Introduction:

The aim of this literature review is to explore the published literature on the barriers to inclusive education for children with severe to profound intellectual disabilities (ID). Individuals with severe to profound ID are described as those individuals who are severely impaired in their functioning with regards to self awareness and awareness of others and their environment (SESS 2017). Children with severe ID are described as having an IQ between 20-35 and those with profound ID are described as having an IQ below 20 on a standard IQ test (SESS 2017). Historically, inclusive education was referred to as "integration" and "mainstreaming". It referred to the practice of educating individuals with ID in regular and special classes in a mainstream school environment (Westwood 1997). Much of the research carried out on inclusive education focuses on its benefits rather than the barriers to its implementation (Watson 2009). The role and function of the nurse in the provision of inclusive education are not discussed in the majority of literature. In addition, much of the research carried out discusses children with mild to moderate ID and little research is carried out with children with severe to profound and multiple disabilities.

Although inclusive education has been spoken about for many years, it has become more popular in recent times due to national policies, current legislation and increased awareness of the rights of the individual with ID. In 1948, the Universal Declaration of Human Rights (UDHR) was adopted by the United Nations (UN). This international document expressed the right to education for all, regardless of ability. In 1994, the United Nations Education, Scientific and Cultural Organisation (UNESCO) released the Salamanca Statement. The statement, which begins by acknowledging and reaffirming the UDHR's position in relation to education for all, outlined a new Framework for Action on special needs education to be used by mainstream schools for promoting inclusive education within their school setting. This framework has been utilised by schools in Ireland and around the world, thus allowing mainstream schooling for individuals with special educational needs (SEN) to become the norm.

In 2003, the National Council for Special Education (NCSE) was established by the Irish Government as an independent statutory body to assess and evaluate inclusive education practice in Ireland. The Education for Persons with Special Educational Needs Act was subsequently passed in 2004. This Act outlines the right to appropriate education for all, recognises the establishment of the NCSE and defines the NCSE's function with regard to supports and the provision of services for children with SEN in school. The Act also outlines the role of the Health Board in providing services and resources to support the child with SEN in school. The position of the designated school in the provision of inclusive education and the task of Government Ministers in providing funding to support inclusive education are also key elements of this Act. Figures released in 2004 by the National Disability Authority (NDA) show that only 60% of children with disabilities attended mainstream schools and only 12% of those children were fully integrated into an inclusive class. Other students enrolled in mainstream school were found to be availing of special education classes with a Special Needs Assistant (SNA) rather than the class teacher.

Search Strategy:

In order to retrieve relevant articles Academic Search Complete was utilised with the databases CINAHL, MedLine, PyscInfo, Health Source and PubMed included in the search. The search terms used included "inclusive education", "children" and "intellectual disability". The search also included the synonyms of these key terms including *mental retardation* OR *learning disability* OR *developmental disability* as the definition of intellectual disability varies in different countries. Search terms *mainstreaming* OR *integration* were used for inclusive education, as much of the older literature employs this terminology. The keys terms searched were searched within the titles of articles sourced.

During the initial search fifty-three (53) articles were found, of which duplicates were removed. To refine the search, journal articles from the previous twenty (20) years were included. For the purpose of filtering

abstracts, the search was further refined to full-text literature, and only articles written in the English language were included. Articles were sourced from around the world so that a global view on the literature published on inclusive education could be achieved. This search obtained twenty-seven (27) articles, of which sixteen (16) articles, through analysis of the article abstracts and introductions, were found to be useful to this literature review. It is important when conducting a literature review to gather literature from a number of sources (Cronin *et al* 2008). On completing a hand search from the reference lists of articles found in the database search, two (2) relevant articles were found. In total, eight-teen (18) articles were retrieved for use in this literature review. In total only two literature reviews were found and sixteen (16) research articles were used for this literature review. The author found that the majority of research was conducted in Australia and much of the research was conducted in the early 21st century.

Themes:

All relevant literature was thematically analysed to find common themes and issues pertaining to the barriers to inclusive education for children with severe to profound disabilities. As the literature used within this review was gathered from different countries, to gain a global perspective on inclusive education, the definition of intellectual disability varies throughout the research. None of the research sourced offers a definitive understanding or clear definition of severe to profound disabilities. Much of the research sourced focuses on the educational component of inclusion in the classroom setting. Common themes derived from a review of the literature include: attitudes towards inclusive education lack of resources and a holistic approach to inclusive education.

