CROSS-AGE PEER TUTORING BETWEEN KINDERGARTEN AND YEAR SIX STUDENTS IN A NEW SOUTH WALES CHRISTIAN SCHOOL: A CASE STUDY

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ABSTRACT

Cross-age peer tutoring involves the partnering of students from different age levels in a tutor-tutee relationship. A review of literature relating to cross-age peer tutoring revealed potential benefits for participants. This case study gathered data from a Christian school in a semi-rural district which ran a cross-age peer tutoring program (the 'Buddy Program'). A mixed-method approach was adopted to gather data by way of observations, questionnaires, interviews and a focus group. The data revealed that in this particular case a great majority of students enjoyed the program with student tutors perceiving their role as that of a 'helper' or 'teacher'. Evidence suggests that the program contributed to enhanced confidence, self-esteem and self-efficacy among participants. It was perceived by teachers, parents and participants that students benefited academically, socially and personally from the program. The research also shows the program to have contributed towards enhanced metacognitive understanding among student tutors. Finally, the study suggests that a cross-age peer teaching program will be more beneficial if teachers carefully plan and prepare for it.

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CHAPTER ONE

INTRODUCTION

Introduction

Cross-age peer tutoring was a characteristic of schooling in the nineteenth century when teachers often ran multigrade classrooms and concentrated on teaching basic skills in literacy and numeracy (Gerber & Kauffman, 1981). By the mid-twentieth century schooling was regulated by governmental authorities, most teachers were professionally trained, classes of students were separated into age-cohorts and cross-age peer tutoring had largely disappeared. Even though it was accepted that student to student interaction did contribute to learning, and group work was a recurring feature in pedagogy, the prime transmission of information was teacher centred and peer tutoring was regarded as being of secondary importance.

Over the past three decades, particularly with the translation of Lev Vygotsky's writings into English, there has been a renewed interest in student interactions and in the potential advantages thought to be available in programs involving cross-age peer tutoring (Gerber & Kauffman, 1981). I had the opportunity to observe a cross-age peer tutoring program and found the experience intriguing and a number of questions arose in my mind. This study addresses these questions within the setting of a Christian school in a semi-rural district.

Peer tutoring is defined as "a system of instruction in which learners help each other and learn by teaching" (Goodlad & Hirst, 1989, p.13). This research specifically examines a cross-age peer tutoring structure which involves senior students of the primary school working with the younger students. It is suggested that in cross-age peer tutoring students should be at least two to three years apart in age (Beery, O'Brien & Beery, 2003). The school for this case study ran a

cross-age peer tutoring program which was referred to by the school as the 'Buddy Program'. The participants of this research were from one year six class and one kindergarten class.

Purpose of the Study

The proponents of peer tutoring claim that benefits are to be obtained from organised interaction between students. Those who advocate cross-age peer tutoring claim that these benefits are maximised when partners are separated in age by two to three years. This study sets out to examine these contentions. The broad purpose of the study asks the following questions:

a) Is there benefit to be gained in cross-age peer tutoring?

b) And if so, what are the benefits to be gained?

Research Questions

The literature review in Chapter Two has refined these broad questions into the following five specific research questions:

a) Do students enjoy working with their 'Buddy' in the 'Buddy Program'?

b) What do year six students perceive their role in the 'Buddy' program to be?

c) Does the program contribute to the development of self-efficacy among the students involved?

d) Do students perceive personal and academic benefits from the program?

e) Does the program contribute to metacognitive awareness among the year six students?

Importance of Study

A significant amount of research has been conducted regarding cross-age tutoring in the primary school. A large majority of the research conducted is in relation to schools in America. Research in Australian schools is very limited. This study will document the use of cross-age tutoring in an Australian school and more specifically in a Christian school in a semi-rural setting.

Data from this research will be used to inform the school and parents about how the program impacts both the school and its students. In particular, the school will be supplied with a critique of the program.

This study will also be of great benefit to me. As a student teacher I am still learning many things about teaching and aim to be as well informed as I can be so that my students may receive the best education I can offer. By performing this study I will gain insights into cross-age student interactions which I believe will help make me a better teacher.

Terms Defined

Peer tutoring

Peer tutoring refers to teaching and learning which takes place between two peers of similar age. Peer tutoring sessions tend to be instructional interactions that are generally directed by the classroom teacher with one student assisting another who may struggle in a particular area. This differs from the idea of cooperative learning as no instruction takes place. Peer tutoring involves the interaction of two students with one student taking the initiative and directing, instructing and critiquing.

Cross-age peer tutoring

Cross-age peer tutoring occurs between two peers who are at least two to three years apart in age. Again, this form of tutoring is generally teacher directed with the older student acting as director and instructor to their younger peer.

Tutor

The tutor is the student who acts as the director / instructor to their peer. This student guides the learning process and assists their peer in different learning areas. The tutor will have a greater understanding of the concept being taught so they are able to instruct and provide additional support and guidance. In the case of this study, the tutor refers to the year six 'Buddy'.

Tutee

The term tutee refers to the student who is being provided with additional direction, instruction and guidance. In the case of this study, the tutee refers to the kindergarten 'Buddy'.

Buddy Program

The term 'Buddy Program' is the title given to the cross-age peer tutoring program run by the school that participated in this study. The school refers to the student peers as 'Buddies'.

Delimitations of the study

This study took place at one Christian school with a focus on one aspect of their 'Buddy program'. Kindergarten, year one, year five and year six students in the school participate in

the ‘Buddy Program’. This case study examined the pairing of one kindergarten class with one year six class.

Overview of Thesis

Chapter Two reviews the literature related to cross-age peer tutoring and brings a strong suggestion of advantages for students. In general, the literature describes an array of potential benefits to the process including socially and personally as well as cognitive benefits and a suggested improvement in metacognitive skills. Chapter three details the research method undertaken in this study and introduces the participants of the study. This is a mixed-method approach employing observation, interviews and questionnaires. Chapter four describes the results from the data collected and details the benefits students received. To conclude the study, chapter five responds to the research questions and provides a discussion and conclusion of the findings. Finally, appendices are attached.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Many teachers will agree that the time allocated for teaching relative to the number of students in a classroom does not allow teachers to give their students as much one-on-one specialised teaching time as they would like. Bloom (1978) states that this is one of the reasons why many students are impeded by learning difficulties in the classroom. One approach that may alleviate these difficulties is that of a peer tutoring program. This chapter reviews the literature related to the use of cross-age tutoring in primary schools. The chapter will present evidence that the potential benefit is not only academic but also social and personal.

Nature of Peer Teaching

Goodlad and Hirst (1989) define peer tutoring as "a system of instruction in which learners help each other and learn by teaching" (p.13). Cross-age peer tutoring involves partners of different learning levels. From a meta-analysis of 767 studies involving more than two and a half thousand participants, Hattie (2009) has found peer teaching to be effective in promoting learning (Cohen's d for learning was 0.52). However, he found that cross-age peer tutoring was even more effective in promoting learning (Cohen's d for learning with cross-age peer tutoring was 0.79). While cross-age peer tutoring has been used to promote reading, many schools implement the program over a wide range of subject areas incorporating most of the Key Learning Areas.

History of Cross-age Tutoring

Tutoring has been used throughout history; most well known examples involved the use of private tutors hired by the wealthy (Bloom, 1978). However, the idea of older or more advanced students teaching younger students was also widely used in eighteenth- and nineteenth-century schooling in which teachers were responsible for large multi-grade classrooms. For example, Andrew Bell is given credit for developing a peer tutoring approach to teaching whilst a superintendent at the Military Male Asylum in England in the late eighteenth- and early nineteenth-century (Goodlad & Hirst, 1989). Through observing students' drawing in sand at a beach, Bell decided to implement the use of sand trays in his classroom as a cheap writing material (Goodlad & Hirst, 1989). Though Bell's work colleagues thought this an absurd act, he began to use students as monitors in teaching each other with the sand boards (Goodlad & Hirst, 1989). During 1791 and 1792, Bell used this idea of peer tutoring to appoint each student with specific roles and tasks and grouped students according to their academic achievement so that half the class performed as tutors and the other half received their help (Goodlad & Hirst, 1989).

Joseph Lancaster established a school based on the systematic use of student monitors (tutors) to teach basic literacy and numeracy skills to large numbers of students (tutees) organised in a hierarchical structure (Gerber & Kauffman, 1981). This form of peer tutoring was also being used in Australia during the 1800's with the main aim of increasing academic skills, student self-esteem and the commitment to education of the tutors and to improve the younger students' academic skills, self-esteem and motivation (Doenau, 1985). Hence cross-age peer tutoring is not a new concept to education; however it appears to have been forgotten over the years since the realisation of its benefits. Certainly government regulations and the employment of classes with students arranged in age-cohorts made the process difficult to implement.

Even in the early days, it was realised that such an arrangement did not just benefit the tutee, but that the tutor also benefitted. For example, Joachim Fortius is reputed to have stated that "if a student wished to make progress, he should arrange to give lessons daily in the subjects in which he was studying, even if he had to hire his pupils" (Keatinge, 1967, p.156). Keatinge (1967) adds that through teaching information, it is more likely that it will become engrained and more memorable as teaching "gives deeper insight into the subject taught" (p.156). This idea of peer tutoring was already thought by some to be a significantly advantageous way of teaching in the 1800's. Russell (1826) said that children who had the opportunity to teach, as well as learn, received a "more thorough and practical education" (p.4).

Theory Behind the Benefits of Cross-age Tutoring

The Russian psychologist, Lev Vygotsky, developed an early theory that is still employed in part today. This theory explained the benefit of peer tutoring to the tutee. Vygotsky's theory was developed in the early twentieth century and prior to his death is 1934. His work remained unrecognised until Jerome Bruner found and championed Vygotsky's writings in the late 1960's and 1970's. Since 1970, many of Vygotsky's books have been translated into English. Before his death he developed the theory that learning among young children was 'socially mediated' by others with greater skills and knowledge (Vygotsky, 1997; Wertsch, 1985). He argued that mediation was needed to achieve learning in what he described as the 'zone of proximal development' (the zone of 'near' development) (Vygostky, 1997). He viewed the 'zone of proximal development' as that region of knowledge and skill that lay just beyond the individual's current level of competence.

In the 1970's Bruner's research group gave Vygotsky's idea of 'social mediation' an updated

label that has been associated with Vygotsky ever since. They used the term ‘scaffolding’ to convey the meaning that Vygotsky gave to his term ‘social mediation’ (Pea, 2004). Others relabelled the concept of ‘social mediation’ as ‘mediated learning experience’ (Sternberg & Williams, 2002). Both terms are used interchangeably. The specific help of mediation or scaffolding from a knowledgeable other (teacher or more able peer) at precise points of difficulty will allow a child to find a solution to a problem that he or she otherwise would not solve. It is the mediation that allows a child to work within his or her ‘zone of proximal development’. It is within this ‘zone’ that new methods of processing information are learned. However, a child needs the aid of specific mediation or scaffolding to be able to work effectively in their ‘zone of proximal development’. In Vygotsky’s view, mediation (scaffolding) can be provided to a tutee by a peer tutor.

