

Acta Genet Med Gemellol 39:231-244 (1990) ©1990 by The Mendel Institute, Rome

Sixth International Congress on Twin Studies

"Twins in School" An Australia-wide Program

C. Gleeson¹, D.A. Hay², C.J. Johnston², T.M. Theobald²

¹ Australian Multiple Birth Association (AMBA), Coogee, NSW, and ² Department of Psychology, LaTrobe University, Bundoora, Victoria, Australia

Abstract. The multiple birth family is more likely to have a dispute with the education system than with any other service. So many potential areas of conflict exist over the abilities and behaviour of multiples and over such issues as separation or keeping back one twin. One reason for disputes is the lack of good data to adequately reflect the different perspectives of parents and teachers and the differing needs of families: the same solution does not apply to all. To provide the first large-scale data base and building upon an initial survey of 85% of all primary school teachers in South Australia, the LaTrobe Twin Study and AMBA worked with Education Departments to set-up in each state Education Research Teams (ERTs) of parents of multiples who were also teachers. The ERTs were crucial in three phases. 1) Developing and circulating questionnaires and publicising the nationwide survey. 784 families and 1264 teachers of their children completed these questionnaires, many reporting that simply having to address the issues raised in the questionnaire was a valuable learning experience. 2) Exploring the data base. Issues arising included the very different bases on which parents and teachers judged separation desirable, with teachers emphasising the unsubstantiated claim that separation is essential to individual development. Separation became more common over the first three years of schooling but 20-25% of twins separated one year were back together the next. 3) Running regional meetings of parents, teachers and administrators to discuss the results and to pool experiences and plan policies at the local level. A need clearly exists to improve the level of consultation between families and school personnel and to ensure the widespread availability of information which identifies key issues in making decisions for that multiple birth family.

Key words: Twins, Schooling, Parental attitudes, Teachers, Separation

INTRODUCTION

"There have been endless assertions about the hazards of not keeping twinpair members apart at school, and the time for disjoining is usually affirmed
to be when the children enter school. It is a common belief that twins on
entrance to school have, because of their youth, fabulous powers of adjustment
and that dissociation from the sib for a few hours per day will be no more
serious than separation of the child from the home situation during school
hours. It is maintained that, while in any case, the twin pair will tend to
be rivalous, be concerned about favoritism and being cheated, be given to
indulging in self comparisons and so forth, all this is intensified by the twins
being enrolled in the same class and subjected to the constant contrasting that
goes on at the hands of their teachers, classmates and school associates."

[12, p 134]

The work of Koch [12] remains one of the few empirical studies of the many unique situations facing twins and higher multiples in school. Although one child in 45 in our school system is a twin, it is a sad reflection on twin research that so little emphasis has been placed on answering such common queries as the following seven:

- 1. Some twins are behind in language development in the preschool years. How do we help them and how do we decide whether to delay their starting school?
- 2. The arrival of twins leaves little time for their older brothers and sisters. What can the family and the teacher do to help children?
- 3. There is much discussion over separating twins at school. Who should make the decision and on what basis?
- 4. Twins are constantly compared at home and at school. Is this bad and what can be done about it?
- 5. Sometimes one twin is a long way behind the other at school. How should the decision be made whether to keep this child back a year?
- 6. At adolescence twins have to achieve independence from their cotwin as well as their parents. What is the role of the school in this as the twins choose different subjects, careers, friends and lifestyles?
- 7. Unfortunately more twins need remedial help and more have disabilities. How can the school cope with their needs relative to those of their cotwin?

One consequence of this lack of recent information is that so much of the advice given in recent literature for families [eg, 3,15] is based not on fact but on well-reasoned opinion and anecdotal reports from parents for whom particular policies have or have not worked. For example, there is no empirical basis for the assertion in Rosambeau [14, p. 107] that "Eight is the age often suggested as being a good time for twins to be parted". This is apart from the fact that such a rigid statement is totally at odds with current educational emphasis on tailoring practices to the needs of the particular child, or in this case children.