1   Attitudes towards inclusive education:

Attitudes are defined as a feeling or opinion about something or someone (Oxford Dictionary 2018). Attitudes towards inclusive education remained the major discussion across the majority of the publications. Although inclusion

has become widely accepted and utilised, attitudes towards it can easily change its implementation and its success. Much research has been carried out on individual groups in society to analyse their attitudes towards inclusion and inclusive education.

1.1. <u>Teachers' attitudes towards inclusive education</u>

In order to promote inclusion and educate individuals with SEN in inclusive settings, it was identified as essential that teachers co-operate and commit to the idea of inclusion across the majority of literature (Avramidis *et al* 2000). Teachers presented an overall positive view on inclusion throughout the majority of research (Gilmore *et al* 2003, Alquraini & Gut 2012). Teachers' personal characteristics and traits, such as gender, age, experience of ID and experience in educating children with ID, were imperative to understanding their views on inclusion (Avramidis *et al* 2000). Research examining teacher variables often conflict when discussing teacher gender as a definitive factor in their attitude towards inclusion (Forlin 2001). Gilmore *et al* (2003) found that age and gender had little difference in the attitudes of teachers towards inclusive education but found teachers with previous experience in working within inclusive settings were more accepting than those who had no experience. Conflicting findings from Gal *et al* (2010) found that older teachers had less positive views on inclusion than that of newly qualified teachers. Alquraini & Gut (2012) found, through literature review, that the majority of teachers with positive views on inclusion were actively participating in inclusive practices and negative attitudes tended to be from teachers with little or no experience of inclusion. Similar results were obtained in a study conducted by Gal *et al* (2010) in Israel, where preschool teachers displayed positive perspectives on inclusion within their classrooms.

When asked about child variables, such as type of disability or SEN, teacher's attitudes often changed. Research found that children with a diagnosis of emotional and behavioural difficulties (EBD) or Attention Deficit Hyperactivity Disorder (ADHD) were viewed as more challenging and caused more stress for teachers than children without these diagnoses (Forlin C

2001, Gal *et al* 2010, Runswick-Cole 2008, Avramidis & Norwich 2002). Many teachers stated that children with EBD or ADHD often require more individualised attention and time from the teacher (Avramidis *et al* 2000). Adequate training and, particularly, external training were found to be the best method of resolving negative attitudes and prejudices towards children with severe to profound disabilities and SEN in mainstream inclusive settings (Avramidis *et al* 2000, Flatman Watson 2009). Alquraini & Gut (2012) found it essential that educators recognise the way in which families view their child's disability and understand the method of education that the families favour for their child. Additionally, the importance of involving the parents in the child's individual education programme (IEP) was emphasised by Alquraini & Gut (2012) as children with ID may require additional support from parents at home to meet IEP goals.

1.2. Parent's attitudes towards inclusive education

Parental attitudes towards inclusion were varied and conflicting throughout the research. Runswick-Cole (2008) found that the parents' view of their child's disability often determined the parents' attitude towards inclusive education. Parents who chose mainstream education for their child often believed in to the social model of disability. The social model of disability concentrates on removing the environmental and societal barriers to disability and on combatting the prejudice and discrimination that can surround disability. Those parents who chose special education, however, often held a medical model view of disability, where the focus is on the impairment itself as the main disabling factor for their child. Runswick-Cole (2008) also found that parents who favoured mainstream education identified the attitudes of professionals within the education system and the resources that were available as barriers to inclusion, which often led families to revert to the special education route. Contradicting evidence was found by Gasteiger-Kilcpera *et al* (2013) where, when asked, parents stated they would not change their decision between mainstream or special education if faced with the same situation. Although many national and international policies have been introduced into the area of inclusive education, parents' attitudes and

experiences of inclusion remain complex and difficult (Runswick-Cole 2008, Alquraini &Gut 2012, Gasteiger-Kilcpera *et al* 2013).

