Transitions from early intervention to school-age special education services—an overview of the literature

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Summary

This paper presents an overview of the international literature related to transitions between early intervention services and special education services for school-aged children. The review describes, firstly, families’ perceptions of services during the transition period, and, secondly, key factors associated with quality transition services.

It should be noted that this literature, predominantly from the United States, is centred more generally on the transition to school for children with special education needs, rather than the transitions from early intervention to school-age special education services. The majority of studies reviewed are descriptive rather than experimental, with few quantitative studies. The evidence to support any specific practice is therefore, not strong.

Review findings

Families’ views
Families of children with special education needs may find the transition to school in general more difficult compared to families of children without special education needs. Families and professionals differ in how satisfied they are with the transition between services. Families perceive the quality of services, once their child enters school, to be lower than that of services received prior to transition. Factors contributing to families’ difficulties include a decrease in the frequency and intensity of services and shifts in service providers.

Quality practices
The literature identifies the following quality practices to support effective transitions between services.

Communication – The importance of good communication between all stakeholders is the strongest theme to emerge from the literature. This incorporates:

- sharing information between providers and between providers and families on an ongoing basis
- collaboration across programmes and with community partners
- having clearly defined roles and responsibilities
- having a primary contact person within each programme or agency.

The quality of relationships is also a significant factor in families’ satisfaction with transition services.

Planning – Planning is interrelated with effective communication, and should:

- include identifying (and communicating) timelines for activities, such as referral processes, enrolment processes, and decisions about eligibility for resources
- address the strengths, needs, and characteristics of individual children, families and programmes.
Family involvement – The literature stresses the importance of active family involvement in transition planning. Barriers to involvement centre on language and culture, and the level of support available to families. Families should be given opportunities for education and skill development, and appreciation for their contribution.

System level processes – The literature points to the importance of service providers:

- knowing which agencies and services are available in the community and the specific roles and responsibilities associated with sending and receiving programmes
- having managerial support for effective practice, for example, having the time required for working with families
- having professional development opportunities that demonstrate how to incorporate policies and regulations into practice.

Monitoring children’s adjustment to their new environment, a standard quality practice, appears to be neglected.

Gaps in the research

Assessment of the outcomes of transition services is a key gap in the research. This includes the planning before a child moves between services and follow-up afterward. In the New Zealand context, there is overall a very scant research literature.

Conclusion

The literature provides a consensus of stakeholder opinion about the factors supporting effective transition between services. It also suggests that it remains a challenge to create mechanisms so that this knowledge can be implemented across the diverse contexts in which children live.
Introduction

Scope & purpose of the review

This paper presents an overview of the literature related to transitions between early intervention services and special education services for school-aged children. This review is intended to contribute to a larger programme of work being undertaken by the Ministry of Education, looking at how special education services are delivered.

In New Zealand the way services are funded requires a transition between Ministry of Education provided early intervention and school age services when a child enrols at school (usually at age 5). This may also involve transition to a new team of field workers depending on the way teams are organised by various Ministry of Education offices. Thus, transition to school occurs at the same time as transition to a new service.

The literature does not, generally, closely distinguish the transition between services from the more general transition to school. In addition the literature is predominantly from the United States where the services available may differ from those in New Zealand.

With these caveats in mind, this review describes, firstly, families’ perceptions of services during the transition period, and, secondly, key factors associated with quality transition services. The research method is described in Appendix 1.

Background

Defining a successful transition

Many of the studies reviewed do not explicitly define a successful transition. However, Rous et al. (2007), in their conceptual framework for examining the transition process, define the objective of a transition process as a child’s entry and success into a primary school programme.

Reflecting on the results of their respective qualitative studies with parents in the United States, both Lovett and Haring (2003) and Podvey et al. (2010) note that families’ ‘comfort levels’ are related to the quality (rather than the occurrence) of the transition. Thus, the smoothness of the transition is an important indicator of success.

In New Zealand, the Ministry of Education (2010) considers that, in general, in the special education context, effective transitions occur when there is:

- an understanding of what the students want and need
- active planning to ensure the right services and support are available in their new settings
- flexibility regarding the services and supports that are provided in schools and after school
- close work between schools and the various agencies that can be involved, especially when students are leaving school

1 For a review of the literature relating to this broader transition, see Peters S (2010) Literature Review: Transition from Early Childhood Education to School. Report to the Ministry of Education. Wellington: Ministry of Education.
• co-operation between professionals as students move from class to class or between years.

