Vol. 8, No. 2, pp. 97-108, 2018 DOI: 10.23960/jpp.v8.i2.201811

Jurnal Pendidikan Progresif

e-ISSN: 2550-1313 | p-ISSN: 2087-9849

http://jurnal.fkip.unila.ac.id/index.php/jpp/

The Effectiveness of the Inclusive Education Model for Students With Special Needs on Cognitive Learning Achievement

Herpratiwi

Department of Educational Technology, Faculty of Teacher Training and Education, Universitas Lampung, Bandar Lampung, Indonesia.

*Corresponding e-mail: herpratiwi64@yahoo.com

Received: 8 August 2018 *Accepted: 20 October 2018* *Published: 30 November 2018*

Abstract: The effectiveness of the inclusive education model for students with special needs on cognitive learning achievement. Objectives: This research aims to analyze the influence of the inclusive education model in the form ofthe regular class with additional instruction outside the classroom on cognitive learning achievement of elementary school students in Lampung Province. **Methods:** Samples consist of 35 fifth grade elementary school students which were randomly selected from a population of 245 out of seven schools in seven regencies in Lampung Province, Indonesia. Data were analyzed using the paired samples t-test at the significance level of 0.05 for all subjects. This research applied a quasi-experimental design. **Findings:** Value of t-count (6.249) for General Knowledge was greater than t-table at the significance level 0.05 which confim the effectivity of the model. **Conclusions:** Inclusive education model had an effective influence on the learning achievement of students with special needs in the General Knowledge subject.

Keywords: Children with special needs, cognitive learning achievement, inclusive education model.

Abstrak: Keefektivan model pendidikan inklusi bagi siswa berkebutuhan khusus terhadap prestasi belajar kognitif. Tujuan: *Menganalisis pengaruh model pendidikan inklusif kelas reguler ditambah dengan bimbingan kelas luar terhadap prestasi belajar kognitif siswa sekolah dasar di Propinsi Lampung.* ***Metode:*** *Sampel sebanyak 35 siswa kelas 5 SD dipilih secara acak dari populasi 245 dari tujuh sekolah di tujuh kabupaten di Provinsi Lampung. Data dianalisis dengan menggunakan sampel berpasangan t-test. Penelitian ini menggunakan metode kuasi eksperimental.* ***Temuan:*** *Nilai t-hitung (6,249)untuk mata pelajaran umum lebih besar dari t-tabel yang menkonfirmasi efektifitas model.* ***Kesimpulan:*** *Model pendidikan inklusif memberikan pengaruh yang efektif pada prestasi belajar siswa berkebutuhan khusus pada mata pelajaran umum.*

Kata kunci: *anak berkebutuhan khusus, prestasi belajar kognitif, model pendidikan inklusif.*

To cite this article:

Herpratiwi. (2018) The effectiveness of the inclusive education model for students with special needs on cognitive learning achievement. *Jurnal Pendidikan Progresif*, *8*(2), pp. 97-108. doi:10.23960/jpp.v8.i2.201811

INTRODUCTION

Inclusive education has long been accepted in many countries (Riddell, 2013). Based on UN conventions, all countries should regulate an inclusive education system for children with disabilities at all educational levels (Rafferty, Boettcher, & Griffin, 2001). "...Schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. Inclusive education includes disabled children, gifted children, street and working children, children from linguistic, ethnic or cultural minorities, and children from other disadvantaged or marginalized areas or groups" (UNESCO, 2009). Thus, education must be able to accommodate all children regardless of conditions and circumstances.

Education cannot be redesigned with a separate model because it does not guarantee opportunities for children with special needs to develop their potential optimally (Reynold, 1962). Education should be inclusive in which children are placed throughout a range of abilities and needs (Lim &Nam, 2000). For example, Singapore has facilitated the presence of inclusive education since 2005 although there are no laws or policies concerning inclusive education (Lim, Wong, & Tan, 2013).