1.3. Peers attitudes towards children with SEN

Many parents discussed their worries concerning their child's acceptance by peers within mainstream school and the impact their child may have on other children without disabilities or SEN (Gasteiger-Kilcpera *et al* 2013, Mann *et al* 2015). Much of the research conducted around the impact on other children proves that children with SEN have little to no negative impact on children without SEN (Ring & Travers 2005, Sermier Dessemontet & Bless 2013). A study conducted by Whitehurst (2006) found that children with severe to profound disabilities were widely accepted by children without ID and their personal independence skills were greatly enhanced by integrating with other children. Similar results were obtained by Alquraini & Gut (2012) where research found that inclusive education aided the growth of naturally occurring relationships with peers and often children attending special education settings do not develop these skills. Parents stated their children had positive experiences of pro-social behaviour in mainstream education (Gasteiger-Kilcpera *et al* 2013). Through observations, within the classroom and playground, Ring & Travers (2005) found that the child experienced no negative behaviours or discrimination with ID in the classroom. In fact, the study showed that the child with SEN educated the children without SEN in basic skills such as patience, waiting and tolerance (Ring & Travers 2005).

1.4. Public attitudes toward inclusive education

Often public perceptions and attitudes play a major role as a barrier to inclusive education for children with SEN and severe to profound ID. A stigma around the abilities of children with ID often stems from a lack of correct knowledge and/or lack of experience of children with severe to profound ID. In 2008, a survey was completed by Bruge *et al* in Ontario, Canada, examined

the attitude of the public towards inclusive education in their area. Of those who completed the study, only 50% had a positive attitude towards inclusive education for children with ID. When asked about the issues faced in inclusive education, results founds that the public believed that having a child with SEN in a mainstream classroom would cause disciplinary issues and negatively impact on other children without SEN. The study also found that the public feared the attitude of children without SEN towards children with SEN would negatively impact on the children with SEN's success in mainstream education. Analysis of these results found that variables, such as age and gender, had little impact on the overall findings. Contrary to this, findings were altered by the respondents' personal knowledge or interaction with someone with a disability (Bruge *et al* 2008).

Gilmore *et al* (2003) found that 37% of the public believed that, rather than full inclusion in the regular classroom, children with Down syndrome should be educated in mainstream schools but in separate classrooms to children without Down syndrome or SEN. In addition, many respondents felt that children with Down syndrome should be placed into mainstream classes with younger children of a similar developmental level. When analysing the data, the author found no significant variable between gender, age or previous and current interactions with children with severe to profound ID for these findings.

2 Resources as a barrier to inclusive education:

Resources refers to a stock or supply of funding, materials and staff that be used to run an organisation effectively (Oxford Dictionary 2018). When considering the barriers to inclusive education, there is little doubt that the lack of resources is a major disadvantage. Much of the research conducted on the barriers to inclusive education states that a lack of resources plays a pivotal role in the implementation and success rate of inclusive practices. The Education for Persons with Special Educational Needs Act (2004) states that

each child is to be assessed individually and resources and supports provided to enable each child to achieve in mainstream inclusive classrooms.

2.1 Funding for the provision of inclusive education

Funding is essential for the effective provision of any service. In education and inclusive education, in particular, funding has been identified as a crucial component in ensuring whether a child with SEN has access to the appropriate education they have a right to and deserve (UNESCO 1994). Flatman-Watson (2009) found that the enrolment in mainstream education for children with ID involves a major cost. A number of clinical reports and assessments, such as psychological, medical and speech and language, are required when applying for mainstream education. Many families stated that, in order to obtain the necessary supports for their child in mainstream school, they were required to source and fund these assessments and reports themselves.

The costs incurred by schools in the provision of resources needed for inclusive education for children with severe to profound ID is discussed throughout the research. Runswick-Cole (2009) found that in order to provide best practice for children with disabilities, follow up assessments and equipment, which require funding that many schools do not have access to, are needed. In addition, many schools lack funding for resource teachers and extra hours to cater for the individual time required by children with SEN to achieve their IEP goals (Flatman-Watson 2009, Forlin 2001, Belanger 2000).

2.2 Staffing issues as a barrier to inclusive education

A lack of staff training, in particular, has been noted as detrimental to the success of inclusive practices for children with severe to profound ID. Many teachers who participated in the research noted that essential training in working with children with severe to profound ID is often not provided in their

initial training as student teachers and is frequently not accessible or of adequate standard whilst they are teaching (Forlin 2001, Avramidis *et al* 2000, Gal *et al* 2010, Campbell *et al* 2003). Many teachers stated that they lacked confidence in their ability to provide adequate support for children with severe to profound ID as they lacked training with regards to specific disabilities and syndromes (Campbell *et al* 2003). Avramidis & Norwich (2002) discussed how improving the confidence and competence of teachers in their ability to educate children with SEN would result in increasing positive attitudes towards inclusion and decreasing barriers to its success. It was also found that the teachers' method of educating and their own personal views in relation to disability might be portrayed onto the child with SEN.

