowledge transformation for them. In other words, the children are capable of deliberate reflection, of halting and restarting the creative process at an earlier age than previously reported, but may only be successful when the constraints are simple (simplified) and easily accessible (explicit). The key to their success is how well they can interpret the instructions and internalise the constraints set by the teachers, and how motivated they are to satisfy these constraints.

6.2.2 Friendship and collaboration

An overarching theme of the research was the exploration of the affective dimensions in peer-mediated learning. Beyond the study of the role of emotions in cognitive processes associated with creative writing, another central aim was to explore the potentials of friendship as the context for classroom-based shared creative writing. The specific research questions identified were as follows:

- *How does the nature of relationship impact on the collaborative activity, reflected in the collaborative strategies and discourse patterns?*
- *What are the affordances and constraints of friendship pairing in creative contexts?*

Friendship pairing and transfer

Chapter 4 has examined the differences in collaborative processes which derived from the differences in the nature of relationship between partners. The analysis showed that the pairs' discourse varied in the level of *collectivity* and *individualism* and that, for the most part but not exclusively, the variations could be explained by the differences in the relationships. Most friends' ability to maintain a high level of collectivity in all phases of the initial writing sessions was demonstrated. (These pairs were described as effective

friendships.) The stability of their discourse strategies and collaborative patterns in subsequent phases was also noted, although task design and instructions were seen as interacting with the friendship effects. Finally, the continuity between on-task content generation and off-task playful fantasy games was shown. Building on Coates' (1996) description of the use of *collaborative floor* by female friends, intense, highly charged episodes of content generation and reflection were likened to the fuzzy, overlapping and non-linear friendship talk in informal settings. It was argued that, although in the classroom it was used to compose texts together, it was easy to associate such organic discourse with other aspects of friendship, such as sharing secrets, or daydreaming and playing together. I also demonstrated that in the context of shared creative writing the use of collaborative floor was not restricted to female friends.

It is therefore quite probable that the observed patterns of the effective friendship discourse were first developed and practised in informal settings, and then applied and adapted to the context of classroom-based collaboration. The partners may have built on pre-existing discursive tools, developed in other contexts which they were mutually involved in as friends, and *transferred to* the context of school-based creative writing. This interpretation suggests that friendship pairing may have considerable benefits for shared creativity. Note however that, apart from one short play encounter, the current research cannot provide direct evidence for this claim, in the form of a comparison between friendship discourse as used in play-events and in school-work. Future research needed to unpack the claim regarding the play-creative writing interface, by observing selected friendship pairs' shared creative activities in formal contexts and play activities in informal contexts.

However, an interesting implication of this tentative interpretation is the *transferability* of collaborative and discourse skills between informal and formal contexts: the context of

friendship and the context of classroom-based creative tasks. Using Gee's (1996) terminology, the paired Discourse of friendship may *filter* into the Discourse of classroom-based creative writing, and as such, can be mobilised for school-based collaboration. This interpretation supports central arguments on paired work, such as Crook's (1999) proposal to apply discursive resources acquired outside school to school-based tasks. It is also in line with Hartup's description of friends as *better cognitive bridges* than acquaintances (1996a). Such interpretation has strong implications to literacy practice, demonstrating the potential benefits of friendship pairing in the development of creative skills through groupwork, for example in the independent phase of the literacy hour.

This finding also helps illuminate that friendship talk is structured differently to schooled talk, and therefore it does not necessarily conform to the views of teachers regarding accepted (*tidy* or linear) discourse patterns. Thus, it helps practitioners to problematise their own approach to friendship talk in the classroom, highlighting its unnecessarily low status, and exploring areas in which it could be successfully mobilised for classroom-based work.

Variations and developments in the acquaintanceship discourse

It was shown that initially the acquaintanceship pairs' discourse was considerably less collective than that of the effective friendship pairs. The lack of collaborative repertoire and intersubjectivity was evident in the discourse of the acquaintanceship pairs. Inducting the children about the ground rules of productive collaboration, as suggested by Mercer (1995), would have equipped the acquaintances with strategies of joint thinking and talking. But the fact that, with the same amount of collaborative experience in formal contexts, the effective friendship pairs still managed to maintain a high level of sharedness and productivity, supports Crook's (1999) standpoint. The current research

contributes to the *induction into ground rules versus re-deployment of discursive resources* debate, highlighting the potential benefits of explicit rule-setting when there are no existing resources to fall back on, but also showing the resourcefulness of the friends to organise their own collaborative activities effectively.

Although effective friendships proved to provide a stable, supportive basis for collaborative creative efforts, there was also an observable development in the AP discourse, although to a varying extent. This in turn was associated with their growing competence at working together, and also their developing relationship. These findings – together with the variations found within the discourse of the three acquaintance pairs – support the description of friendship and acquaintanceship as discrete points on a continuum, and the argument that friends and acquaintances do not form homogenous groups that are distinct from one another. Also, the developments indicate that, regardless of the demonstrated benefits of friendship pairing, working with an acquaintance has potential advantages. As Azmitia points out, such collaborations "might allow individuals to stretch their skills in the service of accommodating to the interactive and cognitive skills of an unfamiliar partner" (1998, p. 225).

An interesting finding was that the gap between friends and acquaintances seemed to be moderated or intensified by other factors, such as the initial level of other-orientation and motivation to collaborate. This is important for two reasons. On the one hand, it shows the significance of motivational factors (both motivation to work *on a task* and motivation to *work together* with a partner) in determining the success of a collaborative situation. It appears of equal importance with the existence of a collaborative and discursive repertoire. On the other hand, the data show that strong motivation to collaborate is *not* restricted to friends only: it can exist between two people who have not got previous collaborative experience or emotional bonds.

The distinction between *learning to collaborate* and *collaborating to learn* could be used to explain the initial differences and subsequent variations in discourse styles. The effective friendship pairs, through shared friendship histories, have already learnt to collaborate in some way and therefore could concentrate on *collaborating to learn*. Also due to their shared histories as friends, they had strong motivation to do so. In contrast, the acquaintances had no previous collaborative experiences, therefore they needed to *learn to collaborate* before they could *collaborate effectively to learn*. The male acquaintanceship pair's discourse provides good evidence for this argument. Although they were strongly motivated to work together (to *collaborate to learn*), they did not have a well-established discursive and collaborative repertoire: they needed to learn *how* to. The interesting difference between the male acquaintanceship pair and the other two acquaintanceship pairs is this *initial motivation*. Initially, the female acquaintanceship pairs seemed to lack the *motivation* to collaborate to learn, as well as collaborative experience, which made their joint working styles even more problematic.

A methodological concern raised regarding the study of the dynamics of paired discourse is the difficulty of capturing the transition from acquaintanceship to friendship (when such development occurs). The contrastive analysis of friendship and acquaintanceship discourse, as if in complete opposition, is a well-documented approach. On the other hand, there are problems with the description of the *in between* – that is, the intermediate stages between friendship and acquaintanceship. Do the friendship-like elements in the acquaintanceship discourse mark emerging strategies and growing collaborative expertise, or the ultimate shift in the relationship? Also, when does acquaintanceship end and friendship begin? How can qualitative, contextualised methods capture the growing frequency of or reliance on particular discourse patterns? Future research is needed to address these issues.

