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**LEARNING ASSISTANCE AND REGULAR TEACHERS' PERCEPTIONS OF
INCLUSIVE EDUCATION IN BRUNEI DARUSSALAM****Teng Leong Koay***Universiti Brunei Darussalam***Levan Lim***Nanyang Technological University***Wong Kooi Sim***Brisbane*

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The success of inclusive education can be influenced by how teachers in regular schools perceive students with special needs. In Brunei Darussalam where inclusive education has been implemented a little over a decade ago through a model where learning assistance teachers work alongside with regular teachers to support the learning of students with special needs, there is limited research on the views of teachers within the regular school system towards including students with special needs. This study investigates the perceptions of both learning assistance and regular teachers towards including students with special needs in the regular school environment. The Perceptions to Inclusive Education Scale (PIES) was adapted, translated into Malay and validated for use to examine the perceptions of inclusive education of Bruneian teachers. Both quantitative and qualitative data were gathered from the use of this adapted instrument. The results of this study on teachers' perceptions towards including students with special needs provide some evidence of the progress of inclusive education hitherto as well as delineate some areas of concerns for improving the success of inclusive education in Brunei Darussalam.

Inclusive education has become a significant educational agenda in Brunei Darussalam over the past decade. The roots of this development can be traced to a confluence of national and global trends in the education of children with special needs. On the global stage, Brunei Darussalam has been a participant in major international conferences that have highlighted the inclusion of students with special needs within education. For instance, Brunei Darussalam was one of the hundred and fifty five countries that attended the *UNESCO's World Conference of Education for All*, held in Jomtien, Thailand in 1990 (Norjum, 2002). This conference drew attention to the basic learning needs of all children and, in particular, the unmet needs of students with special needs. In 1994, representatives from 92 governments, including Brunei Darussalam, and 25 international organizations attended the *World Conference on Special Needs Education* in Salamanca, Spain (Norjum, 2002). The countries represented became signatories to *The Salamanca Statement and Framework for Action in Special Needs Education* (UNESCO, 1994) which urged all governments to adopt as a matter of law or policy the principles of inclusive education.

On the local national front, Brunei Darussalam has embraced inclusive education through its educational policies and practices, which began a little over a decade ago. The Ministry of Education then introduced special education in mainstream regular schools as an initiative to arrest the failure of large numbers of students by providing needed assistance to help children and youth with special needs cope better in the school system (Csapo & Omar, 1996). Recommendations of this initiative, encased in the *Special Education Proposal* (Special Education Unit, 1994), were adopted by the Ministry of Education in 1994, which marked a turning point in the development of special education in Brunei Darussalam towards a focus on inclusive education (Koay, 1996).

Bolstered by worldwide trends towards inclusion and faced with the needs of students with special needs within the regular school system, what followed were key statements issued by the Ministry of Education to embrace the concept of inclusive education and its philosophy as a core feature of Bruneian education. Evidence of the Ministry of Education's decision to embark upon inclusive education can be found in several documents and policy speeches. The Special Education Policy Guidelines (Special Education Unit, 1997, p. 1) states that:

*All pupils are able to learn given an appropriate learning environment.
Appropriate learning environments can be created within the inclusive school.
The inclusive school is one that provides appropriate instruction for all pupils based on their level.*

During the opening address of the 1st National Conference on Special Education held in Brunei Darussalam in 1996, the Minister of Education at that time emphasized that:

We must look at how the system can better serve all children, including children with special needs who require special education and related services if they are to realize their full potential...

The special education, or special needs agenda in Brunei Darussalam, is an essential element of the drive for education for all. The emphasis is on inclusive education where the aim is to respond to the needs of all children. (Abdul Aziz, 1996, p. 2)

At the opening ceremony of the 2nd National Conference on Special education held recently in June 2005 in Brunei Darussalam, the new Minister of Education reaffirmed the nation's commitment to inclusive education to support the educational needs of students with special needs within the regular education system (Abdul Rahman, 2005).

At the core of planning and implementing the necessary special education assistance and supports within regular schools is the professional development of teachers and their collaborative teaming with relevant personnel. These salient issues were recognized by the then Minister of Education in his opening address at the 1st National Conference on Special Education when he announced that:

In order for the child with needs to succeed socially, emotionally and academically, there must be a shared responsibility and commitment on the part of all those who are directly involved in the education of that child...

