TEACHERS' PERCEPTIONS ON ACADEMIC RECOVERY THROUGH EDUCATIONALTHERAPY:- A THERAPEUTIC INTERVENTION IN THREE CO-EDUCATIONAL GOVERNMENT SECONDARY SCHOOLS IN NORTH TRINIDAD

A Research Report

Submitted in Partial Fulfilment

of the Requirements

for the Degree of Master in Education

Concentration in Youth Guidance

of

The University of the West Indies

by

Lisa-Marcella Henry-Legall

2010

Supervisor: Mr. Raymond S. Hackett

School of Education
Faculty of Humanities & Education
St. Augustine Campus
Trinidad W.I.

One should teach children

To dance on a tightrope

Without a safety net,

To sleep at night alone

Under the sky,

To row a boat

Out on the open sea...

One should teach them to

Imagine castles in the sky

Instead of houses

On the ground,

To be nowhere at home but

In life itself and to find

Security within themselves

– Hans-Herbert Dreiske
German poet and social worker
adapted from www.socialpedagogy.co.uk

Abstract

This study introduced the notion of academic recovery through an alternative pedagogical practice of therapeutic intervention called Educational Therapy. As such, its purpose was not only to explore and evaluate an alternative educational practice but also to determine its feasibility in adapting to the local context. This was done using teachers' perspectives from three co-educational secondary schools whose students had a history of academic underachievement and where violence and student aggression were becoming the norm. Twenty three English and Mathematics teachers participated in the study which was encased in an ethnography theoretical perspective. Their perspectives on the current state of the secondary sector brought bearing to the types of best practices that teachers in their departments subscribed to in terms of teaching, understanding how children learn, assessment strategies and accommodating students who have learning deficits in the regular classroom. In addition, it clarified their stance on the adaptation of therapeutic intervention in Trinidad and Tobago while determining the extent to which it could improve academic achievement in these subject disciplines. Findings from the study revealed that teachers needed assistance to effectively manage, teach and assess children with learning problems. They felt that there was an urgent need to implement therapeutic interventions in educational practice as they had no knowledge of how to deal with students who had underlying cognitive deficits which then became manifested in the forms of social, emotional and behavioural problems. As the study was steeped within a qualitative inquiry, its findings also noted the emergence of eight themes which described the factors believed to be responsible for the present crisis within secondary schools where indiscipline was concerned. The framework of this study thus provided a useful basis for identifying school discipline issues and children who may have learning problems and for suggesting plans for appropriately targeted interventions through Educational Therapy.

KEY WORDS:- therapeutic intervention, academic recovery, underachievement, alternative pedagogical practice, cognitive deficits, Educational Therapy, best practices, school discipline.

Dedication

This work is dedicated to my loving husband, Dominique, without whose caring, patience, support and constructive criticism it would not have been possible; to my parents Charles and Shirley, who passed on to me a love for learning and a passion for helping others – without your unwavering love, support and understanding, I would not have made it this far; to my students, who needed that extra help and could not find it before, and to the ones who struggled to learn, lacked the confidence to try and felt that they had no voice and that no one cared –

I was listening.

Acknowledgements

The author thanks the following people without whom this research paper would not have been possible.

Firstly, I wish to express my sincerest gratitude to my supervisor, Mr. Raymond Hackett, who believed in my study and offered his sage advice and guidance. He encouraged and supported me with patience and knowledge from the initial to the final level and enabled me to develop a clearer understanding of the subject.

Special thanks to Dr. Lynn Popp, the educational therapist who theorized with me andoffered an "educational life jacket" and helped me to merge my interest in speech-language pathology with educational therapy and to understand what it means to be a child advocate.

Thanks also to the teachers who worked alongside me for several months, offered their honest opinions – Mrs. Samson; Mrs. Flores-Murray; Mrs. Sambury; Mr. Bharath; Mrs. Boyce; Mr. Jarvis; Mrs. Thomas; Mr. Hope; Mrs. Julian; Mrs. Marshall; Mrs. Blandin; Mrs Byne; Ms. Bishop; Mrs. Vance-Couteau; Mrs. Sookram; Mrs. Bristow; Mrs. Carrington-Dixon; Mr. Boodlal; Mr. Francis; Mrs. Pereira; Mrs. Bernard; Ms. Brathwaite, Ms. Ramroop, Mr. Davis, Mr. Ali and Mr. Miller – and were willing to allow me insight and access into their daily school lives.

To my fellow Youth Guidance colleagues, I wish to thank you for the support and study group sessions as well as the listening ear. We met as strangers but we leave as lasting friends.

Special thanks to my family members for their ongoing love, support and numerous prayers; and to my husband Dominique for supporting and encouraging me to pursue this degree, putting up with my many moods and typing my papers for me when I was unable to so myself.

And lastly but by no means least, I owe my deepest gratitude to my Lord and Saviour, Jesus Christ, who continues to inspire and mould me and shape my craft so that I may teach with wisdom, knowledge and understanding so that I may continue to try to build the competence and confidence of those who struggle to learn.

TABLE OF CONTENTS

List of Tables

List of Appendices

Chapter 1

Introduction

It is estimated that one in six children in Trinidad and Tobago (T&T) is affected with some sort of disability which may include visual problems, hearing deficits, mental and physical disabilities, learning disabilities (LDs) and psychological reactions to abuse. The 2000 census data for disabilities in T&T states that 58, 383 people are living with disabilities (Matroo, 2010). 80% of this population suffer from a LD that has repercussions not only for what and how they learn, but also for social, emotional and behavioural anomalies that become very distinct when a child reaches school age. When left unchecked, the problem begins to spiral out of control, very often leading to school failure and instances of violence as has become the trend in many schools within the secondary sector of T&T.

Background to the problem

Adolescence is a life stage characterized by comparison and doubt. Teenagers constantly evaluate their physical appearance, intelligence, popularity, and stylishness and wonder if they are "good enough."

The development of a healthy self-esteem requires that they get more "yes" answers to this question than not. If this fails to happen, an adolescent may try to repair his or her negative self-image with ill thought-out behaviour involving chemical substances and sexual relationships. Underachieving adolescents are at a particular high risk of engaging in these harmful coping mechanisms (Herr, Cramer & Niles, 2004).

For an academic underachiever, report books, Achievement Days and parent conferences are concrete reminders of not being "good enough." Low or failing grades produce shame, frustration,

helplessness, hopelessness, and peer group rejection. Feelings of competence may be irrevocably undermined.

For the student with a learning disability/difficulty/disorder (LD) or different learning style, such feelings may be particularly acute. As early as primary school, an undiagnosed learning disabled youth may dread going to school and develop physical illnesses in order to stay home (Shepps-Battle, 2010).

Research shows that children and adolescents with LDs tend to score higher on scales of anxiety and depression than their non-disabled counterparts. One study found that 20% – 30% of children with ADHD (Attention Deficit Hyperactivity Disorder) experience anxiety disorders and up to 75% experience depression (American Surgeon General, 2000).

It is understandable that a teen who cannot tap into academic success as a source of self-esteem will try to dull the pain of that failure and create another arena of success. And so, the use of chemical substances, risky sexual activities, disinterest and violent outbursts become primitive efforts to relieve anxiety and foster self-esteem.