Problematic friendship discourse

As noted above, shared histories and collaborative experiences in informal (friendship) settings were seen as providing both the skills and the motivation to collaborate on classroom-based tasks. However, there were two friendship pairs (out of the ten FPs) whose work did not completely follow this pattern. One of these was a high ability pair, who showed problems with using the shared talk constructively for task-related purposes. There are some interesting aspects to consider here, for example the *role of the teacher* (Would the pair benefit from a more teacher-managed collaborative context?), the *difficulty* of the task (Was the task too easy for the high-ability pair?), or the effects of the *research context* (Was this pair particularly affected by the observations?). These questions are all valid and legitimate. For example, Azmitia (1998) has reported that friendship pairing was most effective when the tasks were difficult or complex for the partners. However, I argued that the central problem with this collaborative pair was the lack of observable efforts to apply their collaborative strategies to the task. Thus, although their friendship was not problematic *per se*, it did not support classroom-based creative writing as much as the partnerships described above as *effective friendships*. This finding indicates that not all friendships provide an effective context for shared work in formal settings, although we do not as yet know *why*.

Also, the analysis of the problematic friendship discourse pointed at the complexity of what makes a collaborative session *work*. The analysis of the discourse of the other problematic friendship pair demonstrated individual approaches to creative writing. Although they discussed what they were doing, this was done at the level of *reporting*, without any attempts to engage in joint work. Chapter 4 offered a tentative explanation, linking the apparent lack of collectivity to the children's interpretation of the task. They could have seen pairwork as a vehicle to provide occasional help when one got stuck.

Such interpretation was seen as sensible in the context of much school-based collaborative work, and their reporting style resolved the contradiction between general classroom practice (individual assessment) and the specific task (the requirement to share).

Ambiguities in the instructions – i.e. the lack of emphasis on a *joint product* – would lead to this *default* interpretation of the paired activity. In other words, it is possible that the degree of sharedness displayed in their discourse is influenced by the pair's prior experiences of classroom-based collaboration, or their interpretation of the instructions, and does not fully describe their collaborative capacities. This interpretation underlines the significance of instructions, and further highlights the need to study the interrelation between friendship effects and other aspects of the learning context.

6.2.3 Methodological considerations for the study of collaborative learning

The doctoral research contributes to the current methodological debate about how best to analyse collaborative processes. Drawing on contemporary neo-Vygotskian theory the research focused on the ongoing processes of joint knowledge construction and the negotiation of meaning via the analysis of paired discussion. Contextualised, qualitative analysis was carried out to identify and examine episodes associated with different functions. The main challenge that I faced in this process was the need to capture complex processes in a coherent framework without simplifying them. The significance of the doctoral research lies in the task-sensitivity and descriptive power of the developed model for the specific context of paired creative writing.

Nevertheless, the analytic process identified aspects of the transcribed discourse which need to be further explored. For example the analysis revealed that the use and frequency

of particular phrases and linguistic structures was an interesting aspect to investigate. However, this proved beyond the scope of the study, and was not supported by the chosen methodological design.

For future studies involving the examination of key phrases within children's collaborative creative writing discourse, computer-based text analysis of verbal data is recommended. For example, Mercer and Wegerif (1997) advocate Key Word in Context (KWIC) Analysis, building on a computer-based software tool called *!KwicTex*. KWIC Analysis is a combined approach, allowing for both the in-depth qualitative study of full scripts, and the systematic examination of quantified (yet, contextualisable) data.

Such a methodological approach would help overcome limitations of generalisability, a critical point frequently raised with regards to qualitative research findings. As Wegerif and Mercer (1997) point out, it is very hard to use qualitative analyses of classroom discourse to make convincing generalisations. Yet, in order to fully inform policy makers and practitioners alike, educational research must recognise and address the need for generalisations and evaluative comparisons.

Key Word in Context (KWIC) Analysis has been used by educational researchers for the analysis of classroom-based dialogues, and would be an excellent tool to explore the occurrence and frequency of key phrases and linguistic structures, identified during the qualitative analytic phases. This would be advantageous for the description of function-specific discourse patterns and collaborative strategies and in terms of the differentiation between individualistic and collective discourse styles.

Furthermore, it would make a larger data-set - as described in the recommendations in previous sections - more manageable. By doing so, it would facilitate the extensive,

detailed but systematic study of collaborative work in different genres or the contrastive analysis of friends' discourse data in both formal and informal contexts.

Finally, this computer-based, combined approach would help “maintain the connection between relatively concrete data, such as recordings of events, and relatively abstract data such as word counts or test scores” (Wegerif and Mercer, 1997:277). Therefore, the exploration of statistical relationships would not *replace* but *enhance* the interpretative analysis of the collaborative processes. The quantitative analysis would provide evidence for the significance of the relationships between particular features of the discourse - identified in the qualitative phases - and the productivity of the collaborative activity - measured, for example, through the analysis of written products.

6.2.4 Collaboration in context

Expanding the focus onto the intermediate context of the primary classroom, the following question was raised:

- *How do contextual features of the learning context impact on classroom-based collaborative creative writing activities?*

While the identification of central contextual aspects was planned to be a part of the reflective interpretive-analytic process itself, one important aspect was identified and incorporated in the design: the writing medium as a mediating feature of the classroom-context. The review detailed empirical work outlining the advantages of computer-supported writing as opposed to pen-and-paper writing, and emphasised the need to carry out further research to elaborate on the mediational role of computers in restructuring processes of knowledge building and creating new contexts for teaching and learning.

Within this particular theme, the following question was formulated:

- *What are the constraints and affordances of computer mediation in the context of collaborative creative writing?*

When addressing this issue, both the physical properties of the computer tool and the features of the word-processing software were considered.

Task design and writing medium

Interestingly, the analysis of the role of the writing medium and task design proved to be strongly interlinked. Chapter 5 has shown that the turn-taking strategy typically adopted in shared-copy design in literacy and during shared computer-use in ICT was found to fragment the flow of creative text composition, and sometimes was extended to phases other than transcription, leading to more individualistic approaches towards content generation and reflection. The pedagogical implications of this finding are that, although shared copy compositions may in theory represent a higher level of sharedness, keeping separate drafts or copies of shared compositions may better support collectivity in joint content generation and reflection phases.

In the shared-copy turn-taking context, the benefits of the use of a word-processor as opposed to pen-and-paper mode were marked by the emergence of the editor/scribe role division in several observed partnerships. It was argued that such role differentiation draws on the benefits of a clearer display (the text on the screen being more accessible for young readers than hand-written drafts), and features of the software design (such as spell-check). Also, such computer-supported role differentiation was seen as especially facilitative for less experienced writers or word-processor users, who in this way do not have to divide their attention between transcription and editing, or between the keyboard and the monitor. Thus, it was concluded that the computer tool offers a platform for more

shared transcription phases, allowing children to show greater sensitivity towards aspects of writing typically emphasised by the teachers (spelling and neatness).

However, the constraints of the use of word-processors for the process of creative design were described as arising from the same features. It was found that children often became too preoccupied with spelling and formatting, which hindered the actual process of creative text composition, leading to an over-emphasis on formal representation. It was concluded that, in order to make the most of the benefits of word-processor use, ICT-based creative writing activities of young writers may need to allow for the use of *inventive spelling* and build on a more content-centred approach. This issue has already been addressed when developing software tools to support young children's writing (e.g. Kidworks, in Jones and Pellegrini, 1996) or storytelling (KidStory, Stanton, Bayon, Neale, Benford, Cobb, Ingram *et al.*, 2001). The point to make here is that a more content-centred approach may be beneficial in ICT-based creative writing sessions which build on available software tools that were not necessarily designed for young children (e.g. Microsoft Word).