Rosambeau [14, p. 109] sums-up the situation nicely when she says "there is also however an amorphous general impression among educators that separation for

twins, is somehow good in itself." What could be the bases for such an impression? Certainly not the early work of Koch, who discussed how rivalry between twins in the same class may be regarded as "healthy" as well as being less disruptive than separation, because the former made it so much easier for each twin to check on what the other was doing. She found separation was not even used when both twins were experiencing the delays in verbal skills now known to be common in multiples [9], but was more common when the twins were very different in IQ or where both were advanced in their language skills.

With the absence of data since Koch's study, the only likely bases for the value of separation lie in the case reports of twins whose pathological closeness (often accompanied by almost total isolation from adult models) had indeed had disastrous consequences for their development [2,5,13,17] and where separation undoubtedly contributed to improvement. However, extrapolation from such extreme cases to the vast majority of twins is indefensible. It focusses "the discussion of twin psychology within a pathological framework" [1, p. 52].

An alternative explanation for the press for separation by teachers is that it undoubtedly simplifies their work. In a survey of 584 South Australian primary school teachers (representing 85% of those teaching twins in that state), there were frequent comments about twins in the same class such as "It's too easy to make comparisons" and "I feel pressured to keep the twins' academic achievements level". Such problems are in the teacher not in the twins and the question arises whether these should be addressed by changing the teaching practices or by changing the children to different classes.

The Australia-wide "Twins in School" project introduced here is the first recent attempt to survey a large number of parents of twins and the teachers of their children to determine their view about what has or has not worked in the education of the twins and where differences may exist between their attitudes. A project on this scale with commitment from all the Education Departments and much attendant publicity has two other implications. First is simply drawing attention to the needs of multiples, both by the publicity and especially by the act of completing the questionnaire. Many teachers, in particular, have commented on how instructive they found simply answering the questionnaire. It made them evaluate and quantify their attitudes to separation, abilities and classroom behaviour.

Implementation of the second implication will be discussed at the end of this paper. Data such as these are intended to influence and improve the awareness of both parents and teachers throughout the country and this cannot be achieved by just a scientific report on the results. Agreement to run this survey was conditional upon there being feedback, mainly by a series of workshops in each state, which would address both the general results and how these could best be applied to the specific educational practices and needs of each state. For example, in country regions there may only be one class in each grade, so the issue of separation does not arise. Even more seriously, the remoteness of some such families may limit access to services taken for granted in metropolitan areas. One must acknowledge families who make a weekly round-trip of 600 km to get speech therapy for their twins.

METHOD

Participants

In a project spanning an entire continent, the first priority must be to have local personnel capable of dealing with their immediate issues. In each of the eight Australian states and territories, Education Research Teams (ERTs) were established. These comprised parents of multiples, the majority of whom were teachers or had some direct affiliation with the education system. These teams had three goals:

- 1. Assisting in the wording of the questionnaires, to make them compatible with the differing nomenclature used in the various localities.
- 2. Responsibility for the distribution and in some cases collection of the completed forms from each state. No two Education Departments participated in the project in the same way. Some provided a sampling frame of schools covering the different socioeconomic and other groupings, some allowed the use of their distribution system to save in mailing costs and some collected the completed forms, rather than using the reply-paid envelopes made available by LaTrobe.
- 3. Dealing with queries from parents and/or teachers at the time of the distribution of the questionnaires or when the results were being distributed. To each copy of the questionnaire was attached one of the LaTrobe Twin Study leaflets, "Twins in School", which introduced some of the main issues and gave details of how to obtain additional information.

The Parent and Teacher Questionnaires

Copies of these copyright questionnaires are available on request from the LaTrobe Twin Study. The questions were derived from those used in the LaTrobe Twin Study and from the pilot survey of South Australian primary school teachers mentioned earlier.

The parent questionnaire comprised four sections preceded by an explanation of the rationale and a consent form to be signed and returned to the school along with the teacher forms, this being a general requirement before schools release information. A practical problem was created by roughly half the twins being in separate classes and hence two forms being needed for the school. Every family received two teacher forms, each with the same code number as their own and they returned one or two to the school, depending on their circumstances. The four sections of the questionnaire were:

- 1. Background: details of zygosity, relevant pre- and perinatal problems, the language spoken at home, etc. The language used at home is important in a multilingual country such as Australia, since deficits in language seem particularly common in those twins who have to function in more than one language.
- 2. Parenting multiples: questions on separation, attempts to differentiate the twins, the closeness of the twins and their competitiveness and dominance.