For many years and indeed, more so in recent times, there has been a clamour by virtually every stakeholder in education that the secondary sector in Trinidad and Tobago (T&T) is in crisis despite consistent efforts at reform (Hackett, 2002). What passes for the norm in the nation's schools is that teachers encounter students who on a daily basis are unable to perform even the slightest learning tasks. This problem, however, goes back to the primary system where there are students who lose their capacity

to learn what is taught. According to Subran in his article entitled *School Failure* (Daily Express, July 1st 2003), they attend school as a ritual, writing the Secondary Entrance Assessment (SEA) as a ceremonial rite of passage, fall behind, and eventually give up on education.

Jere Brody, a noted educator, contends that "most children start school with enthusiasm, but over time some of them find school to be stressful and threatening. Unlike students of limited ability, who can fail despite their best efforts, failure syndrome students often fail because they have not made the effort to succeed and they simply give up at the slightest difficulty." As a result, a trend of learned helplessness and a pattern of failure, academic underachievement, disengagement, and violence has evolved within the secondary sector.

With regards to school achievement, the Education Research Paper of 1997 notes that in Trinidad, variation in school achievement is largely explained by the socioeconomic status of parents. However, a clear second order of variance is explained by sex of students – where females outperform males at various levels of schooling in a broad range of curriculum subjects. Moreover, Jules et al (2008) assert that underachievement is associated with a lack of participation and low levels of social inclusion skills by teachers. As such, greater attention needs to be given to helping teachers acquire (and use) additional socially inclusive and relational approaches within the traditional classroom context.

The 1985 – 1990 Education Plan also highlighted issues surrounding the nature and dynamics of schooling in T&T and discussed the trend of failure rates in the secondary sector. Among reasons cited for the development of the trend were the unusually wide ability ranges and student behaviours which make classroom management and teaching difficult; the failure of the then senior secondary or

comprehensive schools to perform optimally due to low and inadequate preparation of students at the level of the previous junior secondary schools (Hackett, 2010).

Nevertheless, while there is a growing concern about the state of education in T&T, Worrell (2002) asserts that education in T&T today, is a source of promise as well as peril.

In many schools students are lost to apathy, hopelessness, absenteeism and violent rebellion while others drop out, are disenchanted and frustrated with the demands of academia or a lack of creativity in classroom tasks that do not cater to their individual needs and/or learning styles. And still others are de-motivated by the disengagement of some educators in terms of curricula content and with the students themselves. A lack of parental involvement is also seen as a determining factor in the degeneration of the system.

However, despite this negativity there is a promise in the many initiatives being proposed and implemented. These include the commitment to universal primary and secondary education; the modernisation of the curriculum; changing approaches to assessment, and the divestment of control to schools, so that choices can be made about the different types of educational experiences best suited to differentiate students' needs.

Teachers in the schools under study share common concerns – their students continue to underachieve despite efforts at remediation, there are no support systems in place to accommodate the child who is suspected of having a LD, they feel unable to cope with the LD student and cater to the non-LD child who demands and deserves their equal attention, and they feel that there is a definite

mismatch between curriculum requirements and the ability of the child. In addition, they feel burdened to deliver curricula in a timely fashion while dealing with an onslaught of social, emotional and behavioural problems that they are not trained to deal with and are so frustrated that they are a breath away from leaving a profession that appears to victimize the very people who are responsible for nurturing a mind and helping to develop an all-rounded individual.

As a teacher, I have had to work with students (in the regular classroom) who have LDs. These problems were often manifested in language and math particularly within the realms of reading and comprehension of concepts, which make it increasingly difficult for them to cope and oft times they "act out" in negative ways so as to mask their deficiencies.

With the advent of the Universal Secondary Examination (USE) in T&T, there has been an influx of students with learning problems and learning disabilities who enter the regular classroom and whose needs continue not to be met. As a result, dual deficits of learning and behaviour problems also make it increasingly difficult to provide effective instruction and so counteract these students' lack of motivation, frequent disruptions, aggression and other forms of maladaptive behaviours.

According to research, past investigations of children with LDs focused mainly on their cognitive and learning problems and on interventions designed to ameliorate these problems (Bryan, 1974; Toro, Weissberg, Guare, & Liebenstein, 1990). However, during the last decade, the awareness of these children's behavioural, social, and emotional problems has considerably increased. This awareness was demonstrated by Bender and Smith's (1990) meta-analysis of studies of the relation between LD and behavioural problems and Kavale and Forness's (1996) meta- analysis of investigations of the relation between LDs and social skill deficits.

Both meta-analyses provided convincing evidence that children and adolescents with LDs experience social problems (e.g., low self-esteem), emotional difficulties (e.g., depression), and conduct problems (e.g., aggression) and suggested that these problems and difficulties are, at least partly, due to deficits in social skills. I am not aware of any such research conducted within T&T.

But as one of the major stakeholders in education, I am concerned that the educational system is still in crisis despite educational reform policies (White Paper on Guidance, 1993; National Policy on Persons with Disabilities, 2005; Education Policy Paper, 1993 – 2003, the Draft Education Plan 1985 – 1990 and the Vision 2020 document).

In my practice, I continue to observe that adolescents are now faced with many dire situations that are contrary to what the norm should be and which impede their academic progress. For example, malnutrition, depression, abuse, complications during their mother's pregnancies (causing developmental lags), abandonment, feelings of inadequacy, peer pressure and sometimes unrealistic self expectations as well as those from others, to name a few.

In addition, I have noted that delinquent behaviours became further compounded by spates of violence and aggression among students which have spilled over in the classroom, where these students will oft times be labelled as disinterested or "very troublesome". And so, it appeared that teachers were battling every day to counteract the dropout rate and underachievement as well as academic and social complacency and suspected LDs in students.

But despite the research done, I have observed that most teachers still do not appear trained or properly equipped to adequately diagnose and instruct children where affective, social and educative factors hinder their potential, and academic performance. In addition, parents and caregivers may not be aware of where to find a reputable referral to assist with their child's dilemma, or they might simply be in denial, not withstanding that the process of diagnosing a LD may be confusing.

LDs are not intelligence problems. Rather, they are caused by a difference in the brain that affects how information is received, processed, or communicated. Children and adults with LDs have trouble processing sensory information because they see, hear, and understand things differently.

Every year some students continue to graduate without basic literacy and numeracy skills. In fact, Ministry of Education's (MOE) statistics for the Caribbean Secondary Education Certificate (CSEC) General O' Level examinations in 2005, show that more than half of the students from the comprehensive secondary schools failed English A and more than 70% failed Mathematics. Added to this mix are those who are unable to establish and maintain positive interpersonal relationships.

This is where Educational Therapy (Ed Therapy) can play a part in improving schooling. Research indicates that 10% - 20% of all people are born with a specific learning disability (SLD). Even with the provision of effective classroom instruction and high levels of intelligence, these individuals still experience difficulty in reading, writing, spelling, and sometimes in oral expression and understanding mathematical concepts.

These SLDs can then lead to problems in reading comprehension, vocabulary, and the general knowledge gained by reading. The National Institute for Learning Development (NILD), based in Norfolk, Virginia, established Ed Therapy as a means to treat assumed, underlying causes of learning difficulties rather than simply treating the symptoms.

In so doing, it addresses underlying learning skills such as visual and auditory processing, attention and focus, and memory skills on an individual basis. Academic skills such as reading, writing, and math are taught through specific methodologies as weak processing skills are identified and addressed. Students are then trained to view themselves as competent, confident learners (Association of Educational Therapists [AET], 2008).

As such, the researcher was encouraged to continue to examine and assess her own work while considering different ways of improving student academic success and improving self esteem. Thus, the study proposes to explore an alternative educational intervention in order to investigate, define and address students' pattern of learning strengths and deficiencies and suggest a comprehensive approach (using the psycho-educational therapeutic model) to focus specifically on the areas of reading, comprehension and math.