Also, it was found that partnerships varied in terms of the balance they demonstrated in sharing through alternation. This finding underlines the need to carefully arrange the shared task for children in a way that we can keep both partners occupied. To increase the educational potentials, the modification of the joint creative writing task was suggested, so that it builds explicitly on the work of two partners. Light and Littleton (1999) achieved this in practical problem solving contexts by structuring the task in such a way that decisions needed to be joint (for example pieces of the *puzzle* had to be moved together). In the context of joint creative writing with ICT support, the open encouragement of children to actively adopt (and switch between) the roles of the scribe and the editor would provide a more appropriate framework for the sharing of duties and

responsibilities. This way, the children could make more conscious use of the advantages of computer support described above. Alternatively, turn-taking in ICT could be put to use by developing children's skills in specific areas of creative writing, such as creative dialogue-composition. Bubble Dialogue, an educational software application designed to teach storytelling through the construction of a dialogue between two characters, is a good example for such a *turn-taking* platform (Gray, Creighton, McMahon & Cunningham, 1991). Finally, the reorganisation of the physical setting of shared computer use has future potentials. For instance, using two keyboards, or two mice – as in the inventive KidStory Project developed for collaborative storytelling (Stanton *et al.*, 2001) – could be another alternative to keep both partners occupied.

Making sense of the instructions

As discussed above, the analysis presented in Chapter 5 demonstrated the mediating effects of task design, the writing medium and the teacher's instructions, highlighting the inextricably linked nature of contextual features in structuring shared work in the classroom. Furthermore, the study found evidence that the complexity of the written instructions had an effect on children's success in narrative writing. More importantly though, it showed the interplay of various contextual variables in shaping the meaning of the task, thus challenging the notion that tasks are *given* and supporting the alternative view that tasks are reconstructed – and continuously renegotiated – by the children (Murphy, 2000).

The analysis demonstrated that paired talk, wider social interaction, and social comparison were vital in the process of sense-making. The participants also displayed a strong interest in discussing other people's work with them, and were highly motivated to offer help to others around them. They also monitored other people for the purposes of self-assessment. Similar findings have been reported by other studies exploring the role of

social interaction and social comparison in other educational contexts (Light & Light, 1999).

Note that teachers did not encourage children to talk to children other than their partners, and some of them actively discouraged such talk. Thus, the observations may help reassess the status of unsolicited classroom talk (for example social interaction around the table), and see it in a more positive light. This argument has pedagogical implications, pointing out the need to redefine our understanding of school-based learning, and encouraging teacher practitioners to build more consciously on peer support in everyday classroom practices.

The fear of children *mucking about*, or going off-task, or activities leading to *too much noise* has some validity. There was evidence in some observed sessions of children being distracted by the others and going off-task while their partners were working. However, I would argue that this was due to the limitations of the task design in those sessions (shared copy writing), and the advantages outweighed the potential drawbacks. The observable benefits of letting students talk around the table – reflected in the participants' genuine interest in other children's work and the constructive feedback they provided for each other – need to be addressed when setting up classroom-based tasks for children.

The question is not whether we should let children talk to each other or not around the table when they are doing independent work. Rather, we need to think about how to set out the task to minimise unconstructive uses of social interaction. This could take the form of *ground rules* regarding classroom talk, which gives children a framework of what sort of talk is seen as desirable and/or acceptable around the table, and encourages them to build on the supportive feedback of peers in the independent phase of the literacy hour (Mercer, 1995). With regards to creative writing, children could be encouraged to help each other with the development or evaluation of creative ideas, and be the *source* or the

editor of other children's creative material. The highly beneficial role of such peer review and evaluation is a crucial argument of the current thesis, which strikes a chord with current debates regarding the *assessment* of creativity (Loveless, 2002).

The methodological implications of these findings are also significant, highlighting the limitations of experimental studies in situating the learning experience in its social and cultural context, and underlining the need to further explore the role of social interaction (especially unsolicited classroom talk) in classroom-based learning situations.

Different layers of context

The analysis illustrated the layeredness of the context, and the important role these different contextual layers play in influencing the observed creative writing activities.

When looking at the role of the educational context, the thesis demonstrated the contradiction between the culture of collaboration and that of classroom based work (and its assessment). It was shown that some children displayed a heightened awareness of and sensitivity towards the ownership of the created material and the avoidance of *copying*. This was seen as appropriate (and often desirable) in the classroom context, but was not deemed to be in line with the culture of collaboration. This finding highlights the potential problems of introducing shared activities in the classroom, deriving from the conflict between the culture of classroom-based assessment – emphasising individual achievement – and the culture of collaboration. Future research needs to unpack this issue, and inform practice by providing routes by which collaborative creativity can become a routine, assessable component of classroom-based learning activities. The synergy of different strands of creativity research and educational ICT research may be beneficial in this respect. For example, when developing criteria for the evaluation of

pupils' multimedia and web work, Lachs (1998, cited in Loveless, 2003) includes criteria for *audience interactivity* and *working with others*.

Furthermore, through the analysis of children's narrative-writing dialogues the specific features of this genre were detailed, and the highly embedded nature of narrative writing in the immediate socio-cultural context (oral narrative experiences at home or during play) and the wider cultural setting (quiz shows, media, popular art, etc.) was demonstrated. The observed dialogues highlighted the crucial influence of the popular culture surrounding the children, both in terms of the content they generated, and in terms of how they approached the genre of story-writing. These findings can be highly informative for practitioners in terms of the planning and resourcing of classroom-based creative writing tasks.

Finally, similarly strong influences of the socio-cultural milieu (e.g. popular culture or classroom culture) were reported when discussing the children's response to the research context. The presence of the camera seems to have changed the meaning of the task for the children to some extent. Writing with a partner in literacy classes was different from writing with a partner in literacy classes in front of the camera. Some of the discourse features observed (such as talking to or acting for the camera) were interpreted as reflecting recent cultural changes (for example reality television), which appear to modify the status and purpose of the camera in the children's eyes. These findings have implications to observational research building on video-recording as a method of data collection, depicting the camera as less intimidating or inhibiting than generally expected. They also highlight newly emerging issues with this data-collection method, showing the distractive potentials of the camera linked to these new cultural phenomena.

In sum, the research clearly demonstrated the *embeddedness* of children's learning experiences in the social and cultural environment that surrounds them, and their active sense-making through social interaction. This chapter has described a number of future themes for educational research on peer collaboration. One particular theme of special interest is the study of the affective dimensions of creative writing (the role of emotions in creative writing) and of collaborative work (the role of the relationship in influencing the process). It was pointed out that future research needs to expand the study of the *creative writing-play* interface by studying friendship discourse in both contexts. Furthermore, instead of a contrastive analysis of friendship and acquaintanceship discourses, future research could examine paired creative writing discourse by following the work of children paired regularly by their teachers, and build the variations in shared histories into the analysis in the form of a longitudinal, ethnographic study of classroom-based paired creative writing talk.

6.3 Conclusion

The current research makes a contribution to the wealth of academic work on collaborative learning by researching a subject-area which hitherto had not been addressed in great detail. By linking cognitive processes associated with writing to observed collaborative and discursive features, the research has identified discourse patterns and collaborative strategies which facilitate *sharedness* and thus support joint creative writing activities. Therefore the research informs both academics and practitioners about the use of pairwork and the nature of paired discourse in activities involving open-ended and unstructured tasks such as collaborative creative writing. That such a research focus holds special currency is demonstrated by the recent emphasis placed on creative tasks in the national curriculum (MacDonald & Miell, 2000). A

significant finding of the research reported here was the centrality of emotions in creativity.

In addition to practice, the research also contributes to the current methodological debate about how best to analyse collaborative processes. The methodological strength of the current research derives from focusing on the contextualised analysis of classroom-based work, providing a qualitative analysis of the social and cognitive *processes* via the in-depth study of verbal interaction, and, where possible, taking a longitudinal approach. The significance of the research lies in the task-sensitivity and descriptive power of the developed model for the study of paired creative writing.