- 3. The twins at preschool: the issue of twins being admitted to preschool early or having an extra year there.
- 4. The twins at school: the main issues concerned the history of the twins being in the same or different classes and the bases on which such decisions were made. A section on "Progress at School" dealt with their ability and the utilization of, or need for, extra services.

The teacher questionnaire also had four sections which were not directly comparable to those used by the parents:

- 1. Background information: details both on the twins under consideration and on the teacher's experience of teaching multiples.
- 2. School policy relating to all twins: apart from the issue of general policy, this concerned the teacher's own ideas about when, why and after what consultation separation should occur.
- 3. Progress in school: referring to the one or both of the twin pair being taught, in the areas of their ability, interaction with other children and with adults and any extra services they may require.
- 4. Teaching multiples: after some general questions about all the twins they may have taught in their career, the remaining questions were only for teachers who had both members of a twin pair in their class and concerned the interaction of the twins with each other and with other children, particularly in the area of comparisons, competition and dominance.

Sample

A total of 784 replies were received from parents and 1264 from teachers, the latter reflecting the incidence of twins in separate classes. The "Twins in School" project focussed on primary school children because the diversity of courses and schooling opportunities available at the secondary level made extension to this age-group impractical. Nevertheless, replies were received concerning children as old as 15 years, either because of confusion or because these children were so disabled they were still retained in primary school. These were excluded from the analysis as were data from twins at special school.

The five groupings of twins (MZ and DZ girls and boys and opposite-sex pairs) were approximately equally represented in the sample ($\chi_4^2 = 1.07$, ns). Their average length of gestation was 36.7 weeks, very similar to that reported from the LaTrobe and the Louisville Twin Studies [6].

Analysis

All analyses were carried out using SPSS-X. A series of interrelated system files had to be created to maximise the sample sizes for particular questions, given that not all teachers returned questionnaires to match those of the parents and there

236 C. Gleeson et al.

were many separated pairs where only one of teachers returned the questionnaire. Because of this, sample sizes vary considerably between analyses.

RESULTS

The data from this study are so extensive that we shall focus here just on three issues:

- 1. Separation in school, why it occurred and on whose advice;
- 2. The relationship between separation, abilities and competition between the twins:
- 3. The proportion of twins needing or receiving remedial help and the consequences when a great difference in ability existed between the twins.

Separation

The incidence of separation increased over the six years of primary schooling common to all Australian states. In the first year, 29.3% were separated, increasing to 49.7% in year 2 and then stabilising at 60.7%, 63.7%, 63.2% and 60.5% for the subsequent four years. The lower rate of separation in year 1 is consistent with the fact that 41% of schools recommended keeping twins together in this introductory year and that 86% of parents favoured this policy. What was surprising was that separation was not permanent. There were 23.5% of twins who, having been separated in one year were reunited the next. Some pairs went through cycles of together and separated throughout their schoolyears.

What were the bases on which the decision to separate was made? Table 1 list the main factors cited by parents and by teachers, where they were given a list of nine issues and asked to rank the four most important. While there was clearly no one issue which was of pivotal concern, the trends as to which issues were of greater importance were remarkably similar in the two groups. The teachers did put more emphasis on twins being overreliant on each other or excessively restricting each other's development. Of greater concern is that only a third as many teachers felt the wishes of the twins should be considered, even though 33% of parents reported their twins were unhappy for a prolonged period after separation. Such a disturbance to the children was more common where they were MZ ($\chi_1^2 = 4.24$, p < 0.05). A consistent complaint was the failure of schools to respond to parental reports of the children's reactions at home. While the wishes of the twins were not respected, parents did not fair much better. There were 34 teachers who said they would never consult the parents about separation. In practice, 35% of parents said they were never consulted and a further 40% were consulted only rarely or in a very cursory fashion.

Table 1 - Parents' and teachers' reports of the attributes most important in deciding on the separation of twins

Attribute	Parents (N=784)	Teacher (N=1232)
Zygosity	5.1	3.4
Language and social maturity	17.7	19.0
Ability differences	12.8	17.3
Dependency/reliance	23.1	29.6
Popularity	2.0	3.1
Closeness	12.1	10.3
Competitiveness	9.2	12.1
Restrictions on each other	15.1	23.5
Opinions of the twins	18.9	6.5

Data are the percentages ranking that attribute among the four most important ones.

