



Primary–secondary transition: Differences between teachers’ and children’s perceptions

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Abstract

Transition from primary to secondary school is an important but neglected topic. For this review, 88 studies were selected from 325 possible studies, as including substantive data related to transition. The teacher’s perspective and the child’s perspective were very different, the former principally concerned with attainment and the latter principally concerned with socio-emotional issues. Children were concerned with peer relations and bullying, self-esteem and external support networks. Teachers were concerned with the attainment dip on entry to secondary school, curriculum problems, school strategies to ameliorate these, special groups and children with disability. The secondary school was a problem for all children at first, but after a term many children adjusted, though 40 percent still struggled after a year. The difficulty was greater for children from homes in poverty or ethnic minorities, particularly where parental encouragement was lacking. The quality of the evidence was critiqued and evidence-based implications for practice and policy and future research were outlined.

Keywords: attainment, consequences, primary, review, secondary, socio-emotional, transfer, transition

For most children and young people transitions or transfers between schools are rare, typically occurring between nursery and primary school, primary school and secondary school, and from secondary school to work. Sometimes this change is known as transition, sometimes as transfer – here we will use the term transition. More frequent school change is experienced where the school system has more phases, and particularly by children with itinerant parents (such as service personnel and Travellers). There is a considerable research literature on the transition from school to work, less on the primary–secondary transition, and even less on the nursery–primary transition.

The rationale for this review is that primary–secondary transition is a major event in the school lives of children, which may have short-term and long-term consequences, but the evidence relating to it has not previously been reviewed. Before, at and after transition, some readjustment may be required. How much might be necessary, for what types of children? This might relate to subject attainment or to socio-emotional aspects of

school life, or both. Additionally, readjustments might be within the child, the school, the peer group, the home, external professionals, the community, or all of these. At first sight it is difficult to find a single theoretical model underpinning these questions, but this may change by the end of the review.

Methodology and structure

Online databases (*Education Research Information Center* (ERIC), *Social Science Citation Index* and *Scopus*) were searched using the terms: transition* OR transfer* AND primary-secondary OR elementary-high (* indicates a wild-card option, so transition* extracts transition, transitional, transitions, etc.). This yielded 325 international studies. The abstract was read in all cases. From this, 127 papers were read in full on the basis that they appeared to include data on effects of transition. From this 88 papers were selected as including such data of some completeness and substance. The papers were reviewed systematically on several occasions in increasing depth. It was evident that papers reporting the teacher perspective focused predominantly on subject attainment, while papers reporting the pupil perspective focused predominantly on socio-emotional aspects of school life. Consequently, these differences were used as the organizing principle of the review.

Within the pupil perspectives section, the introduction concerns the perception of transition as exciting and challenging; a mix of optimism and anxiety. A major subsection deals with the role of peer relationships or networks, followed by related smaller subsections on bullying and networks external to the school. Subsections on special groups and children with disabilities follow. Within the teacher perspectives section, an initial section on the attainment dip on entry to secondary school is followed by a discussion of curriculum problems in secondary school. A substantial section on school strategies follows, including: information exchange, practice tests and booster classes, early transition, guidance teachers, sustaining class teachers across years (looping), outreach staff, peer assisted learning, technology and summer literacy schools. Sub-sections on special groups and children with disabilities follow. As the pupil perspective is traditionally likely to be thought the least important, it was placed first in this review. Recommendations made in the Discussion stem directly from the review findings and are intended to be relevant to the developed English-speaking world.

The pupil perspective: Principally on socio-emotional aspects

Transition to secondary school can result in anxiety for children, but it is often accompanied by optimism and anticipation of new opportunities – a combined status characterized as ‘anxious readiness’ (Zeedyk et al., 2003). Similarly, Pietarinen (2000) found a significant number of students perceived transition as a positive natural transition that was part of their life phase, but the majority experienced some disappointments, problems and fears. Likewise, Sirsch (2003) found that children perceive the transition to secondary school as both a challenge and as a threat, differentiating between academic achievement and the new social environment. Children looked forward to having more choices and making new and more friends, but at the same time, they were concerned about being picked on and teased by older children, having harder work, getting lower grades, and getting lost in a larger, unfamiliar school (Lucey and Reay, 2000; Mizelle, 1999).