Inclusive education is the placement of children with mild, moderate, and severe disabilities in regular classrooms (Staub and Peck 1995; Nussbaum 2006; Fuchs & Fuchs 2014; McNally, Cole, and Waugh 2001). Inclusive education reaches a much higher level in various academic dimensions (Rea, McLaughlan, & Walther-Thomas, 2002). In addition, inclusive education provides positive value for disabled children and not disabled both in behavior and academia (Wallace, Anderson, Bartholomay, & Hupp, 2002; Cawley, Hayden, Cade, & Baker-Kroczynski, 2002). Sapon-Shevin (O'Neil, 1995), explains that inclusive education is an educational service system that requires all children with disabilities to be served in the nearest school, in regular classes with their peers. This education model is expected to overcome discrimination, accept differences, and ensure the implementation of education for all concepts (Florian & Rouse, 2009; Florian & Linklater 2017; Florian, Young, & Rouse, 2010; Florian at al., 2012). Inclusive education makes children have the opportunity to participate in learning (Kershner, 2009). In inclusive education, children learn together (Black Hawkins, Florian & Rouse, 2007), individuals are valued, actively involved in learning, and work with others (Trent, Artiles, & Ernst, 1998), and experience is the same for all given (Florian, 2011). Inclusive education is for social justice and human rights (Nussbaum, 2006) and the best education model for all children (Slee, 2001; Dyson 2008). Inclusive education lowers elite-oriented education systems (Lim and Tan, 2001) ,. All of these statements are in accordance with the cognitive social approach of constructivism (Vygotsky, 1978; Cresswell, 2003).

Inclusive education does not only place children in various physical and economic conditions, gender, and so on in one class, but also aims primarily to enable teachers and children to feel comfortable with diversity and see it as a challenge, not a problem. Children with special needs need teachers to not only play the role of a teacher but also the role of nurses and mothers because special needs children are vulnerable to stress (Gray & Freeman, 1988; Freeman, 1987). A teacher of children with special needs needs an increased ability to understand and overcome their difficulties (McLeskey & Waldron, 2000) and have positive attitudes and behaviors (Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996). The implementation of

inclusive education creates new challenges for teachers, especially in making changes to the development of educational programs (Taylor & Ringlaben 2012; Brown 1990).

Children with special needs are those who in the process of growth and development significantly experience abnormalities or irregularities, both physically, mentally, intellectually, socially, or emotionally, compared to other children their age. Therefore, they need special education services (Baveridge, 1993). Lynch (1994) said that, children with special needs were children who were enrolled in elementary school but did not develop adequately and children with physical and mental disorders. Children with special needs are children who have different important dimensions of humanitarian functions (Suron & Rizzo, 1979). They are physically, psychologically, cognitively, or socially constrained in achieving their goals or needs fully, so they need care from trained professionals

There are many models of inclusive education. Deno (1994) suggests several alternative models of inclusive education, namely: (1) regular classes, (2) regular classes with additional instruction in the classroom, (3) regular classes with additional instructions outside the classroom, (4) special classes with opportunities to join regular classes, (5) full special classes, (6) special schools, and (7) special boarding schools. However, this inclusive education model must be sorted to determine which model is suitable for inclusive education in Indonesia, especially for schools in Lampung. This confirms that the availability of literature on inclusive education in the context of Indonesian education is very important.

However, most research on inclusive practices, including the inclusive education model, comes from western countries. Very few researchers want to study in their research related to the model of inclusive education in the Asian region, especially in Indonesia. According to research conducted by Vorapanya (2008), this has become a gap in inclusive practice knowledge in Asian countries including Indonesia. Therefore, this study was conducted to examine the effectiveness of the inclusive education model applied in primary schools in Lampung Province, in order to help close the gaps that exist in inclusive education.

■ METHOD

This research uses quasi-experimental method aimed at measuring the impacts, creating comparisons to deduce changes induced by treatment,and discovering any cause-and-effect relationships in non-deterministic ways but only the probability or increasing the probability of occurrence, (Cook, Campbell, &Day, 1979; Shadish, 1995; Shadis et al., 2002).

Samples of children with special needs were randomly selected from seven elementary schools that applied inclusive education in Lampung Province. Samples were obtained directly from the sampling unit, causing them to get the same opportunity to become samples (Roscoe, 1975). The number of samples is determined based on the theory put forward by Isaac and Michael Table (Isaac, 1981) with an error rate of 5%, resulting in a sample of 35 students of class V with an average age of 12 years. The study was conducted for one semester and data collection was conducted once a week.