Rationale

The intent of the study is that the research will help to provide clues to a larger and more intensive study, which will hopefully inform and change teacher practices in the future and will hopefully be used as an intervention strategy for disability inquiry in the reading and comprehension as well as

mathematical areas. In other words, the researcher would like to be able to determine how best instruction could be changed in order to impact positively upon students while providing intensive intervention for academic problems such as dyslexia, disorganization and poor studying skills, learning new words, using context clues, and other language disorders related to reading, comprehension and maths problems.

While utilizing information gleaned from Brain-based research, the study would also seeks to suggest a way to utilize students' strengths in order to address academic and processing weaknesses through specialized methodologies/strategies and teaching materials designed to remediate learning problems (Crystal, 2003). In addition, the underlying goal of the study would be to "marry" the concepts of social pedagogy with social education so as to deal with social issues that emerge within the classroom (aggression, violence, empowerment etc) and distract from learning.

Statement of the Problem

When a child is continuing to struggle despite parent-teacher interventions or private academic tutoring, it means that (s)he should be evaluated for underlying learning deficits. Children do not outgrow learning problems as learning problems often develop into social and emotional problems. At the classroom level, these problems further create an environment where low achievers, poor self concepts, indifference, aggression and de-motivation (among teachers and students) appear to be prevalent in the nation's schools (based on media reports and stakeholders' views).

These problems become further compounded because as educators, we need to be cognizant of the fact that a child with a LD cannot try harder, pay closer attention (comments often seen on a child's report), or improve motivation on their own: they need help to learn how to do those things. And so, it was out of a desire to help find a viable solution that this study was born.

Purpose of the Study

The primary objective of this ethnographic case study is to explore and evaluate an alternative educational pedagogic intervention and determine if its implementation will improve functional classroom performance especially for students with LDs, in three co-educational government secondary schools in North Trinidad. In addition, the study proposes to describe the extent to which teachers engage in appropriate assessment strategies in the purposefully selected schools of the study and subscribe to the best practices within the context of their respective school.

Delimitations

This study looks specifically at teachers' perception of strategies used with challenged students and those who are low performers in English and Mathematics, as these are core subjects that all students will have to sit at the relevant examinations (CSEC, NCSE). It is confined to interviewing and observing educators at the forms 1, 3 and 5 points of entry as these are the areas where students sit a national examination (SEA, NCSE and CSEC). The schools chosen for the study were done so on the basis of student academic performance in the core areas over the past three years, student disengagement and rise in student aggression and violence.

Limitations

Because purposive sampling decreases the generalizability of findings, this study will not be generalizable to all schools or all students and as such, the findings could be subject to other interpretations. However, these findings will have implications for other schools.

Since there is no current literature in Trinidad and Tobago concerning Ed Therapy, information gleaned is based on what occurs in the United States. As a result, the researcher liaised with an American educational therapist (whom she had known from a previous acquaintance), affiliated with the University of Florida. And upon her invitation, visited the Learning Development Centre to gain further insight into the nature of Educational Therapy and how it could be adapted to the local context. As such, the study was based upon a theoretical perspective.

Significance of the Study

It is hoped that the research will help to provide clues to a larger and more intensive study, which will hopefully inform and change teacher practices in the future and will hopefully be used as an intervention strategy for disability inquiry in the reading comprehension and math areas. In other words, the researcher would like to be able to determine how best instruction could be changed in order to impact positively upon students while providing intensive intervention for academic problems such as dyslexia, disorganization and poor studying skills, learning new words, using context clues, and other language disorders related to reading and comprehension.

While utilizing information gleaned from Brain-based research, the study also seeks to suggest a way to utilize students' strengths in order to address academic and processing weaknesses through specialized methodologies/strategies and teaching materials designed to remediate learning problems (Crystal, 2003).

The researcher opted to explore teacher perceptions as she hoped to have a better understanding as to gauge the correlation between learning and teaching; learning and assessment and the extent to which students are actively engaged in their learning.

With this in mind, it is hoped that this study would assist in

- investigating underlying issues to learning deficits as a means of improving student academic achievement
- providing further insight into the factors related to academic underachievement and school failure
- making available a framework for policies and programmes designed to improve pedagogic practice in the secondary sector, keeping in mind the child who has a LD
- creating an opportunity for educators in this sector to aspire to subscribe to best practices
- providing a "voice" for participants to become a united voice for school reform and positive change towards nation building (i.e. collaborative and change-oriented) (Creswell, 2003).

A main concern of the researcher was that unless more attention was paid to the underlying issues of the school failure epidemic, the education system would continue to fail our students and they would continue to perpetuate the "pearls offered to swine" syndrome, thus spiralling the system and the nation's children into anarchy.

Finally, the study can help by contributing to the body of knowledge which seeks to explain the extent to which human resource perspectives can help to generate improvement in pedagogic practice in the classroom. In addition, the study is a pioneer one in introducing the concept of therapeutic intervention through Ed Therapy to T&T as a means of innovative pedagogy.

Research Questions

In order to determine whether the intended intervention will assist in improving academic achievement the following overarching question was answered along with the subsequent subquestions:-

Overarching Question: To what extent can therapeutic intervention to pedagogic practice bring about improvement in academic achievement in the schools under study?

Question 1: What is the current state of student academic achievement in the schools under study?

Question 2: To what extent do teachers in the schools under study subscribe to:-

a) best practices in teaching?

b) best practices in understanding how children learn?

c) best practices in assessment strategies?

Question 3: What are teachers' perceptions on therapeutic intervention to pedagogic practice in the schools under study?

Overview of Methodology

The procedures used in this study are dealt with more in depth in Chapter 3. However, a brief overview is presented here.

The study was investigated by the use of four research questions and pursued using a qualitative ethnography paradigm as this strategy of inquiry allowed the researcher to study intact cultural groups (English and Mathematics teachers of forms 1, 3 and 5) in their natural setting (the classroom) over a specified period of time. Data collected was primarily through observations and semi structured interviews (Creswell, 2003) thus allowing the research process to be flexible and evolving contextually in response to lived experiences encountered in the field (Le Compte & Schensul, 1999) while providing a holistic approach to the subject of the study. Since the focus of the study was on exploring teachers' perceptions of Educational Therapy as a means of improving pedagogic practice in the schools under study, a descriptive design was used.

Data collection strategies included purposive sampling using three principals and eight teachers, including the Heads of the relevant Departments, at the various levels of entry previously indicated, in each of the three schools in the study. Participant observation and three in-depth group interviews which lasted for approximately one hour to 1½ hours was also utilized. As the study was grounded in an ethnography paradigm the following data analysis procedures were utilized simultaneously with the data collection process:- line by line descriptive coding, data transcribed verbatim with identified themes categorically organized and data reduction. In addition, triangulation of data, member checks of interviews, observation as well as content analysis was used so as to verify the findings.

Ethical Considerations

In order to address and ensure the integrity of the study the researcher obtained written permission to conduct the study, the participants' rights, interests and wishes was considered and respected, and information gleaned treated with the utmost confidentiality.

Additionally, the research objectives were articulated from the outset so that they were clearly understood by all participants (including a description of how the data was used). Participants were also informed about data collection devices and activities and the final decision regarding anonymity rested with them.

Definition of Terms

Educational Therapy. Educational therapy uses research-based interventions that work to address an individual's pattern of learning strengths and deficiencies. It focuses on building fundamental academic skills, along with cognitive and success training. It is an intensive process of teaching and learning. Each child's program is designed to meet that child's individual needs. Educational therapy strengthens a student's academic and processing weaknesses through specialized methodologies and teaching materials. Teaching is presented in an organized, structured, and sequenced approach (AET, 2009).