Benefits

Social Benefits

Students learn many skills from being given the opportunity to interact with others. From student interactions in a cross-age tutoring program, it has been noted that students have shown a greater level of cooperation not only in the classroom but on the playground (Hagen & Moeller, 1971). Students learn that they need to work with one another in order that their time together will be successful. Friedland and Truesdall (2004) noted that this program was beneficial in providing an opportunity for younger and older students to mix in a socially friendly learning environment. The opportunity to mix with other ages helps students learn how to interact with other ages; it also provides an opportunity for older students to perhaps discover a career path they may wish to take in becoming a teacher. The overall response from Schneider and Baron (1997) was that students showed a greater level of responsibility for their

own learning as well as an increased amount of respect for one another. It provided mutual support in a learning environment.

Autonomy within the Learning Environment

Those who are able to teach other students have the ability to take ownership over their own learning and to become independent, autonomous learners. If students are able to achieve a level of autonomy, classrooms and teachers would benefit significantly. In order to do this, Hattie (2009) states that students must become teachers, not of others, but of themselves. This may be promoted by cross-age peer tutoring (Hattie, 2009). Students who can help another are capable of becoming autonomous and able to take control of their own learning (Hattie, 2009). As students' confidences grows through their increased achievements, the classroom as a whole benefits from the students' attitudes towards their learning. The effect is to create a more positive class environment in which students are willing to learn.

Personal Benefits

Studies have highlighted several areas in which students receive personal benefits from a cross-age peer tutoring program. Friedland and Truesdell (2004) conducted research in which the teachers noted students increased confidence and motivation to read. They found that cross-age peer tutoring programs allowed students to read books which they enjoyed and which were at a level that was suitable to them. These programs provided the younger students with more of a 'friend' figure than a 'teacher' figure. This may have promoted increased feelings of safety and comfort with the process allowing students' the confidence to try and that minimised the repercussions of making mistakes. Another study of cross-age peer tutoring found that if first graders have a more positive attitude to reading, they will feel more confident in reading and writing (Caserta-Henry, 1996).

Studies have shown that when tutors teach skills to others, their own understanding increases and as a result their own confidence is boosted (Ehly & Larson, 1980). As students' confidence increases so does their level of independence. It was discovered that the younger students in a peer teaching program were "less needy" and all of the students showed a greater enjoyment of school (Dennison, 2000, p.171). Growth in confidence and motivation was linked to heightened self-esteem. Sprinthall, Hall and Gerler (1992) found that student self-esteem was enhanced through peer tutoring programs. Similarly, Dennison (2000) found that the older students involved in peer tutoring also benefited with higher levels of self-esteem. Furthermore, Ehly and Larson (1980) found that students who were confident and comfortable with themselves tended to be more relaxed and able to cooperate with others, they could work independently of a teacher and they tended to exhibit higher levels of concentration and motivation.

Self-Efficacy

Self-efficacy can be defined as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995 p.2). Perhaps the most significant benefit students receive from cross-age tutoring programs is the effect the programs have on self-efficacy. Friedland and Truesdell (2006) found that cross-age tutoring programs are "powerful in increasing self-efficacy" (p.37). It has already been argued that cross-age peer tutoring programs bestow greater confidence, more positive attitudes, higher self-esteem, greater independence, and an enhanced feeling of self-worth. These all contribute to the self-belief that one can plan and execute a course of action. They contribute to increased social skills, confidence, management skills and academic achievements. If all students were given the opportunity to increase their self-efficacy, more students would produce high quality work with enthusiasm.

Critical Thinking

Gensemer (2000) argued that benefits from cross-age peer tutoring also include an increase in critical thinking skills as well as improved interpersonal skills and conflict resolution skills. Through learning and improving interpersonal and conflict resolutions skills, students learn to better conduct themselves in group situations and learn to work successfully and cooperatively. From a study conducted by Dennison (2000) it was noted that a majority of the children involved in a peer mentoring and tutoring program displayed an increased positive attitude towards school and a higher level of cooperative classroom behaviour. From working and interacting with other students, social skills were developed and applied in the classroom. A study of American third- and fourth-grade students who tutored first- and second-grade students showed that the student tutors took on a greater levels of responsibility and independence in their own learning and were willing to seek help from peers (Schneider & Barone, 1997). Classroom dynamics can be changed significantly through the skills students can acquire at social and personal levels.

Metacognition

The term metacognition refers to the knowledge an individual has about his own learning (Flavell, 1985; Garner & Alexander, 1989). Metacognitive awareness takes the overview of knowledge, skills, purpose, process and product. In particular, research (Biggs & Morre, 1993; Flavell, 1985; Garner & Alexander, 1989; Kuhn, 2000) indicates that metacognitive knowledge:

- is an awareness of what one knows and can do
- weighs purpose and resources
- involves strategic thinking and planning of how the package of personal skills and knowledge can be best used

- monitors processes and evaluates results.

As individuals progress through life education, they become increasingly metacognitive. Deliberately teaching metacognitive skills accelerates this process. Thinking skills can be defined as "abilities, expertise, or competence in reasoning or logic" (Topping & Bryce, 2004, p.595-596), which when applied can be used to aid in problem-solving (McInerney & McInerney, 2006).

A review of literature on cross-age peer tutoring did not provide a strong indication of a relationship with metacognition. The literature does however show a relationship between reciprocal teaching and metacognition (Cooper & Greive, 2009). Reciprocal teaching is a guided cooperative learning strategy which incorporates a degree of peer tutoring that provides students with the opportunity to learn metacognitive skills to assist their level of independent reading (Brown & Palinscar, 1986; Porter & Brophy, 1988; McInerney & McInerney, 2006). This form of cooperative learning is similar to cross-age peer tutoring in that group members take turns in group leadership. The leader has responsibility to ensure that the four comprehension skills of reciprocal teaching are adequately employed. Leadership provides circumstances in which the four skills must be internalised and hence a metacognitive awareness is developed. The leader (tutor) accesses prior knowledge and leads the group in processing new information. Research into reciprocal teaching has shownt hat students benefit in terms of developing metacognitive awareness (Cooper & Greive, 2009). Teachers prepare students for their roles and intervene if confusion or uncertainty arises (Craig, Sullins, Witherspoon, & Gholson, 2006; Palinscar & Brown, 1984; Uretsi, 2000).

It is likely that during a cooperative learning activity, the metacognitive demands on tutor and tutee are interchangeable. It has been found that young children can notice mistakes made by

adults in counting activities more successfully than if they were counting themselves (Gelman & Meck, 1983). Not only can the tutor clarify their own thinking while teaching and using problem solving, but the tutee can also clarify ideas by monitoring problem solving. Interactive metacognition as a key component of reciprocal teaching may well apply to cross-age peer tutoring. It can lead to a greater understanding of concepts and strategies for both the tutor and tutee.

Specific Application

Academic Benefits - Reading

One subject area that is positively influenced by cross-age peer tutoring is that of reading. It is common practice to identify struggling readers and provide intervention programs that help in their first stage of learning to read. Teacher intervention programs alone are insufficient to aid the young child's reading (Taylor, Hanson, Justice-Swanson & Watts, 1997). Once a student has been identified as a struggling reader, they will need continuous support for most of their primary school education. This is where cross-age peer tutoring can play a part.

Almasi (1996) states that "students who talk about what they read are more likely to engage in reading" (p.20). Students who are engaged in reading have a greater chance of developing their reading skills, including comprehension, as they develop their ability to focus and concentrate. Goodlad and Hirst (1989) define this type of peer tutoring as "a system of instruction in which learners help each other and learn by teaching" (p.13). Research has shown that cross-age peer tutoring is of greater benefit than same-age peer tutoring (Hattie, 2009). Cross-age tutoring provides opportunity for students to read to each other and discuss both the content and process of reading with each other. Students who read aloud to each other showed that on average their fluency and comprehension was increased by approximately 1.5 years (Kreuger & Braun,

1998). A study conducted by Dennison (2000) found that 64% of the younger students who read aloud to each other, improved in their reading by one grade level. Reading aloud is thought to contribute to sight-recognition and increased fluency (Friedland & Truesdell, 2006). Cross-age peer tutoring allows both older and younger students to read aloud to one another and for the older student to assist the younger student. Through assisting the younger student with reading and sounding out words, the older student is reminded of strategies often forgotten.

Academic Benefits – Mathematics

As well as improved reading skills through peer tutoring, research has also shown cross-age peer tutoring to be an effective tool in helping students with mathematics. Hartley (1977) found that peer tutoring was an effective means of increasing students' mathematics achievement. As there are many concepts to be learnt in mathematics, students can often feel overwhelmed and become confused. Through being able to talk about concepts and discover them during hands-on experience with a Buddy, concepts are more likely to be consolidated in both students' mind. However, peer tutoring should not be used as a replacement for teachers but as an addition to enhance student learning (Hattie, 2009). Peer tutoring is a beneficial tool to allow students to discuss the concepts in a relaxed, comfortable atmosphere where they are more likely to feel comfortable, risking making mistakes and taking advice.

Structuring a Cross-age Tutoring Program

Several factors need to be taken into account when planning a cross-age peer tutoring program to ensure students receive all the benefits. Firstly, it is important that the grade levels used are far enough apart that the older students can have a greater feeling of the mentoring experience (Friedland & Truesdell, 2004). It is suggested by Hagen and Moeller (1971) that there should be at least three years difference between the tutors and the tutees.

Secondly, it is important that the younger students have some reading ability for the older students to work with (Friedland & Truesdell, 2004). It is suggested by most researchers of cross-age peer tutoring programs that they are most effective when students are matched according to their level of literacy development.

Thirdly, there needs to be a similar number of students in each class so that there can be a one-to-one ratio (Friedland & Truesdell, 2004). Most young students would feel intimidated if they were to read aloud or answer questions with more than one older student present. In the same instance, having only one tutee means the tutor can focus their attention on the one student.

Fourthly, partners in a 'Buddy Program' which incorporates reading as an activity, should remain together for the duration of the program (Friedland & Truesdell, 2004). It is also recommended that the program extend over several months' duration with sessions of consistent time and place (Friedland & Truesdell, 2004). This allows students sufficient time to work together, get to know each other and feel comfortable enough to answer questions and participate.

Fifthly, students need to be provided with a place to work which is quiet, comfortable and appropriate to the activity (Friedland & Truesdell, 2004). This type of environment is especially important in fostering a positive atmosphere where students can feel relaxed and at ease so they will be more open and willing to participate.

Sixthly, if reading is the activity then a varying range of books should be available in the classroom for students to choose from with a variety of levels and genres (Friedland &

Truesdell, 2004). When all these aspects are present in a cross-age peer tutoring program, students are given a great opportunity to foster successful learning and developing of reading skills.