There is also a need for trained teachers to teach children with special needs...therefore, teachers must have the knowledge and special skills needed to educate them...(Abdul Aziz, 1996, p. 3)

Several key educational reform agendas for school curricula and curricula for teacher education from the mid-1990s onwards helped advance the development of teacher education programmes to enable the preparation and training of teachers for inclusive education. In the mid-1990s, the Ministry of Education introduced a number of major curriculum reforms at the school level in the areas of bilingual policy education, information technology and curriculum revisions for various school subjects. These initiatives not only predisposed schools to expect and experience change but also encouraged them to be open to and initiate change. These initiatives would later serve to generate interest and support for developing a new core of personnel – known as Learning Assistance Teachers – to assist regular teachers to deal with children with special needs.

At the teacher education level, the Sultan Hassani Bolkiah Institute of Education (SHBIE), which is the sole teacher education institute in Brunei Darussalam, undertook a total curriculum reform in the mid-1990s towards the integration of its major components, which, in turn, allowed a greater alignment with the preparation of teachers for inclusive education (Koay, 2004). A three-pronged strategy for the inclusion of inclusive education within its programs, at the pre-service, in-service and postgraduate levels, was adopted by SHBIE (described in Sim, Koay & Liew, 1999).

For example, all pre-service teachers enrolled in the primary teacher education program at SHBIE are required to take a core course on inclusive education. At the in-service level, SHBIE jointed mounted, in collaboration with the Special Education Unit at the Ministry of Education, the Certificate in Special Education in January 1995 to train a new category of teachers – the Learning Assistance Teachers (LATs) – whose roles are to administer screening tests to identify students

with special needs, develop individualized educational plans (IEPs) for them, and collaborate with regular teachers in helping them fulfill the IEPs for the students.

The implementation of special education in regular schools in Brunei Darussalam is based on the Learning Assistance Model. The LATs therefore comprise the backbone of special education support within the regular education system. By the end of January 2002, a total of 1,303 students with IEPs were receiving assistance from the LATs in regular school settings. The LATs also provide assistance to students without IEPs. These students are those who achieve a score within a particular range in the screening tests at their respective grade levels. To support these students, LATs share and demonstrate appropriate remedial teaching strategies as well as team-teach with the regular teachers (Koay, 2004).

The first cohort of LATs completed their Certificate in Special Education in May 1996. The learning assistance programme was implemented in a number of regular schools in June 1996. Since 1995 to 2003, a total of 211 LATs obtained their Certificate in Special Education. Opportunities exist for LATs who would like to go for further training. The BEd (Special Education) and the MEd (Special Education) were offered by SHBIE in August 1999 as opportunities for LATs to upgrade themselves.

Even though it has been nearly ten years since the learning assistance programme was implemented, little research exists on LATs' views or perceptions of inclusive education. Understanding their perceptions of inclusive education is especially valid, now that there is now a sizeable number of LATs practicing for a number of years in regular schools and a number of them have gone on for further training and upgrading. The views or perceptions of LATs towards inclusive education are significant because they can, through their work with regular teachers and in classrooms, influence the degree to which students with special needs are accepted and accommodated within regular schools. LATs comprise the group of teachers who are the most well-trained and the strongest advocates for inclusive education compared with the regular teachers (RTs).

Little research also exists on how regular teachers (RTs) perceive inclusive education. Inclusive education policies and practices have been introduced into the education system as well as into teacher education over the past decade, but little is known about how teachers view inclusive education. Since both LATs and RTs are in the frontline of implementing inclusive practices, research on their views on including students with special needs presents an important indication of the success of inclusion in Brunei Darussalam. The purpose of our research, therefore, was to investigate and compare the perceptions of LATs and RTs towards the inclusion of students with special needs.

Method

Instrument

The *Perceptions of Inclusive Education Scale (PIES)* was used in this study to investigate the perceptions of both the LATs and RTs towards inclusive education. This scale is adapted from Bender, Vail and Scott (1995); Minke, Bear, Deemer and Griffin (1996); and Soodak, Podell and Lehman (1998). Demographic information pertaining to sixteen variables comprises the first part of the scale. The scale itself consists of four statements pertaining to perceptions of inclusive education. The four statements are as follows:

- *PIE1 - I support the inclusion of students with special needs in the regular classroom.*
- *PIE2 - I believe that the inclusion of students with special needs in the regular classroom is beneficial to students without special needs.*
- *PIE3 - I believe that the inclusion of students with special needs in the regular classroom is beneficial to students with special needs.*
- *PIE4 - I believe that the inclusion of students with special needs in the regular classroom has been successful in terms of improving their social and academic skills.*

For each of the above statements, the respondents were asked to indicate the extent of their agreement or disagreement using the 6-point scale: 1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, and 6 = strongly agree. The respondents were required to state their reasons as well. For this research, the *PIES* was translated into Malay.

