

THOUGHTFUL STRATEGIES FOR INCLUSIVE CLASSROOMS IN BRUNEI DARUSSALAM

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A recent study has provided some indication of the types of teaching strategies that Learning Assistance Teachers and Regular Teachers in Brunei Darussalam are likely to use. This paper will describe, briefly, the background, policy and teacher education initiatives towards inclusive education, as well as some relevant aspects of the study, especially in respect of the perceived teacher efficacy, instructional adaptations and collaborative roles in inclusive classrooms. In discussing future directions, it is proposed that the thoughtful teaching paradigm is applied in developing more thoughtful strategies in inclusive education. Specific examples will be presented to illustrate how some of the proposed teaching strategies could be more creative, reflective, responsible and reciprocal in order to cater to the diverse needs of students in Brunei Darussalam.

Introduction

As inclusive education has become a major feature of current curriculum reform in Brunei Darussalam. (Abdul Aziz Umar, 1996), an important concern is how to improve equity in access to quality education in Brunei Darussalam. A recent study (Koay, Sim & Elkins, 2003) appears to offer plausible strategies. This paper will therefore attempt to suggest some future directions that could be pursued.

The paper is divided into three sections. The first part of this paper briefly describes the background, policy and teacher education initiatives towards inclusive education in Brunei Darussalam. The second section highlights the results of a recent study regarding Learning Assistance Teachers' and Regular Teachers' perceived teaching efficacy, use of instructional adaptations and collaborative roles in inclusive classrooms. In discussing future directions, the final section of the paper focuses on applying *thoughtful* strategies for teaching, learning and management that are *creative, reflective, responsible and reciprocal* in order to further improve equity in access to quality education in Brunei Darussalam.

Background, Policy and Teacher Education Initiatives towards Inclusive Education*Background to the Study*

Brunei Darussalam is an independent Islamic Sultanate with a population of about 332,844 located in the northern part of Borneo in Southeast Asia. (Department of Statistics, 2002a). It has a land area of 5,765 square kilometers that shares its borders with the Malaysian state of Sarawak.

The education system of Brunei Darussalam has its roots in the British school system and has adopted a 7-3-2-2 pattern, which represents primary, lower secondary; upper secondary and pre-tertiary levels, respectively. Students are required to sit for four public examinations throughout the length of their schooling years, one at the end of the primary cycle and three more at the end of lower and upper secondary and pre-tertiary levels. The medium of instruction from pre-school to Primary 3 is in Malay for all subjects except the English language. The medium of instruction is changed to English from Primary 4 onwards for Science, Mathematics and Geography. In 2002, a total of 96,334 students were enrolled in 158 government and 74 non-government schools (Department of Statistics, 2002b).

Statements found in the National Education Policy, Brunei Darussalam highlight an education system that aims:

To give all Bruneian children every opportunity to achieve at least an upper secondary or vocational education...

To provide opportunities for all children in Brunei Darussalam to develop to their full potential so that they play a useful role in the development of the country...

(Ministry of Education, 1992, p.7)

Turning Point in the Provision of Special Education

To arrest the large number of students who were failing in the school system, the Ministry of Education introduced special education into mainstream schools to provide the needed assistance to help children and youth with special needs to cope better (Csapo & Khalid, 1996). The *Special Education Proposal* (Koay, 2004), presented to the Ministry of Education in 1994, made the following recommendations:

- (a) The Special Education Unit (SEU) should be set up without delay to begin the planning and implementation of a special education system within mainstream education in Brunei Darussalam.
- (b) The Learning Assistance Model should be used to deal with the learning problems of students. It was proposed that at least one Learning Assistance teacher (LAT) be trained for each school.
- (c) The setting up of the National Advisory Committee on Special Education comprising the Ministry of Education, Ministry of Health, Ministry of Culture, Youth and Sports, Ministry of Law, University of Brunei Darussalam, and Parent Representative. This Committee will meet once a month to advise, monitor and facilitate the development of special education in Brunei Darussalam. The Ministry of Education should formulate a clear policy statement of special education to reinforce its commitment to the education of all children. The three ministries, Education, Health and Culture, Youth and Sports should formulate a comprehensive plan for people with disabilities with clearly defined area of responsibilities.
- (d) The adoption of the *Special Education Proposal* by the Ministry of Education in 1994 was a turning point in the development of special education in Brunei Darussalam (Koay, 1996).