Furthermore, the current research contributes to a third line of interest, the research on computer-supported learning. Through finding that the use of word-processors facilitates a role distribution (*editor/scribe*), the work demonstrated the unique role of the computer in framing and mediating paired creative writing activities. Thus, the research study contributes to the theoretical debate on collaborative learning in general and on computer-supported learning specifically. Furthermore, it affords guidelines about the use of word-processors to support collaborative writing projects, thus departing from the main wealth of literature on computer-supported learning. It is of special interest that the research informs practitioners about the collaborative use of already existing (i.e. available) ICT resources at school, and not about the development and implementation of specialised (and thus not generally available) software applications.

An equally distinctive contribution of this research is the exploration of the affordances and constraints of friendship pairing in classroom-based joint creative writing, highlighting the benefits of working with a close friend, but also indicating the interrelation of friendship effects with other features of the learning context. The work

has demonstrated how and why close relationships often provide a highly facilitative context for joint creative thinking. It can therefore inform teachers and policy makers about the issue of friendship pairing, outlining its potential benefits in school-based creative writing activities. In conclusion, the current research has demonstrated the need to re-examine the status of classroom-based social interaction – be it collaborative discourse, friendship talk, creative use of language or unsolicited social discourse – and build more effectively on peers as *social* and *cognitive resources* in formal education.

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APPENDICES

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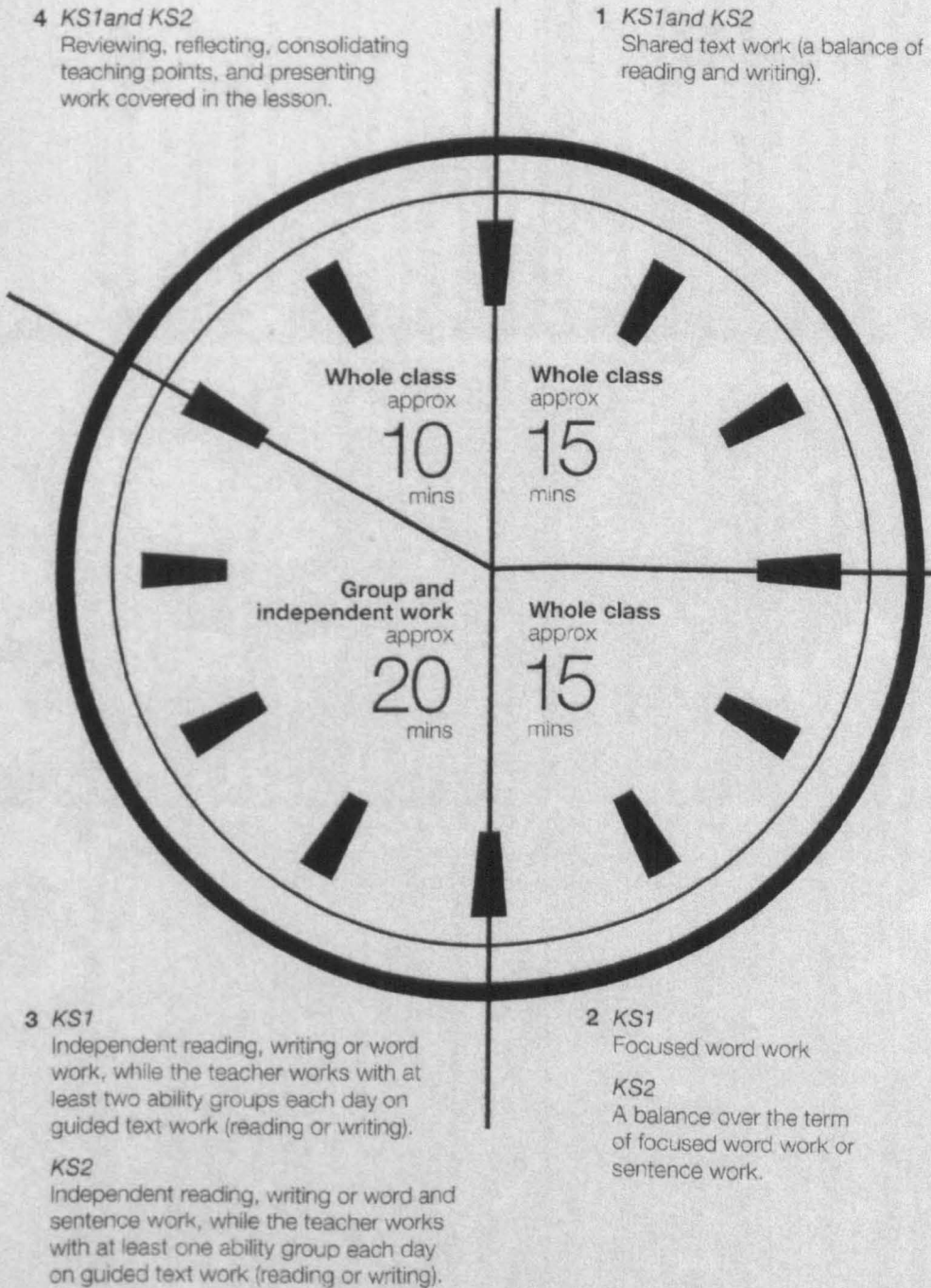
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Appendix 1 - Structure of the Literacy Hour

Structure of the Literacy Hour



Word level work:

Phonics, spelling and vocabulary

Pupils should be taught:

Revision and consolidation from Year 3

- 1 to read and spell words through:
 - identifying phonemes in speech and writing;
 - blending phonemes for reading;
 - segmenting words into phonemes for spelling;
 - correct reading and spelling of high frequency words from KS1 and Y3;
 - identifying syllabic patterns in multi-syllabic words;
 - using phonics/spelling knowledge as a cue, together with graphic, grammatical and contextual knowledge, when reading unfamiliar texts;
 - recalling the high frequency words learnt in KS1 and Y3;

Spelling strategies

- 2 to identify mis-spelt words in own writing; to keep individual lists (e.g. spelling logs) and learn to spell them;
- 3 to use independent spelling strategies, including
 - sounding out and spelling using phonemes;
 - using visual skills, e.g. recognising common letter strings and checking critical features (i.e. does it look right, shape, length, etc?);
 - building from other words with similar patterns and meanings, e.g. *medical, medicine*;
 - spelling by analogy with other known words, e.g. *light, fright*;
 - using word banks, dictionaries;
- 4 to practise new spellings regularly by 'look, say, cover, write, check' strategy;

Spelling conventions and rules

- 5 to investigate what happens to words ending in 'f' when suffixes are added;
- 6 to spell words with the common endings: *-ight, etc.*

Sentence level work:

Grammar and punctuation

Pupils should be taught:

Grammatical awareness

- 1 to revise and extend work on adjectives from Y3 term 2 and link to work on expressive and figurative language in stories and poetry:
 - constructing adjectival phrases;
 - examining comparative and superlative adjectives;
 - comparing adjectives on a scale of intensity (e.g. *hot, warm, tepid, lukewarm, chilly, cold*);
 - relating them to the suffixes which indicate degrees of intensity (e.g. *-ish, -er, -est*);
 - relating them to adverbs which indicate degrees of intensity (e.g. *very, quite, more, most*) and through investigating words which can be intensified in these ways and words which cannot;

Sentence construction and punctuation

- 2 to use the apostrophe accurately to mark possession through:
 - identifying possessive apostrophes in reading and to whom or what they refer;
 - understanding basic rules for apostrophising singular nouns, e.g. *the man's hat*; for plural nouns ending in 's', e.g. *the doctors' surgery* and for irregular plural nouns, e.g. *men's room, children's playground*;
 - distinguishing between uses of the apostrophe for contraction and possession;
 - beginning to use the apostrophe appropriately in their own writing;
- 3 to understand the significance of word order, e.g.: some re-orderings destroy meaning; some make sense but change meaning; sentences can be re-ordered to retain meaning (sometimes adding words); subsequent words are governed by preceding ones;