The transition process in New Zealand (for services delivered by the Ministry of Education)

Currently in New Zealand, Ministry of Education early intervention staff provide specialist support for children who have a ‘developmental or learning delay, a disability, a behaviour difficulty or a communication difficulty that significantly affects their ability to participate and learn at home or in an early childhood education setting’ (Ministry of Education 2012). These services can be delivered in early childhood settings the child attends, and/or their home or some other place that suits their family. These services can be provided as a difficulty is picked up and can continue until the child starts school.

For children of school age, schools provide support for the majority of children with special education needs. The Government funds schools directly to provide this support. If a child has high or very high needs, a school can then call on additional support from special education (Ministry of Education 2012b). These services include the:

• Ongoing Resource Scheme (ORS): which provides support for children with severe needs or multiple needs.
• High Health Needs Fund: which provides a teacher’s aide for a child with a medical condition that requires special care in order for them to be able to attend school safely.
• Communication Service: which provides support for children who have difficulty with talking, listening, and understanding language.
• Severe Behaviour Service: which provides support for children experiencing severe behaviour difficulties.

In her qualitative study of nine families in Christchurch, Wartmann (2000) describes the transition from kindergarten to school in New Zealand for children with special education needs as comprising four stages:

• having an initial discussion about school
• applying for resources and support, introducing the teachers and new professionals
• beginning school and adapting to new routines
• monitoring.

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2 For more information about Early Intervention services see www.minedu.govt.nz/NewZealandEducation/EducationPolicies/SpecialEducation/ServicesAndSupport/EarlyIntervention.aspx
3 For more information about school-age Special Education services see www.minedu.govt.nz/NewZealandEducation/EducationPolicies/SpecialEducation/ServicesAndSupport/HowSpecialEducationWorks.aspx
Importance of successful transition

Overall, as might be expected, descriptive studies in the literature find that the extent to which the transition to primary school is successful for children with special education needs is influenced by the transition to school-age special education services and supports. More specifically, where transition to these supports is problematic, or where services and supports are not in place, the research indicates long-term effects on social and academic outcomes for these children (Janus et al. 2007, Janus et al. 2008, Ministry of Education 2010b, Rous et al. 2007).

The literature also indicates that as with all children (Peters 2010), a positive start to school for children with special education needs can influence social and educational outcomes. In the short term, a child’s ability to adjust within a critical window of time, identified as four to 12 weeks (Rous et al. 2007), affects the child’s ability to actively engage in the new environment and to continue along their developmental trajectory (Dockett et al. 2011, Dogaru et al. 2009).

Support required

The changes associated with starting primary school may be difficult for any child to cope with. Such changes include unfamiliar surroundings, larger class sizes and the generally larger scale of primary schools compared to early childhood education settings (Rosenkoetter et al. 2007). However, transitions may be particularly difficult for children with special education needs depending on the services available and the nature of the disability. For example, children with Autistic Spectrum Disorders may have difficulties in generalising across settings (Branson & Bingham 2009).

As a result of such difficulties, many children with special education needs require support to adjust to the school environment so that they can function at an adequate level for learning (Dockett et al. 2011). Research in New Zealand (Wartman 2000) and in the United States (Dogaru et al. 2009, Janus et al. 2007) has found that such support is frequently not in place before the children enter school. Further, the research from the United States notes that the philosophy and focus of school-age services reflects a significant shift away from the more family-centric early intervention service model towards the individual child in the context of their school (Branson & Bingham 2009, Fox et al. 2002, Podvey et al. 2010). This shift in focus is not reflected in the New Zealand research. However, it does appear that schools in New Zealand may conceptualise special education needs differently from early childhood centres (Larson 2010, Wartmann 2000).
Comment on the studies reviewed

Overall, as noted, the literature focusing on the transitions from early intervention to school-age special education services is very limited; rather the literature is centred more generally on the transition to school for children with special education needs.

Also, as noted, this literature is predominantly from the United States. Consequently most of the studies reviewed in this report describe transitions occurring at age three when children with special education needs, in general, in the United States move from early intervention to pre-school services. As noted, this literature clearly indicates that the transition from early intervention services involves a shift in focus from the family towards the individual child in the context of their school to the child’s education – representing a significant status change for the family in terms of their involvement in their children’s education. These are important features of the literature that may have no or limited application to the New Zealand situation.