The Special Education Unit was set up at the end of 1994, with the following mandates for action in the following ten areas:

- teacher education and in-service training in special education;
- establishing a database on children with special needs;
- formulating educational and psychological assessment and intervention procedures for children with special needs, such as individualized education plans and progress monitoring system;
- producing a blueprint for special education in terms of policy development and transition planning;
- conducting research and evaluating factors that contribute to school failure, and the need to measure and evaluate the effectiveness of intervention programs;
- liaising and collaboration between agencies and bodies involved with children with special needs, such as the Ministry of Health, University of Brunei Darussalam, and non-profit organizations providing services for the people with disabilities;
- liaising and networking with relevant international organizations such as United Nations Educational, Scientific and Cultural Organization (UNESCO) and World Health Organization (WHO);
- collecting and producing resources related to assessment and teaching materials to be stored in a library for special education;
- raising public awareness through the mass media in the form of articles, radio, television, posters, seminars and public events; and
- parent counseling and support services for parents such as parent training, direct support, and the production of educational materials for parents such as booklets and pamphlets on disability information.

Policy Initiatives

Over the past three or four decades, there has been a growing worldwide commitment to education for children with special needs, especially through the United Nations' activities and global statements, which have influenced Brunei Darussalam's decision to embrace the concept of inclusive education. The *Declaration of Rights of Disabled Persons* (UN, 1975) calls for member countries to support human rights, education, integration, full employment, and conditions of economic and social progress for persons with disabilities. The *Convention on the Rights of the Child* reaffirms the rights of all children to equal education without discrimination within the mainstream education system (UN, 1989).

One hundred and fifty-five countries, including Brunei Darussalam, attended the UNESCO's *World Conference of Education for All*, held in Jomtien, Thailand in 1990 (Norjum, 2002). This conference highlighted the basic learning needs of all children and called attention to the unmet needs of students with special needs. UNESCO designated the year 1992 as the *Year of Special Needs in the Classroom* and ministries of education around the world examined and modified their activities in order to increase their assistance to children 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 *Salamanca Statement and Framework for Action on Special Needs Education* (UNESCO, 1994) urged all governments to adopt, as a matter of law or policy, the principles of inclusive education.

In line with world trends towards inclusion, the Ministry of Education, Brunei Darussalam, embraced the concept of inclusive education and its philosophy, as stated in the Special Education Policy Guidelines (SEU, 1997, p.2), which emphasized 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.

The Minister of Education, Brunei Darussalam, during the opening address of the 1st National Conference on Special Education in 1996, stressed 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 realise 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).

Teacher Education Initiatives

The quality of teachers' implementation of special education programs in schools depends on how teachers are trained. At his opening address to the 1st National Conference on Special Education, the Minister of Education emphasized that:

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).

The emphasis on inclusive education, conveyed by the Minister of Education during his opening address at the 1st National Conference on Special Education in 1996, coincided with as well as stimulated a number of important education reform agendas for school curricula and curricula for teacher education (Koay, Sim & Elkins, 2004). In the mid-1990s, the Ministry of Education introduced a number of major curriculum reforms 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 initiate change.

The Sultan Hassanah Bolkiah Institute of Education (SHBIE) in collaboration with the Special Education Unit (SEU), the Ministry of Education, jointly mounted the Certificate in Special Education in January 1995 to train special education teachers, called Learning Assistance Teachers (LATs), to cater to the learning needs of students with special needs in mainstream schools. LATs are equipped with basic skills and knowledge about children with special needs. Their main roles are to conduct screening tests to identify students with special needs and to prepare and implement individualized educational plans (IEP) for these students. The first cohort of LATs completed their training in May 1996. Beginning June 1996, the Learning Assistance Programme was implemented in regular schools in Brunei Muara District. By December 2003, a total of 211 LATs have been trained. The B.Ed. (Special Education) and the M.Ed (Special Education) were offered by SHBIE in August 1999 as opportunities for LATs to upgrade themselves.