Participants

The participants of the study were 138 LATs and 453 RTs across primary and secondary school levels. Of the 138 LATs, there were 96 practicing LATs (PLs) and 56 LATs who were upgrading or have upgraded themselves (ULs). Of the 453 RTs who participated, there were 308 regular teachers with experience in teaching children with special needs (RYs) and 308 regular teachers with no such experience (RNs).

A total of 768 copies of the Perceptions of Inclusive Education Scale (PIES) were distributed to all the teachers. Five hundred and ninety one (76.8%) completed copies were returned. Of the 138 completed forms by the LATs, 56 were from the ULs (100%) and 82 were from the PLs (85.4%). Of the 453 RTs, 226 RYs (73.4%) and 227 RNs (73.7%) completed and returned the forms.

Data Analysis

Comparisons on the four groups of teachers (ULs, PLs, RYs & RNs) were made for the sixteen independent variables, using t-tests, in respect of the four dependent variables of the PIES instrument. The sixteen independent variables are: gender, age, qualification, level of teaching, pre-service teacher education preparation for inclusion, district, position, teacher types, teaching experience, attendance of Special Education course during pre-service teacher education, years of experience in teaching students with special needs, number of students with special needs taught, preferred venue of teaching students with special needs, preferred placement of students with special needs, perceived knowledge and perceived skills in teaching students with special needs.

Statistical analysis of data was carried out using SPSS, Version 11.5 Independent samples t-tests and ANOVA were carried out to examine relationships among the variables and determine whether certain variables exert positive or negative influence upon teachers' perceptions towards inclusive education. Chi square analyses were carried out on nominal data derived from the open-ended questions.

Responses to the open-ended questions were analyzed qualitatively following the procedures outlined by Lincoln and Guba (1985) and Glaser and Strauss (1967). Each response was separated into meaningful units; a *unit* was defined as a single thought, suggestion, or observation. Initial categories for each open-ended question were developed by the first author, using the content analysis procedure outlined by Glaser and Strauss (1967) and Lincoln and Guba (1985). The categories were collapsed into fewer, more manageable, and broader categories, which were then cross-tabulated for non-parametric statistical analysis.

Results

The results of the LATs and RTs responses to the PIES are analyzed and described in the following four sections: (i) independent samples t-tests of the PIES; (ii) one-way ANOVA of the PIES; (iii) overall responses to the PIES in terms of frequencies, percentages and descriptive statistics for each of the dependent variables of the instrument; and (iv) open-ended responses of the PIES.

Independent Samples t-Tests of Perceptions of Inclusive Education Scale (PIES)

Comparisons were made for both LATs and RTs for the sixteen independent variables, using t-tests, across the four dependent variables of the PIES. These results are described in the following. There were no significant gender differences for all the dependent variables. Both male and female teachers were in agreement that the inclusion of students with special needs in the regular classroom benefited these students, especially in terms of improving their social and academic skills. However, primary school teachers were significantly more positive in comparison with their

secondary counterparts for each of the dependent variables: *PIE1*, $t = 4.99$, $p < .001$; *PIE2*, $t = 3.57$, $p < .001$; *PIE3*, $t = 2.61$, $p < .01$, *PIE4*, $t = 4.36$, $p < .001$. LATs were, invariably, significantly more positive than RTs for all the dependent variables: *PIE1*, $t = -9.35$, $p < .001$; *PIE2*, $t = -7.95$, $p < .001$; *PIE3*, $t = -8.51$, $p < .001$, *PIE4*, $t = -8.09$, $p < .001$.

Similarly teachers who attended a course in Special Education during pre-service training were also significantly more positive, when compared with those who did not, in respect of each of the dependent variables: *PIE1*, $t = -2.85$, $p < .01$; *PIE2*, $t = -3.12$, $p < .01$; *PIE3*, $t = -2.88$, $p < .01$, *PIE4*, $t = -2.74$, $p < .01$. As expected, those who perceived that their pre-service teacher education had prepared them for inclusive education were also significantly more positive for each of the dependent variables: *PIE1*, $t = -3.81$, $p < .001$; *PIE2*, $t = -3.58$, $p < .001$; *PIE3*, $t = -3.17$, $p < .01$, *PIE4*, $t = -3.38$, $p < .01$. Finally, teachers who perceived that students with special needs should be placed in regular classrooms have significantly higher support for inclusive education compared to those who did not perceive as such, for all the four dependent variables: *PIE1*, $t = -14.94$, $p < .001$; *PIE2*, $t = -13.73$, $p < .001$; *PIE3*, $t = -11.90$, $p < .001$, *PIE4*, $t = -11.68$, $p < .001$.