Data collection on student learning achievement is done by using essays from five question items for each subject. Test essays have been tested to determine the level of difficulty and level of reliability before being used in research.

Table 1 Difficulty Level and Reliability of Test Items

Measured Aspects	Item Difficulty	Reliability
Religion Education	0.70	0.89
Indonesian Language	0.78	0.80
Pancasila and Civic Education	0.80	0.79
Mathematics	0.65	0.83
Arts	0.74	0.81
Physical, Sport, and Health Education	0.77	0.80
General Knowledge	0.73	0.82
Average	0.74	0.82

RESULT AND DISCUSSION

The effectiveness of learning outcomes, especially the cognitive domain, which is used by students with special needs in primary schools in Bandar Lampung by using test results on seven subjects of Religious Education, Indonesian Language, Pancasila and Citizenship Education, Mathematics, Arts, Physical, Sports, and Health Education , and General Knowledge (Natural and Social Sciences). Cognitive domain scores use numbers 1 to 10.Before analyzing the data, the collected data is tested for causality in the form of normality and homogeneity tests. Based on the test, it is known that all data are normally distributed with a significant value of 0.856> 0.05 and homogeneous with a significant value of 0.100> 0.05. This shows that all items are internal because they have strong strengths (Maier, Wolf, & Randler, 2016; Bonett & Wright, 2015; Sebastian Rainsch, 2004). Data were analyzed using paired samples t-test. Normality data using the Kolmogorov-Smirnov test as opened in Table 2.

Table 2 Results of data normality test with the Kolmogorov-Smirnov test

Measured Aspects	Test Result	Sig.
Religion Education	0.234	0.200
Indonesian Language	0.232	0.200
Pancasila and Civic Education	0.238	0.077
Mathematics	0.304	0.200
Arts	0.302	0.075
Physical, Sport, and Health Education	0.241	0.200
General Knowledge (Natural and Social Sciences)	0.238	0.200

Data homogeneity was tested using one-way ANOVA. The homogeneity test using one-way ANOVA (Donald, 2010) showed that the significance level was 0.125>0.05, thus indicating that the sample was homogeneous. Data were analyzed using the pairedsamplest-test because it used a one-sample t-test (Donald, 2010). Table 3 presents step-by-step data analysis.

The homogeneity test using one-way ANOVA (Donald, 2010) showed sig. of 0.100>0.05, showing the homogeneous samples.

Data were analyzed using the paired samples t-test because it used a one-sample t-test (Donald, 2010). Table 3 presents the data analysis steps.

After the causality test, a t-test is then carried out on each score obtained by students in the tests in each subject.

Table 3. The data analysis steps

Steps	Purpose	Analysis
1	Reliability Assessment	Cronbach's Alpha test
2	Relationships among variables	Correlation analysis
3	Difference test before and after treatment	Paired samples t-test

In the Religious Education column t-count t-table at the significance level> 0.05. This means that the inclusive education model in the form of a regular class with additional instructions outside the class variable has an effective influence on student achievement with special needs in the subject of Religious Education. In the Indonesian Language column t-count t-table at the significance level > 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in the Indonesian Language subject.

In the Pancasila and Civic Education column t-count t-table at the significance level > 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in the Pancasila and Civic Education subject.In the Mathematics column t-count t-table at the significance level > 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in the Mathematics subject.

In the Arts column t-count t-table at the significance level > 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in the Arts subject.In the Physical, Sport, and Health Education column t-count t-table at the significance level > 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in the Physical, Sport, and Health Education subject.

Table 4. Effectiveness of model implementation for the Religion Education subject

	Paired Differences					t	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Religion Education	-.87500	.61914	.15478	-1.20492	-.54508	-5.653	15	.000
Indonesian Language	-1.12500	.61914	.15478	-1.45492	-.79508	-7.268	15	.000
Pancasila and Civic Education	-1.06250	.68007	.17002	-1.42489	-.70011	-6.249	15	.000
Mathematics	-1.18750	.65511	.16378	-1.53658	-.83842	-7.251	15	.000
Arts	-1.12500	.61914	.15478	-1.45492	-.79508	-7.268	15	.000
Physical, Sport, and Health Education	-1.18750	.40311	.10078	-1.40230	-.97270	-11.783	15	.000

Table 5. The effectivity of the model for Natural and Social Sciences subject

Paired Differences							
			95% Confidence Interval of the Difference				
Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
-1.06250	.68007	.17002	-1.42489	-.70011	-6.249	15	.000

Based on Table 10, t-count of General Knowledge was 6,249 > t-table at the significance level 0.05. It means that the inclusive education model in the form of the regular class with additional instruction outside the classroom variable had an effective influence on the learning achievement of students with special needs in theGeneral Knowledge subject.