It was further noted that capital for the allocation of resource teachers and SNA's in mainstream classes is lacking in supply. The role of an SNA in Ireland is somewhat different to that other countries. In Ireland, an SNA is employed to provide support for the special care needs that children with severe to profound disabilities have as a consequence of their ID. The role of a teacher's assistant (TA) in the United Kingdom is described as extra support for educational needs for children with SEN (O'Brien 2010). Currently in Ireland nearly 14,000 SNA's are employed in education (Finn 2017). The role of the SNA for children with severe to profound disabilities is essential for their achievement in an inclusive mainstream setting (Alquraini & Gut 2012). Many SNA's spoke of a lack of understanding from general classroom teachers on the extent of the needs of children with SEN (Belanger 2000). They also noted daily battles in terms of the child with SENS's access to and integration into mainstream schools.

3   A holistic approach to inclusive education:

Often children with severe to profound disabilities require a wide range of supports in order to actively participate daily in inclusive education in a mainstream class. As addressed in the Education for Persons with Special

Educational Needs Act (2004), each child is assessed individually so that essential supports that enable that child to reach their IEP goals can be provided. Children with severe to profound disabilities often require essential medical intervention, speech and language assessment, physiotherapy and occupational therapy support. These supports are often required in the every day life of a child with severe to profound disabilities.

3.1 Multidisciplinary approach

Many children with severe to profound ID often have additional needs such as medical needs (SESS 2018). Often these needs are not supported in mainstream settings, as schools do not liaise with healthcare professionals. It is essential that all professionals working with the child work as a team in order to provide holistic care for the child with SEN. Research surrounding the link between healthcare and education is limited and is essential for the future of inclusive education for children with a range of complex care needs. Flatman-Watson (2009) found that the parents often chose special education settings over inclusive education due to a gap in holistic care when attending mainstream school and difficulties sourcing assessments and follow up appointments. Of course these findings differ on families views of disability, either social or medical.

3.2 Supports for families

Flatman-Watson (2009) found that, when enrolling their child in inclusive mainstream school, parents reported a lack of support and information. Many families stated a missing link between healthcare and education for children with SEN and severe to profound disabilities; a link that, ideally, would be supplied by the Registered Nurse in Intellectual Disability (RNID). Contradicting results were found by Mann *et al* (2015), where parents stated they preferred to make their own decisions on inclusive education or special school education for their child. In addition, some parents also preferred information from professionals in the area of disabilities and also highly

appreciated information form other families in similar situations. Research found that many families were require to rely on their own research and instinct to make the most informed decision as information from professionals may take to long to materialise due to long waiting lists for assessments and appointments (Mann *et al* 2015, Runswick-Cole 2008)

Summary:

Research conducted on the barriers to inclusive education mainly focuses on the barriers for children with mild to moderate disabilities. Those research studies conducted around children with severe to profound disabilities often only discuss the benefits to inclusion for the child's educational development and little research is conducted on the holistic care for those children.

Attitudes towards inclusive education are often the determining factor to its success. It is essential that those directly involved in the implementation of inclusive education have a positive outlook and a deep understanding of the needs of the child with severe to profound disabilities (Gal *et al* 2010). Parental attitudes towards inclusive education often stems from their understanding of disability and the model of disability that they relate to (Runswick-Cole 2008). Public perception and negative attitudes often stem from a lack of knowledge and understanding of inclusion and the abilities and rights of the child with severe to profound disabilities (Burge *et al* 2008). In addition, the impact of a child with SEN on their non-disabled peers is often misconstrued and misunderstood. Research shows that children with SEN have no negative impact on other children without SEN in their class (REFERENCE) The benefits for children with severe to profound disabilities can be seen across the majority of the literature with children developing basic life skills in addition to educational skills (Whitehurst 2006).