Lastly, Samway, Whang and Pippitt (1995) state the importance organisation has in peer tutoring programs and that the students involved need to be prepared for what the program entails. To make the most of a cross-age peer tutoring program, the tutors should be prepared for teaching their younger student. Their time together should be structured and activities should be suited to the time available. Schnieder and Baron (1997) suggest that teachers should model tutoring activities to the tutors. Tutors should be familiar with lesson plans and activity sheets.

Conclusion

Research suggests that a number of benefits may be available to students involved in cross-age peer tutoring programs. These include benefits of a personal, social and academic nature. In reading activities, students involved in peer tutoring are reputed to achieve greater fluency and comprehension. Further, research also indicates that students involved in peer tutoring tend to show increased levels of cooperation. However, the literature also indicates that in order for cross-age peer tutoring programs to be successful, they need organisation in some key elements. This involves choice of partners (ensuring a three-year gap), preparation of tutors, planning the duration of the program and the timing of sessions, the planning of individual session activities and the preparation of the partners for the activities.

This study tests these claims in an examination of a cross-age peer tutoring program run in a Christian school set in a semi-rural district.

CHAPTER THREE

RESEARCH METHOD

Introduction

This chapter describes the processes undertaken to conduct research on the potential effects of a cross-age peer tutoring program for students in year six and kindergarten from a Christian school in a semi-rural setting. The study aimed to discover any potential benefits to being involved in the program.

Specifically, the research questions addressed by this study are:

a) Do students enjoy working with their 'Buddy' in the 'Buddy Program'?
b) What do year six students perceive their role in the 'Buddy Program' to be?
c) Does the program contribute to the development of self-efficacy among the students involved?
d) Do students perceive personal and academic benefits from the program?
e) Does the program contribute to metacognitive awareness among the year six students?

Overview of Research Design

A mixed-method design was used for this research that involved the collection of data through:

a) observations of student interactions during their tutoring sessions;
b) interviews with students and teachers;
c) a focus group with year six students;
d) questionnaires to parents and year six students.

During observations field notes were used to record the manner of students' interactions, the structure of the tutoring sessions, the questions and comments and the responses provided by the tutee. A selection of year six and kindergarten students were chosen to participate in semi-structured interviews. Because the participants in the interviews were primary-aged children who could be embarrassed or hesitant to be audio-recorded during interviews, field notes were again used to record data. A focus group of year six students was convened to follow up some issues that arose within the interviews.

Year six students completed a questionnaire about their experiences with the 'Buddy Program'. Similarly, parents or caregivers of both the older and younger students completed a questionnaire regarding their observations on the impact of the cross-age peer tutoring program on their child. Finally, the classroom teachers were involved in semi-structured interviews and answered questions regarding their involvement in the program, what they perceived the impact of the program had on their students, themselves and their classrooms.

Setting of the Study

This study was conducted at a Christian school in a small New South Wales township. The school catered for students from Kindergarten to Year 12. The school was chosen because it ran a 'Buddy Program' between year six and kindergarten students as well as year five and year one students.

Recruitment of Participants

Once ethics approval was gained for this study, the school Principal was approached with a research proposal. The proposal was also forwarded to the Head of Primary and supplied to the collective Primary staff. Permission was granted for the study at all of these levels.

There were three year six classes and three kindergarten classes who participate in the school-run 'Buddy Program'. A total of 81 year six students and 67 kindergarten students participated in the 'Buddy Program'. Of these, one year six class consisting of 27 students and one kindergarten class consisting of 22 students (see Table 1) were selected for the study and information sheets (see Appendix B) were sent to the homes of these students. The two classroom teachers of the selected classes were approached and invited to participate in the research. Both parents and students were required to complete consent forms giving permission for participation in the study (see Appendix C).

Table 1: Description of Students by Sex and Class

Class	**Male**	**Female**
Kindergarten	9	13
Year six	10	17

Research Method

Observations

Field notes were made from three 30-minute cross-age peer tutoring sessions. These observations were made of three successive sessions over a three-week period. The

observations concentrated on discovering how the students related to each other, how well they worked together, how enjoyable their time together appeared to be, what strategies were employed by the year six students and the nature of learning that may have taken place. From these observations, summaries regarding student interaction were created. The researcher undertook a six-week practicum placement with the year six class. Time spent with students during the researcher's practicum allowed for easier identification of students' attitudes to the cross-age peer tutoring experience and any benefits that may have resulted from the process.

Questionnaires

The second phase of this study consisted of the distribution of a questionnaire to all year six students participating in the study as well as sending a parental questionnaire to the homes of all students involved in the study. The student questionnaire was designed to elicit the students' perspective and feelings towards the 'Buddy Program' they were involved in. The questionnaires allowed students to expand on their feelings towards to the program and to answer non-leading open questions relating to the benefits and drawbacks of the program. Of the 27 year six students, 24 completed a questionnaire. The parental questionnaire sought information from the perspective of the caregiver and a total of 16 parents and caregivers returned the completed questionnaire. Sample questionnaires are to be found in Appendix E and G.

Semi-structured Interview and Focus Group

The third phase of the study involved semi-structured interviews with a selection of kindergarten and year six students and their teachers (see Table 2). The interviews were used to gather further data in describing and gaining a deeper understanding of the students' and teachers' experiences with the program. The interviews were followed by a focus group

comprised of a selection of students from year six. Key questions were prepared for both the interviews and the focus group and supplementary questions clarified some of the responses.

This form of data collection was chosen for this study as it would give the opportunity for students to expand on their experiences and to provide a more detailed perspective for the researcher. It also allowed the researcher to facilitate further discussion that could draw out notable comments or reveal important aspects and issues related to the 'Buddy Program'.

Table 2: Description of Students Interviewed by Sex and Class

Class	**Male**	**Female**
Kindergarten	2	2
Year six	3	2

Ethical Considerations

Confidentiality was maintained throughout the research. Students and parents were not required to place their name on their questionnaire; numbers were assigned to students who participated in an interview. Students and parents were made aware that they would not be identified in any way. The data collected was stored on a password protected computer and hard copies were locked in a filing cabinet. This research received clearance from the Avondale College Human Resources Ethics Committee (see Appendix A). Finally, approval was sought and provided by the school principal, and the head teacher of the primary school.

Data Analysis

The data was analysed by collating information gathered from the three phases of the research. Thematic analysis was employed with the data collected by the semi-structured interviews. Data

collected from the year six student questionnaire were analysed separate to the semi-structured interviews and the parent and caregiver questionnaire. Descriptive statistical methods were employed with the results of the questionnaires.

Conclusion

The method used for this study complies with suggested research design by educational researchers. Fraenkel and Wallen (2006) argue that interviews permit participants to comment upon observations. The mixed-methods approach is used by an increasing number of researchers as it provides triangulation and is thought to assist in lowering the chances of errors made while conducting research (Johnson & Christensen, 2004, pp.50; 410).

CHAPTER FOUR

RESULTS

Introduction

This chapter presents the results of this study. The study employed a mixed-method approach consisting of:

1. observations of Buddy partnerships;
2. analysis of questionnaires supplied to year six partners and parents / caregivers;
3. interviews conducted with year six partners and teachers.

The results are organised into themes and the chapter prepares the reader for the discussion of some of the more important implications arising from the results that are to be found in Chapter Five. For the purpose of confidentiality and convenience, the teacher of the kindergarten class has been coded as 'Teacher K' and the teacher of the year six class as 'Teacher Six'.

Background Information

In earlier years the school ran a cross-age peer tutoring program consisting of groups with a student from each year level in the school. Teachers provided a workbook for the groups and they also prepared the year six students as leaders for the specific activities. The tone of these sessions were closely controlled and business-like. However, as a result of a recommendation from one of the year six teachers, the program was altered to become a 'Buddy Program' with an initial focus on reading. This year the program was altered again to become a Buddy program focused on enjoyable social interaction ranging over subjects and learning games beyond the scope of reading. However, teachers still provide guidance. For example, when mathematics was the topic for interaction, the kindergarten teacher provided a worksheet for

students to complete. Similarly, when craft was the designated activity, directions and materials were provided.

Teacher Intentions

The implementation of the cross-age peer tutoring program, known at the school as the 'Buddy Program' was an initiative of the school staff. Teacher Six stated that it was anticipated the program would help build relationships between upper and lower primary students leading to a feeling of unity within the primary school (see Appendix I). Both Teacher Six and Teacher K saw the one-on-one interaction as a positive influence on both age groups and that through the interaction students would stand to gain both personally and socially.

Both teachers were involved in the previous peer tutoring programs. After working with these programs the teachers identified their shortcomings, which included the tight structure, and the lack of opportunity for relationship building activities. Further, in the opinion of the teachers, the students did not enjoy the tight structure and the loosening of the program aimed to improve the style of peer tutoring. The importance of interaction between different age levels in the schools was deemed by the teachers to be of value to the school. As a result the program was restructured to allow the "Buddies" a greater chance to build positive relationships.

Issues faced for Implementation

In organising this program, teachers were faced with the challenge of matching the year six and kindergarten students into 'Buddies'. Teacher K stated during the interview that the matching of the 'Buddies' was one of her main concerns in implementing this program (Appendix I). It was important that 'Buddies' be matched well in order to maximise the potential benefits for

students. In addition, one of the kindergarten students had a mobility disability which required greater consideration from the teachers about appropriate pairing with a year six student.

As there were 27 year six students and 22 kindergarten students in the sample chosen for this research, five kindergarten students had two year six Buddies each. During my observations of this program, it was clear that under these circumstances one of the year six Buddies tended to interact more with the kindergarten student.

Observations

Records of observations from three 'Buddy' sessions were made in field notes. A series of different aspects of student interaction were noted. Each session began with Teacher K explaining to both the year six students and the kindergarten students the activities involved in the coming session and the expectations placed on their interactions. During one of the sessions, one kindergarten student made sure his 'Buddy' was paying attention to the teacher's direction by turning around and asking him if he was listening. As soon as the year six students entered the classroom, both they and their kindergarten 'Buddy' immediately located each other. Many pairs were observed to exchange hugs before they settled for their instructions. It was clear that a bonding relationship was developing between many of the 'Buddies'.

Students dispersed to different areas inside and outside the classroom to begin their activities. Approximately one quarter of the kindergarten 'Buddies' appeared to take charge in organising themselves and beginning their activity while with other 'Buddies' it was the year six student who directed the 'Buddy' and encouraged them to make a start on their activity. Each of the three sessions observed involved a different type of activity which impacted the students' levels of enthusiasm towards their task.

Nature of Current Interactions

Field notes taken during observations indicated that both the kindergarten and year six students showed enthusiasm and enjoyment during their interactions (see Appendix I). It was noted that for an art and craft session students showed increased levels of enthusiasm as they rushed to secure a work space and begin their activity. Students also showed enthusiasm in their interactions as they discussed how they would approach the activity. Laughter was heard while students were working on their activities as stories were told and comments on the activities were made. It was clear from the three sessions observed that the students showed a high level of comfort with their 'Buddy'. This was evident through the close proximity in which 'Buddies' sat next to each other. Depending on the nature of the session's activity, it was observed that some kindergarten girls would sit on the lap of their year six 'Buddy' (also female). This generally occurred while the kindergarten students were reading to their 'Buddy'. While the interactions were guided by the assigned activities, students still appeared to be building a relationship through discussing other topics, especially during the above-mentioned art and craft lesson.