Based on Tables 4 to 10, it can be concluded that the implementation of the inclusive education model in the form of the regular class with additional instruction outside the classroom is effective for children with special needs. It is supported by Lintner's (2008) opinion that students with special needs at the primary level can be independent through classical learning with a modified strategy. Likewise, Collins, Bybee, and Mowbray (1998) found that education for children with special needs within the classroom received the highest score, followed by within groups, and individually in learning participation, self-perception, and increased student activity after learning. Therefore, the government should not only provide support for inclusive education programs but also examine the overall education policy related to the moral value of education programs, not only related to political policy (Barnes, 1999).

Inclusive education implementation must be supported by the presence of special teachers to achieve more effective learning in all subjects. It is supported by Santos's (2012) opinion that special education teachers must have the ability to overcome difficulties, causing them to get trainingin order to achieve appropriate skills in educating children with special needs (Engelbrecht, 2005; Johnson & Inoue, 2003). Teachers shouldencourage children to learn with constructivist approaches, such as cooperative methods, peer guidance, and various different methods (Carroll, Forlin, and Jobling, 2003; Jordan, Schwartz, McGhie-Richmond, 2009).

Teachers must have the commitment and accept responsibility for the learning of all children in the classroom (Jordan, Schwart, &McGhie - Richmond, 2009) and have confidence in their students and profession (Florian and Rouse, 2009). Teacher behavior has a considerable influence on inclusive education success (Avramidis& Norwich, 2002), especially in the developing-stage inclusive education system (Poon, 2016). Successful implementation of inclusive education depends on teacher positive behavior and confidence (de Boer, Pijl, &Minnaert, 2011; Forlin, Keen, & Barrett, 2008; Avramidis& Norwich, 2002; Lancaster & Bain, 2010).

Inclusive education requires significantly and innovatively leaders' role changes (Forlin, Loreman, Sharma,& Earle, 2009) and policy support (Florian & Rouse, 2009). School leaders are the key factor in the system reformation of educatorsmanagement, supervision, and guidance (Angelides, Antoniou, &Charalambous, 2010; Horrocks, White, & Roberts, 2008; Marshall, Ralph, & Palmer, 2002). Leaders must be willing to implement these changes (Kagan, 1992; Yang, Volet& Mansfield, 2017; Brownell &Pajares,

1999; Richardson, Tolson, Huang, 2009). If possible, the physical environment and organizational change restructurisation might be needed (Avramidis, Bayliss, & Burdon, 2000). In addition, according to Lewis (2014), official support from schools must be clearly communicated to parents.

As teachers are educators directly dealing with students with special needs (Forlin, Jobling&Carrol, 2001), professional teachers need to be developed for inclusive education effectiveness (Avramidis&Kalyva, 2007; Avramidis& Norwich, 2002; Chong et al., 2007; de Boer et al., 2010; Forlin, 2008, Ernst & Rogers, 2009). Teachers positive behavior is also very necessary for inclusive education success (de Boer, Pijl, &Minnaert, 2011; Forlin, Keen, & Barrett, 2008). Training is needed to support the education of children with special needs (Poon-McBrayer& Wong, 2013; Brownlee & Carrington, 2000; Forlin, Keen &Barret 2008; Avramidis& Norwich, 2002).

Inclusive education also requires positive support from parents. Parents are the main driving factor behind the education for children with special needs (De Boer, Pijl, &Minnaert, 2010; O'Connor, 2010). In inclusive education, children with special needs can build positive interactions, make friends with others, learn to behave according to culture, and develop social skills (van Kraayenoord, 2007, O'Conner, 2007; Scheepstra, Nakken, & Pijl, 1999; Turnbull & Turnbull, 2001). Their potential cognitive achievement might also be improved (De Boer et al., 2010; Palmer et al., 2001; Pun Wong et al., 2004).