Although national and international policies discuss the rights to education for all, a lack of resources and internal supports result in many children with severe to profound ID being unable to access inclusive education. Research found that the lack of SNA's in mainstream school also

results in the child with SEN being unable to achieve their optimal education (O'Brien 2010). A multidisciplinary approach is essential for children with a wide range of needs, both medical and educational. No direct link between healthcare and education and a gap in services was discussed by parents in a study conducted by Flatman-Watson (2009). Bridging the gap may result in a holistic approach to the inclusion of children with severe to profound disabilities.

Conclusion:

The purpose of this literature review was to explore the barriers to inclusive education for children with severe to profound ID. An increase in public knowledge and the promotion of the rights of the individual with ID have made inclusive education more and more popular in recent times. This, however, is not always the case for individuals with severe to profound ID who often remain completely excluded from inclusive practices or are enrolled in mainstream schools but have access special education classes only.

Inclusive education has been found to improve the quality of life for all children with ID or SEN. Basic life skills, such as independency and assertiveness, are found to increase for children who attend inclusive settings. Having said this, many barriers stand in the way to its success for children with severe to profound ID, barriers such as: attitudes, resources and a holistic approach to inclusion. Little research is conducted on the role of the RNID in the promotion of inclusive education for children. Future research conducted in this area would greatly improve the link between healthcare and education to provide a holistic approach to the needs of the child with severe to profound disabilities. The introduction of this role for the RNID, in bridging the gap between education and healthcare, may also act as a support for families faced with the decision between mainstream schooling or special education for their child. Overall, research found shows that small changes to training, funding and professionalism may dissolve the barriers between inclusive education and children with severe to profound intellectual disabilities.

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Appendix 1. Summary Table for Research Studies included in Review

Author(s) and title	Study Aims & Objectives	Research Design	Sample	Data Collection Methods	Data Analysis Method	Findings Relevant to the Review
Avramidis E., Bayliss P., Burden R. (2000) A Survey into Mainstream Teachers' Attitudes Towards the Inclusion of Children with Special Educational Needs in Ordinary School in one Local Education Authority.	To survey the attitudes of mainstream teachers towards inclusion in mainstream schools.	Qualitative: Bricolage approach	16 schools took part in the survey (12 secondary schools, 4 primary schools). A total of 81 surveys were completed and returned.	Surveys were sent to participating schools by post and returned by post. No follow up data was collected.	N/A	Research found an overall positive attitude towards inclusion. Many teachers stated their confidence in educating individuals with emotional and behavioural difficulties is lacking. Teachers who had completed external training felt more competent in educating individuals with special educational needs than those who didn't. Teachers discussed the lack of resources available and environmental difficulties as a major barrier towards inclusion.
Belanger N. (2000) Inclusion of 'pupils-who-	To examine the education as a whole for a child with	Qualitative	Interviews were conducted with two (2) teachers, two (2) specialists	Research was conducted through observation,	N/A	Research stated that roles between staff in the promotion of inclusion require close work

need-extra-help': social transactions in the accessibility of resource and mainstream classrooms.	special educational needs.		and the school principle. Informal interviews were conducted with 15 children.	analysis of documentation and interviews		relationships. Although in an inclusive school the author found that children were often excluded from tasks throughout the day. Emphasis was placed on the lack of available placements for children with ID in different levels of education.
Burge P., Ouellette-Kuntz H., Hutchinson N. (2008) A quarter century of inclusive education for children with intellectual disabilities in Ontario: public perceptions.	A measurement of public perception on inclusive education and the possible impacts of children with disabilities in the classroom and obstacles faced by the children with disabilities.	Qualitative	A total of 680 participants were contacted to take part. Of 680 only 23% (156) participated. All participants were living in Ontario, Canada.	Questionnaires were completed over the phone.	Data was analysed using SPSS 12.	Only 50% of participants favoured inclusive education for children with intellectual disabilities. Participants believed that having a child with disabilities in a regular classroom would negatively impact on other children's learning, cause safety issues and cause discipline problems. Lacks of resources and teachers competence were the major obstacles faced by children with disabilities.