Implementation Model

The implementation of special education into regular mainstream schools in Brunei Darussalam is based on the Learning Assistance Model. The LATs are responsible for identifying students with special needs by using various screening tests designed by SEU (SEU, 1998a). A draft individualized educational plan (IEP) is prepared by the LAT, with input from class teachers and parents. The draft IEP is then presented to the School Based Team (SBT), comprising the head teacher as chairperson, LAT, regular class teacher, and parents (SEU, 1998c). The SBT discusses the various adaptations/modifications in the draft IEP to ensure that the student receives an appropriate education programme to meet his or her individual needs. Members of the SBT collaborate and discuss ways to ensure the provision of appropriate resources and support for students with special needs at the school level (SEU, 1998b). The teamwork and successful partnerships generated by the SBT help promote decision-making and shared responsibility, thus translating inclusive education into reality (Norjum, 2000).

Once the IEP for a student has been approved, it is implemented and monitored by the LAT in collaboration with regular class teachers. From time to time, depending on the needs of the student, he or she may be pulled out for a short period to the Learning Assistance Centre (LAC) for individual or small group instruction by the LAT. In the LAC, the LATs use a variety of teaching materials and teaching strategies, such as direct instruction, task analysis, and reinforcement such as token economy system, precision teaching and record keeping procedures to monitor student progress. The LAT also helps the class teachers to plan and make instructional adaptations for students with special needs, demonstrates teaching techniques and assists to monitor the student's progress.

Study of Learning Assistance Teachers' and Regular Teachers' Perceived Self-efficacy, Use of Classroom Adaptations and Collaborative Roles in Inclusive Classrooms

For the second part of this paper, only the qualitative findings from open-ended responses of the study, in terms of the LATs' and RTs' perceived self-efficacy, use of instructional adaptations and collaborative roles in inclusive classrooms, would be used as they are most suggestive of plausible pedagogical strategies for inclusive education. In particular, the qualitative results from three instruments, namely: (a) *Teacher Efficacy Scale (TES)*, (b) *Classroom Adaptations for Inclusive Teaching Scale (CAITS)*, and (c) *Interactive Roles of Learning Assistance and Regular Teacher Scale (IRLARTS)*, would be employed.

Participants in the study

The participants in the study comprised 56 Upgrading LATs (ULs), 96 Practising LATs (PLs), 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 sets of questionnaires were distributed to all these teachers. Five hundred and ninety one (76.8%) sets of usable questionnaires were returned; 138 were from LATs and 453 were from regular teachers. The breakdown of the teachers who returned completed questionnaires is as follows: all the 56 (100%) ULs and 82 (85.4%) PLs; 226 (73.4%) RYs and 227 (73.7%) RNs.

Data Analysis

Responses to the open-ended questions were analysed 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 researchers, using the content

analysis procedure outlined by Glaser and Strauss (1967). The categories were collapsed into fewer, more manageable, and broader categories, which were then cross-tabulated for non-parametric statistical analysis.

Chi square analyses were carried out on nominal data derived from the open-ended questions. The present paper will, however, focus mainly on the various comparisons between the responses of Learning Assistance Teachers (LATs) and Regular Teachers (RTs), including their sub-groups, namely Upgrading LATs (ULs), Practising LATs (PLs), RTs with experience in teaching students with special needs (RYs) and RTs with no experience in teaching students with special needs (RNs).

Results

The main qualitative findings from the open-ended responses are summarised below. The open-ended responses in *TES*, *CAITS* and *IRLARTS* also provided valuable insights on the specific differences in perceptions, especially between LATs and RTs, which would help to fine tune the strategies to be employed in preparing the different types of teachers to be more effective in inclusive education. For most of these responses, the qualitative responses were categorised and then compared, using chi square analysis.