Student Enjoyment and Feelings Towards the Program

It was clear from the year six responses to the questionnaire that the 'Buddy Program' increased students' feelings of happiness. Students noted that as a result of working with their 'Buddy' they felt "happy" and "good" about themselves (see Figure 1). One year six student indicated that the program made him "…feel great. It actually leaves me with a warm fuzzy feeling as I go back to class."

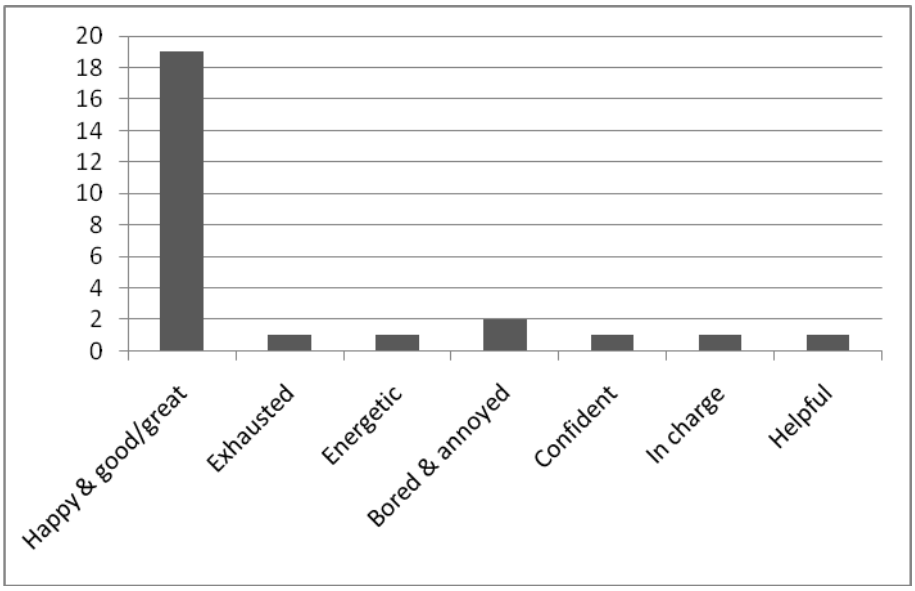


Figure 1: Year six students' feelings after assisting Kindergarten Buddy (data arising from the implementation of the questionnaire)

The kindergarten students interviewed also expressed their enjoyment of spending time with their 'Buddy'. Half of the students interviewed said that the time spent with their 'Buddy' was fun. The other half of kindergarten students interviewed responded that they enjoyed the program because their 'Buddy' helped them and played games with them. When asked what the kindergarten students enjoyed doing with their 'Buddy', their responses included hands-on activities and physical activities, and were congruent with the year six student responses.

All kindergarten students interviewed agreed that their 'Buddy' had helped them with their school work, such as mathematics, spelling and understanding various concepts. They also were unanimous in stating that they would enjoy being part of the program again next year.

Parent Responses

All parents and caregivers who completed the questionnaire indicated that their child enjoyed the program and also that their child had mentioned both the program and their 'Buddy'. One parent indicated that their kindergarten child mentioned that their year six 'Buddy' "makes some activities fun" (see Appendix H). Another indicated that their child enjoyed the program so much that they wanted the 'Buddy' session to run longer. Overall, parents and caregivers expressed their child's enjoyment of the program with only one mentioning that on occasion his/her child felt frustrated with their kindergarten 'Buddy'. Despite this, the year six student still displayed general enjoyment in spending time with his 'Buddy'.

Teacher Responses

The teachers interviewed also indicated their students' enjoyment in participating in the program (see Appendix I). Teacher Six stated that the students were "always excited" about going to see their 'Buddies'. Teacher K mentioned that her students loved the program. Furthermore, both Teacher Six and Teacher K stated that their students looked forward to the program each week.

Year Six Student Questionnaire Results

Out of the class of 27 year six students chosen for this research, 23 students completed a questionnaire. Of those students, 15 indicated that they enjoyed spending time with their 'Buddy' - with a majority indicating their enjoyment being due to their 'Buddy' being happy and fun to be with. Year six students indicated an overall enjoyment of the program and of the activities they participated in with many making reference to their kindergarten 'Buddy' and

showing an understanding of the important role they felt that they personally played in influencing their 'Buddy'.

Student Activities

Figure 2 shows year six student responses about the nature of the activities in which they participated during their "Buddy" sessions. These included a cluster of activities involving teacher-directed activities, arts and craft and mathematics. These activities were assigned by the teacher and were interspersed with talking and playing and the whole tone was "fun".

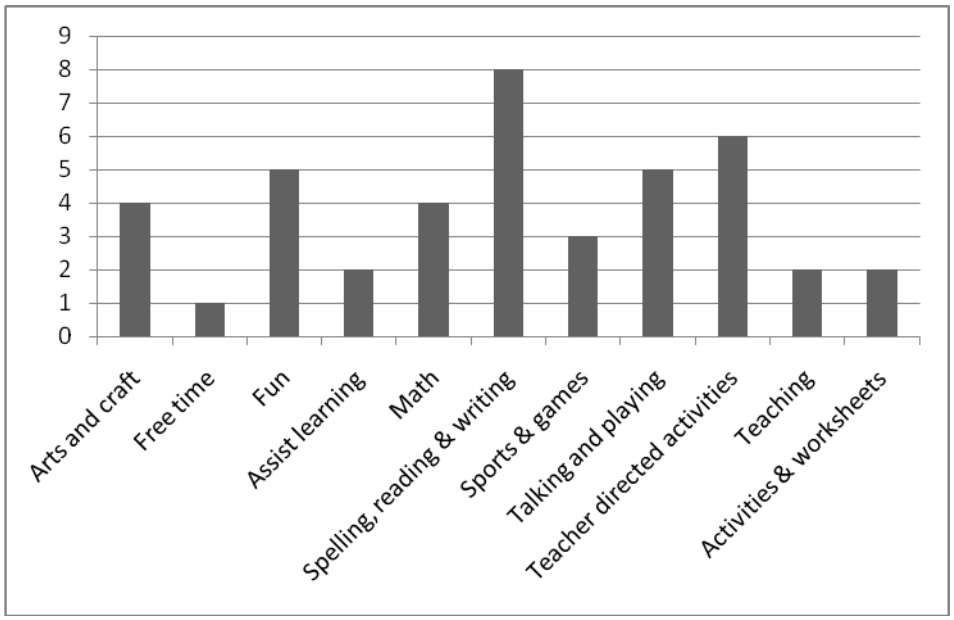


Figure 2: Activities performed during "Buddy time"

Field notes made during both observations and interviews with the teachers reflected the results shown in Figure 2. That is, the activities of reading, spelling, writing, mathematics, and arts and crafts dominated the sessioms. For the most part, the interactions were directed by the year six students, and the teachers impressed upon them that it was their responsibility to help their kindergarten 'Buddy' complete the set work. However, as mentioned above, in approximately one quarter of cases the kindergarten student took over the role of director. This could happen

only if the kindergarten student concerned felt confident and comfortable in their relationship with their 'Buddy'. It indicates that two major objectives were being achieved; pleasant interaction and the development of confidence and self-efficacy.

Literacy Skills

As discussed in Chapter Two, the use of frequent reading in a cross-age peer tutoring environment provides students with the opportunity to read aloud. Research has shown that this has the potential to increase the students' levels of fluency and comprehension (Kreuger & Braun, 1998). In this 'Buddy Program', both the kindergarten and the year six students were given the opportunity to enhance these skills.

All year six students who responded to the questionnaire indicated that they had helped their 'Buddy' with reading during the year. Figures 3 and 4 provide student responses in relation to reading with their 'Buddy'. A majority of year six students (15) reported having their kindergarten 'Buddy' read to them reasonably frequently ("often" or "sometimes"). In contrast, only 12 year six students reported reading to their kindergarten 'Buddy'. Three year six students reported that they had never read to their kindergarten 'Buddy'. This could have resulted from a misunderstanding of the role of the year six students. Perhaps they believed that helping kindergarten students with reading did not involve their own reading to the kindergarten student. All year six students reported that their kindergarten 'Buddy' read to them at some time or other.

Most year six students encouraged their 'Buddy' to read and assisted them with difficult words. Some year six students helped their 'Buddy' in sounding out words and identifying the letters while others simply read the difficult word for their 'Buddy'. All but one year six student

indicated that they felt confident in helping their 'Buddy' with reading. The one year six student who indicated a lack of confidence in helping with reading also stated that he had never read to his 'Buddy'. It would appear that in relation to reading, the self-efficacy for the remaining year six students was sufficient to permit them to help the kindergarten students develop their reading skills. Self-efficacy is associated with the development of confidence.