One-way ANOVA of Perceptions of Inclusive Education Scale (PIES)

The results of one-way ANOVA for the PIES together with summaries of patterns of pair-wise significant differences are described in this section. In terms of the teachers' age, those who were in their thirties had the highest support for inclusive education, followed by those who were in their twenties and above forties, respectively. However, overall significant differences were found for only two dependent variables, namely *PIE1* and *PIE3*. Even so, the post hoc pair-wise comparisons using the Scheffé test, show that significant difference was found only in the case of *PIE3*, $F = 6.65$, $p < .01$, between those in their thirties and forty and above.

There was no significant difference with respect to the teachers' qualifications as well as the districts they were serving in, in terms of their perceptions of inclusive education for all the four dependent variables. It is interesting to note that, when comparisons between Teacher Types were made, overall significant differences were found for all four dependent variables: *PIE1*, $F = 35.22$, $p < .001$; *PIE2*, $F = 26.29$, $p < .001$; *PIE3*, $F = 28.02$, $p < .001$, *PIE4*, $F = 23.65$, $p < .001$. As well, an invariant order was found for each of the comparisons, with Upgrading LATs (ULs) being most positive and RTs with no experience teaching students with special needs (RN) being the least positive. When post-hoc pair-wise comparisons were made, no significant differences were found for the RYs and RNs (regular teachers with and without experience in teaching students with special needs, respectively) for *PIE1* and *PIE2*, and for the ULs and PLs (Upgrading and Practising LATs respectively) as well as RYs and RNs for *PIE3* and *PIE4*.

There were no significance differences between teachers of varied experience in teaching in terms of their perceptions of inclusive education, for all the four dependent variables. However, teachers with more experience teaching students with special needs had more positive perceptions of inclusion, compared to those who had not taught these students, for all the four dependent variables: *PIE1*, $F = 13.95$, $p < .001$; *PIE2*, $F = 8.78$, $p < .001$; *PIE3*, $F = 12.28$, $p < .001$, *PIE4*, $F = 11.91$, $p < .001$. Furthermore, teachers who had taught more students with special needs were more positive towards these students, for all the four dependent variables: *PIE1*, $F = 21.17$, $p < .001$; *PIE2*, $F = 15.53$, $p < .001$; *PIE3*, $F = 17.25$, $p < .001$, *PIE4*, $F = 15.21$, $p < .001$.

When comparisons between the perceptions of inclusive education and venues of teaching students with special needs, significant differences were found for all the four dependent variables: *PIE1*, $F = 32.03$, $p < .001$; *PIE2*, $F = 22.63$, $p < .001$; *PIE3*, $F = 25.57$, $p < .001$, *PIE4*, $F = 22.55$, $p < .001$. An invariant order was found for each of the comparisons, with teachers with experience in teaching students with special needs in both Learning Assistance Centres (LACs) and Regular Classrooms (RCs) being most positive and those without experience teaching students with special needs being least positive. However, when post-hoc pair-wise comparisons of teachers' perceptions of inclusion were made for the venues, no significant differences were found between *Both* and *LAC*, and between *RC* and *None*, for all the four dependent variables.

Finally, highly significant differences were found between the teachers' perceptions of inclusion and their (a) perceived level of knowledge in teaching students with special needs: *PIE1*, $F = 38.07$, $p < .001$; *PIE2*, $F = 29.88$, $p < .001$; *PIE3*, $F = 32.05$, $p < .001$, *PIE4*, $F = 34.89$, $p < .001$, and (b) perceived level of skills: *PIE1*, $F = 44.12$, $p < .001$; *PIE2*, $F = 35.49$, $p < .001$; *PIE3*, $F = 39.73$, $p < .001$, *PIE4*, $F = 40.33$, $p < .001$, respectively. Teachers who perceived that they have good knowledge and skills in teaching students with special needs were most positive towards including these students.

Overall Responses to Perceptions of Inclusive Education Scale (PIES)

The overall responses of teachers, using frequencies, percentages and descriptive statistics for each of the dependent variables, *PIE1*, *PIE2*, *PIE3*, and *PIE4*, are discussed in this section.

Almost all (98.8%) of the ULs and about three quarters (76.9%) of the PLs support the inclusion of special need students in the regular classroom. On the other hand, slightly more than half (55.3%) of the regular teachers with experience in teaching students with special needs (RYs) and about 48% of their counterparts without experience in teaching students with special needs (RNs) support inclusion.