In Section C of the *TES* instrument, the respondents were presented with a Case Study of Dollah, a boy with special needs, and were asked to suggest strategies that they could use to help him. A total of 1312 open-ended responses were obtained and these responses were initially grouped into 23 different categories, which were then collapsed into the following 8 new categories:-

- A: *Shaping/counselling behaviour* [229]
- B: *Using appropriate, especially remedial, reading strategies* [179]
- C: *Involvement of parents* [165]:
- D: *Adaptive, including peer and individualised teaching* [157]
- E: *Suku kata syllabification of Malay words* [131]
- F: *Using data from various sources, especially for diagnostic reading/maths assessment* [109]
- G: *Consulting other teachers, including use of LAT/LAC* [79]
- H: *Use of suitable strategies for teaching maths* [77]

On the whole, it is interesting to note that, although there were many qualitative differences between the LATs and RTs in terms of the types and degree of open-ended responses, the Chi-square tests did not reveal any significant quantitative differences between them, nor between the four groups of teachers, namely ULs, PLs, RYs and RNs. Thus, whereas the LATs gave proportionately more open-ended responses than the RTs, the quantitative differences between them for the different categories of responses were not statistically significant, suggesting that the strategies that they tend to suggest are quite similar.

Section B of *CAITS* consisted of three open-ended questions pertaining to the use of instructional adaptations for teaching students with special needs, namely:

- Give examples of instructional adaptations that you would normally use in your classroom.
- Give examples of barriers (problems) that you would encounter when using instructional adaptations in your classroom.

- Give examples of supports (e.g. administrative, equipment, other resources) needed for you to use instructional adaptations in your classroom.

A total of 958 open-ended responses were collapsed into the following five main categories, showing examples of classroom instructional adaptations:-

A: *Modify teaching content, materials and resources* [332]:

Examples of instructional adaptations under this category include using suitable teaching aids such as concrete materials; modifying worksheets or exercises through reducing number of words and questions, as well as preparing different sets of questions; modifying teaching materials according to individual needs of pupils; and modify teaching content, for example by reducing content. As expected, proportionately more LATs compared to RTs, mentioned the strategy of modifying both the content and materials to suit the abilities of special needs pupils.

B: *Involvement of peers, e.g. cooperative learning/group teaching* [187]:

The examples focus on strategies aimed at peer involvement and use of cooperative learning strategies and group teaching. The teachers mentioned the use of setting up mixed and same ability groupings of students. In addition, the LATs also cited the use of regular students as peer tutors or buddies to those with special needs.

C: *Modify teaching, especially communicative, strategies* [186]:

The examples involve the use of a wide variety of teaching and communicative strategies. The former include the modification of teaching techniques such as the use of pupil-centred pedagogy, drills, hands-on activities and remediation; modifying seating arrangement and classroom organisation; and giving more time for explanation and completion of class to students with special needs. The latter involves the teachers giving concise instructions and using language that special needs pupils could understand; the setting up of reading corners. It is interesting to note that five ULs have mentioned the use of team-teaching with RTs, as a strategy of adapting instruction for pupils with special needs.

D: *Individualised teaching* [151]:

The examples involve the strategy of adapting teaching to suit individual learning styles, needs and abilities of pupils. On the whole, more ULs have cited the use of this strategy in adapting classroom instruction.

E: *Modify evaluative teaching, including positive reinforcement* [106]:

The strategies mentioned by teachers include the use of verbal praises, tokens, stickers as positive reinforcement and displaying pupils' work; keeping records, monitoring, and providing feedback, as well as the use of task analysis. Proportionately more LATs compared to RTs, indicated that they have monitored pupils progress by keeping proper records and providing feedback.

A total of 528 responses, showing examples of problems encountered when using instructional adaptations, were similarly reduced to five main categories, as follows:-

A: *Lack of time* [195]:

Lack of time was apparently the most common barrier to adapting instruction, especially for RYs. These teachers mentioned that with their heavy teaching load, they were unable to make adaptations to teaching students with special needs.

B: *Shortage of materials* [150]:

Shortage of materials includes the lack of photocopiers, paper, funds and other curriculum materials. Proportionately more PLs and RYs have indicated that the lack of curricular materials is a limiting factor in their efforts to make instructional adaptations for students with special needs.

C: *Problems of class control* [99]:

This category relates to teachers having problems with class control. Proportionately more RTs felt that the classes they teach in have too many pupils, resulting in discipline problems, absenteeism and lack of interest from their pupils.