Table 2 - Variables considered important by teachers in advocating separation

Better for the twins' individual development	92.1
Teacher confusion may upset twins	34.0
Twins together can be disruptive	12.1
Teachers get to know each child better	75.8

Data are percentage of the 1232 teachers checking each nonexclusive category as important.

While Table 1 is a consideration of variables important in deciding when separation may be desirable, teachers were also asked to evaluate four commonly stated reasons as to why separation was routinely desirable. The results in Table 2 show an almost uniform belief that it benefitted the individual development of the twins. Yet, as indicated earlier, there is no empirical evidence for other than the most pathological twin situations that this is the case.

Abilities, Competition and Separation

Both the parent and teacher questionnaires had sections dealing with general school behaviour (restlessness, difficulty following instructions, etc.), social behaviour towards other children and adults, reading, spelling, writing, number and language skills, the nature of any competition between the twins, and the perceived need for any intervention in these areas, as well as whether such intervention was being carried out.

The differences between parents and teachers as to the twins' abilities were extensive and are to be the subject of a separate report. Those teachers who believed that separation was better for twins' individual development were more likely to report the twins as being poor on language (t=2.29, df=589, p<0.05), as receiving more intervention in small groups (t=2.26, df=413, p<0.05) and for reading problems (t=2.14, df=416, p<0.05) and having larger differences

within the pair in overall academic ability (t = 2.86, df = 490, p < 0.01) and in reading (t = 2.28, df = 492, p < 0.05).

The fact that the twins who have been separated constitute a distinct group from the others in terms of ability and intrapair ability differences is a major complication when it comes to assessing the effects of separation on competition. At first glance, the data in Table 3(A) would appear to support the value of separation. Proportionately more of the children who have been separated cooperate and have pride in each other and are not jealous of each other. But across the whole sample, the pairs who interact in such desirable ways are those with smaller intrapair differences in overall ability (t = 2.11, df = 459, p < 0.05) and smaller differences in the need for remedial services (t = 1.98, df = 460, p < 0.05) and in small group intervention (t = 2.00, df = 461, p < 0.05). That is, where one twin is noticeably less able than the other, both competition and separation are more likely.

Table 3 - Competition and co-operation in twins

(A) Differences in competition between twins who have or have never been separated, as perceived by parents

	Twins co-operate and have pride in each other	Do not	Twins are jealous and never praise each other	Are not
Separated	157	39	15	164
Never separated	256	126	51	309
$\chi_1^2 = 10.87, p < 0.001$		$\chi_1^2 = 3.89$, p <	0.05	

(B) Differences between parents and teachers in the perceptions of twins' competition and co-operation for those twins currently in the same class

Twins cooperate and have

Twins compete constantly

				pride in eac	h other
		Teacher		Teach	er
		Yes	No	Yes	No
Parent	Yes	18	69	261	66
	No	24	286	54	45
		$\chi_1^2 = 12.04$, p < 0.001		$\chi_1^2 = 25.21,$	p < 0.0001

Table 3(B) indicates the extent of parental and teacher agreement on constant competition or co-operation for those twins who were in the same class. It is significant that constant competition was much more often reported by the parents than by the teachers. In contrast, both groups were equally likely to report pairs who did not cooperate, though more often than not the parent and teacher reports for a particular pair of twins disagreed on this. The extent of these disagreements may indicate state-specific behaviour or different perceptions of the twins. In either

case, they are a good indication of the need for decisions to be based on information from both parents and teachers.