Academic Achievement. Academic achievement generally refers to a child's performance in academic areas e.g. reading, maths, science, history etc. In addition, academic achievement pertains to the skills that the student is expected to master in each area (US Department of Education, 2005).

Academic Recovery. When students are performing below the required standard, a comprehension plan is designed and implemented to reduce school failure (Dictionary of Psychotherapy and Social Work, 2007).

Therapeutic Intervention. An intervention or activity aimed at enhancing mental health through one of the following:

a) improving the quality of mental health

b) reducing the negative effects of mental ill health or distress

c) retaining psychological/psychosocial equilibrium

The intervention/activity, in order to be "therapeutic", should have one of the above aims and should have a desirable outcome which is measurable from an objective or subjective viewpoint or both (Dictionary of Psychotherapy, 2009).

Learned Helplessness. Characteristic of some students with disabilities in which they see little relationship between their own efforts and school or school success, often resulting in a belief that they cannot perform challenging tasks (Friend & Bursuck, 2004).

Special Education (SPED). Services offered to children who possess one or more of the following disabilities: specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, multiple disabilities, hearing impairments, orthopaedic impairments, visual impairments, autism, combined deafness and blindness, traumatic brain injury, and other health impairments (Exceptional Learners, 2002).

Learning Disability (LD). A condition in which a student has a dysfunction in processing information typically found in language-based activities, resulting in interference with learning. Students with LDs have average or above average intelligence but experience significant problems in learning to read, write, and/or use the computer (LD Online, 2009).

Inclusion. Term to describe a professional belief that students with disabilities should be integrated into the general education classrooms which meets his/her individual needs and learning characteristics (Friend & Bursuck, 2004)

Specific Learning Disability (SLD). The official term used to refer to difficulties in certain areas of learning, rather than all areas of learning. It is sometimes used synonymously with learning disabilities (LD Online, 2009).

At risk. Term used to describe students who have characteristics, live in conditions, or have experience that make them more likely than others to experience failure in schools (LD Online, 2009).

Maladaptive Behaviours. Undesirable and socially unacceptable behaviour that interferes with the acquisition of desired skills or knowledge and with the performance of everyday activities (Dictionary of Speech Pathology, 2005).

Universal Design for Learning (UDL). UDL provides a framework for creating flexible goals, methods, materials, and assessments that accommodate learner differences (LD Online, 2009).

Pedagogical Practice. This involves developing curriculum intent to provide multiple opportunities for students to engage in intellectually challenging and real-world learning experiences (Dictionary of Language Teaching and Applied Linguistics, 2000).

Social Pedagogy. Social pedagogy is an academic discipline that draws on core theories from various related disciplines, such as education, sociology, psychology and philosophy. Social pedagogic practice is concerned with human beings' learning, well-being and inclusion into society. The term pedagogy is derived from the Greek *pais* (child) and *agein* (to lead, to bring up). As a concept, social pedagogy is founded on humanistic values and an image of children as active agents and competent, resourceful human beings (Cameron, 2004).

No Child Left Behind (NCLB). The No Child Left Behind Act of 2001 is the most recent reauthorization of the Elementary and Secondary Education act of 1965. The act contains President George W. Bush's four basic education reform principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods based on scientifically-based research (Friend & Bursuck, 2004).

Summary

In attempting to address the research problem, it was recognized that attention needed to be paid to the current situation of education within the secondary sector. This was done in order to provide a window to understand the complexity of teaching in an environment that appears to be in crisis. The problem was further compounded by the fact that educators were expected to disseminate aspects of curricula to students who may have learning deficits and who are genuinely unable to cope with the

expectations and rigours of academia. In addition to this, these students are disheartened, disengaged and frustrated within a mire of social crisis which mirrors the situation at the macro level of society.

An attempt was also made to outline why it was thought necessary to undertake the study as well as provide a rationale for its importance. Finally, a brief insight was offered as to the methodology used for conducting the study.

Chapter 2

Review of the Related Literature

Introduction

As the movement in Trinidad and Tobago has begun from Special Education (SPED) to Inclusive Education, there is a need now more than ever for teachers to begin their journey as child advocates to ensure that every child has an equal opportunity to achieve his/her fullest potential. In so doing, the educator has the chance to help mould, shape and cultivate an individual who is self-reliant, resilient, committed to nation building, and who is able to cope with the dynamics of society.

Although the education system was intended to prepare students for fulfilling their roles in society and foster national development, there are many students who still fail to learn what is taught in school, some simply refuse to learn while others engage in violent outbursts. The resulting school failure phenomenon is one that is currently threatening the continued development of the secondary education sector.

This chapter explores the dominant themes related to the research questions and offers insight into the field of therapeutic interventions by introducing Educational Therapy as a viable solution towards addressing the twin problems of academic underachievement and increasing student violence in the nation's schools.

Nature of Academic Achievement

Academic achievement can be defined as excellence in all academic disciplines, in class as well as extracurricular activities (Dictionary of Language Teaching & Applied Linguistics, 2009). It is the

outcome of complex interaction between individuals' aptitude, skills, motivational disposition, and environmental influences and as such is the benchmark by which student performance is assessed. Cawelti (1999) proposes that accurately measuring academic achievement is an important part of

planning for a child's education. However, he cautions that no one source of information should be used to assess academic achievement. A student may demonstrate knowledge on one instrument and not on another. For Cawelti, using good strategies to assess academic achievement from multiple sources will ensure good information and the best possible educational planning.

Research indicates that these multiple sources of assessing academic achievement includes administering standardized tests, analyzing national test results, using informal surveys and looking at grade reports (Cotton, 2003). However, using grades as an indicator for academic success does not necessarily factor in the concept of long term learning or mastery or that a school is achieving academically.

Danielson (2002) suggests that there are certain predictors of academic achievement that needs to be paid attention to in terms of determining school success for adolescents. These variables include geographical location; gender; family and parental involvement; and socioeconomic status. Osuji (1982) concurs and adds that special interest also must be paid to factors relating to individual differences which include self-concept; self-efficacy; personality traits; self-esteem; motivation; career maturity and career interest as well as career efficacy. These elements according to Osuji indicate an adolescent's aspirations with regard to education and career and is affected by the individual's academic achievement.

Shepps-Battle (2008) argues that it is critical to discuss academic achievement and what contributes to the phenomenon of underachievement if the notion is to be understood. He posits that underachievement can be simply defined as academic performance that is significantly lower than predicted, based on some reliable evidence of learning potential. It is reasonable therefore to assume that there exists a range of mild to severe underachievement. He also reported that when the discrepancy appears to be significant to the teacher and/or parents, attention should be given to the student's specific

needs for modification of educational programming i.e. some sort of educational intervention should be implemented.

He also states that a lack of motivation and of environmental nurturance; developmental delays or chronic health problems; specific disabilities; and specific or general academic skill deficits are causes of underachievement. This inadvertently leads to juvenile delinquency and school failure which also leads to early dropping out of school. The 2000 UNDP report, "Youth at Risk" indicated that in Trinidad dropping out began at the primary level and by Form Two in secondary school, 28.2% would have dropped out. Moreover, there is the association of criminal behaviour with school failure as there is evidence that students who do not achieve at school are most likely to become delinquent thus fostering the notion of school failure students.