D: *Lack of pedagogical skills* [55]:

Proportionately, more PLs, RYs and RNs were concerned that they lack skills and knowledge to adapt or modify instruction; to help pupils with high support needs, manage difficult behaviours, and to provide instruction to meet individual needs in regular classrooms. Also some regular teachers have expressed their lack of confidence in adapting instruction effectively.

E: *Other constraints* [56]:

Miscellaneous barriers to adapting instruction include a whole range of problems such as difficulty completing the syllabus, which is too rigid, and heavy workload. In addition, some LATs were concerned about the lack of support from regular teachers whilst their regular counterparts were worried that the performance of pupils in their classes might fall.

Finally, a total of 555 responses, showing Examples of supports encountered when using instructional adaptations, were also collapsed into five new categories, as follows:-

A: *Provision of equipment and materials* [265]:

Proportionately more PLs and RYs indicated that they need more support, including equipments, teaching aids, OHP, computer, and curriculum materials in order to make instructional adaptations in their classrooms.

B: *Support from others* [136]:

Support from others, included support from other colleagues and parents. The LATs also mentioned the support they received from the Special Education Unit and other members of the School Based team.

C: *Provision of funds for teaching aids* [56]:

Proportionately more RTs compared to LATs indicated that they needed more funding from their Headteacher.

D: *Help from others* [36]:

The ULs and PLs mentioned that the Special Education Unit should appoint a consultant to help teachers deal with pupils with high support needs as well as provide more support to the School Based team. They also requested for more regular visits by staff members of the Special Education Unit to their Learning Assistance Centres. On the other hand, RTs requested for more LATs and teacher Aides to be trained and posted to their schools.

E: *Skills improvement workshop for teachers* [31]:

Proportionately more PLs and RYs indicated that they need to attend workshops to equip themselves with up-to-date and effective skills to adapt classroom instruction.

Section C of *IRLARTS* contained three open-ended questions pertaining to collaborative efforts between Learning Assistance and Regular teachers in the respondents' school. The three questions are:

- Give examples of collaborative roles that you would normally use in your classroom.
- Give examples of barriers (problems) that you would encounter during collaboration in your school.
- Give examples of supports (e.g. administrative, equipment, other resources) needed for you to collaborate in your school.

A total of 603 examples of collaborative roles were finally collapsed into four main categories, as follows:-

A: *Discussion on student problems/progress* [202]:

Examples of collaborative roles under this category include discussing with colleagues about student's weaknesses, progress; collaborate in SBT to solve problems together between LATs, regular teachers and parents; and meeting with parents of special needs pupils. As expected, proportionately more ULs (55.36%) and PLs (39.02%) compared to RYs (24.78%) and RNs (18.94%), reported that they carried out these collaborative roles.

B: *Sharing information, ideas and materials* [172]:

The examples focus on the sharing of teaching materials, strategies, teaching aids, information/data from screening & diagnostic tests, knowledge and skills, as well as ideas about behaviour management. Again, proportionately more ULs (58.93%) and PLs (54.88%) compared to RYs (14.60%) and RNs (13.66%), reported that they have shared with their regular colleagues the above mentioned information and materials.

C: *Collaborative planning* [123]:

The responses, involve the collaboration of teachers in planning teaching strategies, providing suggestions for suitable teaching methods, as well as meeting to discuss, formulate and implement IEP goals, objectives and teaching activities. Again, as expected, proportionately more ULs (58.93%) and PLs (37.80%) compared to RYs (13.72%) and RNs (11.89%), reported that they have been involved in collaborative planning with their regular counterparts.

D: *Collaborative teaching* [106]:

LATs and regular teachers have reported that they have collaborated in teaching pupils with special needs mathematics and reading in the regular classes; and in carrying out team teaching. Proportionately more ULs (32.14%) and PLs (29.27%) compared to RYs (13.27%) and RNs (11.45%), reported that they carried out collaborative teaching.