Table 4 - Twins needing and receiving extra help

Area where help needed	Parent		Teacher	
	One twin	Both twins	One twin	Both twins
Speech	9.8	6.9	10.0	9.0
Writing	14.2	10.8	13.1	12.8
Reading	16.2	13.3	18.2	12.3
Number	12.7	10.3	13.9	10.3

(B) Percentage of twins receiving extra help as reported by parents and teachers

Area where help received	Parent		Teacher	
	One twin	Both twins	One twin	Both twins
Remedial maths	5.0	3.0	4.7	3.1
Remedial English	6.1	4.1	7.0	4.9
Extra small group work	8.6	7.4	11.0	11.5
Speech assessment	8.7	8.4	7.3	6.5
Psych. evaluation	4.3	2.5	4.3	2.2

The disproportionate needs for remedial help in twins have been documented in the La Trobe Twin Study [9], in the Australian Council for Edicational Research National Survey of Literacy and Numeracy [8] and in the Australian NH&MRC Twin Registry [10]. Table 4 confirms this result particularly in the case of reading where twin problems are best known [8], as well as reinforcing the unfortunate observation [8] that there are many more twins needing remediation than are receiving it. The smallest disparity between those needing and receiving help is for speech therapy where in Australia private services are more readily available to avoid the delays in the public system. The ability of families to get such help outside the school would also explain why parents report a greater utilisation of speech assessment and therapy than do teachers. Conversely, more teachers are taking twins out of the routine classroom activities for special group work than the parents realise.

A major concern must be that more often than not it was just one twin of the pair who needed or was receiving the different types of intervention. These various sorts of help are not independent in that twins with speech problems often go on to have reading problems [9] and difficulties in reading are often associated with problems in mathematics because of the difficulty of comprehending the written questions [8]. The issue of how much of this disparity relates to the genetic differences in DZ pairs or is more the product of stereotyping one twin as able and the other as less able and exaggerating differences between them is the subject of another analysis in progress.

That having twins different in ability increases the likelihood of competition and jealousy has already been mentioned. Such ability differences do have major

consequences for the children's self-esteem. In a follow-up study of twins tested longitudinally in the LaTrobe Twin Study [Bruce and Hay, in preparation], the best predictor of their adolescent self-esteem (as measured by the Piers-Harris Self-Concept Scale) was their verbal ability and the intrapair differences in this ability.

While one way of dealing with this ability difference has been to separate the twins, Table 5 goes further and indicates how many teachers and parents were prepared to go to the extent of actually keeping the less able twin back a year. Very few parents or teachers questioned the validity of the assessment of the difference in ability and whether the difference was permanent or simply reflected a delay in one twin which may diminish by the next year.

Table 5 - Parents' and teachers' beliefs about advancing one twin a year in school above the other

Parents' alternatives	
Allow one to go up at same school	34.1
Keep in ame year but different claes	42.0
Allow one to go up but at another school	7.8
Never allow	16.1
Teachers' alternatives	
Should never occur	12.4
Last resort only	29.9
Better than keeping both back	1.0
Suitable if major difference in ability	19.9
Same as advancing any child	17.3
Suitable following parental input	17.5

Data are percentage of 784 parents and 1232 teachers choosing each alternative.

DISCUSSION

There are three main recommendations about separation:

1. The need for more consultation between school and parents. It is disturbing that only 25% of parents feel they are adequately consulted about this decision, especially as they are much more likely than the teachers to note any resulting disturbance in the children. There were 10% of teachers who claimed it was "official" policy to separate twins, although parents who have tried have generally been unable to see any official statement to this effect. At least two states have circulated schools to the effect that there should be no rigid policy on this decision. Yet, teachers in these states were no less likely to cite "official" policy.

In general, the lack of communication between parents and teachers about the twins is of concern. For example, there were 50 pairs out of the 784 where the parents had organised speech therapy but the teachers were unaware of this. Both parents and teachers often appended comments to their questionnaires and one frequent point against separation was that the teacher of *both* twins tended to be much better informed as to what was happening in the family. The teacher of

one twin often did not know what was happening to the other child and how this may impinge upon the one in their class.

- 2. More realisation that separation is not permanent, and that in cases where it is not working it can easily be reversed in the next year, if not necessarily within the one academic year.
- 3. The collection of empirical data on which a decision about separation could be made. While the teachers' most usually cited reason that separation helps "individual development" is based on folklore and has no proven relevance to the vast majority of twins whose relationship is not so close as to be pathological, the results here have suggested that separation is most often advocated where there are differences of the sort traditionally associated with the deleterious effects of closeness. There is no evidence that separation actually benefits the abilities of twins (as distinct from separation being advocated where twins are behind). This can only be assessed via a follow-up study of pairs separated or together in school and this is currently being done using the longitudinal ability data from the LaTrobe Twin Study where the children had been assessed before school entrance.