From the children's perspective, transition is thus complex. Jindal-Snape and Foggie (2008) followed up a sample of children thought likely to have adjustment problems, conducting interviews with children, parents and professionals, with further interviews after six months. A third of the children still had problems with transition even at follow-up, with considerable impact from the child's internal attributes, family, peers, school systems, professionals and community. The attitudes of parents, siblings and even neighbours had a big impact.

Peer networks

At a time when friendships and the peer group are becoming increasingly important in the development of the adolescent, the transition between schools often serves to disrupt, alter or sever them (Mizelle and Irvin, 2000). Pietarinen (2000) also found the social peer group was important, and peer relationships are reported by students to be a cause of anxiety (Arowosafe and Irvin, 1992).

Pratt and George (2005) found pupils reported concerns about disruption of friendships and issues of image and status. As the end of primary school became imminent, male pupils developed closer bonds with other males, while girls did not make such bonds. Children saw daily struggles such as conflicts with peers as stressors (Newman and Blackburn, 2002), and a high number and frequency of these makes them major stressors. During transition peer relationships are often in a state of flux. Children who have been classmates for years can become strangers.

The nature of peer status changes too, as children go from being a 'big fish in a little pond' (the BFLP effect) to minnows in an uncharted ocean. Missing friends from elementary school, having trouble making new friends and not being part of a group were reported as stressors by a sample of 11-year-old children assessed four weeks after transition to middle school (Elias et al., 1985). Yates (1999) found that in three primary and four secondary schools, students had difficulty with lunchtimes and made many comments in relation to this.

The role of peer relationships has long been recognized as a buffer as students undergo transition (Hertzog et al., 1996). Facilitating the perpetuation of peer relationships from the previous school setting is reported to promote effective transition (Carter et al., 2005). For example, in a two-year longitudinal study of 143 10–11-year-old pupils (Hirsch and DuBois, 1992), peer support prior to transition reduced the effects of stress during transition from elementary to junior high. Students who had a structured series of peer interactions with older students at transition displayed fewer failing grades and missed fewer days of school than students who did not participate in such a programme, and females particularly benefited (Cognato, 1999, cited in Mizelle and Irvin, 2000). Lindsay (1998) reported an initiative that closed the school to all students except new entrants. This resulted in the formation of positive social relationships between new students and decreased levels of anxiety. Similarly, the attempts of a secondary school to facilitate the learning, participation and psychological adjustment of new pupils through a Transition Club were explored by Humphrey and Ainscow (2006).

Other social interventions include various forms of cooperative and peer-assisted learning. In Thurston et al. (2010), target secondary schools were those to which primary

cooperative learning pupils had transitioned. There was evidence of transfer of social gains – follow-up pupils (from both rural and urban schools) reported more positive relationships (especially out of the classroom) with pupils. Peer-assisted learning activities have been evidenced to contribute to enhanced self-esteem and motivation to learn (Ginsburg-Block et al., 2006; Topping, 2001). Similarly, studies point to the ways in which formative assessment techniques can be used by teachers to enhance self-esteem (Craven et al., 1991; Miller and Lavin, 2007; Thomas et al., 1993).

Peer mentoring is a one-to-one non-judgemental relationship in which one pupil (the mentor) voluntarily gives time to support and encourage another pupil (mentee). An evaluation of a peer mentoring programme based on staff and pupil surveys and visits to eight case study schools (Parsons et al., 2008) suggested that mentor and mentee matching seemed to be most successful when pupils were put together according to similar interests/hobbies and or similar personality characteristics. Co-ordinators in schools reported improved transitions most frequently (64%), and 63 percent thought that the programme had improved pupils' confidence and self esteem. The vast majority of mentees were pleased at having a mentor; found their mentor helpful; and thought that the relationship with their mentor got better over time. They said that being mentored had improved their attitudes towards school; helped them attain better; and increased their confidence at school. Most of the mentors (87%) believed that being a peer mentor changed them in some way; including increasing their confidence and helping them talk to people more easily.

Bullying

Bullying and victimization were studied longitudinally by Pellegrini and Long (2002). Generally, bullying and aggression increased with the transition and then declined (but did not disappear). Approximately three in every ten children had some or many experiences of bullying (according to their parents) (Evangelou et al., 2008). Bullying may be one way in which young adolescents manage peer and dominance relationships as they make the transition into new social groups. In line with this, cross-sex comparisons suggested that boys targeted other boys and did not target girls.