The only Upgrading LAT who moderately disagreed with the statement of supporting inclusion cited that, in her opinion, *students with high support needs could not be successfully included in the regular classroom*. From their experience in their own schools, 19 Practicing LATs did not support inclusion because they felt that inclusion required a lot of support from various sources, especially from regular teachers, regular students and parents.

About 96% of ULs and 70% of PLs perceived that inclusion is beneficial to regular students. It is interesting to note that only about 30% of RYs, as compared to almost half (50%) of RNs, perceived that inclusion is beneficial to regular students. A larger proportion of RTs as compared to LATs perceived that inclusion is not beneficial to students without special needs.

In contrast to the above, overall more of the respondents perceived that the inclusion of students with special needs in the regular classroom is beneficial to these students. All the ULs (100%) and almost 90% of PLs agreed that inclusion benefits students with special needs. However, slightly more than two thirds (71.2%) of RYs and 63% of RNs agreed that inclusion of students with special needs in the regular classroom is beneficial to these students. As expected, a much higher proportion of regular teachers, as compared to LATs, perceived that including students with special needs in the regular classroom does not benefit these students.

Finally, the same order of perceptions that inclusion benefited students with special needs in terms of improving their social and academic skills is obtained when comparing the four groups of teachers. Furthermore, for all the four dependent variables, ULs had the most positive perception of inclusion, followed by PLs, RYs and the least positive, RNs.

Open-ended Responses of Perceptions of Inclusive Education Scale (PIES)

For each of the *PIES* statements, open-ended responses were also obtained by asking the teachers to state their reasons for their extent of agreement or disagreement to each of the statements. The distribution of teachers' open-ended responses for each of the statements on the *Perceptions of Inclusive Education Scale (PIES)* is presented in terms of whether they fall under the themes that support or do not support the inclusion of students with special needs.

(a) *PIE1 – I support the inclusion of students with special needs in the regular classroom.*

A total of 494 open-ended responses were obtained that supported the inclusion of students with special needs in the regular classroom and they were grouped into twelve categories. The twelve categories of responses were scrutinized carefully and collapsed into six new categories. The new categories are labelled with letters, and the numerals within the parentheses are the frequency of responses.

- A: *Learning with peers* [146]:
- Category 3 - Students with special needs can learn together with peers (in the least restrictive environment) [135].
 - Category 9 - Students with special needs can take part in group activities [11].
- B: *Segregation undesirable* [102]:
- Category 2 - Students with special needs should not be segregated from peers/society [102].
- C: *Learning improvement* [92]:
- Category 5 - Students with special needs can develop to their full potential [17].
 - Category 8 - Improve social/communication skills of students with special needs [75].
- D: *Inclusion as a right* [54]:
- Category 1 - Every child, regardless of disabilities has the right to be educated in the regular class (least restrictive environment)/Equal rights for all children in education [49].
 - Category 11 - Increase public awareness of students with special needs /Acceptance of students with special needs [3].
 - Category 12 - In line with Brunei National Education Policy/Special Education Policy Guidelines [3].
- E: *Help from peers* [51]:
- Category 4 - Regular students can assist students with special needs [40].
 - Category 6 - Students with special needs can get support/encouragement from peers [6].
 - Category 10 - Students with special needs can imitate peers (language) [5].
- F: *Improve self-esteem/confidence* [49]:
- Category 7 - Improve self-esteem/self confidence of students with special needs [49].

The differences between the four groups of teachers did not reach significance level. Although there was no significance difference between LATs and RTs, proportionately more RTs gave the first two categories of responses and the LATs, more of the other categories of responses.

Fourteen categories comprising 319 responses were obtained that did not support the inclusion of students with special needs in the regular classroom. These responses were carefully analyzed and collapsed into six new categories, as described below:

- A: *Pedagogical demands on regular teacher* [75]:
- Category 5 - Regular teachers have difficulty managing behaviors of students with special needs [15].
 - Category 7 - Regular teachers lack skills and knowledge [42].
 - Category 8 - The regular class cannot cater for individual needs of students [18].
- B: *Learning disadvantage* [64]:
- Category 2 - Students with special needs cannot learn as well as regular students [47].
 - Category 10 - Students with special needs have low self-esteem/self confidence to succeed in regular class [17].
- C: *Attention to students with special needs neglects other students* [63]:
- Category 1 - Students with special needs require a lot of attention/time from regular teachers; other pupils are neglected [63].
- D: *Students with special needs disruptive* [45]:
- Category 3 - Students with special needs disrupt teaching/disturb other students [45].
- E: *Special needs unavailable in regular class* [43]:
- Category 12 - Students with special needs need special class with special facilities/assistance [38].
 - Category 13 - The regular class cannot cater for students with high support needs [3].
 - Category 14 - Students with special needs will miss lessons when they are pulled-out from regular class to Learning Assistance Centre [2].
- F: *Time and effort demands on regular teacher* [29]:
- Category 4 - Regular teachers have to do a lot of preparation [5].
 - Category 6 - Heavy workload of regular teachers [12].