A profile of school failure students

Hackett, in his 2006 article, *Failing Schools*, identifies failing schools as those which are traditionally viewed as having students perform poorly in standardized national tests – particularly in

English and Mathematics. He recognizes that for schools to be effective, it means that students should excel not only in academia, but should also demonstrate competence in sports and fine arts. Additionally, students should also demonstrate social competency skills which include concern for their fellow citizens, the nation, spirituality and ethical standards.

At-risk students are the ones who are not experiencing success in school and are potential dropouts. They are usually low academic achievers who exhibit low self-esteem. Generally they are from low socioeconomic status families and are at higher risk for school failure. In some cases, their parents may have low educational backgrounds and may not have high educational expectations for their children.

These students tend not to participate in school activities and have a minimal identification with the school. They have disciplinary and truancy problems that lead to other social problems. They exhibit impulsive behaviour and their peer relationships are problematic. Family problems, drug addictions, pregnancies, and other problems prevent them from participating successfully in school. As they experience failure and fall behind their peers, school becomes a negative environment that reinforces their low self-esteem.

Simmer (1983) contends that school failure leads to serious consequences. He maintains that the failing student loses self-confidence, becomes discouraged, decreases effort, and fails further, continuing a downward spiral from which there seems to be no escape. Twenty years later, Subran (2003), agrees with Simmer and asserts that students who experience school failure syndrome often display an external locus of control; believe their success or failure is determined by circumstances beyond their control;

believe they are not inclined to link success to investment of their own efforts; have very little beliefs in their capabilities; have a poor sense of personal responsibility, have no sense of belonging to the school, are not interested in its academic purpose and view the school merely as a venue for socializing and find the formal regime of the classroom to be highly stressful, showing a preference for action.

Ormrod (2008) in his article taken from *Educational Psychology for Developing Learners* also addresses the issue of school failure and reiterates that some students at risk are those with special education needs (SPEDNs). Others may be students whose cultural backgrounds do not mesh easily with the dominant culture at school. Still others may be students from home environments in which academic success is neither supported nor encouraged. What they seem to have in common is that they share a history of academic failure; are older in comparison with their classmates; exhibit emotional and behavioural problems; frequently interact with other lowachieving peers and show increasing dis-involvement with the school.

On the other hand, these characteristics are not meant to be "hard and fast" indicators that a child will fail. Some have little family or peer encouragement for school success while others may have extenuating circumstances e.g. a medical problem or take an outside job to help with family finances. Many are simply dissatisfied with school - they do not do well in their classes, have trouble getting along with classmates, find the school environment too dangerous or restrictive, or perceive the curriculum to be boring and irrelevant to their needs. Others may simply "clash" with the teacher's personality (Hardre & Reeves, 2003).

Robert Slavin, a noted educational psychologist, of the Centre for Research on Effective Schooling gave further insight into this framework by concluding that school failure is preventable. According to Slavin (1994), school failure can be prevented through the following strategies:-

- School-based strategies beginning from pre-school and continuing throughout primary and secondary education (seamless education).
- Pre-school children placed in stimulating, developmentally appropriate settings for some portion of the day – with an emphasis on reading with one-to-one tutoring being used for at risk students.
- The school managed in such a way so as to promote achievement.
- Teachers providing positive feedback and allowing students to experience success by providing them with individual attention and involving them in engaging learning tasks that cater to tactile, kinaesthetic and other forms of stimulation.

He also reported that research indicated that retaining children to repeat classes was worse than promoting them. Similarly, grouping low achievers also confirmed low achievement. He submitted that remedial action should be taken once students are found to be falling behind.

Slavin further recommended that the traditional “chalk and talk” needed to give way to activity methods, group projects, investigations and problem solving techniques. By doing this, he contended that interest would be evoked and the practical importance and application to what is being taught would be demonstrated. In addition, parents needed to set high but realistic standards at home while demonstrating high aspirations for their children. Essentially, parents were charged with the responsibility of showing

belief in their child's ability and providing them with encouragement and an appropriate learning environment.

Cognitive Deficits and Environmental Circumstances underlying LDs

According to current literature in the United States and Canada, children with learning disabilities (LDs) constitute the largest handicapping condition as well as the largest number of underserved students (Friend & Bursuck, 2009). Stanford & Thomas (2000), acknowledge that cognitive difficulties associated with the identification and remediation of LDs are often seen in areas particularly concerning reading, spelling, and math. They posit that an underlying cognitive deficit was a difficulty in reasoning, judgement, intuition and memory, as well as a lack of awareness and insight in a child.

Hudson, Weakley and Firminger (2005) concur and further recommend that cognitive impairment includes difficulty with perception, problem-solving, conceptualisation and attention. These problems were then attributed to result from a range of conditions such as environmental etiologies, Mental Retardation, Autism, brain injury, Parkinson's disease, Alzheimer's and old age. Hudson et al, argue that functional cognitive deficits involve difficulties or deficits including reading problems e.g. dyslexia and attention e.g. Attention Deficit Hyperactivity Disorder (ADHD). In addition, cognitive deficits underscored problems with computations, reasoning, math comprehension, visual comprehension, reading, linguistic and verbal comprehension, organizational deficits and non-verbal learning disorders e.g. difficulty interacting with other children.

Research coming out of Disability World – a disability website – also added that more males than females were affected by cognitive deficits with only 1% - 3% of children being diagnosed. The literature also indicated that many cognitive disabilities have a base in physiological or biological processes within the individual, such as a genetic disorder or a traumatic brain injury. However, other cognitive disabilities were based in the chemistry or structure of the person's brain.

Because learning disorders are commonly manifested during childhood, though not always formally diagnosed, relevant historical information regarding the individual's academic history and learning processes in elementary, secondary and postsecondary education should be investigated and documented. The report of assessment should include a summary of a comprehensive diagnostic interview that includes relevant background information to support the diagnosis.

As such, educational psychologists (particularly those trained in assessment and evaluation) should be a part of the team working in conjunction with the general education as well as the SPED teacher in order to correctly identify students who may have a LD.

The United States Medical Licensing Examination (USMLE) website also indicates that a clinical summary (a well-written diagnostic summary based on a comprehensive evaluative process) should accompany the diagnostic interview and history taking. It is recommended that this clinical summary include:-

- demonstration of the evaluators having ruled out alternative explanations for the identified academic problems as a result of poor education, poor motivation and/or study skills,

emotional problems, attention problems and cultural or language differences;

- indication of how patterns in cognitive ability, achievement and information processing are used to determine the presence of a learning disability;
- indication of the substantial limitation to learning presented by the learning disability and the degree to which it impacts the individual in the situational context ;
- indication as to why specific accommodations are needed and how the effects of the specific disability are mediated by the recommended accommodation(s).

In his 1997 M.Ed. research report, Richard Pressinger, acknowledged that environmentalas well as chemical exposure were factors that can cause damage to the delicate brain growth processes in an unborn child during pregnancy, thereby demonstrating potential to cause LDs, Attention Deficit Disorder (ADD), Hyperactivity and other child behaviour anomalies. He reported that unlike an adult, the foetus does not have a functional blood brain barrier to protect itself from toxic insult. This lack of natural defence then allows chemicals into the foetal brain with potential to cause serious harm and disruption in this delicate brain growth process (Journal of Paediatrics, 1992).

He posits that a number of research studies confirmed that children with LDs and ADD exhibit at least one of several types of damage to the brain structure. According to Pressinger, this can appear as either one or more of the following:

- fewer numbers of brain cells in important areas of the brain
- smaller size of brain cells
- brain cells that migrated to the wrong part of the brain (called dysplasia)
- lower than normal blood flow to specific areas of the brain

- brain cells that metabolize glucose (the brain's primary fuel) at lower than normal levels

He also noted that the effects of chemical exposures can become evident in later years as not only as LDs, attention deficit disorders, and mental retardation but also as personality and behaviour difficulties such as shyness, hyperactivity, aggression or even violent tendencies and lack of conscience (Pressinger, 1997).