A total of 613 open-ended responses regarding Barriers encountered during collaboration were obtained. These responses were finally collapsed into eight main categories, as follows:-

A: *Time constraints* [161]:

The lack of time, which was the most common barrier to collaboration, resulted from various administrative duties, attending meetings and in-service courses. ULs, in particular, cited that they were attending the Bachelor of Education (Special Education) that is offered part-time.

B: *Lack of support from HM, teachers & parents* [126]:

This barrier includes the lack of support from class/subject (regular) teachers, parents and HM/School administrators.

C: *Lack of knowledge & skills in teaching SNC* [71]:

This category relates to the lack of knowledge and skills in teaching special needs pupils, in collaboration and about inclusive practices. In particular, more PLs felt that they lacked knowledge and skills in dealing with high support needs pupils.

D: *Heavy teaching load* [63]:

Heavy teaching load includes problems such as having too many IEP pupils that needed assistance in both Malay and mathematics.

E: *Timetable problems with regular class* [62]:

Timetable problems with regular class collaboration resulted from various constraints arising from scheduling the pulling-out of pupils with special needs from the regular classes to the Learning Assistance Centre (LAC).

F: *Lack of communication* [46]:

Lack of communication includes the lack of sharing of information or communication between LATs, regular teachers and parents. Both ULs and RYs felt that when pupils were pulled out from the regular classes, they missed lessons taught in these classes. In addition, both LATs and RTs admitted that it was stressful to collaborate with each other.

G: *Lack of funds/resources* [40]:

Lack of funds and other resources was also a barrier to a sizable number of teachers.

H: *Poor attitudes of RTs* [39]:

Finally, quite a few ULs and PLs have reported that regular teachers have poor attitudes and they push or *dump* special needs pupils into the LAC.

A total of 520 responses regarding Supports needed for collaboration were reduced to six main categories, as follows:-

A: *Sufficient resources* [214]:

Proportionately more ULs and PLs compared to RYs and RNs, indicated that they need more resources, including equipments, funding, curriculum materials, and handbooks.

B: *Support from HM/school/parents/SBT* [117]:

The respondents mentioned that they needed support from their headmaster, colleagues and parents. The LATs, in particular, cited the support they received from the members of the School Based team.

C: *Close cooperation between RTs and LATs* [82]:

Both the LATs and RTs acknowledged the support from their respective counterparts in collaborative efforts to support students with special needs. Proportionately more LATs indicated that they value the support from RTs.

D: *Workshops and training* [41]:

PLs and RYs, in particular, indicated the need to attend workshops on collaboration skills in order to enhance their collaborative efforts. Both the LATs as well as RTs have requested the Ministry of Education for more LATs to be trained.

E: *Positive attitudes of regular teachers* [34]:

The LATs have acknowledged the support from RTs who are open minded and accepts inclusion. The ULs, in particular mentioned the support from their regular colleagues in understanding roles and responsibilities of LATs.

F: *Help from others* [32]:

This category of responses includes help by resource personnel from SEU and UBD to consult on problems of collaboration in schools, as well as the appointment of teacher aides.

Thoughtful Strategies and Future Directions

While the foregoing results are indicative of strategies that teachers are likely to employ in inclusive teaching, it would be most desirable that these and other strategies are re-conceptualised in a more systematic and systemic way and tested empirically with representative samples of teachers. In this regard, it is proposed that the paradigm of *thoughtful* teaching (e.g. Sim, 1999) be invoked. Four *thoughtful* dimensions have been delineated, two of which are mostly cognitive and two others are mainly affective in nature, and are defined as follows:-

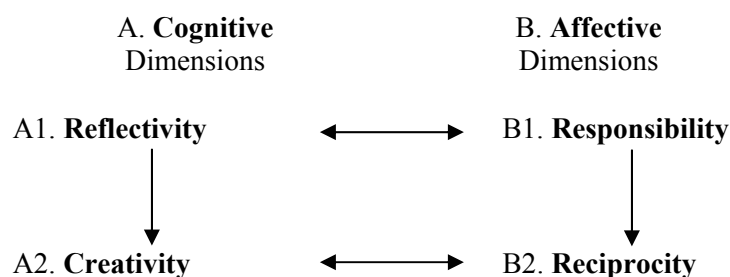
Reflective Teaching is one which attempts to regularly reflect on the efficacy of possible or actual actions aimed at improving teaching.