Text level work:

Comprehension and composition

Pupils should be taught:

Fiction and Poetry

Reading comprehension

- 1 to understand how writers create imaginary worlds, particularly where this is original or unfamiliar, such as a science fiction setting and to show how the writer has evoked it through detail;
- 2 to understand how settings influence events and incidents in stories and how they affect characters' behaviour;
- 3 to compare and contrast settings across a range of stories to evaluate form and justify preferences;
- 4 to understand how the use of expressive and descriptive language can, e.g. create moods, arouse expectations, build tension, describe attitudes or emotions;
- 5 to understand the use of figurative language in poetry and prose; compare poetic phrasing with narrative/descriptive examples; locate use of simile;
- 6 to identify clues which suggest poems are older, e.g. language use, vocabulary, archaic words;
- 7 to identify different patterns of rhyme and verse in poetry, e.g. choruses, rhyming couplets, alternate line rhymes and to read these aloud effectively;
- 8 to review a range of stories, identifying, e.g. authors, themes or treatments;
- 9 to recognise how certain types of texts are targeted at particular readers; to identify intended audience, e.g. junior horror stories;

Writing composition

- 10 to develop use of settings in own writing, making use of work on adjectives and figurative language to describe settings effectively;
- 11 to write poetry based on the structure and/or style of poems read, e.g. taking account of vocabulary, archaic expressions, patterns of rhyme, choruses, similes;
- 12 to collaborate with others to write stories in chapters, using plans with particular audiences in mind;

Appendix 3 – Fieldnotes from Preliminary observations

Date: 2 December 1999

School:

Phone:

Head:

Year visited: Year 6.

Form Teacher:

Aim:

General overview (school organisation, typical schoolday, teaching material/methodology, principles and guidelines, etc.) meeting with teachers - get hands-on experience of British schooling and educational practices

Questions:

How did the Education Reform Act change things at the school?

What are the current guidelines/principles set by the N.C. as to content and assessment (with spec. emphasis on English and IT)?

What is the policy of the school in terms of general discipline, control, teaching styles, methodological techniques etc. - or are these prescribed too?

Notes prior to school visit:

Before 1988 considerable autonomy of schools, variation in content and assessment. 1988: Education Reform Act - change in the National Curriculum: all state schools share a common curriculum and assessment procedure.

English, maths and science are the core subjects, contents set by the government. There are 7 foundation subjects: modern foreign language (from secondary school), history, geography, art, physical education, technology and music. TGAT - Task Group on Assessment and Testing: sets attainment targets, describes skills, understanding and range of knowledge the children will be expected to achieve as they progress through the school system. Each target has levels of attainment (1-10), with precise description of skill relevant to children at different ages and stages. At the ages of 7/11/14/16 the children are assessed: i) SAT (standard assessment task); ii) teacher assessment.

Things to observe (if possible at all):

- teaching style (control, questioning, rapport)
- physical setting, general atmosphere
- types of groupwork and interaction patterns

Background information:

The school has received Beacon Status from Ministry of Education. Head: the need to meet those high standards on one hand, and to let children find joy in their daily work on the other are considered crucial.

Key stage 1: Preparatory class, Years 1-2; Key stage 2: Years 3-6; Key stage 3: Years 7-9; and Key stage 4: GCSE.

The observed group/class belongs to Year 6. With the two other year six groups/classes, and a year 7 class they occupy 'sheds' that are only separated by curtains, and all four of which open to a spacious 'shared area'. The children use both the shared and separated areas during the activities. There seems to be quite a large amount of continuous background noise (coming from the other activity areas), which does not seem to disturb the children or teachers. Sometimes all 3 Year 6 classes work together, sometimes they divide into groups other than the original classes. The sheds have tables, around which children sit in groups (they might change tables, and they decide their own seating on the basis of friendships).

8.45-9.00 Registration

The form teacher reads out the children's names (only their first names - there seem to be 3 Sophies, who all seem to know when to respond...) The late-comer does not receive any scolding.

9.00-10.00 English

Reading in the shared area

The form teachers take turns to read out 2 chapters of Roald Dahl's autobiographical book "Boy". (The current topic of English lessons is autobiographies, non-fiction.) Children listen attentively, although they become more and more fidgety at one point during the 2nd chapter. But soon the turns and twists of the story catch their attention again. The readings are interrupted and followed by discussion with the children, the teachers ask their comments and opinion, related experiences (to get them personally involved?)

10.00-10.15 Children go back to the 'sheds' and are given a handout: questions about previous chapters of the book. They work in groups around the table. Is this real groupwork, or individuals working alone around a table? Could probably make more use of potentials offered by the seating plan. (Strong discipline: teacher asks questions, and the children have to raise their hands, but they are not allowed to answer unless their names are called. In general, the children are very well-behaved, they do not question the authority of the adult, and seem to be happy to

follow any instructions, happy to work. The level of noise is acceptable even when they work in groups and they escape the direct attention of the teacher.)

11.15-11.45 Assembly - all children go to the assembly hall

Today's topic is hobbies, encouraging children to take up any activities they feel like doing, and enjoy doing things that they are not that good at.

11.45-12.00 Break

12.00-13.00 Science (Maths)

(Meanwhile, I am quickly shown around the school by two year 6 children) Topic: angles, fractions and multiplication. Most of the work is done in whole-group setting, although at times children spontaneously form pairs or small groups to exchange ideas about the answer to the question/problem in focus, or to share props/tools (e.g. digit number and arrow cards). Again, the setting could lend itself to more groupwork, they would love it. Hyperactive child ('H') is given extra help to occupy himself (he is one of the children who was assigned to show me around, and later on he will be given extra attention and will be seated in the rocking chair (the chair is used for special purposes: teacher, guests, nominated children)

12.00-13.00 Lunchbreak. After finishing their lunch children go outside accompanied by helpers. H is found fighting in the library.

13.00-14.00 IT session

The school has been equipped by Tiny Computers: there are enough work stations for all the children to work individually. This however limits the possibility of groupwork: they all want their independence, although some of them form pairs spontaneously, and work on the project together. (Their task is to write a summary or review of a story (some of them are writing about 'Boy', some work on an ancient story, Dolphin?). When stuck, children ask teacher and each other for help. Some boys seem to be highly skilled and experienced and very helpful towards the others. No sign of student behaving as 'the sole source of knowledge' – no superior attitude. Teacher is open about her own technical limitations: tells children that she learnt something from the IT specialist of the school the day before, and hopes it will work, but warns them that she may fail (she tries to log on to children's workstations from her own PC, this way being able to show their work on the projector).

14.00-14.45 Talking session (weekly)

Teacher and students sit in a big circle. Teacher chooses H to sit in the rocking chair – privilege!!! Children warm up with a game called 'fruit salad' - each gets a fruit name, and then they have to follow the teacher's instructions to mix (e.g. bananas swap places with oranges, etc.) The aim is to mix them properly. Then she selects two children, who will be the focus of the session. The two children may choose their own talking animal. This animal is being passed around in the circle, and the rest of the children have to tell the group why they like one of the selected children. Then the whole thing is repeated for the other child. Confidence boosting? Telling nice things about each other? Emotional bonding? Getting to know each other? Paying attention? Lovely activity, the children love it, and they say it is their favourite time of the week. Then the teacher starts to talk about a topic - e.g. calling names this time - and one by one each child tells the rest what they feel when they are called names - with the talking animals in hand. The topic has current relevance, after the assessment tests there was a tendency to ostracise the ones who did 'too well'. The teacher wants to raise their awareness to how it feels to be bullied. The children show genuine openness. One girl (G) tells the group that she does not care about name-calling, and that she relies on her inner strength and courage, telling herself that the people who are nasty are not right, and she knows better who she is inside. This expression of maturity almost makes the teacher cry. In the next round H tells teacher to not to bother, and just cry, because it is natural, his mother does that too sometimes when she feels sad for him, and that they have noticed her nose becoming red anyway.