Landerl, Fussenegger, Moll and Willburger (2009), however submitted that dyslexia (reading) and dyscalculia (math) were two learning disorders with different cognitive profiles. Common cognitive characteristics of dyslexia included a marked inefficiency in the working or short-term memory system, inadequate phonological processing abilities, difficulties with motor skills or co-ordination and a range of problems connected with visual processing. However, for dyscalculia, these characteristics included a difficulty in learning and remembering facts, executing calculation procedures and understanding basic concepts such as numerosity (Geary & Hoard, 2001).

The literature then suggests that while cognitive profiles for dyslexia and dyscalculia are distinguishable, there still exists a problem of co-morbidity. One possible line of argument is that there are a range of numerical and arithmetical tasks that depend on language. Dyslexia is a deficit in language abilities that affects phonological processing which is known to reduce working memory capacity. This then implies that dyslexics have difficulty with fact retrieval, if these are stored in verbal form, and with multi-digit arithmetic with high working memory load.

The problem, however, with this line of argument, is that dyscalculiacs do not have reduced working memory span (Vaidya, 2004) and there is no qualitative difference between children with both reading and math disability and children with math disability only. In addition, no quantitative differences on tests of arithmetic, or on simple number tasks such as counting and magnitude comparison, were found between dyscalculiac children and those with both dyslexia and dyscalculia when the groups were matched for IQ (Landerl et al).

Importance of Learning Theory in Pedagogy

In psychology and education, a common definition of learning is a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views (Ormrod, 1995). Learning as a process focuses on what happens when the learning takes place. Explanations of what happens constitute learning theories. A learning theory is an attempt to describe how people and animals learn, thereby helping us understand the inherently complex process of learning. There are three main categories or philosophical frameworks under which learning theories fall: behaviourism, cognitivism, and constructivism (Appendix J).

Because most human behaviour is learned, investigating the principles of learning will help educators to understand why students behave as they do. An awareness of the learning process will therefore allow a greater understanding not only of normal and adaptive behaviours, but also of the circumstances that produce maladaptive and abnormal behaviour. As such, more psychotherapy might result from such an understanding.

Moreover, there is a close relationship between the principles of learning and educational practices – as knowledge of the learning process increases, educational practices should therefore, become more efficient and effective. Because individuals differ from one another, these differences may be explained in terms of differing learning experiences which are moulded through the interaction of the environment with the learning process.

Thorndike and Kimble (2002) submit that educational objectives must be within the learner's response capabilities and should be divided into manageable units so that the teacher can apply "a satisfying state of affairs" when the learner makes an appropriate response. As such, learning proceeds from the simple to the complex.

Since each learning experience is unique, then the learning environment has to be arranged so that the desired responses are elicited in the presence of the stimuli to which they are supposed to be attached e.g. through practice (Allen, 2002). Humphrey (2007), also posits that the learning that occurs at one maturational stage is not the same as that which occurs at another stage. She stresses that learning should not therefore be viewed as a unitary process in terms of whether or not it occurs, but should be explored further in terms of how the learning process may change as a function of motivation.

A Brain Based perspective

The teaching and learning process for students with SPEDNs requires the understanding that there should be a balance in terms of an ideal methodological approach. It should be done with the understanding that when choosing an approach, outcome should inevitably guide instructional choice.

To teach all students according to today's standards, teachers need to understand subject matter deeply and flexibly so they can help students create useful cognitive maps, relate one idea to another, and address misconceptions. Teachers need to see how ideas connect across fields and to everyday life. This kind of understanding provides a foundation for pedagogical content knowledge that enables teachers to make ideas accessible to others (Shulman, 1987).

Shulman (1986) introduced the phrase *pedagogical content knowledge* and sparked a whole new wave of scholarly articles on teachers' knowledge of their subject matter and the importance of this knowledge for successful teaching. In Shulman's theoretical framework, teachers need to master two types of knowledge: (a) content, also known as "deep" knowledge of the subject itself, and (b) knowledge of the curricular development. Content knowledge encompasses what Bruner (as cited in Shulman, 1992) called the "structure of knowledge"– the theories, principles, and concepts of a particular discipline.

Especially important is content knowledge that deals with the teaching process, including the most useful forms of representing and communicating content and how students best learn the specific concepts and topics of a subject. "If in-service teachers are to be successful, they must wrestle simultaneously with issues of pedagogical content (or knowledge) as well as general pedagogy (or generic teaching principles)" (Grossman, as cited in Ornstein, Thomas, & Lasley, 2000, p. 508). Shulman (1986, 1987, 1992) also created a Model of Pedagogical Reasoning, which comprised a cycle of several activities that a teacher should complete for good teaching: comprehension, transformation, instruction, evaluation, reflection, and new comprehension.

In recent years, research on how the brain learns has emerged and significantly informed the teaching of students with SPEDNs. Brain-based research (BBR) is therefore supportive of the concept of SPEDNs, in that it suggests different ways of teaching so as to facilitate all within the same framework. It also focuses on what children need to learn and on developing new teaching strategies and arrangements to access the curriculum.

In fact, Kovalik (2003) reported that BBR indicates that

- learning is a function of experience
- emotions are a gatekeeper to learning
- multiple intelligences is used to process information and create product
- the brain's search for meaning is a search for patterns
- learning is the acquisition of useful mental pictures and
- one's personality has an impact on learning.

It is therefore recommended these principles be used in pedagogy as a guide to not only inform curricular but also instructional offerings. With this in mind, the educator is then able to ensure that there is an absence of threat within the classroom; alternatives as to how learning takes place; adequate time to explore, understand and use information; movement to enhance learning; an enriched environment; collaboration; immediate feedback; mastery and application.

Improved understanding which BBR provides thus makes a strong case to better understand not only how the brain works, but of brain impairments. This understanding can then be used as a tool to improve learning for struggling students (Jensen, 2000).BBR, however, does not negate the contributions of other theories to learning, but rather adds to the dearth of knowledge and what teachers should know and be able to do.

Innovative Pedagogical Practice & best practices

According to the Department of Education and Training, pedagogical practice is defined as a means of developing curriculum intent to provide multiple opportunities for students to engage in intellectually challenging and real-world learning experiences. Effective teachers then use an array of teaching strategies because there is no single, universal approach that suits all situations. Different strategies used in different combinations with different groupings of students will improve learning outcomes. Some strategies are better suited to teaching certain skills and fields of knowledge than are others. Some strategies are better suited to certain student backgrounds, learning styles and abilities.

Effective pedagogy, incorporating an array of teaching strategies that support intellectual engagement, connectedness to the wider world, supportive classroom environments, and recognition of difference, should be implemented across all key learning and subject areas. Effective pedagogical practice then promotes the wellbeing of students, teachers and the school community - it improves students' and teachers' confidence and contributes to their sense of purpose for being at school; it builds community confidence in the quality of learning and teaching in the school.

As such, the ultimate goals of pedagogical practice should be concerned with the essentials of learning which include lifelong learning; developing social competence and meeting complex, real-life challenges (National Research and Development Centre for Adult Literacy and Numeracy, 2007).