Creative Teaching is one which attempts to use diverse, novel or innovative ways for enhancing teaching.

Responsible Teaching is one which attempts to monitor the outcomes or effects of teaching on oneself or on other individuals, for whom one should be held responsible.

Reciprocal Teaching is one which attempts to promote collaboration and sharing for mutual benefit in improving teaching.

It is possible to employ any of these strategies separately or in any order. However, it is suggested that, while the cognitive and affective strategies may be considered concurrently, it would be preferable to start with Reflective or Responsible teaching strategies before applying Creative or Reciprocal teaching strategies as shown below:-



For each dimension, it would be useful to pose a number of questions, which could then be tested empirically. While the future study has yet to be designed, a preliminary exercise might consist of re-scrutinising the results of the foregoing study vis-à-vis some pertinent questions pertaining to thoughtful teaching, as illustrated in what follows.

A1. **Reflectivity** Questions:-

- (a) What strategies have teachers used? Do they work? Are they adequate?

- (b) What problems have teachers encountered? Have they been overcome? How?
- (c) What supports have teachers received? Were they useful? Any others?

The qualitative results from administering *CAITS* (*Classroom Adaptations for Inclusive Teaching Scale*), and *IRLARTS* (*Interactive Roles of Learning Assistance and Regular Teacher Scale*) have, in fact, highlighted some of the strategies that teachers are likely to use, the problems they have encountered and the kind of supports that they have received. An initial strategy of inducing teachers to reflect on these aspects in relation to their preferred practices could therefore constitute an important area of investigation in the future.

For instance, based on the findings from *CAITS*, teachers could be asked to reflect on one of the following categories of classroom adaptations that they would choose in terms of whether they are adequate and are likely to work:-

- A. *Modify teaching content, materials and resources*
- B. *Involvement of peers, e.g. cooperative learning/group teaching*
- C. *Modify teaching, especially communicative, strategies*
- D. *Individualised teaching*
- E. *Modify evaluative teaching, including positive reinforcement*

They could then be encouraged to reflect on how to overcome the problems that they are likely to encounter, such as:-

- A. *Lack of time*
- B. *Shortage of materials*
- C. *Problems of class control*
- D. *Lack of pedagogical skills*
- E. *Syllabus constraints*

Finally, they could be asked to reflect on the usefulness of possible supports that they might receive, such as:-

- A. *Provision of equipment and materials*
- B. *Support from other colleagues and parents*
- C. *Provision of funds for teaching aids*
- D. *Help from the Special Education Unit*
- E. *Skills improvement workshop for teachers*

A2. Creativity Questions:-

- (a) How can teachers' strategies be improved? By overcoming problems? By using supports?
- (b) Any completely new strategies to be offered? Any anticipated problems? Potential supports?
- (c) How can all the strategies be synergistically synchronized into a comprehensive meta-strategy?

The next area of study could endeavour to facilitate teachers' use of creative strategies, not only in improving earlier suggested strategies, or coming out with totally new strategies, but, more important, to orchestrate diverse creative strategies from themselves as well as others into a comprehensive meta-strategy.

Whether in terms of suggesting strategies for helping Dollah in the *Teacher Efficacy Scale (TES)* study or in suggesting classroom instructional adaptations, including suggested strategies for overcoming barriers and capitalising on possible supports, in the *Classroom Adaptations for Inclusive Teaching Scale (CAITS)* study, it is quite apparent that the teachers lack the ability or disposition to think of more creative strategies than the rather straightforward, if not simplistic, strategies that they have suggested. It is therefore envisaged that special workshops will need to be conducted not only to familiarise teachers with creative strategies, tapping on the ideas of creativity experts, such as de Bono (1993), Costa (1991), Buzan (2002) and Hyerle (2000), but also to involve them to develop more comprehensive meta-strategies.