- Category 9 - Regular teacher cannot complete syllabus for the whole class [10].
- Category 11 - Teachers cannot complete syllabus [2].

There were no significant differences between the four groups. However, the differences were significant between LATs and RTs. Although there were relatively few responses from the LATs as compared to the RTs, proportionately more of the LATs (PL in particular) cited Learning disadvantage as the predominant reason for non-support of inclusion in the regular classroom, whereas RTs cited many other reasons.

(b) *PIE2 – I believe that the inclusion of students with special needs in the regular classroom is beneficial to students without special needs.*

A total of 403 open-ended responses were obtained and they were grouped into twelve categories. These responses were in agreement with the perception that the inclusion of students with special needs in the regular classroom was beneficial to students without special needs. The twelve categories of responses were studied carefully and collapsed into five new categories. The new categories are labeled with letters and the numerals within the parentheses are the frequencies of responses.

A: *Learning to be more responsible/helpful* [121]

- Category 1 - Regular students learn to be more responsible (to help students with special needs) [64].
- Category 5 - Regular students benefit by becoming peer tutors (learn from peers) [27].
- Category 8 - Regular students can support/help students with special needs [28].
- Category 12 - Regular students can be role models for students with special needs [2].

B: *Learning to be empathetic/caring* [108]:

- Category 3 - Regular students can understand students with special needs [27].
- Category 4 - Regular students more tolerant to students with special needs [18].
- Category 7 - Regular students can show empathy (more caring) to students with special needs [63].

C: *Awareness & respect for differences* [92]:

- Category 6 - Regular students learn to respect/accept each other's uniqueness [58].
- Category 9 - Regular students more aware of differences of students with special needs [34].

D: *Exposure to alternative teaching methods* [36]:

- Category 10 - Regular students exposed to alternative teaching methods by LAT/regular teachers [36].

E: *Social interaction with students with special needs* [34]:

- Category 2 - Regular students can interact with students with special needs [29].
- Category 11 - Regular students can make friends with students with special needs [5].
- There were no significant differences between the four groups of teachers as well as between LATs and RTs. Proportionately more of the LATs cited inclusion as beneficial to regular students because these students learn to be more responsible/helpful, and empathetic/caring, whilst proportionately more RTs cited the other three reasons, which are only indirectly related to some important aspect of learning.

Six categories, comprising 159 responses, were obtained that indicated disagreement with statement *PIE2*. These responses signify disagreement with the perception that the inclusion of students with special needs in the regular classroom was beneficial to students without special needs. These responses were carefully analysed and collapsed into three new categories, as shown below.

A: *Over-attention to students with special needs neglects regular students* [58]:

- Category 1 - Teacher spent too much time on students with special needs [31].
- Category 2 - The teacher neglects regular students [27].

B: *Disruptive influence of students with special needs* [55]:

- Category 3 - Regular students are disturbed/distracted by students with special needs [48].
- Category 5 - students with special needs can have a bad influence to regular students [7].

C: *Non-beneficial to regular students* [46]:

- Category 4 – Not beneficial to regular students [42].
- Category 6 - Regular students cannot study well [4].

Relatively fewer LATs compared to RTs, disagreed with PIE2. Three reasons were cited by PLs, RYs and RNs as a basis for their disagreement. However, there was no significant difference between their responses.

(c) *PIE3 – I believe that the inclusion of students with special needs in the regular classroom is beneficial to students with special needs.*

A total of 551 open-ended responses were obtained and they were grouped into eleven categories. These responses agreed with the perception that the inclusion of students with special needs in the regular classroom was beneficial to these students. The eleven categories of responses were analyzed carefully and collapsed into five new categories. The new categories are labeled with letters and the numerals within the parentheses are the frequencies of responses.

A: *Social interaction with regular students* [128]:

- Category 2 – Students with special needs can interact with regular students [73].
- Category 5 - Develop bonding with non-disabled peers/Friendship/ Accepted by peers [31].
- Category 10 - Improves communication skills of students with special needs [24].