Zeedyk et al. (2003) conducted a survey in which the views of 472 primary and secondary pupils, parents and teachers were explored in regard to transition – to establish the extent to which the views of the four groups agreed. Bullying was a major concern for all groups, followed by fears of getting lost, increased workload and peer relationships. The views of primary pupils and their parents were very similar. However, teachers rarely identified children's individual abilities as making a difference to the transition process, focusing instead on institutional initiatives.

External networks

Successful adaptation may be due to students remaining resilient and coping with change and receiving support from external networks that may serve as a protective factor (Akos, 2004). McGee et al. (2004) found that having adequate external social support networks was a crucial factor in successful transition. Family support was linked to achievement after transition and the influence of encouraging parents was cumulative. Pupils tended to think there was a problem with delivery of programmes;

teachers tended to think that the pupils brought problems with them. Likewise, Osborn et al. (2006) found that parents' knowledge of their children had much to contribute to their successful transition and to the school's understanding of how to facilitate this. However there was little evidence that this was drawn upon substantially by schools.

In Canada a study of an elementary-junior high school and a senior high school focused on career and life planning for students (Gordon et al., 2000), considering that adolescents wanted to prepare for the transition to adulthood. Results revealed that students and parents perceived there to be the highest degree of need with the area of developing a life plan. School staff, on the other hand, reported that this was the least important area of need and scored self-management as the top priority.

Self-esteem and mental health

Self-esteem and anxiety

Several factors contribute to how well an individual deals with transition, including self-concept and social anxiety (Sirsch, 2003). Transition is a period of anxiety for many children, with substantial decline in self-esteem, academic motivation and achievement (Otis et al., 2005; Seidman et al., 1994; Wigfield et al., 1991). Falls in academic performance were related to decreased self-concept as a learner and decreased self-concept in individual subjects (Mullins and Irvin, 2000). In a review of transition during the middle school years, Demetriou et al. (2000) concluded that evidence of falling motivation levels after an initial period of adjustment was due to loss of self-esteem in a more competitive learning environment.

Delamont (1991) found that children about to make the transition to secondary school had ideas about secondary school that were greatly influenced by 'horror stories' communicated by their peers. Similarly, Osborn et al. (2006) argued that transitions are particularly significant with regard to exploring changes in identity and construction of self. Transitions can challenge established identities and force re-assessment. Children's learning performance could suffer, with accompanying social, emotional and behavioural difficulties. However, Lucey and Reay (2000) argued that it is difficult to separate children's anxieties from those of the adults around them. Perceptions of autonomy, competence and relatedness immediately after the move to secondary school were investigated by Gillison et al. (2008). Self-report questionnaires were administered on three occasions over 10 weeks (albeit with a small sample, $n = 63$). An improvement was recorded for only 21 percent of students, predicted by satisfaction of the needs for autonomy and relatedness, but not by competence.

Mental health

More extreme reactions involving declines in self-esteem and increases in anxiety raise questions about the mental health of pupils, which may or may not prove temporary. Measor and Woods (1984) highlighted that at the time of transition children can experience a sense of loss – loss of the familiar, in terms of places, people and routines. Barber and Olsen (2004) noted increased loneliness and depression and decreased initiatives with peers. This was linked to increased stress and depressive symptoms (Rudolph et al., 2001).

Special groups

In a large study, Burgess et al. (2008) found the experiences of high poverty pupils at transition might be quite different to those of their peers. Their peer groups were more fractured at the age of 11 and they tended to find themselves more concentrated within lower-performing secondary schools. High poverty pupils were less likely to go to the most popular school when it was better than average in attainment, but more likely to go when it was worse than average in attainment.

Children from minority ethnic backgrounds were studied by Graham and Hill (2002), who found that more than 77 percent of ethnic minorities felt that transition was more difficult for pupils who spoke a language other than English at home. Black ethnic minority pupils seem to fare better (Caulfield et al., 2005). These students said they had a greater choice of friends, felt secondary school had helped them to mature socially, and were positive about the greater variety of learning experiences. However, they reported more racism in the secondary school. Pupils were more likely to confide in peers about racism and bullying than either parents or teachers.