■ CONCLUSION

The implementation of the inclusive education model in the form of the regular class with additional instruction outside the classroom in elementary schoolsin Lampung Indonesia has proven to be effective for learning. The results showed that there were differences between pre and post-test with the significance level of 0.05 for all of the following subjects: 5.653 for Religion Education, 7.268 for Indonesian Language, 6.249 for Pancasila and Civic Education, 7.251 for Mathematics, 7.268 for Arts, 11.783 for Physical, Sport, and Health Education, and 6.249 for General Knowledge (Natural and Social Sciences). These results indicated that the inclusive education model run effectively because it could significantly improve the learning achievement of fifth-grade students with special needs in elementary schools in Lampung Province.

The implementation of inclusive education model in the form of the regular class with additional instruction outside the classroom as the intervention improved the cognitive achievement of elementary school students in all subjects but had not been able to prove learning outcomes in the affective and psychomotor domains. Therefore, it is necessary to design and reformulate the inclusive education model in the form of the regular class with additional instruction outside the classroom. Further research needs to be developed to measure three domains containingthe comprehensive aspect of inclusive education.

The discussion of this research has not been completed because it only measures the cognitive aspect. Measurements from both aspects require further research to identify which aspects are more dominant.

Empirical data cannot prove whether the cognitive aspect of student learning outcomes resulted from the implementation of inclusive education model in the form of the regular class with additional instruction outside the classroom would change or not over time. This research did not prove other factors influencing cognitive learning outcomes. Therefore, further research is needed to examine how other variables affect cognitive learning outcomes significantly.

■ REFERENCES

Angelides, P., Antoniou, E., & Charalambous, C. (2010). Making sense of inclusion for leadership and schooling: A case study from Cyprus. *International journal of leadership in education*, *13*(3), 319-334

Avramidis, E., and E. Kalyva. (2007). "The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion." European Journal of Special Needs Education *22*(4): 367-89.

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration / inclusion: A review of the literature. *European Journal of Special Needs Education*, *17*(2), 129-147.

Avrimidis, E., Bayliss, P., & Burdon, R. (2000). A survey into mainstream teachers attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology*, 20(2), 191-212.

Barnes, Colin. (2016). Struggles for Inclusive Education. *British Journal of Sociology of Education*,20(3),445-447.

Black-Hawkins, K., Florian, L., & Rouse, M. (2007) *Achievement and Inclusion in Schools*. London: Routledge/Falmer

Beveridge, S. (2012). *Special educational needs in schools*. Routledge.

Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, *36*(1), 3-15.

Brown, J. D. (1990). Evaluating one's abilities: Shortcuts and stumbling blocks on the road to selfknowledge. *Journal of Experimental Social Psychology. 26*, 149-167.

Brownell, M. T., & Pajares, F. (1999). Teacher efficacy and perceived success in mainstreaming students with learning and behavior problems. *Teacher Education and Special Education*, *22*(3), 154-164.

Brownlee, J., & Carrington, S. (2000). Opportunities for authentic experience and reflection: A teaching programme designed to change attitudes towards disability for preservice teachers. *Support for Learning*, *15*(3), 99-105.

Carroll A, Forlin C and Jobling A (2003) The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. Teacher Education Quarterly 30(3): 65–79

Cawley, J., Hayden, S., Cade, E., & Baker-Kroczynski, S. (2002). Including students with disabilities into the general education science classroom. *Exceptional Children*, *68*(4), 423-435.

Creswell, J. W. (2003) Research design: Qualitative, quantitative and mixed method approaches (London, Sage).

Stella, C. S. C., Forlin, C., & Lan, A. M. (2007). The influence of an inclusive education course on attitude change of preservice secondary teachers in Hong Kong. *AsiaPacific Journal of Teacher Education*, *35*(2), 161-179.