B: *Learn/help from others* [136]:

- Category 3 - Students with special needs can learn from (be helped by) other students [98].
- Categories 8 - Opportunities to observe, interact and imitate students who have higher cognitive/academic, social, language skills [42].

C: *Non-segregated from mainstream* [107]:

- Category 4 - Students with special needs receive age appropriate academic support services and necessary modified instruction [27].
- Category 6 - Opportunity to participate in typical or ordinary school practices/Not segregated from regular peers [86].

D: *Social-emotional development* [108]:

- Category 7 - Improved social skills/ emotional growth of students with special needs [105].
- Category 9 - Students with special needs can learn better from peers/Expose students with special needs to more experiences [7].

E: *Improve self-esteem/confidence* [72]:

- Category 1 - Improves self-esteem/self confidence of students with special needs [61].
- Category 11 - Increase confidence of students with special needs [11].

Although proportionately more LATs compared to RTs were in agreement with *PIE3*, there were no significant differences between the responses of the four groups of teachers as well as between the LATs and RTs. It is apparent that the opportunity to interact with regular students is perceived as most beneficial by all respondents.

Four categories comprising 72 responses were obtained that did not agree with the perception that the inclusion of students with special needs in the regular classroom was beneficial to these students. These responses were carefully analyzed and collapsed into three new categories, as shown below.

A: *Regular classroom less suitable than Learning Assistance Centre* [39]:

- Category 4 - Students with special needs cannot learn successfully in regular class; can only cope in LAC [39].

B: *Little help from regular teachers* [25]:

- Category 3 - Regular teachers cannot help students with special needs [25].

C: *Little help from regular students* [8]:

- Category 1 - Students with special needs can be bullied by regular students [2].
- Category 2 - Students with special needs merely copy the work of regular students [6].

There were no significant difference in the responses between the three groups of teachers as well as between the LATs and RTs. Most of the respondents in each group regarded the regular classroom as less suitable than the Learning Assistance Centre.

(d) *PIE4 – I believe that the inclusion of students with special needs in the regular classroom has been successful in terms of improving their social and academic skills.*

A total of 363 open-ended responses were obtained and they were grouped into eleven categories. These responses agreed with the perception that the inclusion of students with special needs in the regular classroom has been successful in terms of improving the social and academic skills of these students. The eleven categories of responses were examined carefully and collapsed into six new categories. The new categories are labelled with letters and the numerals within the parentheses are the frequencies of responses.

A: *Improve social skills from role models of good regular students* [118]:

- Category 2 – Students with special needs can improve social skills with regular students as good role models [118].

B: *Learn social/academic skills from regular students* [84]:

- Category 1 – Besides IEP objectives, students with special needs can learn social and academic skills from regular peers [84].

C: *Help from peer tutoring/buddy system* [40]:

- Category 8 – Help by peer tutoring, buddy system [40].

D: *Improve communication skills* [56]:

- Category 7 – Students with special needs can observe and imitate peers to acquire language skills [24].
- Category 11 – Improve language/communication skills through socialization [32].

E: *Improve self-esteem/confidence in normal situations* [37]:

- Category 3 – Expose students with special needs to normal behavior patterns [6].
- Category 9 – Involved in cooperative learning, adaptation and [8] modification.
- Category 10 – Improve self-esteem of students with special needs [23].

F: *Learn to relate to people* [28]:

- Category 4 – Develop healthy attitudes towards other people [3].
- Category 5 – Learn to compromise and form friendships with peer groups [16].
- Category 6 – Understand and be understood by peers [9].

Proportionately more LATs (particularly ULs) compared to RTs, were in agreement with *PIE4*. However, there were no significant difference between the responses of the four groups of teachers and between the LATs and RTs. The majority of the respondents in each group tended to identify the learning of social skills from regular students as being the most important outcome of inclusion. Finally, four categories comprising 70 responses were obtained which showed disagreement with the perception that the inclusion of students with special needs in the regular classroom has been successful in terms of improving the social and academic skills of these students. These responses were carefully analyzed and collapsed into three new categories, as shown below.

A: *No academic improvement as students with special needs merely copy from others* [39]:

- Category 1 – Students with special needs do not improve academically, merely copies work of regular students [39].

B: *Need special treatment provided by Learning Assistance Centre* [23]:

- Category 2 – Students with special needs cannot study in regular class, they need the Learning Assistance Centre [23].

C: *Students with special needs have problems relating to others* [8]

- Category 3 – Students with special needs have limited ability to socialize [6].
- Category 4 – Students with special needs can distract/disturb other students [2].