Children with disabilities

Data was gathered from children/young people with autistic spectrum disorders and their parents (Jindal-Snape et al., 2006). Despite the size and complexity of their new mainstream school, the children/young people were positive about transition, but wanted real inclusion in school activities. Parental evaluations of transition arrangements were considerably lower than those of professionals. Hannah (2008) investigated a transition treatment programme for children on the autistic spectrum, the children meeting in a peer group outside of school. There were positive student and parent evaluations. Students reported higher than normal anxiety levels before and after transition, but anxiety was mixed with excitement. Students and parents gave a positive evaluation of the students' social functioning in secondary school, in contrast to the mixed perspective of school staff.

The teacher perspective: Principally on attainment

There is strong evidence that after transition pupil attainment declines, recovering only after a year or two. This may explain why teachers are preoccupied with attainment (although alternative hypotheses are that they take a longer term view than children or that this perspective is their natural inclination). Over 12 months Kirkpatrick (1992) interviewed Australian children – pupils made little improvement during their first year at secondary school and in some cases academic performance declined. Pupils reported that the work they were doing was no more difficult (and at times easier) than the work they had been doing at primary school. Fouracre (1993) studied a Scottish secondary school and its five associated primary schools. After transition tests of basic skills (such as spelling and punctuation) actually showed a decline, so teachers at secondary schools appeared to be underestimating pupils' innate academic abilities. Significant declines in science attainment scores were evident after transition for a sample of 225 12-year-old students (Petersen and Crockett, 1995).

In a sample of 25,795 students, almost one quarter who previously had good attainment results failed at least one subject in the first semester after transition to senior

high school (Roderick and Camburn, 1999). Galton et al. (1999) found that two out of every five pupils failed to make expected progress during the year immediately after the change of schools. Pupils in secondary schools frequently saw the first years in secondary schools before studying for public examinations as less important and did not appreciate that working hard then could have benefits later. Decreased attainment scores and levels of motivation were observed at transitions from elementary to middle and middle to high school in a sample of 933 pupils (Barber and Olsen, 2004). Thus there also seems to be a dip in motivation as well as attainment in the first year of secondary school (Boyd, 2005). However, there is also evidence that for other (perhaps many) children, problems with transition are relatively short-lived and that pupils integrate into secondary school relatively quickly (e.g. Huggins and Knight, 1997).

Youngman and Lunzer (1977) followed urban and rural samples through and beyond the transition period. They assessed 1500 children from six secondary schools in reading, mathematics, intelligence and attitude to school, and asked them about their experiences in June, September and December of the year in which they transitioned. High ability was associated with positive attitudes to school before and after transition. High motivation in the absence of ability reduced anxiety but had no effect on attainment. Urban and rural samples showed no significant transition differences (although rural children began with higher attainment), nor did those from smaller and larger primary schools, nor did boys and girls.

A study of attitudes to science by the Wellcome Trust (2006) found that the quality of teaching in science was influential in determining attitudes toward science education, and pupils thought the quality of teaching declined from primary school into secondary school. Boys expressed consistently more positive attitudes toward many aspects of science than did girls. However, girls expressed consistently more positive attitudes toward biology, particularly human biology, and areas of science that involve imagination and aesthetic appreciation. The majority of students reported that they were motivated to learn science, but only a minority reported interest in a career involving science.

Curriculum problems in secondary school

Researchers have noted a number of problems with the curriculum, its delivery and organization in secondary schools. Tobbell (2003) found aspects of the secondary school timetable were viewed negatively by pupils (e.g. having maths after history and having lessons that were too short). The primary school timetable was viewed in a positive way as being more flexible and responsive. Pupils found secondary schools favoured an individualized style of learning rather than the group style of primary schools. The number and range of teachers was also raised – some saying it led to confusion and others commenting on difficulties in forming relationships with staff. However, the breadth of secondary subjects was welcomed. Where primary schools teach a foreign language, do secondary schools subsequently capitalize on this, and is eventual attainment higher? Case studies from 19 local authorities suggested this varied according to the schools concerned (Hunt et al., 2008). Studies in the rest of Europe (Kvalsund, 2000; Lohaus et al., 2004; Zanobini and Usai, 2002), the USA (Akos, 2004; Pellegrini and Long, 2002), Australia (Tonkin and Watt, 2003) and elsewhere have emphasized similar issues.