Data from the LaTrobe Twin Study cast doubt on whether such a simple strategy as separation in school will generally improve twins' development. Firstly any delays in language and social development are well established before the twins begin preschool [9] and such early delays are the best predictor of reading delays in late primary school [10]. In addition, there are good arguments that the main stages of what has been termed the separation-individuation stress point in twins' development [1] have largely been realised well before schooling begins. Furthermore, the usual view that the delays in speech and reading in twins owe much to their unique social situation [16] is being questioned with the finding from an extensive survey of preschool twins and singletons that twins were as delayed in fine-motor skills as in language and social skills [10]. Furthermore, these three areas of behaviour were much more closely related in twins than in singletons with those twins most delayed in language and social skills also being most delayed in motor skills [Hay, Tan and Johnston, in preparation]. This pattern was much weaker among the singletons. It is much more difficult to attribute motor skill to the social situation of twins and indeed the best predictors of motor delay were variables concerned with perinatal complications.

What is needed is a more flexible approach, recognising individual differences between twin pairs and that strategies such as separation may not be equally appropriate for all pairs. Separation may be of most value in those pairs of very different ability to reduce the inevitable comparisons, and Table 4 has shown just how common are such differences. But the question of how this difference in ability is assessed is an important one. One focus of the LaTrobe Twin Study has been on the way in which parents may stereotype differences between their twins from an early age on the basis of birth order, birthweight or who comes home from hospital fist after the delivery. Such different perceptions become enshrined in the children and by the time they start school are obvious to the teacher [7]. In the course of the LaTrobe Twin Study it has become apparent that these perceived differences in ability often disagree with formal psychometric assessment of ability and that

the child reported as being the more able may be little different from the cotwin except in confidence.

This caution applies especially in the situation where the difference in ability is so extensive that keeping one twin back a year is being actively considered. A particular problem, here, is whether the less able twin is so far behind relative to the entire year or just to the cotwin. The data in Table 5 indicate that few teachers have given much thought to this and to the irrevocable differences it creates within the pair. It must only be seen as a last resort, possibly best achieved by moving that twin to another school to help reduce comparisons both by the twins and by others [15].

One area where differences between twin pairs must receive more recognition concerns starting school and whether or not twins should stay in preschool for another year. In 22% of the families the twins had had an extra year at preschool. The parents who did not think an extra year before schooling would have helped, were, not surprisingly, those whose twins were less likely to need additional help with reading ($\chi_1^2 = 27.57$, p < 0.001), writing ($\chi_1^2 = 37.42$, p < 0.001) and number skills ($\chi_1^2 = 12.47$, p < 0.005). A recent longitudinal study of Australian singletons [11] has shown that repeating a year has little direct benefit in academic skills but contributes greatly to a feeling of competence and to social and emotional adjustment. Unfortunately, while the twins who were kept back can be identified here, there is no way of identifying a comparison group of those who needed this but were not kept back. It is inappropriate to compare the twins kept back with the more mature ones where this was not an issue.

IMPLEMENTATION

While the state meetings and workshops to consider implementation of the results are still continuing, the following are some of the plans being introduced:

- 1. More information on twins in teacher training. Only 34% of teachers had had any mention of twins in their training, and following the trend so deplored by Zazzo [18], this most often was in the context of genetics rather than in practical terms. To cover the diversity of training institutions, the plan is to develop a kit of resource materials relying heavily on the handouts developed in the LaTrobe Twin Study and with suitable audiovisual aids, which will enable more people in different regions to give a 1-2 hour workshop on the special issues in teaching multiples.
- 2. Seeking to improve the situation as the twins are starting their education. One AMBA group in Brisbane has been working with remedial teachers to develop a Prevention Program for preschool and Grade 1 twins and there are plans to extend this to the younger children where help would be most effective. The work on the long-term consequences of the stress imposed on a family by newborn twins [4] is leading to more consideration of the possible educational values of additional support at this early stage.
- 3. Getting information to parents. It is felt this is more appropriate than trying to target all teachers, who may discard information they feel is not immediately

relevant. A long-term aim is to develop a video, as a school-age parallel of the one for prospective parents called "More than One", which was professionally produced for AMBA and funded by them and by Johnson and Johnson. In the immediate term, the plan is to produce leaflets which parents can discuss with the teacher when their twins are starting school or when a problem arises.