Collins, M. E., Bybee, D., & Mowbray, C. T. (1998). Effectiveness of supported education for individuals with psychiatric disabilities: Results from an experimental study. *Community Mental Health Journal*, *34*(6), 595-613

Conner, J. O. (2010). Learning to unlearn: How a service-learning project can help teacher candidates to reframe urban students. *Teaching and Teacher Education*, *26*(5), 1170-1177.

Cook, T. D., Campbell, D. T., & Day, A. (1979). *Quasi-experimentation: Design & analysis issues for field settings* (Vol. 351): Houghton Mifflin Boston

De Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International journal of inclusive education, 15*(3), 331-353

De Boer, A., Pijl, S. J., & Minnaert, A. (2010). Attitudes of parents towards inclusive education: A review of the literature. *European Journal of Special Needs Education*, *25*(2), 165-181.

Deno, E. (1994). Special Education as Developmental Capital Revisited A Quarter Century Appraisal of Means Versus Ends. *The Journal of Special Education, 27*(4), 375-392

Donald Ary. Lucy Cheser Jacobs, Chris Sorensen. (2010). *Introduction to Research in Education: Eight Edition*. Canada: Nelson Education ltd.

Dyson, A., & Kozleski, E. B. (2008). Disproportionality in special education: A transatlantic phenomenon. *Dilemmas and alternatives in the classification of children with disabilities: New perspectives*, 170-190.

Ernst, C., & Rogers, M. R. (2009). Development of the inclusion attitude scale for high school teachers. *Journal of Applied School Psychology*, *25*(3), 305-322.

Florian, L., & Rouse, M. (2009). The inclusive practice project in Scotland: Teacher education for inclusive education. *Teaching and teacher education*, *25*(4), 594-601.

Florian, L., Young, K., & Rouse, M. (2010). Preparing teachers for inclusive and diverse educational environments: Studying curricular reform in an initial teacher education course. *International Journal of Inclusive Education*, *14*(7), 709-722.

Florian, M. C., Dörr, K., Niebel, A., Daria, D., Schrezenmeier, H., Rojewski, M., ... & Zheng, Y. (2012). Cdc42 activity regulates hematopoietic stem cell aging and rejuvenation. *Cell stem cell*, *10*(5), 520-530.

Florian, L. (2017). Teacher Education for the Changing Demographics of Schooling: Inclusive Education for Each and Every Learner. In *Teacher Education for the Changing Demographics of Schooling* (pp. 9-20). Springer, Cham.

Florian, L., & BlackHawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, *37*(5), 813-828.

Florian, L., & Rouse, M. (2009). The inclusive practice project in Scotland: Teacher education for inclusive education. *Teaching and teacher education*, *25*(4), 594-601.

Forlin, C., ed, 2010. Teacher Education for Inclusion: Changing paradigms and innovative approaches. Oxon: Routledge

Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian context. *International Journal of Disability, Development and Education*, *55*(3), 251-264.Freeman, A. & Gray, H. (1987). *Teaching Without Stress*. London: Paul Chapman.

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing preservice teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, *13*(2), 195-209.

Forlin, C., Jobling, A., & Carrol, A. (2001). Preservice teachers discomfort levels toward people with disabilities. The Journal of International Special Needs Education, 4, pp32-38.

Fuchs, D., Fuchs, L.S., & Vaughn, S. (2014). What is intensive intervention and why is it important? Teaching Exceptional Children, 46, 13–18.

Gray, H. L., & Freeman, A. (1988). *Teaching without stress*. London: Paul Chapman Publishing.

Horrocks, J. L., White, G., & Roberts, L. (2008). Principals' attitudes regarding inclusion of children with autism in Pennsylvania public schools. *Journal of autism and developmental disorders*, *38*(8), 1462-1473

Isaac, Stephen&Michael, William B. (1981). *Handbook in Research and Evaluation for Education Sciences (2nd ed.).* San Diego 92107: EdITS Publishers.

Johnson, K., & Inoue, Y. (2003). Diversity and multicultural pedagogy: An analysis of attitudes and practices within an American Pacific Island university. Journal of Research in International Education, 2, 251-276

Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. *Teaching and teacher education*, *25*(4), 535-542.

Kagan, D. M. (1992) Implications of research on teacher belief. Educational Psychologist 27, 65-90.