There are questions about how well pupils sustain motivation in the secondary school, and to what extent this can be blamed on the school or the pupils. One hundred and forty pupils in transition completed measures on four occasions during a 12-month period (Warburton and Spray, 2008). Most goals and beliefs showed a linear decline over time, but mastery-avoidance goals showed no significant change. Similarly, Mok et al. (2007) examined the self-perceived metacognitive patterns of Hong Kong school students. Results showed that students' metacognitive competencies decreased with age, with a sharp decline at primary/secondary school transition.

This may be particularly true for less-able children. They can be confronted with tasks that highlight their lack of understanding or competence. The difference between their performance and that of their peers may become very evident, to them and to their peers. Marsh's empirical studies into the big-fish-little-pond effect (e.g. Marsh and Hau, 2003; Marsh et al., 2004) highlight the importance of social comparisons on children's self-judgments. Equally, those who are faced with work which is too easy may suffer in terms of self-esteem – able children are likely to question the true nature of their ability. When children receive praise that seems disproportionate to their efforts, the uncertainty created can have negative effects on self-concept.

School strategies

At transition, the curriculum may differ but the pedagogy will also differ. For many pupils, transition is characterized by a shift from child-centred, activity-based or experiential learning classrooms to a more didactic approach, informed by a different pedagogical ideology (Midgley et al., 1989). The expectations of teachers may differ, as will the nature of some important relationships between teachers and students (Midgley, et al., 1989; Tonkin and Watt, 2003).

Koizumi (1999) found a reciprocal relationship between optimism and attainment in the primary years, but in the transition years attainment became the more dominant influence. Of course, this might mean that as children grow older their self-perceptions become more realistic, or it might mean that they are increasingly overwhelmed by external perceptions of their worth based upon examination results. Several factors contributed to how well an individual dealt with transition, including self-regulatory beliefs regarding control over academic success (Rudolph et al., 2001; Seidman et al., 1994).

Many schools have developed procedures to reduce the perceived threat and smooth the transition, including the development of shared pedagogy in staff between schools, promoting study skills in students, involving parents in transition, giving information/orientation sessions to students and engaging students in positive social relationships with other incoming students (Mizelle, 2005). Some schools arrange for school visits with peers in the year before moving, and allocate older students as mentors (Graham and Hill, 2003; Sirsch, 2003).

Information exchange

Many schools have focused on improvements in the transition of information from primary to secondary settings (Hargreaves and Galton, 2002). Capel et al. (2004)

analysed questionnaires from 80 secondary schools and 299 primary schools (with particular reference to physical education). The highest percentage of teachers exchanged information through written documentation, followed by discussion at cross-phase liaison meetings. The type of information was generic information about the curriculum, rather than information about specific physical education content covered or information about individual pupils such as levels of attainment or ability. The information might be used for pastoral purposes but few teachers used the information to plan for continuity and progression in the physical education curriculum. Similarly, Evangelou et al. (2008) reported interviews with local authority officials revealed that secondary schools did not appear to 'trust' the data on children provided by primary schools, and this led to re-testing of children in secondary.

Practice tests and booster classes

Galton et al. (2003) tracked pupil progress in 300 primary schools, while transition practice in a dozen local authorities and more than 50 schools was analysed and interviews conducted with 50 primary head teachers. Two strategies dominated primary head teachers' approaches to the year before transition: regular use of 'practice tests' (reported by 82%) and the provision of 'booster' classes (74%). A majority concentrated their more experienced teaching staff in these classes, reduced the scope of the curriculum taught and focused the efforts of any support staff here. For many pupils much of the final primary year was revision with an emphasis on whole class direct instruction. Consequently, the first secondary year was not sufficiently challenging or different. By the end of their first year after transition many pupils found school a less enjoyable experience. The dominance of tests in structuring schools' approaches to teaching and learning was clearly evident.

Early transition

An early transition scheme was described by Trend (2007) – all final primary year children transitioned to secondary school four weeks before the end of the summer term. Questionnaires were administered to all children before and after the four-week induction period, in two consecutive years. Girls expressed higher levels of general anxiety and subject-oriented worry than did boys at most stages. Only in physical education was there a change in anxiety generated, a greater improvement among boys set against a modest improvement among girls. The induction period increased gender differences in perceptions of subject usefulness.