						Some participants believed that other children's attitudes might impact on the child's learning environment.
Campbell J., Gilmore L., Cuskelly M. (2003) Changing student teachers' attitudes towards disability and inclusion.	To explore methods of changing student teachers' attitudes towards and understanding of disability and inclusion.	Quantitative	A total of 274 student teachers were involved in the study.	Research was conducted using a questionnaire that explored the students' understanding of Down Syndrome, the stereotypical perception of personalities, developmental milestones and their attitudes towards the inclusion of children with Down Syndrome in a mainstream setting.	MANOVA was used to analyse the data between the two-year period.	A positive result was found for both questions. Teachers' level of understanding and knowledge of Down Syndrome increased over the two-year period. Attitudes towards the inclusion of children with Down Syndrome also become more positive between the two studies.
Flatman Watson S. (2009) Barriers to inclusive	To explore the barriers to inclusive education for children in	Quantitative and Qualitative.	A total of 245 schools took part in the research (Mainstream schools (65%),	Phase one and two surveys. Phase three semi-structured interviews.	Quantitative data was analysed using SPSS. Qualitative	The author found that a lack of capital was the main barrier to inclusive education in these areas. Children's rights were not

education in Ireland: the case for pupils with a diagnosis of intellectual disability and/or pervasive developmental disabilities.	Ireland with learning difficulties.		mainstream schools with special classes (25%), special schools (9%) and ABA centres (1%) and 119 parents (47% had children enrolled in mainstream schools, 24% had children who attended specialist classes and 29% had children who attended special schools and ABA centres) completed the second questionnaire.		data was analysed using the Nvivo 6 system.	upheld in may situations described. The data collected also showed that many parents and children experience discrimination with regards to enrolment. The author also found, that the gap between health and education needs to be filled.
Forlin C. (2001) Inclusion: identifying potential stressors for regular class	A study into potential stressors faced by teachers teaching children with	Qualitative	A total of 571 teachers took part in the survey.	The author used the Teacher Stress and Coping Questionnaire (TSC) in order to gather	N/A	Research found that teachers lacked competency in their abilities to educate children with special educational needs (SEN). Teachers also stated training which

teachers.	intellectual disability in a mainstream classroom.			information. Teachers were assessed using part C of the questionnaire that focused on stressors in inclusive education.		they had been provided with was inadequate in meeting the needs of children with SEN. In addition the author found that the child's behavioural difficulties also caused stress. Teachers worried about the impact of the child's behaviours on other children in the class and also about the lack of time allocated to the teacher to provide adequate educational support for the child with SEN.
Gal E., Schreur N., Engel-Yeger B. (2010) Inclusion of children with disabilities: Teachers' attitudes and requirements for environment al	To examine teachers' attitudes towards inclusion based on personal characteristic, their attitudes to environmental accommodatio ns needed to	Qualitative	A total of 53 preschool teachers agreed to take part in the study and all participated.	Questionnaires were sent to all teachers. Three (3) questionnaires were sent to all teachers. These included a demographic questionnaire, The attitudes towards Disabled Persons Scale	Data was analysed using SPSS 14. Cronbach's alpha was used to measure the internal consistency of the EAS questionnaire. Multivariate analysis of	An overall positive view on inclusion was found through the research. The author found that teachers with negative attitudes towards inclusion were young and lacked experience in working with children with disabilities. The author also found teacher with more experience were more likely to request additional

accommodations.	promote inclusion and the different accommodations needed for children with different disabilities.			(ATDP-A) and The Environmental Accommodations of School (EAS).	variance (MANOVA) was used to distinguish teachers based of different experiences with disabilities and their attitudes towards inclusion.	supports and changes in environmental conditions in order to accommodate children with disabilities. The research made it evident that particular disabilities were more challenging than others.
Gasteiger-Kilcpera B., Kilcpera C., Gebhardt M., Schwab S. (2012) Attitudes and experiences of parents regarding inclusive and special school	To evaluate the satisfaction rate of parents who's children attended inclusive and special schools.	Qualitative	716 (59% of 1215) parents completed the survey.	The research was carried out using a survey that was distributed to each school	N/A	Overall a positive view on inclusive education. Parents stated they would not change their mind if making the choice between mainstream or special school again. Results showed that children with severe to profound disabilities benefit from both inclusive mainstream education and special schooling.