Then from 14.45 to 15.15 they have an arts class, when they have to discuss the Dahl's illustrator's techniques, and draw in similar style.

My general impression is that the class is a lovely group of children. The teacher is dedicated and warm. This setting could be optimal to use less direct control and let children work on projects in pairs and groups. There was discussion about how many times I should visit, and whether I could use the school, or year group for my research. I think it could be a good setting, at least for the preliminary or pilot studies.

Appendix 4 – Interview questions for the participants of the Preliminary Observations

Points of follow-up discussion (school visits and observations in [redacted])

1 Form teacher

- general discussion of the picture-book project, reflections
- how will it be assessed? within IT? under which subject?
- feedback on the boys' performance/achievement

2 Children

- impressions of the project, reflections (was it exciting, would they like to have another writing task in IT, or do they prefer something else in IT or in English) - the boys' use of computers outside classroom
- reflections on working in this particular friendship-pair at the computer - girls? other partners? e.g. clever boy, clever girl, etc.
- discourse patterns in IT and outside school - do they spend a lot of time together outside IT/school, if yes, do they talk to each other like they talked in the session I recorded? Is there any difference? If they were with someone else in pair, how would it be different?
- content of the dialogue - vague points, who said it, what they meant by it, references to characters/programmes/films:

Appendix 5 - Sociometric questionnaire

A) Instructions for children

Talk to the children about the purpose of this questionnaire (to learn about year 4 children, the relationships in the classroom).

Tell them that it is confidential, their answers will be treated as *secrets*. Tell them how you will use the answers.

Read the introduction with them.

Read the two questions to them, and explain to them what you expect: 3 names, with the activities you like sharing with them at school and at home. Including work and play!

Tell them about the lack of hierarchy!

Tell them to answer the questions as they feel the best, and to avoid discussing with their peers. We are interested in everybody's own opinion and feelings.

Finally, tell the children that they don't have to fill it in if they don't want to. It is up to them. If they feel uncomfortable, leave the page empty, or any questions empty.

Of course, remind them that we need their full names on the sheet.

Please answer the questions with the full name of three children in your class. I would also like you to tell me what you like doing with each of them at school and out of school. You can list as many activities as you like. Try not to discuss your answers with anyone, choose the people and activities that YOU feel are the best. I will not discuss your answers with teachers or other children either.

Questions:

1. What is your name? (FULL NAME PLEASE!)

.....

2. Can you name three of your friends in the class? (FULL NAME PLEASE!)

Friend 1:

Friend 2:

Friend 3:

3. What do you like doing with them at school?

Friend 1:

Friend 2:

Friend 3:

4. What do you like doing with them out of school?

Friend 1:

Friend 2:

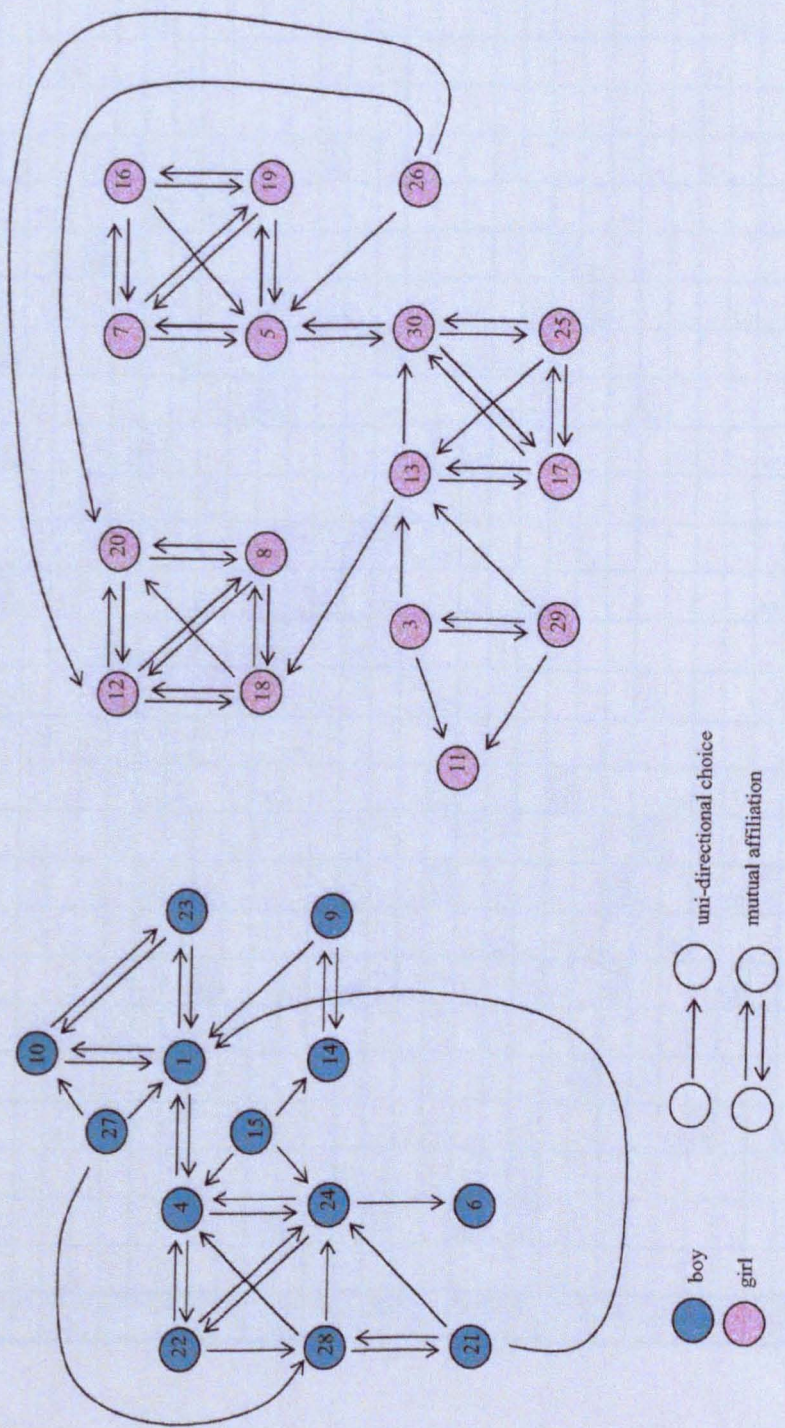
Friend 3:

Thank you very much for your help!