Guidance teachers

The role of the guidance teacher was studied by Wilson et al. (2007) – this being a teacher in the secondary school specifically responsible for the pastoral care of a number of students. Initiatives aimed at raising pupil attainment often presuppose that pupils will receive adequate levels of guidance and support to help them make curricular, personal, social and health decisions. A study explored the views of all 32 local authorities in Scotland, a sample of students in training in two universities and teachers, head teachers and pupils in eight case study schools, and also a sample of their parents. Two dominant models of pupil support emerged from these data: an embedded and a specialist

approach, and these varied according to school and education sector. Primary school teachers were more likely to embed pupil support into their concept of being teachers, whereas secondary teachers perceived it to be a separate, specialist function, which many were reluctant to undertake.

Sustaining class teachers across years (looping)

The practice of looping (having a teacher advance from one grade level to the next along with his or her class) was explored by Gaustad (1998). Students in looping classes scored substantially higher on standardized tests of reading and mathematics than did students in regular classes, even when both groups were taught by the same teacher. However, if scaled up a class which is disadvantaged by having a poor teacher in perpetuity could be a problem.

Outreach staff

Outreach staff specializing in mathematics undertaking an active role in improving primary and secondary education were studied by Duke et al. (2008). Results showed that post-transition students displayed a significant change in algebraic skills, while students in earlier grades made little progress. However, the outreach mathematician lacked some awareness of the lower grade students' background and motivation, which illustrated the importance of working closely with the participating class teacher.

Peer assisted learning

In Thurston et al. (2009), target secondary schools were those to which primary cooperative learning pupils had transitioned. Data were collected from 204 follow-up pupils and 440 comparison pupils. Follow-up pupils scored significantly higher on a forces test than comparison pupils (forces being the area for primary cooperative learning) – they had sustained their gains. These pupils also reported more positive attitudes towards science than comparator pupils. This was true of pupils from both rural and urban schools. In Topping et al. (2011), eight secondary schools agreed to trial a cooperative learning intervention, while a further eight agreed to be control schools. Data were collected from 259 experimental and 385 control pupils. There was evidence from direct observation that experimental classes did do cooperative learning. In attainment, both experimental and control groups gained significantly. Rural pupils performed higher on some attainment tests.

Technology

Can technology ease transition? According to Twiner et al. (2008), technology has resolved some traditional issues, but in some instances has created a new set of discontinuities. Access to computers tends to be very different between primary and secondary schools. The 48 schools studied offered different levels of access to technology, and also different activities when using technology facilities. The introduction of high-speed Internet access increased the gap between those using the technology as an add-on to existing resources and those embedding the technological facilities into the fabric of the learning environment.

Summer literacy schools

Summer Literacy Schools were evaluated by Sainsbury et al. (1998) as an attempt to improve children's literacy skills at the time of transition from primary to secondary education. The pupils' results from the national test taken in May were compared with results of a similar test administered in September, after transition, and with results for a control group. The scores of both groups declined significantly between pre-test and post-test, and no significant difference was found between the summer school pupils and the control group.

Special groups

Difficulty in transition was associated with children who were younger within their year and children from poorer homes, particularly where parental encouragement was lacking (Nisbet and Entwistle, 1966, 1969). Less able children from larger and less well-educated families did worse. An unusual number of school changes exacerbated problems. Similarly, Evangelou et al. (2008) reported a longitudinal study of 500 children in transition (46% response rate) in six local authorities. The study investigated four groups: local authorities, children, parents and schools. Low socio-economic status was found to be associated with less positive transitions for children.

Kristen (2002) explored assignment of ethnic minority children to schools, and found that even when attainment was controlled, ethnic minority children were disproportionately sent to vocational schools. This effect increased with the number of ethnic minority children in the primary school class. However, Tiedemann and Billmann-Mahecha (2007) did not find such an effect, but did find that where there were many pupils of high ability in a class, it disadvantaged them in terms of selection for the academic school. Four secondary schools with high numbers of bilingual students were investigated by Hayes and Chodkiewicz (2006), who mapped existing school–community links that supported student learning. They found that students, families and teachers expressed the view that learning was limited to schooling; and that contacts between schools and communities about learning were difficult to negotiate and were heavily mediated by school principals.