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education for children with learning and intellectual disabilities						
Gilmore L., Campbell J., Cuskelly M. (2003) Developmental Expectations, Personality, Stereotypes, and attitudes towards inclusive education: community and teacher views of Down Syndrome.	To examine the views of teachers and the general population on children with Down syndrome and their views on inclusive education.	Qualitative	2053 participants from the general population took part in the research. 538 experienced teachers took part in the survey.	A questionnaire was adapted for the research that included 28 questions in five main areas about Down syndrome and inclusive education.	N/A	Overall teachers were found to have a better understanding and knowledge about Down Syndrome. Both groups agreed that inclusive education for children with down syndrome would benefit both the child and their peers. The child's ability to attend general school with other children their own age was questioned by both groups.
Mann G., Cuskelly M., Moni K. (2015) Choosing school:	To explore the decision process made by parents when choosing between	Qualitative	A total of 30 parents from south-eastern Queensland were involved in the study.	Focus groups were developed by the author in order to gather results through open discussion.	Audio-recordings were transcribed and NVivo (version 9)	Concern was expressed with regard to their child's ability to progress socially and also the acceptance and understanding of the peers within the

parental decision-making when special schools are an option.	mainstream and special school for their child.				was used to sort and store comments.	mainstream classroom. Most parents accepted information and guidance from professionals and also other families in similar situations.
O'Brien e. (2010) Teacher and Special Needs Assistants in Irish Classrooms: An Evaluation of a Model of Reflective Teamwork	To assess a model of Reflective teamwork amongst all employees in a mainstream school.	Qualitative	A total of 10 (5 teachers and 5 SNA's) took part in the study.	Over an eight (8) week period teachers and SNA's met 4 times for a one hour session completing training activities aimed at enhancing attitudes amongst staff.	Data was analysed using a thematic analysis approach.	Two main themes were presented from the research. Initially the author found the impact the activities had on the workplace relationship had become more positive with increased communication. Secondly the author found that the study had improved the work place relationship in planning and organising daily schedules for the children.
Ring E., Travers J. (2005) Barriers to inclusion: a case study of a pupil with severe learning	To examine the inclusion of a pupil with severe intellectual disabilities in a mainstream primary school in rural Ireland.	Qualitative	Interviews were conducted with the class teacher and observations were conducted on the class group as a whole (No numerical data available).	Interviews were conducted with the teacher alone and observations were conducted in the school playground and within the classroom.	Multivariate Analysis of Variance (MANOVA)	Teachers reported the need for additional support and resources needed to support the child with Special educational needs (SEN). Peers lacked a deep understanding of SEN but integrated well with the child.

difficulties in Ireland.						
Runswick-Cole K., (2008) Between a rock and a hard place: parents' attitudes to the inclusion of children with special educational needs in mainstream and special schools.	To explore parents' attitudes towards inclusion for children with special needs in mainstream school settings.	Qualitative	A total of twenty-four parents (24) took part in the initial phase of the study. The author gathered information from seven (7) education professionals also.	Interviews took part in parent's homes and also on phone. Interviews with one (1) education professional took place at his work place and others were completed by phone. Interviews lasted from 45 minutes to 4 hours. All interviews were recorded and transcribed. All participants were give copies of their transcript and they were allowed to comment.	Data collected was analysed using thematic analysis. This involved identifying themes and patterns and condensing data into analysable units.	The author recognised the importance of the medical and social model of disability and it's influence on educational setting choice. The author recognised the lack of resources and flexibility in mainstream schools to cater for children with special educational needs. Although many policies have changed in recent years the author found children with special educational needs were continually excluded from mainstream education.
Sermier Dessemonte nt R., Bless G. (2013)	A study into the impact of inclusion of children with	Quasi-experimental	A total of 202 pairs (404 participants) took part in the study.	The children's academic achievements were measured	N/A	The author found no negative impact of inclusion on the academic achievement of other

The impact of including children with intellectual disability in general education classrooms on the academic achievement of their low-, average-, and high-achieving peers.	special educational needs in the general classroom on the academic progress of their peers.		All participants were school ages children.	using an individual academic achievement test. The class teacher conducted the test. The children's cognitive abilities were measured using an adaption if the Culture Fair Intelligence Test-Scale 1 (CFT-1).		children in a class with children with special educational needs (SEN).
Sermier Dessemonte nt R., Bless G., Morin D. (2011) Effects of Inclusion on the academic achievement and adaptive behaviour of children with intellectual	To examine the effects of inclusive education on children with a diagnosis of intellectual disabilities.	Quasi-experimental	A total of 68 participants took part in the survey. 34 were enrolled in special education and 34 were enrolled in general education.	The children academic achievement was examined individually in the classroom setting by the class teacher. Adaptive behaviour was analysed by both the class teacher and the children's parents.	Data was analysed using SPSS 16. ANOVA (Analysis of Variance) was used to compare changes over the two-year period.	Children who participated in the study who attended general education settings were to seen to develop better literacy skills compared to those in special schools. All children had progressed within the two years of the study. Overall the study found a positive view on inclusive education for children with intellectual disabilities