- 4. Getting information to teachers especially in the states such as Queensland where the distances are so vast as to be a major deterrent to effective dissemination of knowledge. One value of the workshops has been local knowledge of the networks of communication among principals, among school administrators and among remedial staff and of the educational satellite systems.
- 5. Developing a method of conciliation. Irrespective of how much information is made available, situations will arise where parents and schools are deadlocked over an issue involving a set of twins. Particularly in Victoria, the LaTrobe Twin Study has often become involved in these arguments, even to the extent of carrying out independent assessments of the children and the question is how to provide a nation-wide basis of expertise about twins to help resolve these disputes.

In conclusion, apart from its results the "Twins in School" survey has been important by heightening awareness among parents and teachers about issues which can arise with twins at school. It is important to note that overall about 70% of parents and teachers saw the twins as generally being happy and well-adapted to life at school as a twin and they had no real concerns about the children. It was difficult to characterise the remaining 30%. They were not specifically those together or apart in class, but did include many of the pairs very different in ability. The aim must be to improve the school experience for this significant minority of twins.

Acknowledgments. Running of the Twins in School project was funded mainly by the LaTrobe Vice-Chancellor's Development Fund. Analysis of the data and the preparation of information leaflets on the results were funded by Twincare (on the winding-up of its function as a support organisation) and by the Australian Multiple Birth Association Inc. (AMBA). The support of the Education Departments and of AMBA members in each state and territory is gratefully acknowledged. The LaTrobe Twin Study has been funded mainly by the National Health and Medical Research Council (Australia).

REFERENCES

- 1. Ainslie RC (1985): The Psychology of Twinship. Lincoln: University of Nebraska Press.
- 2. Bakker P (1987): Autonomous languages of twins. Acta Genet Med Gemellol 36:233-238.
- 3. Bryan EM (1984): Twins in the Family: A Parents Guide. London: Constable.
- 4. Costello AJ (1978): Deprivation and family structure with particular reference to twins. In Anthony EJ, Coupernik C (eds): The Child in His Family, Vol 4. New York: Wiley, pp 59-71.
- 5. Douglas JE, Sutton A (1978): The development of speech and mental processes in a pair of twins: A case study. J Child Psychol Psychiat 19:49-56.

244 C. Gleeson et al.

- Hay DA, O'Brien PJ (1983): The LaTrobe Twin Study: A genetic approach to the structure and development of cognition in twin children. Child Dev 54:317-330.
- Hay DA, O'Brien PJ (1987): Early influences on the school social adjustment of twins Acta Genet Med Gemellol 36:239-248.
- 8. Hay DA, O'Brien PJ, Johnston CJ, Prior M (1984): The high incidence of reading disability in twin boys and its implications for genetic analysis. Acta Genet Med Gemellol 33:223-236.
- 9. Hay DA, Prior M, Collett S, Williams M (1987): Speech and language development in preschool twins. Acta Genet Med Gemellol 36:213-223.
- Hay DA, Tan L (1990): One child in 45 is a twin Do early childhood services meet their special needs? Proceedings 9th Australian Early Childhood Conference.
- Kenny D (1989): The effect of grade repetition on the social/emotional adjustment of infants and primary students. The Australian Educational and Developmental Psychologist 6:1-10.
- 12. Koch HL (1966): Twins and Twin Relations. Chicago: University of Chicago Press.
- Luria AR, Yodovich FI (1959): Speech and the Development of Mental Processes in the Child. London: Staples.
- 14. Rosambeau M (1987): How Twins Grow Up. London: The Bodley Head.
- 15. Sandbank A (1988): Twins and the Family. London: Arrow.
- Savić S (1980): How Twins Learn to Talk: A Study of the Speech Development of Twins from 1 to 3. London: Academic Press.
- 17. Wallace M (1986): The Silent Twins. London: Chatto & Windus.
- 18. Zazzo R (1960): Les Jumeaux: Le Couple et la Personne. Paris: Presses Universitaires de France.

Correspondence: Dr. David A. Hay, Department of Psychology, LaTrobe University, Bundoora, Vic 3083, Australia.