Children with disability

Turning to pupils with special educational needs, parents of children on the autistic spectrum in transition and professionals were interviewed by Jindal-Snape et al. (2005). Parents felt that whatever the educational provision, teachers should have autism-specific training. Whatever the provision, the quality of delivery, staff attitude and curriculum modification played an important part – rather than the structure of the provision.

Methodological critique

The quality of the 88 studies included in this review was very various. Mostly the studies were relatively small scale. Few studies included control groups (in no case fully randomly allocated). Three studies used tests to gather data, but case study was the predominant design. Questionnaires and interviews were frequently used. Some studies

had a low response rate while others sampled in rather dubious ways. Studies of attainment used tests or teacher perceptions as measures, while studies of pupil social and emotional factors used questionnaires, interviews, self-concept measures and other forms of self-report with pupils. A few studies used both kinds of data and compared them, which is to be encouraged. A few studies were longitudinal (although not always for a long period), but otherwise all studies were cross-sectional, and very few included any kind of follow-up.

Discussion

Jindal-Snape and Miller (2008) have argued that while schools have developed administrative and organizational systems to ease the transition process with relation to academic problems, children and parents are typically more concerned with personal and social issues. This is exactly what this review finds. Teachers seem to be somewhat preoccupied with institutional initiatives, while children and parents are more concerned with the needs of the individual. This may be at the root of the differences between parents and children on the one hand and teachers on the other – teachers are sure that they are doing something, but as far as parents and children are concerned, they are doing the wrong things.

Connected with this is the question of blame – teachers may be inclined to blame the children, while the children and parents may be inclined to blame the teachers. Relatedly, does pupil self-esteem reduce because they do less well in attainment, or do they do less well in attainment because their self-esteem is reduced, or both? Might teachers and pupils have different perceptions of the likely causal direction? How much of pupil reaction to transition is because of what they think will or might happen, and how much is because of what actually does happen – and do pupils go out of their way to make their prophecies come true? The truth almost certainly lies somewhere in the middle. Thus all parties are somewhat to blame, but the nature of that blame needs making explicit, as well as what can effectively be done to improve the situation.

Given the tendency of attainment to stall if not decline in the first two years of secondary school, it is unsurprising that teachers are preoccupied with attainment (although whether secondary school teachers are prepared to accept that this may reflect a problem with the secondary school and not be a consequence of some kind of problem in the primary school is another issue). The differences between teachers and pupils may also reflect their different time perspectives. Parents and children may tend to be preoccupied with the here and now, while teachers may take a longer term view and be looking for development over a longer trajectory.

When it comes to the question of what can be done about transition problems, it is clear that parents and children need to increase their concern (and action) about attainment and take a longer term view, while teachers need to increase their concern (and action) about socio-emotional issues and take a shorter term view. Direct evaluations of specific initiatives to foster positive transition are very mixed – some work and some do not. Even those that work may not work when replicated owing to poorer implementation. Consequently, school staff should approach intervention suggestions in this area with caution, hoping to see a pilot evaluation before wide-spread implementation. In the meantime, the guidelines on effectiveness emerging from this review will be worth considering.

Thus the beginnings of a theory of primary–secondary transition have been developed. Pupils (and parents) are preoccupied with short-term, personal, socio-emotional issues. Teachers are preoccupied with longer-term, institution-led, attainment issues. There needs to be much discussion between both sides, so that an approach to transition can be developed which reflects concern for attainment *and* socio-emotional issues, the short *and* long term, and systemic school strategies *and* responding to the personal needs of individuals. These discussions can now be informed by the research evidence on what works and what does not.

Conclusions

This review highlighted a major difference between pupils (whose concerns were often focused on socio-emotional issues) and those of teachers (whose concerns were often focused on issues of attainment).

Taking pupil perspectives first, there are dual pupil perceptions of transition – it is exciting but challenging, yielding a mix of optimism and anxiety. Peer relationships or networks become increasingly important as children enter adolescence, but at transition these can be severely disrupted, creating issues of image and status. However, peer relationships can also act as a buffer to stress, and peer support projects can be helpful. Peer-assisted learning, cooperative learning, peer mentoring and formative assessment have all been found to be effective. At transition, bullying increases and then declines. Support networks external to the school (usually the family) are extremely important, but often neglected by schools. Transition is often accompanied by a decline in self-esteem and motivation, involving changes in identity and the construction of self. In extreme cases, this can lead to mental health problems, with accompanying feelings of loss, loneliness, stress and depression. High poverty pupils are likely to go to schools with lower attainment levels and peer groups are more likely to be fractured. Transition is more difficult for ethnic minority pupils, except for Afro-Caribbean pupils, although all find more racism in secondary schools. Children with disabilities want real inclusion rather than token incorporation in a separate special unit. Their parents are less positive than teachers. Peer support is effective with pupils with autism.