Many of the studies reviewed refer to the ecological framework expressed by Bronfenbrenner (Bronfenbrenner & Morris 1997). This framework conceptualises the child within the context of family and immediate community (neighbourhood, church, workplace) and larger community (law, cultural mores). Within the context of transition, the ecological model suggests that the presence or absence of connections between settings (for example, family and community) has an effect on child development and transitions (Malone & Gallagher 2009).

Despite acknowledging the ecological model, much of the literature available does not describe how the culture of the family and/or wider community actually affects the transition from early intervention to school-age special education services. Nor does the literature, in general, describe other dynamics that could be expected to have an affect such as urban or rural residence, or access to transport. Further, despite the considerable diversity amongst children with special education needs, few studies focus on this diversity – although children and or families from particular groups may be included in the studies reported.

Most studies acknowledge that transition is a process extending over a period of time, not a single point in time (Rosenkoetter et al. 2007). However, in almost all studies located, the data has been collected at one point in time only and, further, it is very difficult to assess the chronology of activities described in these studies. In addition, there are a number of other topic gaps in the literature. These are discussed further on page 13.

Finally, the majority of studies reviewed are descriptive rather than experimental, with few quantitative studies. In addition, actual services received are seldom detailed in the literature. The evidence, therefore, to support any specific practice is not strong. There are of course difficulties in designing studies that meet the high standards of evidence in this area. These difficulties include the diversity and special requirements for assessing this population, the need to individualise techniques and research questions, the small number of potential subjects in a given geographic region, and the challenges in obtaining a sufficiently large subject pool to conduct statistical analyses (Rosenkoetter et al. 2009).
Review findings

Families’ perspectives of the service transition

Research indicates that the transition to school in general (rather than the transition between services specifically) can be more difficult for families of children with special education needs compared to families of children without special education needs. Families of special education students have reported significantly more concerns surrounding their child’s behaviour, communication, academic readiness, and overall readiness for kindergarten (generally located within the school system in the United States) (Janus et al. 2008, McIntyre et al. 2006). Podvey et al. (2010) note that families perceive the transition as difficult despite the presence of policies designed to make it easier for them.

Research from the United States also identifies a number of factors related specifically to the transition in services that contribute to families’ difficulties. These factors include:

- a decrease in the frequency and intensity of services
- a decrease in home visitation services (and in general the move from family-focused and primarily home-based services to child-focused and primarily classroom-based programs)
- shifts in agencies
- a sense of discontinuity as families meet new service providers who are unfamiliar with prior programmes and services (Janus et al. 2007, Podvey 2010, Rous et al. 2008).

New Zealand studies (Larson 2010, Salter & Redman 2006, Wartmann 2000) have also reported parents’ descriptions of their difficulties with their child’s access to resources and specialist support, affecting the amount of time the child could have at school (Wartmann 2000). Respondents (parents), to the review of special education in 2010 reported there was not enough time, commitment or resources available for transitions (Ministry of Education 2010b).

Larson’s (2010) case study reported parents’ concern that support for their child’s special education needs was not organised prior to school entry (due to the school wanting to see how the child would cope first). The author considers this policy may result in the need for support only being realised once the need has escalated, at which time it may be more difficult to address. Similarly, in Salter & Redman’s (2006) study (of a project granting additional resources to children without ORS funding), participants felt that Group Special Education’s rule of thumb was not to accept a referral for school children until they had been at school for between one to three months. This policy was intended to allow the child time to settle in – but by that time difficult behaviours had often seen school-family relationships deteriorate.

In their review of published studies of transitions for children with special education needs, Janus et al. (2007) reported a discrepancy between parents and professionals in how satisfied they were with the transition of services. While the research reviewed does not explore the reasons for this, Janus et al. (2007) speculate that parents’ expectations may be higher (‘less realistic’) than professionals ‘who know the shortcomings of the system.’
Further, drawing on the results of a large community survey in the United States, Janus et al. (2007) reported that parents perceived the quality of services, once their child entered school, was lower than that received prior to transition. Results from this survey showed that a third of parents of kindergarteners with special education needs were not satisfied with the transition of services, and close to half were not satisfied with the availability of school-level services for their child.