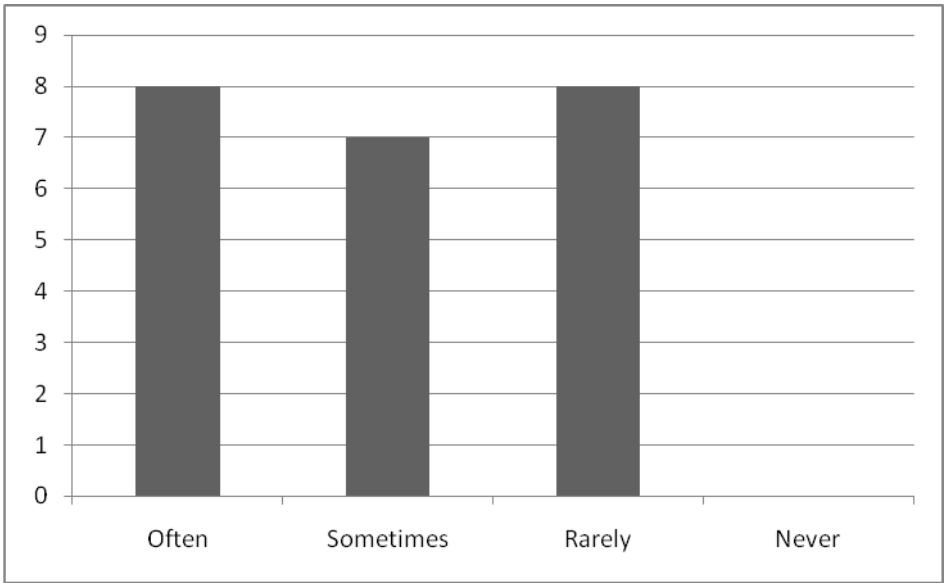


Figure 3: Frequency of kindergarten students reading to their Buddy

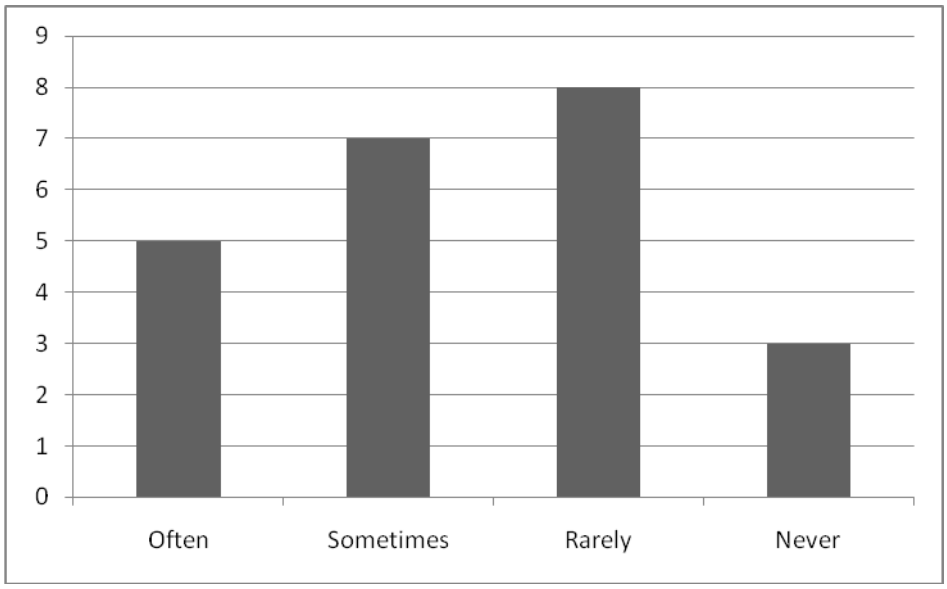


Figure 4: Frequency of year six students reading to their Buddy

Mathematics

Mathematics was another topic on which students frequently worked together during 'Buddy time'. All year six students stated that they had helped their 'Buddy' with mathematics at some stage. The kindergarten teacher usually supplied students with a worksheet for mathematics which needed to be completed. The year six students guided their 'Buddy' through each stage of completing the worksheet. Only one year six student surveyed did not feel confident in helping his 'Buddy' with the mathematics activities. Through completing mathematic activities the kindergarten students were given the opportunity to discuss concepts and put them into practice with someone able to scaffold their efforts at every step. Most kindergarten students observed responded well to the help provided and the year six students exhibited enthusiasm in being able to help their 'Buddy'.

Art and Craft

Art and craft was also a subject area in which students regularly participated. Figure 5 below shows that 16 out of 23 year six students who completed the questionnaire identified 'Art and Craft' as their preferred subject area to work on with their kindergarten 'Buddy'.

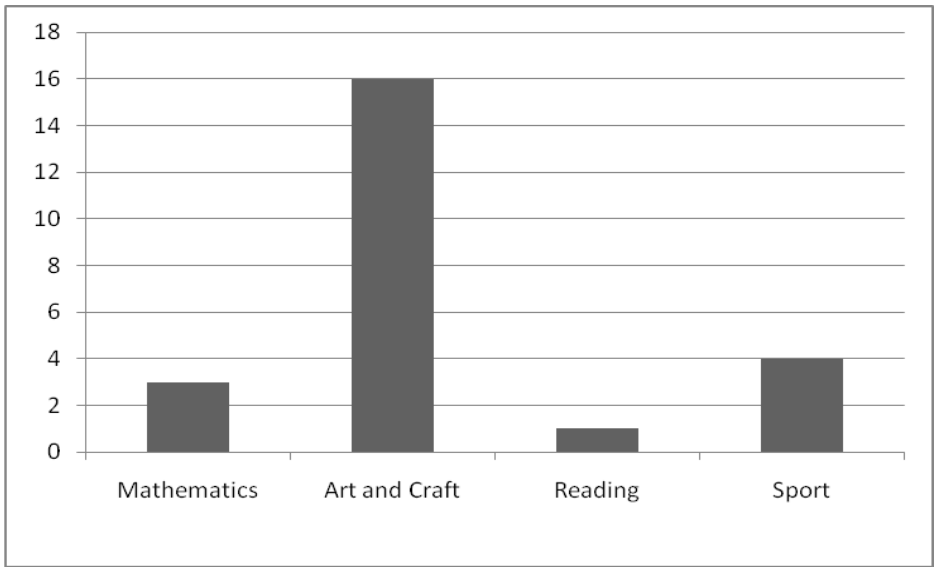


Figure 5: Year six students prefered subject

Some year six student responses relating to the preferential teaching of art and craft included:

"It is a fun thing working with a Buddy and helping them create a thing that is purely their ideas."

"Because we both enjoy making things."

"Because he likes it and so do I and we're both good at it."

"Because it is fun and my Buddy behaves because sometimes she thinks things are boring and doesn't do them."

"Because it's fun and creative and you can both work on it at the same time."

Figure 6 below shows year six student responses for their preference of participating in Art and Craft activities with their Buddy. The two main reasons for their preference of this subject were that this subject area was fun and allowed for creativity.

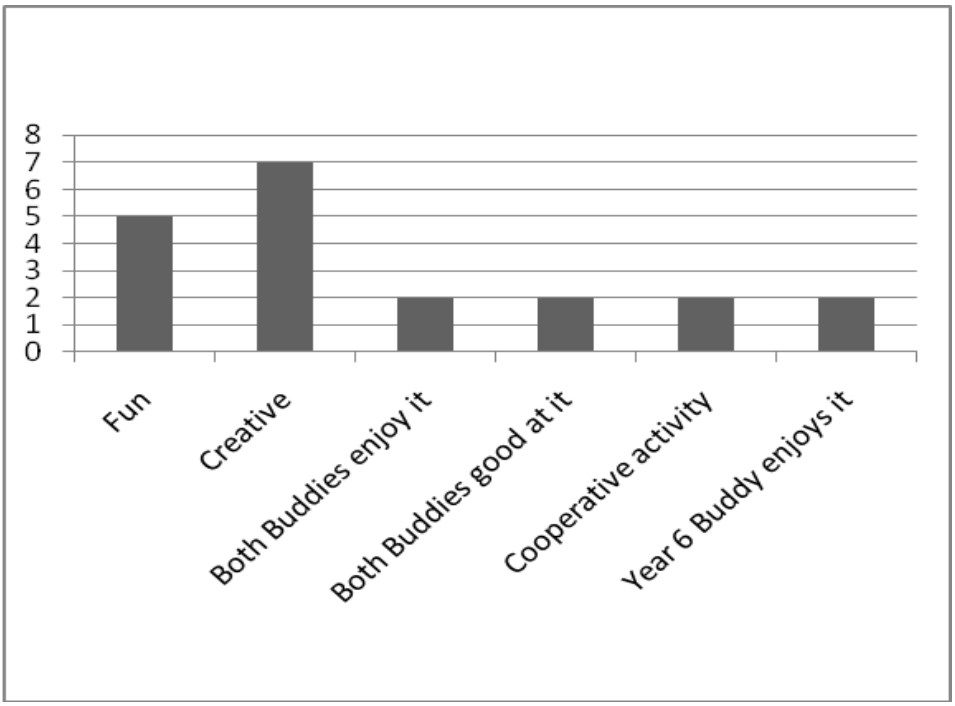


Figure 6: Reasons for year six student preference of Art and Craft activities during 'Buddy' sessions

One year six student noted that she preferred art and craft activities “because it's fun and it's creative and you can both work on it at the same time”. During an observation of an art and craft ‘Buddy’ session, it appeared that both ‘Buddies’ cooperated in producing their artwork with an equal share in creation. Some kindergarten ‘Buddies’ insisted that their year six ‘Buddy’ be allowed to create their own artwork so they would not feel left out. It was clear from these observations that because of the relationship built throughout the year, the students had developed teamwork skills which they were applying in all observed activities.

Role of Year Six Students in Buddy Program

Figure 7 identifies a range of different roles as indicated by the students in their completed questionnairs. A large portion of year six students surveyed commented that they see their role with their kindergarten ‘Buddy’ as that of a “helper”. Some indicated that their role was to help their ‘Buddy’ in their school work and to help them learn. From observation, this role involved scaffolding their ‘Buddy’s’ efforts; however, most students identified more than one role they believe they had.

As well as seeing themselves as a helper. Seven year six students surveyed also saw themselves as an academic teacher to the kindergarten students. Furthermore, year six students indicated that besides being a teacher and a helper, they were there to make the learning fun and to be an example to the students. Only two students did not feel that they had taught their kindergarten Buddy anything.

Of those year six students who felt they had taught their ‘Buddy’, 14 out of the 21 responses

showed that they enjoyed the experience of teaching. One student said that she enjoyed the experienced as she felt "like I've made a great achievement".

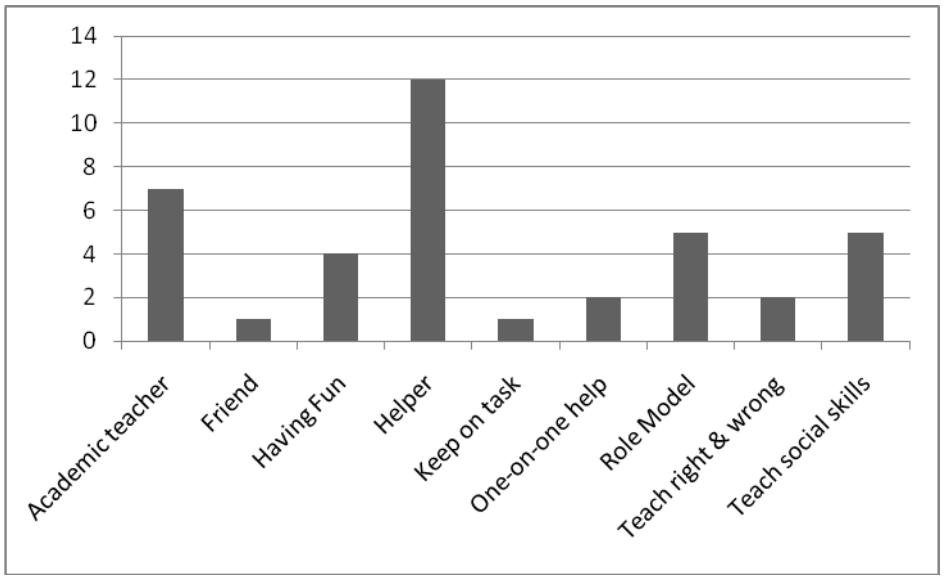


Figure 7: Year six students' identified roles

The Social Role

In general, the year six students saw their role as a helper (scaffolder) and teacher. One student who felt this was his role stated that "because I'm knowing that if I teach him what's right while he's small then he'll be good when grows up." Students indentified a role beyond academics. In addition to an academic role, the year six students also perceived that their interaction with the kindergarten students should aim at providing a social benefit. They taught such social skills as "kindness" and "manners". Many year six students' responses pointed to a future benefit for their 'Buddy' from their interactions..