The Centre for Research on Education, Diversity & Excellence (CREDE) focused on improving the education of students whose ability to reach their potential is challenged by language or cultural barriers, race, geographic location, or poverty. An important facet of CREDE's work then, is the development of a pedagogy that has been proven to be effective in educating all students, especially at-risk students. CREDE also offers a Five Standards for Effective Pedagogy model (Appendix N) that does not endorse a specific curriculum but, rather, establishes ideals for best teaching practices that can be used in any classroom environment for any level or group of students.

Cartwright, Cartwright & Ward (2005), also submitted that educators use a productive pedagogy framework which allows teachers to choose and develop strategies appropriate to what they are teaching, and the variable styles, approaches and backgrounds of their students. Teachers can then use the Productive Pedagogies framework to focus instruction and improve student outcomes.

In the Hong Kong Study Centre, Second Information Technology in Education Study (SITES), six (6) productive and *innovative* pedagogical practices were identified:- project work, scientific investigations, media production, virtual schools/ online courses, task-based learning and expository teaching. The term 'innovative' is often used to address new pedagogical methods and creative educators who represent a deviation from traditional didactics (Kőrös-Mikis, 2001).

According to Kőrös-Mikis, for educators to be considered innovative, they must strive to actively engage their students in learning activities that promote reform. For Kőrös-Mikis, pedagogical practice only becomes innovative when a teacher uses resources (especially that of technology), materials, methods, principles and explanations (to name a few) that have not been employed before. The secret to innovative pedagogical practices, therefore, lie in the fact that it provides something new to the existing practice.

Assessment strategies for the LD child

Hills (1992), describes the major purposes of assessment in programmes for children as including instructional planning and communicating with parents; identification of children with special needs (Appendix R) and programme evaluation and accountability. The fundamental nature of assessment therefore, is to let the teacher and student know how well the learner comprehends the material being taught. It provides both general and specific feedback (that is timely) and suggests corrective measures in order to improve achievement.

What educators should then strive for in their classroom assessment is an approach to assessment that creates activities that students regard as naturally motivating. This thus includes designing assessments that are fair, challenging, and respectful of students as learners. Students would then view them as being logically related to the instruction they have been receiving. They would be learning experiences in themselves, and educators would be encouraged to think about every assessment from the students' perspective before implementing it (Smith, Smith & De Lisi, 2000).

For the LD child, assessment then becomes the bridge between identification and intervention.

Assessing students with LDs can be a challenge; however, the objective is to provide the students with an equal opportunity to demonstrate their knowledge, skill and understanding as it pertains to a particular subject matter (Appendix P).

Hallaran & Kauffman (2006) also posit that there is a range of inclusive assessing practices which will enhance the learning of all other students in the class but for the LD child particular adjustments will have to be made for assessment tasks. Friend & Bursuck (2009) also recommend the use of a collection strategies (authentic assessment) for assessing students with LDs that include: graphic organizers; interviews; observation; performance tasks; creative performances and exhibitions; self and peer evaluations; learning logs and journals; student-led conferences and portfolios.

The strategies are then tailored to suit the specific need and disability of the child. In this way, educators differentiate instruction so as to maximise learning so that each child has an opportunity to showcase their strengths and work collaboratively while developing their socialization skills.

Social Pedagogy

The term social pedagogy has been used to describe a range of work straddling social work and education. It has its roots in German progressive education - and is sometimes translated as 'community education' or 'education for sociality' (Crystal, 2009). Its theories are rooted in the belief that the upbringing of a child is not only the responsibility of parents but a shared responsibility of society

(Appendix M).

Many of the ideas that informed debates around social pedagogy in the late nineteenth century began to influence developments in American educational thought. Social Pedagogy was thus viewed as a child-centred theory and became established as social education in America.

As a result, social pedagogy is a 'function of society' it reflects how a given society at a given time thinks about education and upbringing, about the relationship between the individual and society, and about social welfare for its marginalized members.

It is based on humanistic values stressing human dignity and mutual respect, trust, unconditional appreciation and equality – concepts that seem to be a foreign entity for many young people. Overall, social pedagogy aims to achieve:-

- holistic education – education of head (cognitive knowledge); heart (emotional and spiritual learning) and hands (practical and physical skills)
- holistic well-being – strengthening health-sustaining factors and providing support for young people to enjoy a long-lasting feeling of happiness
- to enable children, young people as well as adults to empower themselves and be self-responsible persons
- to promote human welfare and prevent or ease social problems (Wikipedia, 2010).
-

Dewey (1916) championed the cause of social pedagogy by claiming that the experience required for learning was participation in community life (community was defined by Dewey in terms of sharing in a common life). Thus, his classroom was to be a community in itself - a place where there are group activities - where people cooperate. Teachers were to join in with the activities - to take part in a common endeavour. A critical point here is that Dewey saw the environment as *social* as people learn through interacting with a social environment.

The idea aroused considerable interest amongst UK educators - especially those operating within what might be called the informal education tradition. Perhaps the most significant shift in terms of practice was the re-conceptualization of youth work – youth development – as social education during the second half of the 1960s.

For a significant period 'social education' became the dominant way of describing both the content and the process of youth work. However, it was subject to some critique and gradually became less

prominent - especially as 'informal education' came back into use and gained a stronger theoretical base (Smith 1988).

The notion of social education (as being concerned with the relationship we have with ourselves, others and the world) also became an aspect of debates concerning schooling. As such, social and personal education, then social, personal and health education (PSHE) became part of the curriculum of many schools. Clinical practice was infused and became mainstream to assist students with psychological

disorders which hinder student performance (Smith 2002).

Therapeutic Intervention

Therapeutic Interventions (TIs) strive to meet and strengthen students at their point of social and academic need while maintaining a mainstream school placement. Its goals are to improve attendance and to enhance academic performance, problem solving, conflict resolution, and anger management skills while improving student-teacher relations. As such, the primary emphasis of TI is collaboration, as a team, with the family, school, and community with the desire being to keep children in the least restrictive learning environment (LRE – mainstream school setting) and avoid off-site school or out of home placement (Therapeutic Interventions website, 2010).

Moreover, the students who would most likely benefit from a TI are the individuals

- who demonstrate a mental, behavioural or emotional illness resulting in significant impairments in major life activities
- who display deficits in social skills, peer relations, dealing with authority and impulse control
- disrupting their own learning as well as the learning of other students
- with hyperactivity, depression, and/or marginal connection with reality.

Rowan (1998) asserts that dealing with children who have emotional and social problems is one common use for a TI and that even pre-schooler can benefit from certain types of behavioural intervention. He recommends that children who have LDs including those who suffer from a “failure to

thrive" syndrome may also benefit from the interpersonal support offered by an intervention specialist (Appendix O).

Myrick (2005) concurs and concludes that TI in the classroom can assist students with problem solving, self analysis, developing coping skills, as well as stress and anger management. However, she stresses that for a selected TI to be successful, teachers and administrators need to work closely with the school's counsellor as a social worker so as to help solve issues as they emerge.

Thompson-Prout & Brown (2007), argue however, while most learning disorders stem from information processing deficits of assumed neurological basis, concomitant problems in self-regulation and social interaction may exist, yet do not constitute a learning disability. They further posit that TI for children with learning difficulties has moved beyond remediation of their cognitive deficits to addressing the social and affective effects of learning disabilities.

Educational Therapy

The Association of Educational Therapists (AET) is a national professional organization first formed in California in 1979 to meet the needs of a subgroup of special educators whose work melded the clinical with the educational models of intervention. This clinical teaching model, brought to America from Europe in the 1940s by pioneers like Marianne Frostig, Katrina DeHirsch and others, was inspired by the work, called *heilpedagogie*, of August Aichorn in Vienna. Many of these practitioners, in preparing for this unique pedagogy, had independently trained themselves from the course offerings of two or more disciplines, from fields such as special education, psychology, speech/language, and child

development.