In a New Zealand case study of one child’s transition, Larson (2010) identified considerable differences in expectations, particularly of the child’s behaviour, between primary school and early childhood education teachers. Whether the child was ‘settled in school’ (a criterion for the transition to school age special education services) was determined by a checklist completed by the education support worker. This was found to detract from using the individual education plan which in fact offered better guidance for supporting the child into school routines.

A further study by Janus et al. (2008) (involving standard survey measures and interviews with 40 parents) showed that parents do consider that attention is paid to the transition to school for children with special education needs. However, this attention is more effectively translated into action at the pre-school level, with the involvement of early childhood education service providers, resource teachers, and services. The New Zealand research, while limited, would appear to support this finding (Bourne 2007, Larson 2010, Salter & Redman 2006, Wartmann 2000).

A survey by Janus et al. (2008) found that while school-based staff also appear to be involved in transition planning, parents’ experiences indicate that this is not effectively translated into action with the timely delivery of support required by children. Parental reports showed that less than half of the promises of support made prior to transition were fulfilled. Notably, a survey by Summers et al. (2005) of 147 United States parents of children ages birth to 3 years, 3 to 5 years, and 6 to 12 years, parents of older children reported lower satisfaction.

In their study drawing on fora with parents and professionals, Rous et al. (2008) found that training in high quality practices for supporting transition was lacking, especially for those supporting the transition from preschool to kindergarten (within the United States school system). This finding applied to general education staff and therapy staff and was complicated by the lack of communication among families, teacher and therapists and the high use of jargon by professionals. In addition Rous et al. (2008) noted that teachers and therapists could not provide families with critical information such as the name of their child’s teacher because decisions about such are made only a few weeks before the start of the school year.
Factors associated with quality transition practices

The literature identifies a variety of quality practices in transitioning between services. These practices are founded on good relationships between families and professionals, and centred on the importance of thorough planning and communication that begins well before children leave early intervention services.

Communication

The importance of good communication between all stakeholders is the strongest theme to emerge from the literature. Reviews of the literature, descriptive studies, surveys and reports of consultations with parents and professionals all support the importance of good communication. In this literature the sharing of information between providers and between providers and families is key (Branson & Bingham 2009, Bailey et al. 2006, Dockett et al. 2011, Janus, et al. 2008, Kagan & Tarrant 2010, Lovett & Haring 2003, Ministry of Education 2010, Ministry of Education 2010b, Rosenkoetter et al. 2007, Janus et al. 2007, Podvey et al. 2010, Rous et al. 2007b, Rous & Hallam 2011).

Further to this, collaboration across programmes and with community partners was also a major theme in a study by Rous et al. (2007b) validating quality practices with parents and professionals. Findings from Rous et al. (2007b) support the need for ongoing contacts, interagency groups and cross training amongst different groups. This collaboration requires roles and responsibilities to be clearly defined.

Reviews of the literature and stakeholders’ views strongly recommend that families have a primary contact person within each programme or agency (Rous et al. 2008). This is also suggested by Larson (2010) following her case study work in New Zealand.

The quality of relationships is identified as a significant factor by Podvey et al. (2010) in a small scale descriptive study in which participants identified personality rather than specific professional training as making the greatest difference in the transition process. Similarly, a ‘critical incident’ study by Dogaru et al. (2009) of transition highlighted the importance of the professionals involved having positive attitudes.

Although the importance of communication in managing transition processes is universally acknowledged in the literature, families’ perspectives on the process discussed above suggest a significant gap between the recognition of the importance of communication and its practice during transition. Further, the literature suggests there is not a consensus between families and professionals in their understanding of what constitutes appropriate communication, and how frequently that communication should occur. In their small scale descriptive study Podvey et al. (2010) note that much of parents’ frustration was due to their experience not matching expectations. Both Podvey et al. (2010) and Janus et al. (2008) consider that managing parents’ expectations may be useful.

These findings are echoed in Larson’s (2010) New Zealand case study of a moderate needs child’s transition. This study identified that a decrease in support at school during the transition phase placed increased reliance on communication between agencies but neither parent nor primary teacher had a clear understanding of the transition process.
Planning

Planning is identified in the literature as interrelated with effective communication about transition services (Rous et al. 2007b). Studies validating quality practices point to the importance of identifying (and communicating) timelines for activities, including referral processes, enrolment processes, and decisions about eligibility for resources (Rous et al. 2008).