Turning to teacher perspectives, there is an attainment dip on entry to secondary school, which recovers only after a year or two. Pupils report working at the same level as at primary school or repeating work. Their basic skills are often under-estimated by secondary teachers. However, high ability pupils tend to be unaffected. There seem to be curriculum problems in secondary schools – pupils are negative to the timetable, the lower frequency of cooperative work and encountering too many teachers. In secondary schools, pedagogical styles differ, teaching is more didactic and attainment seen as more important – consequently children's self-esteem can suffer. There is a decline in motivation and meta-cognitive competence, especially for those with low self-esteem. In terms of school strategies, there is little evidence that information exchange, early transition or summer literacy schools are effective. Practice tests and booster classes in primary result in secondary school being less interesting. Teachers in secondary schools leave guidance functions to guidance staff, instead of the more holistic experience of primary school. Technology has both advantages and disadvantages, depending on how it is used. Effective strategies include sustaining class teachers across years (looping), deploying outreach staff and peer assisted learning. Children from high poverty, larger

and less well-educated families do worse, especially if the children are young in their year. Children from ethnic minorities likewise do worse, and their parents are less likely to see their role as supporting school. Regarding children with disabilities, teachers should have very specific training, and parents regard the quality of local provision more important than its structure.

From a methodological perspective, studies can be critiqued for being mostly small scale, using few control groups, often using a single measuring instrument, often using subjective instruments and including little longitudinal data.

Suggestions to improve research on transition

Studies of the effects of transition need to focus upon positive and negative effects. Studies should be large and include control groups of equivalent size which are randomly allocated. Measures should include both tests and teacher perceptions where academic attainment is to be studied, not one or the other. Self-report data from pupils should be gathered by questionnaire, interview and measures of self-concept, but of course these are appropriate for differently sized samples, and should not be regarded as alternatives. Studies should seek to gather attainment data and socio-emotional data for the same subjects, rather than focusing upon one or the other. High response rates are essential. Longitudinal or follow-up studies should be much more frequent and cover a longer time span, following the same pupils over time.

Suggestions to improve practice and policy on transition

Only evidence-based recommendations are given here, divided into those that work and those that partially work. A number of interventions which are commonly proposed are not listed because there is no evidence that they are effective. A number of social interventions appear in the evidence-based working section (albeit led by teachers), while interventions relating to attainment are less likely to appear. There is clearly a need to develop effective interventions relating to sustaining and enhancing attainment. Of course, all of these interventions take time – some much more so than others. Allocating scarce time to any of these interventions will involve taking time from another area of activity.

The following interventions seem to be effective. Be especially vigilant during the first term of transition. Ensure same-age peer affiliation to reduce bullying. Develop a structured series of peer interactions with older students. Engage pupils in peer assisted learning programmes. Engage pupils in formative assessment to enhance self-esteem. Provide targets identified by pupils, otherwise goals and beliefs can decline over time. Close the school to all students except new entrants, even if only for the first day. Seek to explore and adjust the attitudes of parents, siblings and even neighbours to transition, especially on personal and social issues. Beware a shift away from family-based cultural education to a school-based model. Do not allow attitudes or meta-cognitive competencies in maths and science to decline, especially with most able pupils.

The following interventions seem to be partially effective. Exchange information about pupils' individual abilities and specific individual plans between primary and secondary schools. Develop peer mentoring – it improves transitions, pupil confidence and self

esteem, but has less impact on pupil attainment and bullying. Developing an early transition scheme – this led to improvement in anxiety but only in some curriculum areas. Organize a Transition Club in the secondary. Engage specialist outreach mathematics staff to work with primary and secondary pupils. Encourage students and parents to focus on life-planning skills. For autistic spectrum children, develop transition programmes which gather the children in a peer group outside school. In school, provide high quality specific professional development activity for teachers and subsequent quality implementation.

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