B1. **Responsibility** Questions:-

- (a) How committed are teachers towards inclusive education? In terms of their attitudes towards inclusive education? And their perceived teacher efficacy?
- (b) How can teachers become more accountable in inclusive education? In terms of students with special needs? In terms of other students?
- (c) Can, and should, teachers be responsible for continually adapting their teaching for inclusive education? Independently? And interdependently?

The findings from using the *Teacher Efficacy Scale (TES)* as well as the *Attitudes Toward Inclusive Education Scale (ATIES)* (Koay et al., 2004) have amply demonstrated that teachers are quite committed towards inclusive education, although LATs have invariably proven to be more positive than RTs in this regard. A study on teachers' responsible strategies would therefore need to pay more attention to RTs than LATs. While LATs could be challenged to develop independent strategies, RTs may be encouraged to work interdependently, such as in workshop groups, in continually adapting their teaching for inclusive education.

In order to sustain teachers' interest in developing responsible strategies, it would be preferable if progressive monitoring of teacher initiatives become part of a Ministry programme for inclusive education.

B2. **Reciprocity** Questions:-

- (a) What collaborative roles in inclusive education would teachers play for mutual benefit? What are the barriers? How may they be overcome?
- (b) What arrangements are most conducive in encouraging collaboration among stakeholders? Within the school? With other organizations?
- (c) How can the efforts of all the interested parties be symbiotically synchronized into a concerted meta-strategy?

It is apparent that teachers have much to gain from each other through collaborative action. In encouraging them to develop reciprocal strategies, the results from the use of the *Interactive Roles of Learning Assistance and Regular Teacher Scale (IRLARTS)* would be most pertinent.

It would, for example, be useful to explore teachers' preferred collaborative roles, such as the following, which resulted from the use of *IRLARTS*:-

- A. *Discussion on student problems/progress*
- B. *Sharing information, ideas and materials*
- C. *Collaborative planning*
- D. *Collaborative teaching.*

In developing the reciprocal strategies, special attention needs to be paid on how to overcome various constraints, such as the following:-

- A. *Time constraints*
- B. *Lack of support from HM, teachers & parents*
- C. *Lack of knowledge & skills in teaching SNC*
- D. *Heavy teaching load*
- E. *Timetable problems with regular class*
- F. *Lack of communication*
- G. *Lack of funds/resources.*

In attempting to overcome the barriers, cognisance of teachers' perceived supports, such as the following, would be most helpful:-

- A: *Sufficient resources*
- B: *Support from HM/school/parents/SBT*
- C: *Close cooperation between RTs and LATs*
- D: *Workshops and training*
- E: *Positive attitudes of regular teachers*
- F: *Help from SEU and UBD.*

The major challenge, again, lies in how to orchestrate the various reciprocal strategies into a concerted meta-strategy that would be mutually beneficial to all teachers. Obviously, all stakeholders, especially including the Special Education Unit and the University of Brunei Darussalam, have important collaborative roles to play.

Admittedly, the results of the study reported herein have more implications for policy than for practice. It is envisaged that future directions could focus on developing thoughtful teaching strategies for inclusive education. It is suggested that *more cognitive* and *more affective* approaches be adopted concurrently. For each approach, a couple of thoughtful strategies may be pursued by attempting to address a number of thoughtful questions and undertaking relevant investigations. Thus, for the *more cognitive* approach, the *reflective strategy* is first applied by responding to the *reflectivity questions* and getting teachers to reflect on classroom adaptations, problems likely to be encountered and possible supports. The *creative strategy* is then applied, not only by responding to the *creativity questions*, but also to encourage teachers, with the help of workshops on creativity, to develop and test new or improved strategies, including the conceptualisation of a more comprehensive meta-strategy. For the *more affective* approach, the *responsible strategy* is initially applied by attempting to answer the *responsibility questions* and undertaking progressive monitoring of both the Learning Assistance Teachers as well as the Regular Teachers. The *reciprocal strategy* is then applied, not only in responding to the *reciprocity questions*, but also to encourage teachers to explore their collaborative roles, various constraints, and perceived supports, including the conceptualisation of a more concerted meta-strategy.

The suggested pedagogical investigations focus mainly on thoughtful teaching strategies. If desired, future studies could also explore thoughtful learning and thoughtful management strategies.

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