disabilities.						compared to special school settings.
Sermier Dessemontet R., Bless G., Morin D. (2011) Effects of inclusion on the academic achievement and adaptive behaviour of children with intellectual disabilities.	To explore the impact school placement has on the academic achievement of a child with intellectual disabilities.	Quasi-experimental	A total of 68 participants took part in the survey (2 groups of 34).	Academic achievement was measured using the Lest 4-7 and the Lest 6-9 which is used to measure the academic progress. The adaptive behaviour of the children was measured using the Adaptive Behaviour Assessment System- Second edition, 5 to 20 years (ABAS-II).	SPSS 16 was used to measure the statistical data. All repeated measures were analysed using ANOVA to monitor the progress made over the two-year period.	Children with SEN in inclusive settings were found have better literacy skills that children in special school. All children involved in the study progressed over the two year period. Overall a more positive outcome for inclusive settings.
Whitehurst T. (2006) Liberating silent voices- perspectives of children with profound & complex	To gain an understanding of inclusion from an individual living with severe to profound disabilities.	Qualitative	6 students with a range of disabilities participated in the study. Care staff and education staff working with the student were	Staff that worked closely with the students interviewed them. Staffs working with the students were also interviewed to	N/A	Students gave a positive response in relation to being involved in the drama production with mainstream schools students. Students indicated they integrated with mainstream pupils but remained hesitant when

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learning needs on inclusion.			also interviewed.	gain a deeper understanding of inclusion for the child as most students had communication difficulties. Speech and language teams were involved in the interview process to find best methods of interviewing each child based on their communication abilities.		asked if they had become friends. Case studies completed on two students indicated that they gained excellent interpersonal skills and independency skills from the completion of the drama group. The author discussed the importance of listening to individual's experiences, as it is the only way in which we can work inclusively.

Appendix 2. Summary Table for Literature Reviews and Systematic Reviews

Author(s) & Title	Research Question/ Purpose	Search Strategy/Inclusion/ Exclusion Criteria	Search Terms	Detail of Literature/Study Selection	Quality Assessment (where applicable)	Data Synthesis (where applicable)
Alquraini T., Gut D. (2012) Critical components of successful inclusion of students with severe disabilities: literature review.	An overview of the literature regarding best practice with specific emphasis on the critical components to inclusive education promotion.	Online search was completed using databases: ERIC, Academic Search Complete, Education Full Text, Proquest Dissertations and Theses. Search limited to US publications only.	Search terms included the following: (a) students with severe disabilities/significant disabilities/ intellectual disabilities/mental retardation ; (b) inclusion/inclusive/general education setting/public schools;(c) general curriculum, modification, adaptations, and accommodations; (d) assistive technology/ assistive technology devices; (e) collaboration; (f) instructional /teaching strategies;(g) typically developing peers; and (h) family	Articles were chosen on two areas (a) article discusses inclusion and inclusive practice in a mainstream setting and (b) the article examines the critical components of inclusion. 72 articles were chosen.	N/A	N/A

			support/involvement.			
Avarmidis E., Norwich B. (2002) Teachers' attitudes towards integration/ inclusion: a review of the literature	To explore the attitudes of mainstream teachers towards integration and inclusion.	Databases including ERIC, BEI and Psychinfo were used to conduct this literature review. Hand searches were also conducted in Journal articles within this area. Articles conducted on the views of student teachers and articles published prior to 1980 were excluded.	N/A	N/A	N/A	N/A

Appendix 3. Overview of Search Strategy

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│  Academic Search Complete   │        │                             │
│  Total articles found:      │──────→ │  Duplicates removed:        │
│  53 articles                │        │  41 articles                │
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│  abstracts:                 │──────→ │  Research findings:         │
│  27 articles                │        │  16 articles                │
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│  Hand Search findings:      │        │  Total Articles Used:       │
│  2 articles                 │──────→ │  18 articles                │
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