Eva



Appendix 6 – Sociometric matrix of a Year 4 Class



Appendix 7 – Friendship nominations in a Year 4 class

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
1	X																C				B	A								
2		X													B			A		C										
3			X			B					A								C											
4				X							A										B				C					
5					X																A	B							C	
6						X				A		B																	C	
7							X		B													A					C			
8								X			A									C						B				
9							A		X								C					B								
10						C				X		B											A							
11											X								B	C	A									
12		B					C					X																	A	
13													X											A						
14						C								X													A	B		
15		C													X				B	A										
16						B							C		X														A	
17									C			B				A	X													
18		A													C		X			B										
19								C										X		A				B						
20		C													A					B	X									
21	B										C										X	A								
22					C																B	X							A	
23							A		B														X							NO C
24									B		A								C					X						
25				C			A		B															X						
26	A			B																			C		X					
27							A		B													C					X			
28															B			A									X		C	
29				C												A						B						X		
	2	4	0	3	1	2	6	2	4	2	5	0	4	1	4	2	2	2	2	5	6	7	3	2	4	0	2	2	2	5

mixed gender, mutual nomination
 female pair, mutual nomination
 male pair, mutual nomination

Appendix 8 – Mutual friendship nominations and popularity in a Year 4 Class

Child	Number of nominations received	First mutual nomination of child	Second mutual nomination of child	Third mutual nomination of child
1	2			
2	4	18		
3	0			
4	3			
5	1	22		
6	2	10		
7	6	9	27	23
8	2			
9	4	17	23	7
10	2	6		
11	5			
12	0			
13	4			
14	1			
15	4	20		
16	2	29		
17	2	9		
18	2	2		
19	5	20	24	
20	6	19	15	
21	7	22		
22	3	21	5	
23	2	9	7	
24	4	19		
25	0			
26	2			
27	2	7		
28	2			
29	5	16		

highly popular
isolated

Appendix 9 - Participants

Preliminary Study

Friendship pair:

Carina - Jenni middle ability

Acquaintanceship pair:

Annabel - Mary middle ability

Main Study

Friendship pairs:

David (mid 4)¹ - Chris (mid 4) high ability
Zak (low 4) - Robbie (mid 3) high ability
Dawn (Low 4) - Linda (high 3) high ability
Jennifer (low 3) - Carina (low 3) middle ability
James (high 2) - Mike (mid 2) lower-middle ability
Zeena (high 2) - Louise (low 2) low ability

Acquaintanceship pairs:

Martin (high 2) - Alan (high 2) middle ability
Jane (low 2) - Claire (high 2) low ability

Study 2

Friendship pairs:

Lisa - Julie middle ability
Mark - Simon middle ability
Del - Kenneth middle ability
Liam - Tom² low ability

¹ The scores in brackets indicate the children's end-of-term literacy SAT test results taken in July, following the observations. The literacy tests assess ability using a 1-4 scale, where lower scores indicate lower ability and higher scores indicate higher ability. Mainstream, middle ability groups typically range from high 2 to high 3, above that is high ability rating, below that is low ability rating. Note that some children have moved up or down in terms of test scores, leading to slight discrepancies between the original ability grouping and the test-scores in brackets.

² Note that this pair's discourse is not discussed in the research. This does not however mean that the boys' work was excluded from the analysis. Rather, episodes from other transcripts were deemed more revealing regarding the focal points of the analysis.

Appendix 10 - Letter to the governor

Computer-supported collaborative creative writing - Classroom observations in Year 4.

*Eva Vass
The Open University
17 January 2001*

This letter describes a classroom-based research project planned to be carried out in the Year 4. classrooms of Middle School.

Background

Based on evidence that children can benefit from opportunities for collaboration, there is a growing interest in studying how children work together on school projects. The present study investigates children's paired creative writing activities during a period of two school terms. The observations will be of ongoing activities in the literacy and ICT classroom, and will not interrupt ongoing work or place additional demands on the students or the teachers.

Pairs of children were selected using a questionnaire and with the help of the form teachers. During the Spring and Summer terms, the joint writing activities of selected pairs will be observed and video-taped upon a number of occasions (whenever planned, extensive creative writing takes place in the literacy or ICT classroom). The observed children will be working alongside the rest of the class, engaging in the ongoing activities planned for everyone. They will not be separated from the other children or asked to do things differently from them.

Ethical considerations

Confidentiality will be respected vis-a-vis data collection and analysis: no names or any other forms of personal data will be published. Children have been informed about the voluntary nature of the study, and have been given the option to refrain from the participation. Children have also been given information about the study itself, and have been encouraged to discuss their queries or problems with the researcher. (The same principles were followed when using the questionnaire.)

The researcher

Eva Vass is in her second year of carrying out research leading to a PhD at the Open University, supervised by Dr. Karen Littleton, Dr. Ann Jones and Dr. Dorothy Miell. Eva has a background in education, and has an MPhil in English and Applied Linguistics from Cambridge University. She previously worked as an English teacher, and has experience in classroom observation. The project outlined above forms the central part of her doctorate thesis. She carried out a short pilot study with a similar focus in June 2000 - working with Year 3 students - and has developed a very good rapport with both the children and staff.

Signed and approved by:

head teacher

governor

Date:

Appendix 11 - Spring-term planner¹

Termly planning

Year group: 4

Term: Spring

Theme:

Date:

Week no	1	2	3	4	5	6	7	8
	8 January	15 January	22 January	29 January	5 February	12 February (4 days)	26 February	5 March
English	Writers create imaginative works. How settings influence events and characters' behaviour.	Compare and contrast settings in stories. Use of expressive and descriptive language. Develop storysetting in own writing.	Figurative language in poetry and prose; identify cues which suggest poems' age.	Patterns of rhyme and verse in poetry. Write poetry using structure and style.	Review a range of stories. Identify authors, themes. NFER. Nelson test.	Review of SATs. Style tests.	Review of SATs. Style tests.	Recognise intended audience (fiction, non-fiction) Collaborate to write stories.
Week no	9	10	11	12				
	2 March	19 March	26 March	2 April				
	Writing own descriptive and expressive language.	Woodrow, note making, appraise a non-fiction book, prepare for factual research.	scan texts - key words; annotate extracts, make short notes; collect information (humanities link)	Why paragraphs are used; purpose, structure, language features. Improve cohesion of written explanations				

¹ Only the plans for English were reproduced in this table. The original planner had sections for all other subjects.

Objectives ↓	Text	Sentence	Word/Phonic	S+L focus	Year 4 Literacy Planning Sheet <small>week beg: 5th March.</small>	Plenary	Assessment	
Mon. general recognise text types) Identify audience	SELECT 10 BOOKS representing a broad range. Worst Witch J Murphy. (Can the children identify the intended reader from the cover list types of books enjoyed by the class)		To recognise and spell prefixes Revise mis- con- ex- co- ante- Introduce al- find other words. Remind what a prefix does.		<p style="text-align: center;">This week's big idea:</p> <p style="text-align: center;">To recognise that texts are targeted at particular readers</p> <p style="text-align: center;">To collaborate with others to write stories.</p> <p style="text-align: center;">Activities & Resources</p> <p>M/ Consider the remaining books selected and identify genre, audience, prediction + why.</p> <p>Tu/ Plan, in pairs, a story for a younger child. (A book for a child between ages of 5-7 boy/girl) Prepare idea. (Task sheet 5 for ideas)</p> <p>We/ Continue planning the story. Paying attention to characters, setting and use of adjectives.</p> <p>Th/ Extended writing. In pairs write the story on paper. Write the story and decide where the page breaks would be. Draw attention to punctuation and vocabulary.</p> <p>Fr/ Share stories.</p> <p style="text-align: right;"><small>Spelling Homework</small></p> <p style="text-align: right;"><small>Handwriting</small></p>	Discussion of book titles and appropriate audience.	Have the children matched the intended audience to the book?	
Tue. To understand that books are for everyone and adults enjoy children's books.	The Worst Witch (first 2 pages) Identify the intended audience and justify opinions		Develop the lists of words. Challenging word/definitions.	collaboration		Share initial thoughts and subject matter.	Is the subject matter appropriate for children?	
Wed. To understand texts for younger children. (key features)	Share with children a picture book. Discuss key features. Identify interests and abilities for audience. look at plot, complexity and characters in story.		Select adjectives in the text read. Think of alternative adjectives.	collaboration		Are the stories being kept simple? Share.	u	
Thu. Do story plans match intended audience?	Reviews 2/3 of the children's story plans. Do they match yesterday's list.	Extended writing.		collaboration		We/ Continue planning the story. Paying attention to characters, setting and use of adjectives. <p>Th/ Extended writing. In pairs write the story on paper. Write the story and decide where the page breaks would be. Draw attention to punctuation and vocabulary.</p>	Teachers share what we have noticed about their collaboration.	u
Fri. To evaluate the stories	Their stories.	where necessary give some proof-reading time				Fr/ Share stories.	15 mins. What makes a good child's story? Ideas for publication.	u
NLS ref.	TL 9 12	SL 7	WL 7		<p style="text-align: center;"><small>Spelling Homework</small></p> <p style="text-align: center;">↑ pg 18 be- → pg 14 our- ↓ pg 7 ou</p> <p style="text-align: center;"><small>Handwriting</small></p> <p style="text-align: center;">Focus on proportion.</p>			