The literature also highlights the importance of planning in the context of transition as a process extending over a period of time rather than a ‘point of change’ in services and staff. Transition planning should begin before a child moves to another setting or service system, and extend well after the child has engaged with the new services and activities (Hanson 2005, Janus et al. 2007, Rosenkoetter et al. 2007, Rous & Hallam 2011). Rous et al. (2007b) note from their review of the transition literature that it is critical that families, teachers and professionals have this view of transition as a process that happens over time.

Family involvement in planning

The literature stresses family involvement in planning transition activities. Critically for a successful transition, Rous et al. (2008) identified that families’ needs related to transition are assessed and addressed, and that they should be (made) aware of the importance of transition planning, have the information they need to be involved and be linked with resources and services that met their specific needs.

Further, families should meaningfully participate as partners with staff in programmes and providing services, feel involved and have opportunities for decision making related to their children’s individual education plan (Lovett & Haring 2003, Rous et al. 2008). These findings are also reflected in the themes in submissions from parents, teachers and professionals to the Ministry of Education (2010b).

Families’ participation in the transition process – barriers and enablers

The active role of families in the transition process is a key theme highlighted in the literature (Janus et al. 2007, Schischka et al. 2012). Families are required to be knowledgeable case managers, advocates and often drivers of the process. The literature shows that family members do tend to participate in transition activities and find them helpful (Janus et al. 2007).

Clearly, however, some families may not be skilled or comfortable in this role. Rous et al. (2008) identified a number of barriers to families’ participation in the transition process specific to children from culturally diverse backgrounds. As might be expected, several of these centre on language and culture – for example, a lack of staff who speak the family language, and a lack of assessment tools available in the child’s family language.

A key barrier identified by Rous et al. (2008) was the discord between a family’s cultural values and the educational practices of early intervention or school systems. For example, in the early intervention system, home based services may not be sought or welcomed by families who believe that rearing a child is a family responsibility. In addition, Rous et al. (2008) note (from their focus group study with parents) the mismatch between expectations placed upon families with children with special education needs during the transition process and the supports and services provided. Families are expected to participate in evaluations and other meetings while continuing to have the care of their children – and day to day work and other family responsibilities – with few resources to support this demand on them (Janus et al. 2007, Rous et al. 2008). For families living outside of urban areas, such engagement has been found to be problematic (Dockett et al. 2011).

A review of the literature by Janus et al. (2007) suggests parents should be given opportunities for education and skill development, and that appreciation of parents’ contribution be promoted.
**Flexibility and individualised services**

Another major theme identified in the literature is the need for transition planning to address the strengths, needs, and characteristics of individual children, families and programmes (Rous et al. 2007b, Rous et al. 2008, Rous & Hallam 2011, Wartmann 2000). This includes acknowledging and considering families’ and professionals’ social supports as part of the transition planning process.

However, Rous & Hallam (2011) note a lack of specificity in the literature addressing how these plans can be tailored to the individual needs of children and families while considering the time and resources required by the teacher, provider or programme.

**Professional development for teachers**

In their review of the literature Rous and Hallam (2011) also found teachers generally did not use transition practices specific to children with special education needs; rather, they used ‘low-intensity’ practices such as those used for the class as a whole.

Similarly, in her New Zealand case study of one child’s transition, Larson (2010) found that the individual education plan was insufficiently used by the primary school teacher. The teacher also felt she wanted a better understanding of the special education policy and the tasks for which she was responsible.

Studies from the United States have noted that the content of professional development opportunities that are largely technical in nature (that is, stress the regulations) can lead to strategies that are more directed toward meeting regulatory standards and are not family and child driven (Bailey et al. 2006, Harbin et al. 2008). These studies suggest that professional development opportunities need to include why particular standards are required, and how to incorporate policy into practice if professionals are to become proficient at meeting both agency and family expectations.

**System level processes**

As might be expected, reviews of the literature consistently point to the importance of service providers being knowledgeable about transition processes. This includes knowing the agencies and services available in the community and the specific roles and responsibilities associated with ‘sending and receiving’ programmes (for example, an early childhood education centre and a primary school respectively) (Rous et al. 2007b, Rous et al. 2008).