Self-efficacy

Chapter Two cites Friedland and Truesdell (2006) as arguing that cross-age peer tutoring programs are "powerful in increasing self-efficacy" (p.37). The parents and caregivers who completed the questionnaire acknowledged their child's enjoyment of the program and noted

the benefits they saw result from the peer tutoring. Benefits noted by parents of kindergarten students included that their child "feels good when their Buddy comes to spend time with them", that it made their kindergarten child "feel important", gave a greater sense of "confidence" and "makes them feel special" (see Appendix H). Teacher K (see Appendix I) also mentioned increased levels of confidence amongst her students, especially their confidence in approaching older students. She also mentioned that the interactions developed their cooperation skills. Increased confidence was also noted during observations of sessions in which approximately one quarter of kindergarten students took charge of an activity (see Appendix D). One parent indicated that his/her child feels confident and comfortable enough that "if in trouble or worried they can go to their Buddy". The relationship also provided the kindergarten students with a source of security as they had someone they could go to when they needed help. It also indicates that the relationship contributed to self-esteem and growing self-efficacy among the kindergarten students.

Benefits noted by parents and caregivers for year six students included increased "self-confidence and self-esteem", developed "leadership skills" and the feeling of importance from being a "role model" and "mentor". Other benefits parents and caregivers noted included students' feeling of "self-worth", "belonging", "security" and "empowerment". One year six parent noted that his/her daughter had mentioned hugging her Buddy in the playground and she stated that "she always gives me a smile" and that "she is getting taller". This is an indication of the nature of the relationship built between the Buddies and that students were interacting outside of their Buddy sessions and were showing a genuine interest in each other.

Growth of self-efficacy among year six students was indicated by statements made during interviews and questionnaire responses that signaled feelings of confidence. Students noted that they felt confident that they could help their kindergarten 'Buddy' with their work. One

particular student noted during an interview that it was “fun being able to teach little kids what I know”. A total of 19 year six students responded in their questionnaire that the ‘Buddy Program’ made them feel “happy” because of the response they get from their ‘Buddy’. One student stated that as a result of working with her Buddy it made her “feel happy that I can help”. It was noted that the kindergarten ‘Buddies’ made the year six students feel happy because they themselves were “happy and fun”. One student noted that her Buddy was “cheerful” and “excited to see me”. This impacted the way students felt about themselves and added to their level of self-confidence and self-esteem. The relationship of the Buddies and especially the kindergarten students’ attitude played an important role in the year six students’ enjoyment of the sessions as well as their levels of self-efficacy – a self-efficacy that is conveyed through a confidence in being able (sufficiently knowledgeable and skilled) to help another person learn what they know.

Metacognitive Skills

The data collected from this research has suggested that the cross-age peer tutoring program promoted development of metacognitive thought. Two-thirds of year six students surveyed indicated a greater awareness of what they had learned because they had to reflect on it when teaching their kindergarten ‘Buddies’. This suggests the beginning of metacognition. A focus group consisting of five year six students was set up to further explore the relationship between cross-age peer tutoring and metacognition. All of the students in the focus group agreed that their ‘Buddy’ made them aware of “what I have learned”. One student mentioned that through teaching letters, their sounds and spelling, she had been reminded of strategies and skills she could use to help her spell difficult words (see Appendix I). Another student mentioned that his mathematics had improved as he had been reminded of basic skills and strategies he had otherwise forgotten. As well as being reminded of various skills and strategies, students also

noted that tutoring helped them better understand their own work because they had the opportunity to teach it.

All students indicated that when tutoring they thought about how they could explain a concept to their 'Buddy' before beginning an explanation. One student mentioned that he thought about how he could teach his 'Buddy' to count in multiples before he began the teaching process. Another student indicated that he also thought about his explanations and how his 'Buddy' might understand a concept while he was explaining and demonstrating. All students mentioned that they not only used "explaining" as a teaching strategy but they had also used 'modelling' to teach their 'Buddy' a skill. Most of the modelling took place during art and craft lessons. One student mentioned that he used modelling to show his 'Buddy' counting with dice as well as how to make and interpret a picture graph. Four out of five students indicated that they preferred to use modelling instead of explaining when teaching their 'Buddy'.

According to Borkowski and Muthukrishna (1992) there is a link between metacognitive experiences on self-efficacy and self-confidence. As students begin to understand concepts through the use and development of metacognitive skills and as they increased their understanding they felt a sense of achievement and felt good about themselves. They then develop the belief that they can teach these skills to another person.

The following chapter will present the discussion and conclusions to the study.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

This study set out to discover if there were benefits to be gained from a cross-age peer tutoring program run in a Christian school in a semi-rural setting. The program known as the 'Buddy Program' involved students from year six being teamed with kindergarten students. Benefits in relation to students' academic and social areas were also considered in this research and detailed in Chapter Four. Results were gathered from field notes taken during observations of 'Buddy' sessions, student and parent questionnaires, student and teacher interviews and a year six focus group. This chapter will address each research question asked in Chapter One.

Research Questions Addressed

Question (a) Do students enjoy working with their 'Buddy' in the 'Buddy Program'?

Students' enjoyment of the 'Buddy' program was obvious in every observation session. There was a sense of anticipation among the year six students prior to the commencement of each session. This was expressed by comments and gestures. During the session, the body language of partners also showed their enjoyment. Out of 23 year six students who completed the questionnaire, 19 students stated that spending time with their 'Buddy' made them feel "happy", "good" and "great". Only three students responded with negative feelings such as "exhausted", "bored" and "annoyed". These responses came as a result of the year six students being paired with a kindergarten 'Buddy' who "can get very distracted", or doesn't "usually do his work". The kindergarten students interviewed also gave positive responses to spending time with their 'Buddy'.

Many students stated that their enjoyment came from having fun with their 'Buddy' as well as helping and being helped with school work. Of the 23 students who completed the questionnaire, 16 stated that they preferred and enjoyed participating in art and craft activities because they were "creative" and "fun" as both 'Buddies' enjoyed it and could work on it together. Furthermore, parents and teachers also noted the students' enjoyment of participating in the 'Buddy Program'. All 16 parents who completed the questionnaire indicated that their child had mentioned the 'Buddy Program' and their 'Buddy' with several parents mentioning that their child "loves" spending time with their 'Buddy'. One parent stated that their child "really enjoys and looks forward to Buddy time" and also "talks about what his Buddy said or did and how he felt".

Enjoyment of the program was the key that unlocked other benefits to be gained from the program. In creating the program, it was the teachers' desire for students to enjoy it. The enjoyment experienced by both the year six and kindergarten students was obvious from observations and interviews with both students and teachers. Because the students enjoyed the program, they were more likely to receive the benefits it offers.

Question (b) What do year six students perceive their role in the "Buddy" program to be?

Out of 23 students who completed the questionnaire, 12 indicated that they viewed their role with their kindergarten 'Buddy' as a "helper". Many linked this role of "helper" with academic skills and others thought of themselves as general helpers in any area their 'Buddy' required help. Seven out of the 23 students surveyed indicated their role as that of an academic teacher, there to primarily help their kindergarten 'Buddy' with their school work. Other roles indicated by students included being a role model (5), teaching social skills (5) and having fun (4).

Students not only identified their role in the area of school work, but also identified a social role in teaching "kindness" and "manners".

The year six students showed a great level of maturity when it came to discussing their role as a 'Buddy'. They showed that they took their role seriously and identified the importance of the position they held. The year six student responses regarding their role were influenced by their kindergarten 'Buddy'. Students who indicated that they were paired with an easily distracted 'Buddy' or one who struggled to focus on their work, mentioned their role of teaching social skills and manners. Being in a position of leadership through teaching, helping or being a role model gave the students a sense of responsibility and importance. All of these aspects aid in the development of students' self-efficacy.

Question (c) Does the program contribute to the development of self-efficacy among the students involved?

Because students showed real enjoyment for the program, a link with self-efficacy is easy to make. Both parents and teachers indicated that "feelings of importance" resulted from students' participation in the program as both kindergarten and year six students felt an importance in the roles they played and from the relationship formed. Kindergarten students showed a greater confidence in approaching older students as well as increased cooperation skills due to increased confidence. It definitely appears that the strong bond formed between the 'Buddies' was a factor contributing to students' growth in self-efficacy.

Generally the year six students noted that they felt confident in their ability to assist their 'Buddy' with their work as well as noting the enjoyment they received from being able to help. However, enjoyment did appear to be subject to the 'Buddy' pairing. Those students who were

paired with a kindergarten student who was easily distracted, bored or hard to work with, did not indicate the same levels of enjoyment as those paired with a 'Buddy' with whom they got along well. This was one of the main concerns raised by the kindergarten teacher at the onset of this program. However, overall even the students who struggled with a difficult 'Buddy' still identified with a degree of enjoyment from the program, and a degree of pride in participation.

Question (d) Do students perceive personal and academic benefits from the program?

Many of the personal benefits resulting from participation in the cross-age peer tutoring program were related to students' self-efficacy. Benefits such as increased self-confidence and self-esteem were suggested by student comments and noted by parents and teachers alike. Students described feeling a sense of importance from the position they held as a 'teacher' and 'helper'. From the enjoyment observed and indicated through questionnaires and interviews, students identified with feeling happy and good about themselves.

As mentioned in Chapter Two, reading played an important part in the 'Buddy Program' and the literature has linked this with increased student comprehension skills and fluency (Friedland & Truesdell, 2006). It is clear from this research that the kindergarten students in this study were given the opportunity to increase these skills through practice in reading aloud to their Buddy and from the guidance and assistance. The year six students also indicated benefits to themselves through being reminded of some of the basic ideas and concepts related to reading and spelling that they had otherwise forgotten or dismissed. The year six students also assisted the kindergarten students with their spelling through the practice of phonics. Students from the focus group indicated that being reminded of these skills was very beneficial for themselves.

Students also participated in mathematics activities in which the year six students had the

opportunity to explain and model concepts to their kindergarten 'Buddy'. The kindergarten students were provided with further opportunities to understand and practice mathematic concepts and skills in a one-on-one environment in which they appeared comfortable and confident. Through being involved in the teaching processes of explaining and modelling, the year six students were able to put into practice their own knowledge and skills which in turn enhanced their own understanding.

Question (e) Does the program contribute to metacognitive awareness among the year six students?

Initial data collected from the year six student questionnaire and interviews suggested the program stimulated growth in metacognitive awareness amongst year six students. Approximately two thirds of students indicated that as a result of teaching their kindergarten 'Buddy' they were made aware of what they knew and what they had learned. Following this finding a focus group consisting of five year six students was convened and interviewed to substantiate the initial finding.

All five students in the focus group were in agreement that they had become more aware of the nature of their own knowledge. One student described being reminded of some mathematics skills he had forgotten but which he has found helpful in his own mathematics work. Another student mentioned that by teaching rules for spelling she developed strategies that improved her own spelling. By acting as instructors students had to think about, explain and model some concepts they had forgotten. They were forced to recall and rethink these skills and strategies in order to give explanations to their 'Buddy'. Acting as instructors changed the way they thought about their own information.