Kershner, R., 2009. Learning in inclusive classrooms. In: P. Hick, R. Kershner and P. Farrell, Eds. *Psychology for inclusive education. New directions in theory and practice.*Abingdon: Routledge, 23(2), 52-65.

Lewis, N. M. (2014). Rupture, resilience, and risk: Relationships between mental health and migration among gay-identified men in North America. *Health & Place*, *27*, 212-219.

Lim, L., & Nam, S. S. (2000). Special education in Singapore. *The Journal of Special Education*, *34*(2), 104-109.

Lim, S. M. Y., Wong, M. E., & Tan, D. (2013). Allied educators (learning and behavioural support) in Singapore's mainstream schools: first steps towards inclusivity? International Journal of Inclusive Education, advance online publication. doi:10.1080/13603116.2012.758321

Lim, L., & Tan, J. (2001). Addressing Disability in Educational Reforms: A Force for Renewing the Vision of Singapore 21. In J. Tan, S. Gopinathan & W.K. Ho (Eds.), Challenges Facing the Singapore Education System Today (pp. 175-188). Singapore: Prentice Hall.

Lintner, Timothy; Schweder, Windy. *Social Studies in Special Education Classrooms: A Glimpse behind the Closed Door.* Journal of Social Studies Research32.1 (Spring 2008): 3-9.

Lancaster, J., & Bain, A. (2010). The design of pre-service inclusive education courses and their effects on self-efficacy: A comparative study. *Asia-Pacific Journal of Teacher Education*, *38*(2), 117-128

Lynch, J. (1994). *Provision for Children with Special Educational Needs in the Asia Region. World Bank Technical Paper Number 261. Asia Technical Series*. Distribution Unit, Office of the Publisher, The World Bank, 1818 H St., NW, Washington, DC 20433..

Maier, U., Wolf, N., &Randler, C. (2016). Effects of a computer-assisted formative assessment intervention based on multiple-tier diagnostic items and different feedback types. *Computers & Education*, *95*, 85-98.

Marshall, J., Ralph, S., & Palmer, S. (2002). 'I wasn't trained to work with them': mainstream teachers' attitudes to children with speech and language difficulties. *International journal of inclusive education*, *6*(3), 199-215

McLeskey, J., & Waldron, N. (2000). *Inclusive schools in action: Making differences ordinary*. Alexandria, VA: ASCD.

McNally, R. D., Cole, P. G., & Waugh, R. E. (2001). Regular teachers' attitudes to the need

for additional classroom support for the inclusion of students with intellectual

disability. Journal of Intellectual and Developmental Disability, 26(3), 257-273.

Nussbaum, M. C. 2006.*Frontiers of Justice. Disability Nationality Species Membership*. Cambridge, MA: Belknap Press of Harvard University Press.

O'Neil, J. (1995). Can Inclusion Work? A Conversation with Jim Kauffman and Mara Sapon-Shevin. *Educational Leadership, 52*(4), 7-11.

Oswald, M., Swart, E., Kitching, A., & Eloff, I. (2005). Parents' experiences of their rights in the implementation of inclusive education in South Africa. School Psychology International, 26, 459–477.

Palmer, D. S., Fuller, K., Arora, T., & Nelson, M. (2001). Taking sides: Parent views on inclusion for their children with severe disabilities. *Exceptional children, 67*(4), 467-484.

Poon, K. K., Ng, Z., Wong, M. E., & Kaur, S. (2016). Factors associated with staff perceptions towards inclusive education in Singapore. *Asia Pacific Journal of Education, 36*(sup1), 84-97.

Poon-McBrayer, K. F., & Wong, P. M. (2013). Inclusive education services for children and youth with disabilities: Values, roles and challenges of school leaders. *Children and Youth Services Review, 35*(9), 1520-1525.

Pun Wong, D. K., Pearson, V., & Kuen Lo, E. M. (2004). Competing philosophies in the classroom: a challenge to Hong Kong teachers. *International Journal of Inclusive Education, 8*(3), 261-279.

Rafferty, Y., Boettcher, C., & Griffin, K. W. (2001). Benefits and risks of reverse inclusion for preschoolers with and without disabilities: Parents' perspectives. *Journal of Early Intervention, 24*(4), 266–286.