In addition, the research notes the importance of service providers having managerial support for effective practice (Rous et al. 2008). Effective practice includes having guidelines and policies, personnel dedicated to transition planning, and time for the communication and the development of collaborative relationships. Participants in a study by Rous et al. (2007b) had felt that their ‘hands were often tied’ in implementing specific transition activities without the direct support of managers.

Studies also show that agencies need to develop formal mechanisms to minimise disruptions in services before during and after transition (Dockett et al. 2011, Rous & Myers 2006, Rous et al. 2008). In the United States, Janus et al. (2007), reporting on a large scale survey of parents, noted a lack of seamless funding left children without services for several months; however, the professionals surveyed did not consider that transition to kindergarten for children with special education needs was a problem.

In a further United States example, frustration experienced by parents was associated with the school board’s delay in implementing resources promised to the parents at meetings prior to school entry. Since the school board appeared to be aware of the need for special resources prior to school entry, it was considered probable that the problem lay with administrative practices rather than overall lack of resources (Janus et al. 2008).
The literature also indicates that conscious and transparent connections should be made between curricula and expectations of the child across programmes or environments (Rous et al. 2008, Rous & Myers 2006, Larson 2010).

**Monitoring**

Following up on children to support their adjustment to the new environment is considered a standard quality practice (Rous et al. 2008). However the literature suggests such follow up may be neglected. For example, in a review by Janus et al. (2007) of published studies, it is noted that Canadian school districts have polices to ensure children with special education needs have their educational needs assessed; however, the outcome of these assessments is seldom evaluated.

Similarly, Wartmann (2000), in her small scale study of nine families in Christchurch, found that while all stakeholders acknowledged the importance of monitoring the transition there was confusion about the responsibility for doing so. While specialised schools reported clear monitoring procedures and set review dates, schools that mainstreamed children felt less confident with the procedures they had in place, and teachers frequently found it difficult to access professional help to establish monitoring procedures.
Gaps in the research

There is a clear gap in the research relating to the outcomes of transition services for children with special education needs and their families. This includes the planning before a child moves between services and follow-up afterward. In addition, any such analyses need to look at longer-term trajectories rather than just initial adjustments (Briody & Martone 2010, Janus 2008, McIntyre 2010, Rosenkoetter et al. 2007, Rous & Myers 2006). Outcome assessment should include factors such as the nature of the special education need, families’ coping resources and support, and early childhood education centres’ and schools’ responsibilities and involvement (Briody & Martone 2010).

In the New Zealand context, there is overall a very scant research literature. In her literature review of transitions to primary school more generally, Peters (2010) notes there is ‘very little New Zealand research which gives insights into how the characteristics of children with special education needs, their families, early childhood services and the schools they join might impact on their transition to school’.
Conclusion

Although the majority of studies reviewed are descriptive rather than experimental and the actual services received are seldom detailed, the literature does provide a consensus of stakeholder opinion about the factors supporting effective transition between services. These factors centre on knowledgeable service providers building constructive partnerships with families who are supported in their advocacy role, and the importance of thorough planning and communication.

Thus the knowledge – broadly – exists to achieve effective transitions between early intervention and school-age special education services. The literature suggests that the challenge is to create mechanisms so that this knowledge can be implemented in a comprehensive and consistent manner across the diverse family, programme and community contexts in which children live (Fox et al. 2002).
References


Summers JA, Hoffman L, Marquis J et al. (2005) *Relationship between parent satisfaction regarding partnerships with professionals and age of child*. Faculty Publications, Department of Psychology, University of Nebraska – Lincoln, Paper 440

Wartmann S (2000) The transition from kindergarten to school for children with special needs. *SET* 1
Appendix 1: Method

A systematic search of peer reviewed literature published during 2002-2012 was undertaken using the databases EBSCOhost, ERIC, PubMed, and PsycInfo. The following descriptors were used in the search:

- infants
- early childhood
- (young) children
- preschool
- kindergarten
- early childhood education
- disabilities
- special needs
- special education
- transition(s)
- readiness
- entry
- continuity
- alignment
- early intervention

In addition the contents of journals focused on young children with special education needs were explored. Bibliographies of papers found in these searches were also scanned for relevant literature.

Key articles published prior to 2002 (for example, those that are heavily cited in the literature) and non peer reviewed papers (for example, New Zealand-specific research and government reports) were included if the information was relevant to the review. A summary table of the selected papers was developed noting the study, aims, location, method, sampling and findings.