Limitations of Study

This research was conducted at one Christian school. Within the school there were three year six classes paired with three kindergarten classes and three year five classes paired with three year one classes. The study was limited to an examination of one pairing between a year six class and a kindergarten class. Extreme care must be taken in attempting to generalise from these results. Nevertheless, in this one case, participants were observed to benefit from a cross-age peer tutoring program.

In organising this program, the teachers prepared their students by informing them on what the program entailed and what was expected of them. The year six students were briefed on their role with their kindergarten 'Buddy' as well as given advice for dealing with different situations and behaviour. The kindergarten students were briefed on the behaviour that was expected of them. At the beginning of each session the kindergarten teacher prepared both the year six and kindergarten students by detailing what activities were to take place during that session and what was expected of students in terms of behaviour and work to be completed. This study has demonstrated that in this case, students benefited from the program. However, the benefit would not have been as rich had teachers not prepared the students for the learning experiences which were to take place. It is likely that benefit would not be found without careful preparation of the students involved. This is an important limitation to consider.

Questions and Suggestions for Further Research

Due to the limitations of the study and the need for the study to be contained and structured for an Honours program, the researcher would recommend that in order to substantiate the data collected here that the study be repeated with a large sample size. This would include a larger

number of student participants at more schools from both the Christian and Government sectors as well as involving students of different ages.

Further, this study has hinted at metacognitive benefits. It is recommended that this should be the subject of future research. While there is literature demonstrating the metacognitive benefits of reciprocal teaching, there is diminutive information about a similar benefit resulting from cross-age peer tutoring.

Benefit from the Study

This study documents a cross-age peer tutoring program. It has indicated that provided teachers prepare students, there are social, personal and academic benefits to be gained from such a program. The findings of this study also suggest that cross-age peer tutoring has the potential to promote metacognitive skills among those students who act as tutors. This finding is not a strong theme within the educational literature.

Benefits for the Researcher

Through conducting this research I have been given an insight into the organisation for and implementation of a cross-age tutoring program. The information gathered shows the benefits to be gained from one-on-one peer tutoring in which teachers team together and prepare students for the session to come. Involvement in the research has broadened my view of teaching. From the knowledge gained I am better equipped to be able to organise and implement either the same or a similar program in another school.

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APPENDICES

APPENDIX A – Ethics Approval



From the Office of the Vice President
(Administration and Research)
Email: vivienne.watts@avondale.edu.au
Tel: 02 4980 2120
Fax: 02 4980 2117

2 December 2009

Mrs Mandi Hill
c/- Dr Cedric Greive
Faculty of Education
Avondale College
COORANBONG NSW 2265

Dear Mandi

Thank you for submitting your application for ethics approval from the Avondale Human Research Ethics Committee for your Honours research project *The Benefits Of A Reading Peer-Tutoring Program Involving Year 5 And Kindergarten In An Australian Christian School: Potential Effects On Students' Attitudes And Reading Self-Efficacy.* The committee met on Tuesday 24 November to consider your application.

The committee approved your application subject to minor corrections to the application and reformatting of the information letters to the satisfaction of Dr Cedric Greive.

We wish you well in your research endeavour.

Sincerely,

V. Watts

Dr Vivienne Watts
Human Research Ethics Committee Chair and
Vice-President (Administration & Research)

APPENDIX B – Information Letter to Parents

INFORMATION STATEMENT TO PARENTS/GUARDIANS

RESEARCH TITLE:

The benefits of a peer tutoring program on student's attitude towards their education and self-efficacy in Year six and Kindergarten students in a Christian school.

RESEARCHERS' NAMES:

Principal Investigator: Mandi Hill

Supervisor: Cedric Greive

Your child is invited to participate in a research project that examines the benefits of being involved in a cross-age peer tutoring program whereby older students tutor younger students. To help us improve our understanding of positive aspects on a child's self-confidence, self-esteem, attitude towards learning and feelings of self-worth. A sample of students and staff of Avondale Primary School will be surveyed and observed. This project is being conducted by an education honours student from Avondale College.

PURPOSE OF THE PROJECT

The purpose of this study is to research the benefits of a peer tutoring program on students' attitude towards their education, self-confidence, self-esteem, attitude towards learning and feelings of self-worth.

PARTICIPATION CRITERIA

Participants for this study will be:

- 50 students and their teachers from Year six primary classes and Kindergarten classes.

WHAT PARTICIPATION INVOLVES

The students' and teachers' class routine and schedule will not be interrupted or changed. Data for this study will be collected by way of observation and interviews. The researcher will sit in an inconspicuous place in the classroom and record in written form both the teacher's verbal comments and the children's response. Following these observations students and parents will complete a short questionnaire. The classroom teachers and a selection of students from each class will participate in a semi-structured interview.

POSSIBLE RISKS OR INCONVENIENCES

We are required to notify you of possible risks and inconveniences should you agree for your child to take part in the research. We believe the only inconveniences will be the student completing the 10 minute questionnaire and for a selection of students, a 15 minute interview. The classroom teacher has made arrangements for this to occur during normal class time.

BENEFITS

Although there are only minor direct benefits to your child participating in the research, the main benefit of the research will be to inform educators about the relationship between positive attitudes towards education and student self-efficacy, which could positively influence the future of successful education. Administrators and teachers can use the information gathered to inform parents of its benefits to their children and to possibly improve their program.

CONFIDENTIALITY AND DISCLOSURE INFORMATION

Data collected from your child during the research will remain within the confidence of the researchers. Reports will not identify individual teachers, children (or schools). Data will be kept secure within a locker in the classroom of the Principal Investigator at Avondale College and stored for five years after completion of the study.

DISSEMINATION OF RESULTS

The data collected will be presented in a thesis for the researcher's honour's program. In addition it may be used for scholarly journals and professional conferences. Confidentiality of individual participants and organisations will be assured. In any publication, information will be provided in such a way that your child cannot be identified. The school will be sent a summary of the final results.

FREEDOM OF CONSENT

Your child's participation in this study is voluntary and there is no payment to subjects for their participation. Please note that the students are free to choose not to take part in this research and you may withdraw your child at any time without providing a reason. Withdrawing will not disadvantage your child.

Any questions about the above information can be obtained by contacting:

Mandi Hill at Avondale College, PO Box19, Cooranbong, NSW, 2265
Phone: 0406687196 or email s073557@avondale.edu.au

This research project has been approved by the Avondale College Human Research Ethics Committee (HREC). Avondale College requires that all participants are informed that if they have any complaint concerning the manner in which a research project is conducted it may be given to the researcher, or if an independent person is preferred, to the College's HREC Secretary, Avondale College, PO Box19, Cooranbong, NSW, 2265 or phone (02) 4980 2121 or fax (02) 4980 2117 or email: research.ethics@avondale.edu.au

APPENDIX C –Consent Form

Parent/Guardian Consent Form

RESEARCH TITLE: The benefits of a peer tutoring program on student's attitude towards their education and self-efficacy in Year six and Kindergarten students in a Christian school.

RESEARCHER'S NAME: Mandi Hill

I agree for my child _____to participate in the above research project and give my consent freely.

I have read and understood the information provided in the Information Statement.

I understand that the project will be conducted as described in the Information Statement, a copy of which I have been given to keep.

I understand I can withdraw my child from the project at any time and do not have to give any reason for withdrawing.

The procedures required for the study and the time involved have been explained to me in the information letter. I have been given the opportunity to ask questions and have had them answered to my satisfaction.

I understand that my child's personal information will remain confidential to the researcher/s.

Print Name: _____

Signature: _____ Date: _____

Student Consent Form (Kindergarten)

I,_____ agree to participate in the project (on peer tutoring) that Mrs Hill and my classroom teacher has told me about.

I have had the project explained to me and I understand what is going to happen in the study.

I understand that the project will be conducted as described in the Information Statement, a copy of which has been given to my parent to keep.

I understand I can withdraw from the project at any time and do not have to give any reason for withdrawing.

I have had the opportunity to ask questions and have had them answered to my satisfaction.

I understand that my personal information will remain confidential to the researcher/s.

Print Name: _____Date: _____

APPENDIX D – Observation Field Notes

Observation 1

Time	Notes
11.55am	Kindy Buddies immediately look for their Buddy as they come into the room and move to sit with them. Kindy teacher gives instructions to class One Kindy student turned around to make sure his Buddy was listening to the instructions.
12.00pm	Students pair up with their Buddy, find a space around the room and begin working on the assigned tasks. Many pairs begin with general chatter instigated by the year six Buddy. Year six students show a genuine interest in their Buddy and what they did on the weekend. Students sit close to their Buddy. Both Buddies generally appear comfortable with each other. Some Year six students take more time to get their Buddy started than others; others get their Buddy straight into the task. *Some kindy's take control and delegate tasks for their*
12.05pm	Year six students assist their Buddy in a craft activity. Some Year six students take charge of the activity, others are allowing their Buddy to do the majority of the work and make decisions on colour. Some Year six students need encouragement from a teacher to get started on the task. Kindy's generally respond well to Year six instructions Some Kindy's need to be reminded to listen to their Buddy and follow instructions
12.10pm	Some Kindy's wanted their Buddy to be able to make their own puppet, so some of the Year six students made their own. Many Buddies show enjoyment for what they are doing, if only because they make it fun working together, laughing and talking in between completing their task.
12.15pm	Majority of Buddies begin the next assigned task while others finish their first task.
NOTES	Some Kindy's have two Year six Buddies.

APPENDIX E – Student Questionnaire

1. Are you: *male* □□*female* □□
2. What were your first thoughts about having a Kindy Buddy?
3. Do you enjoy spending time with your Buddy? *Yes* □□*No* □□
4. Why do you enjoy this time or why don't enjoy this time?
5. What do you think your role is with your Buddy?
6. What do you do with your Buddy during 'Buddy time'?
7. Have you ever helped your Buddy with their crafts? *Yes* □□*No* □□
8. Have you ever helped your Buddy with maths? *Yes* □□*No* □□
9. Do you feel that you can help your Buddy with his/her maths? *Yes* □□*No* □□
10. Do you ever help your Buddy in reading? *Yes* □□*No* □□
11. How often have you had your Buddy read to you? *Often* □ *Sometimes* □ *Rarely* □ *Never* □□
12. How often have you read to your Buddy? *Often* □□*Sometimes* □□*Rarely* □□*Never* □□
13. Do you ever have your Buddy read to you? *Yes* □□*No* □□
14. Do you feel that you can help your Buddy with his/her reading? *Yes* □□*No* □□
15. Is there a particular subject you enjoy working on with your Buddy?
16. Why do you enjoy working on this subject with your Buddy?
17. Do you ever teach something to your Buddy? *Yes* □□*No* □□
18. If you have taught something to your Buddy what was it?
19. If you have taught something to your Buddy, did you enjoy teaching them?
20. How does working with your Buddy make you feel?
21. Are you confident that you can help your Buddy with their school work? *Yes* □□*No* □□
22. Do you feel that you know enough to help your Buddy with his/her work? *Yes* □□*No* □□
23. Does helping your Buddy make you aware of the many things you have learned? *Yes* □ *No* □□
24. Do you feel good when you help your Buddy with their work? *Yes* □□*No* □□
25. After you have spent time with your Buddy, do you feel good about your own class work? *Yes* □ *No* □
26. Does the "Buddy" system make you feel good about school? *Yes* □□*No* □□
27. How would you feel if the school were to stop the Buddy system?