Rea, P. J., McLaughlin, V. L., & Walther-Thomas, C. (2002). Outcomes for students with learning disabilities in inclusive and pullout programs. *Exceptional Children, 68*, 203-222. doi:10.1177/001440290206800204

Reynolds, M. (1962). A Framework for considering some issues in special education. *Exceptional Children, 28*, 267-370

Richardson, R. C., Tolson, H., Huang, T. Y., & Lee, Y. H. (2009). Character education: Lessons for teaching social and emotional competence. *Children & Schools, 31*(2), 71-78.

Riddell, S., & McCluskey, G. (2013). 'Policy and provision for children with social, emotional and behavioural difficulties in Scotland: Intersections of gender and deprivation'. In T. Cole, H. Daniels, & J. Visser (Eds.), *The Routledge international companion to emotional and behavioural difficulties* (pp. 57–67). London: Routledge.

Roscoe, J.T. (1975). *Fundamental Research Statistic for The Behavior Sciences. (2nd,ed), Holt.* New York: Rinehart and Winston

Santos, Maria Cristina J. *Assessing The Effectiveness Of The Adapted Adversity Quotient Program In A Special Education School*. Researchers World3.4 (Oct 2012): 13-23.

Scheepstra, A. J., Nakken, H., & Pijl, S. J. (1999). Contacts with classmates: the so-

cial position of pupils with Down's syndrome in Dutch mainstream education. *European Journal of Special Needs Education, 14*(3), 212-220.

Scruggs, T., & Mastropieri, M. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*, 59–74.

Sebastian Rainsch. (2004). *Dynamic Strategic Analysis: Demistyfying Simple Succes Strategies*.Wiesbaden: Deutcscher Universitasts-verlag.

Shadish, W. R. (1995) *Philosophy of Science an the Quantitatve-Qualitative Debates: Evaluation and Program Planning*, 18,1.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Design for Generalized Causal Inference*. Houghton Mifflin Company: BostonShadish, W. R. (1995) *Philosophy of Science an the Quantitatve-Qualitative Debates: Evaluation and Program Planning*, 18,1.

Slee, R. (2001). Social justice and the changing directions of educational research: The case of inclusive education. *International Journal of Inclusive Education, 5*(2/3), 167-177.

326 *Keith Ballard*

Staub, Debbie and A. Peck, Charles. "*What are the Outcomes for Nondisabled Student*?", Educational Leadership, Volume 52, No. 4. December- January 1994-1995.

Suran, B.G. and Rizzo, J.V. (1979). *Special Children: an Integrative Approach*. Scott, Foresman & Company.

Taylor, R. W. and Ringlaben, R. P. (2012). *Impacting Pre-service Teachers' Attitudes*

toward Inclusion. Higher Education Studies, 2, 3.

Trent, S., A. Artiles, and R. Ernst. 1998. "From Deficit Thinking to Social Constructivism: A Review of Theory, Research and Practice in Special Education." Review of Research in Education 23: 277–307

Turnbull, H. R., & Turnbull, A. P. (2001). Self-determination for individuals with significant cognitive disabilities and their families. The Journal of the Association for Persons with Severe Handicaps, 26, 56–62.

UNESCO (United Nations Educational, Scientific and Cultural Organisation). (2009). *Policy guidelines on inclusion in education.* Paris, France: Author

van Kraayenoord, C. E. (2007). School and classroom practices in inclusive education in Australia. *Childhood education, 83*(6), 390-394.

Vorapanya, S. (2008). *A model for inclusive schools in Thailand*: ProQuest.

Vygotsky, L.S., 1978. *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press

Wallace, T., Anderson, A. R., Bartholomay, T., & Hupp, S. (2002). An ecobehavioral examination of high school classrooms that include students with disabilities. *The Council for Exceptional Children, 68*(3), 345–359.

Yang, Y., Volet, S., & Mansfield, C. (2017). Motivations and influences in Chinese international doctoral students' decision for STEM study abroad. *Educational Studies*, 1-15.

Yu, H., Zheng, Zhao, B, Y., & Zheng, W. (2008). *Understanding User Behavior in Large Scale Video on Demand Systems*. In L Song (ed) Collaboration: New York