Appendix 14- Poems from the Preliminary study

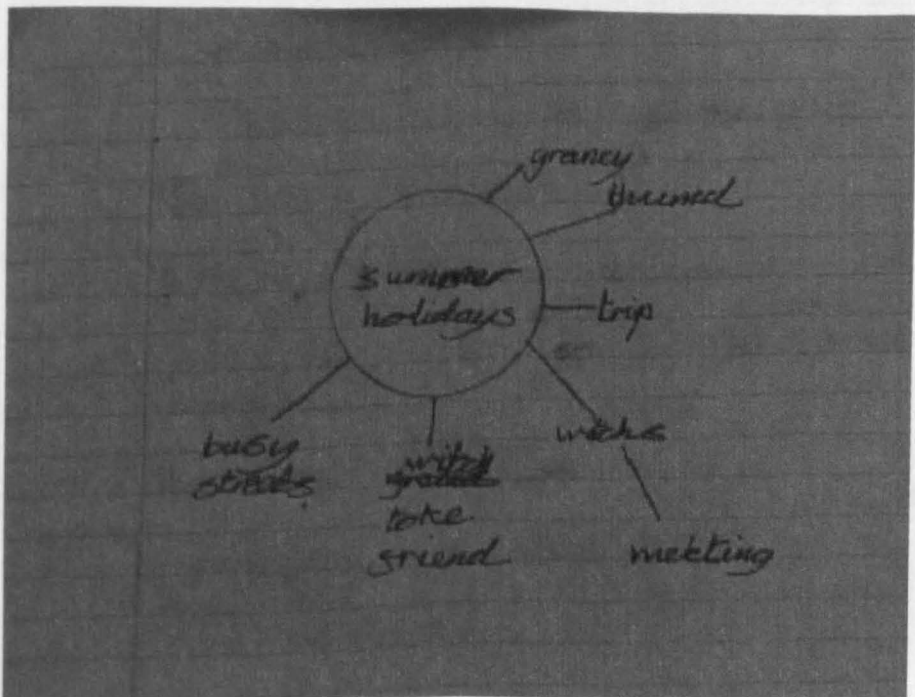
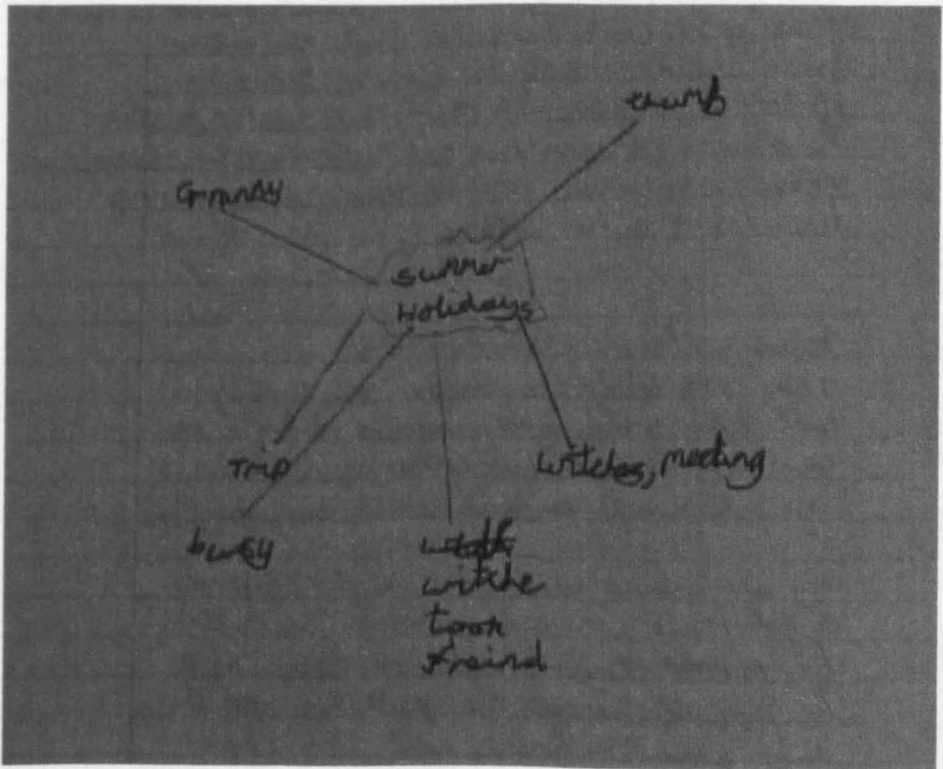
Acrostics poem

Sharks eating scales of a fish!
A angler fish dying of anchors dropping in the sea.
Ice creams melting in the sand.
Leaping ^{porpoises} dolphins in the air
Ice bugs floating wibble wobble wee
Natures best under the sea happiness is right
for me.
Gulp Gulp said a fish Bgey Bey to you
and me.

Limerick

This¹ was² a young boy³ from york⁴
Who sat on some ^{yorkshire} ~~pork~~ ^{pork} from yark⁵
The pork was so fat
it looked like a cat
That poor looking fat ^{boy} ~~pork~~ from yort

Appendix 15 - Mindmap for a writing project



Appendix 16 - Transcript symbols

1 Transcript symbols used throughout the thesis (Adapted from Silverman, 1998 and Schlegoff, 2000)

Symbol	Example	Explanation
(())	M: Ok, my go. We'll go down one. Let me think. A: ((pointing at the screen)) Oh, it says that that's wrong!	Double parentheses contain author's descriptions rather than transcriptions
(word)	J: Ermmm big and small C: No, big (corks)!	Parenthesised words are possible hearings
()	A: I wanted to () ship, ship, ship. M: I think.	Empty parentheses indicate the transcriber's inability to hear what was said
WORD	J: Sharks C: ((musing tone)) eating J: ((with excitement)) Sh- I KNOW!	Capitals, except at the beginnings of lines, are used for words/syllables uttered with emphasis
-	M: I, I, I was going to say, s- A: ((interrupting)) Sailing away	A hyphen indicates an incomplete word or utterance

2 Transcript symbols used in specific sections on overlaps and interruptions (Adapted from Coates, 1996)

Symbol	Example	Explanation
=	C: Sharks die, dolphins/ =No. J: survive=	An equals sign at the end of one speaker's utterance and at the start of the next utterance indicates the absence of a discernible gap
/	C: Sharks/ No, sharks/ Sharks die/	A slash indicates the end of a tone group or chunk of talk
-	K: They can hear us. D: ((giggles))	A broken line marks the beginning of a stave, and indicates that the lines in between the broken lines are to be read simultaneously

3 Transcript symbols used in specific sections on creative content generation

Symbol	Example	Explanation
word	M: Hobbies. Football, football, running into post. J: <i>Running into mud</i>	When focusing on the emergence and formulation of new ideas, the introduction of a new idea is marked by bold
word	M: Yeah. J: <i>Football, football, running</i> M: NO, sliding in mud.	The repetition of an existing idea or line is indicated by italics