APPENDIX F – Overview of Descriptive Results for Year Six Student Questionnaire

QUESTION	Response	Response	Response	Response
Gender	Male = 10 Female = 13			
Q2	Oh wow! This is going to be so much fun	I thought it would be really fun teaching them what to do, and the right thing to do	I was excited because I love working with little kids, their so cute	That it would be a great experience to get to know new people
Q3	Yes = 16 Sometimes = 7			
Q4	Because he is enjoyable to be with, but he does get bored with work	Cause you're interacting with someone that may not know as much as you. I enjoy teaching my Buddy.	I love spending time with my Kindy Buddy and it lets me get to know them better.	Because it's cool teaching someone younger than you.
Q5	To be able to have fun with him, as well as helping him with work	A teacher, an example, a role model, an admirer, a leader and a person to be like	I think my role is to help the Kindies learn and be kind and to also get along with other people.	I think it is to help them with their work and to get used to spending time with big kids.
Q6	Do some things the teacher asks us to do, and have fun.	I try to be as fun as possible with my Buddy but at the same time I try and help them learn.	Well we talk and we play, we do the work we are asked to do then we have to leave. I get a great big hug from my Kindy Buddy.	We do activities, work sheets, games, and sometimes French knitting, skipping, throwing balls.
Q7	Yes = 23 No = 0			
Q8	Yes = 23 No = 0			
Q9	Yes = 21 No = 1 Sometimes = 1			
Q10	Yes = 22 Sometimes = 1			
Q11	Often = 8	Sometimes = 7	Rarely = 8	Never = 0
Q12	Often = 5	Sometimes = 7	Rarely = 8	Never = 3
Q13	Yes = 21 Sometimes = 2			
Q14	Yes = 19	No = 2	Sometimes = 2	
Q15	Art and Craft = 16	Literacy = 1	Mathematics = 3	PDHPE (outside) = 4
Q16	Art & Craft: Because it's fun and it's creative and you can both work on it at the same time	Literacy: Cause it is fun	Mathematics: Because she is good at it and it's fun to see how good she is.	PDHPE (outside): Because he isn't bored with it, so it is more fun
Q17	Yes = 21	Sometimes = 1	No = 1	
Q18	I've taught him to keep his hands to himself and taught him to do the right things	how to read some words and how to work out some mathematical problems	To obey and to try her best not to get distracted. To listen and watch so that she understand what to do.	I taught him how to work out maths multiplication

Q19	Yes = 14 Yes I did because I'm knowing that if I teach him what's right while he's small then he'll be good when he grows up.	Sometimes = 4 Yes but sometimes it got a bit frustrating.	No = 1	
Q20	It makes me feel great. It actually leaves me with a warm fuzzy feeling as I go back to class.	Well, it is a great feeling because it makes you feel like you know more than you actually do.	It makes me feel happy that I can help.	It makes me feel like I've done something nice for someone.
Q21	Yes = 22	Sometimes = 1	No = 0	
Q22	Yes = 22	No = 1		
Q23	Yes = 16	Sometimes = 1	No = 6	
Q24	Yes = 21	Mostly = 1	No = 1	
Q25	Yes = 12	Sometimes = 3	No = 8	
Q26	Yes = 14	Sometimes = 5	No = 4	
Q27	I would feel like they were stabbing me with a knife that has poison barbs which is connected to a plug in the wall that sends electric impulses into my body. OUCH!	I would feel very confused because why would they stop people helping little kids come out of their shells.	I would feel sad because I love to spend time with my Buddy, we are really close.	I would think it's a bad thing if they stopped because it's helping us become adults teaching them.

APPENDIX G - Parent / Caregiver Questionnaire

Parent Questionnaire

This questionnaire is about the Buddying Program run between Year 6 and Kindy.

Thank you for completing this questionnaire. It is completely voluntary and anonymous. You do not have to answer every question. But I would be very grateful if you did take the time to complete them all.

Firstly, can you provide some information about your child?

1. Is your child in: Kindergarten ☐ Year 6 ☐
2. Is your child: Male ☐ Female ☐
3. How old is your child?
4. Has your child mentioned the buddying program they are involved in? If so, what have their comments been?
5. Has your child ever told you what they do in their Buddy program? If yes, what have their comments been?
6. If you child has told you about their Buddying program have they ever indicated how they **feel** about it?
7. Has your child mentioned their buddy? If so, what have their comments been?
8. What do you think the Buddying system can do for the Kindergaten students?
9. What do you think the Buddying system can do for the year six students?
10. Do you feel that your child has benefited from being involved in this program? If so, in what way/s?
11. Do you think this type of program would benefit your child throughout the rest of their schooling? Why / why not?

APPENDIX H - Parent / Caregiver Questionnaire Responses

Kindergarten

M	F	Age	Child comments	Has your child mentioned the program	Child Comments	Benefits to Kindy	Benefits to Y6	Other benefits	Should this program be in high school?
✓		6	Interacting with Buddy fun	Y - Buddy kind, engaging activities	Buddy makes some activities fun, loves their help	Integration, positive view towards older students	Leadership skills	Relate with other age groups	
	✓	6		Loves Buddy, enjoys time together	Wants Buddy time to last longer	respect older children, view as sharing, caring and helpful	Relate to Kindy experience and feelings	self-worth, belonging, friendship	Always have a friend, older, wiser, give advise, encourage
✓		6	Buddy is nice	Yes	Do activities, games, Buddy helps with things	Confidence, older student looking out for them, "instant friend"	Think outside the square, bring out inner teacher	Sense of security, someone else cares	Yes, learn well off older peer model
✓		6	Buddy is his friend	Yes, loves it	Sometimes Buddy gets a bit impatient with him				
					Feels good that a big kid knows him			Learning to help others, friendliness and patience	
		6	Good and fun	Yes	Feels good when Buddy comes to spend time	Sense of belonging to school, mentoring	Feeling good to support others	Feeling at home at school, getting to know older students Learn for older students	Yes, seeing where they are headed with school
✓		5	Good friends	yes	Play games, if in trouble or worried can go to Buddy				
	✓	6		Yes	Feel important, someone to look up to Buddy teaches and helps		patience, self confidence	interaction with older kids, familiar faces at school, there to help	yes
	✓	5	Do fun things	yes		Makes them feel special, know others at school	sense of responsibility	Opportunity to learn from others	

APPENDIX H- Parent / Caregiver Questionnaire Responses

Year six

M	F	Age	Child comments	Has your child mentioned the program	Child Comments	Benefits to Kindy	Benefits to Y6	Other benefits	Should this program be in high school?
✓		12		Yes	He loves it and talks about his Buddy. Sometimes he is frustrated with him, but mostly he really enjoys and looks forward to Buddy time. Talks about what his Buddy said or did and how he felt.	Someone to look up t and a connection with other older students	Confidence, self esteem, patience, tolerance, builds leadership skills, teaches unselfishness		Yes - kids need to have more cross-age interactions. I would love to see a year 7 - year 12 Buddy program.
	✓	12	Positive	Yes	Mentions giving Buddy a hug in playground, meeting at the bus stop "she always gives me a smile" "she is getting taller"	Establish lifelong connections with older peers	Long life connections with younger peers, encourage social skills, develop abilities to communicate, strengthen leadership skills	Sense of empowerment, mature	Yes, a real necessary in high school for sure.
	✓	11	Enjoys time with Buddy	Yes	Likes having a kindy Buddy	Helps them settle, get to know faces, more comfortable at school	sense of responsibility, mentor role, increase self esteem	self worth	Yes, getting to know more students outside own class
	✓	12		Yes	love it	Adapt to school. Someone to look up to	care for younger students, be a role model	Help with understanding younger children - develop self confidence and awareness of little people	Yes, gives the kids a mentor and creates caring young adults
✓		11	Enjoys being with Kindy	yes	Mentioned activities done with Buddy, sometimes he gets frustrated with Buddy	Mentor, good example, big sister or brother	patience, self confidence	learning to lead	yes, builds self confidence and patience, teaches to calm down and be creative in dealing with young ones
	✓	12	Very enjoyable	y	Good fun	integration to school	teaches pleasure of helping others	enjoyable experiences	yes, helping others is always good

APPENDIX I – Teacher Interview Notes

Question	Teacher Six response	Teacher K response
What were your initial thoughts towards the 'Buddy program'	I suggested the program One-on-one tutoring is beneficial for students It provides the opportunity for students to build relationships across the school	Loved the idea
Did you have any reservations about the program?	None	Preparing work for Buddies Matching Buddies
What benefits have you observed to students attitudes and / or school work?	Student feedback and comments about program have been positive Students have shown new insights and understanding Developed patience and tolerance Feeling of care/concern for younger kids Students learn "natural consequences". If you are nice to Buddy, Buddy will be nice back.	Develop confidence One-on-one tutoring is beneficial Allows for regular activities teaching does not have time to help students with one-on-one
Have you observed any negative aspects from this program on students?	It is difficult for year six students who have a difficult Buddy who is hard to deal with, the get frustrated However, don't want to change Buddies so that perseverance can be taught	Bad Buddy relationship Difficult kindy Buddy However, these teach discipline for year six students When year six students sit near their friends they are distracted
Do you feel these 30 minute weekly 'Buddy' sessions take away from valuable classroom teaching time?	No. The lessons learnt from the Buddy program is more valuable	"Not at all" "One-on-one time is invaluable"
What general benefits have you seen as a result of this program?	Kids are excited about it Kids look forward to it	Kids love it and always look forward it
What has been done to prepare students for being involved in this program?	Students have had the program explained to them There have been information discussion regarding their role, appropriate and inappropriate behaviour, what to expect and handling different situations	Discussions have taken place about how to handle a difficult Buddy
What improvements have you noticed in your students?	Increased confidence, self-esteem Students have a sense of responsibility Learning strength of character Increased tolerance Learning leadership skills	Developed cooperation Braver to approach upper grades Program is breaking division within the school

APPENDIX J – Focus Group Interview

Question	**Response**		
Does helping your Buddy make you aware of what you have learned?	Yes = 5 No = 0		
In what way? How did you become aware of what you have learned?	It helps you to remember what you know	It reminded me of letter sounds which has helped me with spelling	I was reminded of what I know about maths
Do you think of how you would explain something so your Buddy can understand? Give an example.	Yes = 5 No = 0	I have had to think about strategies for counting in two's, three's etc	Thinking of explanation before and during explaining.
Do you show your Buddy how things work / how to do something? (modelling)	Show = 4 Explain = 1	Have shown / demonstrated folding paper, different arts and crafts activities	Used dice to show Buddy about counting and have shown Buddy how to make a picture graph
Do you understand things better because you taught it?	Yes = 5 No = 0	Understand the importance of being kind, patient and understand now how little kids brains work	Understand skills and strategies better for spelling and letter sounds