There were no significant difference in the responses between the three groups of teachers as well as between the LATs and RTs. Most respondents in each group tended to identify the danger of students with special needs developing a *crutch mentality* by merely copying from other students.

Discussion

The success of inclusive education depends heavily on the attitudes of teachers within regular schools towards students with special needs (Jobe, Rust & Brissie, 1996). Positive perceptions and feelings on the part of teachers tend to encourage successful inclusion. Teachers' attitudes towards including students with special needs have been found through research to be influenced by various factors. For example, survey studies have shown that teacher acceptance or resistance to the inclusion or integration of students with disabilities into regular education classrooms is related to the knowledge base and experiences of teachers (Gallagher, 1985; Pernell, McIntyre, & Bader, 1985; Sack, 1998; Stoler 1992; Taylor, Richards, Goldstein & Schilit, 1997). Other researchers have cited the lack of skills necessary to teach students with disabilities as the most common source of teacher resistance (Kauffman, 1989; Kauffman, Gerber & Semmel, 1988).

The results of our research support the findings of these previous studies. The quantitative part of our research showed, in terms of the ratings of the four subscales of the PIES, that the ULs had the highest means, followed by the PLs, RYs and RNs. These results highlight that as teachers gain more experience and knowledge with students with special needs, they become more positive in their perceptions and beliefs about including these students. This research finding is of particular significance to the developments within teacher education over the past decade aimed at preparing teachers for inclusive education in Brunei Darussalam.

The establishment of the Learning Assistance Programme to train LATs and the development of the three-pronged strategy at SHIBE for pre-service and in-service teachers to develop knowledge and skills about special needs, have provided significant opportunities for teachers to increase and upgrade their competencies for inclusive education. The finding that the teachers who have received the most training and experience in special needs, through their upgrading opportunities at SHIBE and experience as LATs – the ULs – have the most positive views about inclusive education compared with the PLs, RYs and RNs, testifies to the impact of concerted developments between SHBIE in conjunction with the Ministry of Education to launch the Learning Assistance Programme as well as the available teacher education programmes to prepare teachers for inclusive education.

As it is the case in survey research, the perceptions of the ULs, PLs, RYs and RNs towards inclusive education are, at best, views expressed by these groups of teachers and may not reflect their actual classroom behaviours. It is possible that respondents who indicated that they are positive in their views in supporting students with special needs on the PIES may behave in ways within their classrooms that do not reflect their views. Further research on teachers' attitudes towards including students with special needs can focus on the behavioural observations of selected samples of the various groups of teachers in classrooms where these students are included.

The qualitative data gathered through the open-ended responses provided by the various groups of teachers to the PIES consists of their reasons for the extent of agreements and disagreements with each of the statements of the PIES. The reasons provided by the LATs and RTs for each of the PIES statements were then collated within relevant categories that subscribed to themes which either support or do not support the inclusion of students with special needs. There were mostly no significant differences between the various groups in terms of the categories and themes that emerged. The qualitative reasons were generally very similar across the groups of teachers.

These themes and their specific categories of the qualitative data describe the benefits and concerns related to including students with special needs as perceived by the teachers. Such information from the teachers, especially their expressed concerns with including students with special needs, is useful in helping delineate what aspects of the implementation of inclusive education needs attention. For example, themes that arose from reasons given for ratings on statement four of the PIES revealed concerns such as students with special needs not improving academically because they tend to copy the work of their classmates and that these students have problems relating to their peers. Knowledge of such concerns can inform the development of appropriate training courses at SHBIE that target the teaching of skills for teachers to better handle these challenges.

Research can play a significant role in evaluating and monitoring the progress of inclusive education in Brunei Darussalam. The perspectives of different stakeholders who are involved in the process of inclusion, such as teachers, students, parents, principals and students with special needs themselves, provide important information and insights into how the implementation of inclusive education can be improved and refined. As teachers are in the frontline of implementing inclusive education, their perspectives and insights into the process of inclusion can be quite valuable. This research study has examined the perceptions of both learning assistance and regular teachers towards including students with special needs using a particular instrument (the PIES). Further research can be extended to new batches of the various types of teachers through additional ways of examining attitudes of teachers that include surveys, in-depth qualitative interviews as well as observational data. Such research methodologies can also be replicated across the other stakeholders to evaluate the impact and progress of implementing inclusive education. Further research can definitely provide the necessary evidence for making key decisions on how to ensure and enhance the success of inclusive education in Brunei Darussalam.

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