Because of the lack of specific university training programs offering this sort of multidisciplinary curriculum, as well as uncertainty in America about the definition and domain of the practice of educational therapy, AET was established as a professional organization to formally define Ed Therapy and to establish principles of practice and standards for academic and experiential training needed for such practice.

AET defines an Ed therapist as a professional who combines both educational and therapeutic approaches for evaluation, remediation, case management, and communication/advocacy on behalf of individuals of all ages with learning disabilities or learning problems (Appendix Q).

Standards of practice and ethics were codified by AET and have become the foundation for professional membership. Supervision and continuing education provided by the association offer both neophytes and experienced practitioners alike the opportunity to supplement and expand training in those areas most needed.

AET has worked in partnership with several major universities and colleges to develop training programs specific to the needs of educational therapists. These model programs have been refined so that they can be implemented throughout the country as well as provide curriculum for delivery through Distance Learning over the Internet. The goal has been to assure that Ed therapists have skills in the

following psycho-educational therapeutic processes:

- formal and informal educational assessment;
- synthesis of information from other specialists;
- understanding the client's psychosocial context of family/school/-community/ culture;
- development and implementation of appropriate remedial programs for school-related learning and behaviour problems;
- strategy training for addressing social and emotional as well as academic aspects of learning problems;
- formation of supportive relationships with the individual and with those involved in his educational development;
- facilitation of communication between the individual, the family, the school, and involved professionals.

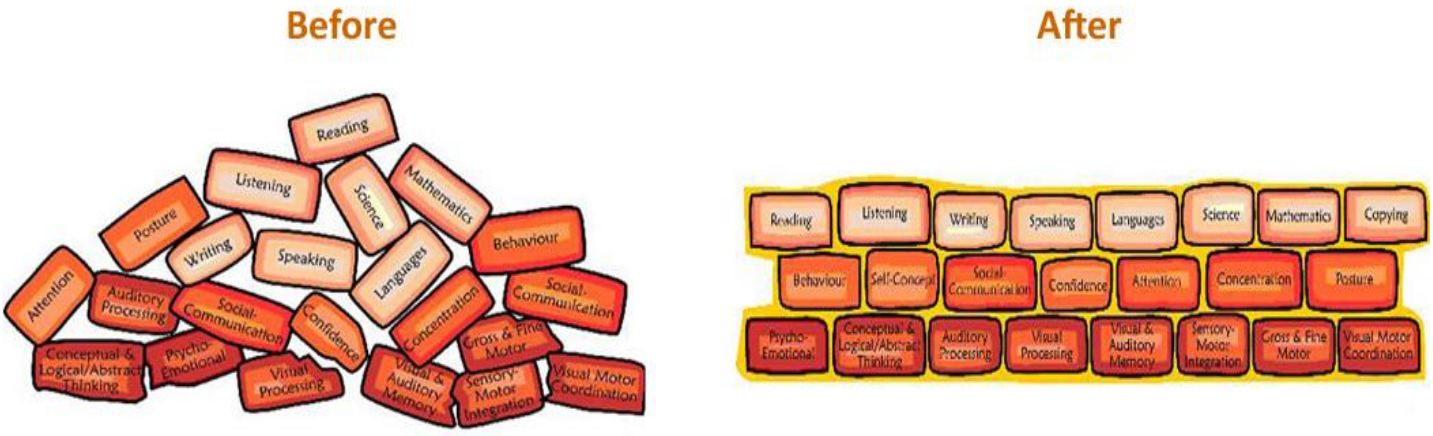
Excerpted from Ungerleider, D. & Maslow, P. (2001). "Association of Educational Therapists: Position Paper on the SAT." Journal of Learning Disabilities, 34, 311-314.

National Institute of Learning Development's (NILD) Educational Therapy

Learning is a dynamic and interactive process, but for many students it is just plain hard work and frustration. When the tools for learning are not readily accessible, both students and teachers become discouraged. NILD has developed specific, multi-sensory, multi-faceted programmes to help students learn and think effectively, especially those with learning difficulties.

The four elements represented within the figure eight (cognition, academics, perception and emotion) emphasize NILD's comprehensive approach in developing the ability to learn, as it is believed all learners can be taught to think better (NILD, 2008).

Because deficits in perception and/or thinking skills (cognition) impact the learning process and create uneven academic performance. The learning process is depicted below as a wall of various components or academic building blocks. Perceptual and cognitive skills form the foundation. If any areas, such as visual/auditory memory or abstract/logical thinking are vulnerable, the wall is unstable, all academic areas become affected, and future learning is diminished.



Educational therapy helps to strengthen perceptual deficits and thinking skills, evening out and thus strengthening the wall, while making the learning process functional and efficient. Students are then able to learn independently. Like physical therapy or speech therapy, NILD Educational Therapy boosts weaker or vulnerable systems.

NILD Educational Therapy is unique because it is:-

- Deficit Stimulated: Strengthen learning skills that are weak
- Non-Tutorial: Learning skills, not specific content
- Integrative: Stimulating both perceptual and academic skills
- Individual and Intense: Affecting lasting cognitive change through skilled mediation between therapist and student
- Non-Compensatory: Intervention to strengthen a weakness rather than merely to compensate and it can be used for
- All Ages: Enhancing thinking for individuals at all stages of life

Ed Therapy uses research-based interventions that work to address an individual's pattern of learning strengths and deficiencies. It focuses on building fundamental academic skills, along with cognitive and success training. Ed therapists provide individualized intensive interventions with a student with learning challenges, using both therapeutic and educational approaches. These learning challenges include (but are not exclusive to) children and adults with learning disabilities, dyslexia, ADHD, speech and language difficulties, low vision, hearing impairment, and those who struggle academically (AET, 2009).

It is an intensive educational intervention beyond what tutoring focuses on as it provides educational and therapeutic approaches to helping students throughout the learning process. In this way, the students are assisted not only with specific subject material, but it also allows for the Ed therapist to take an active role in the evaluation, assessment and remediation process (Dictionary of Psychotherapy & Social Work, 2007).

Therapy goals include building self-esteem, developing learning strategies, improving the learning process, developing confidence, building automaticity. They also include attaining mastery level reading, writing, and math skills. Its purpose therefore, is to strengthen a student's academic and processing weakness through specialized methodologies and teaching materials. In addition, Ed therapy may be used to develop a relationship which enables the child or young person to feel more settled in the classroom, while exploring and resolving the emotional difficulties which inhibit learning, and encouraging the child to make emotional and social progress. As such, teaching is presented in an organized, structured, and sequenced approach.

Identifying a student who may need Ed Therapy

There are a number of ways to identify whether a student needs Ed therapy. A student may be identified with a LD by a teacher, psychologist, speech and language specialist or school personnel. Otherwise, parents and teachers should watch for students who have:

- difficulty with maintaining concentration
- problems remembering facts
- delays in learning language
- problems paying attention
- taking an extreme amount of time and parent support to get homework tasks done
- low self esteem
- difficulty with handwriting and grasping writing utensils
- difficulty with auditory processing
- difficulty staying on task
- lacking awareness of physical surroundings

- problems with impulse control
- resistance in going to school
- trouble interacting with peers or participating in normal childhood activities or
- feelings of anxiety, tension and/or depression (Lynn Popp, 2009, Board of Certified Educational Therapists).

How Ed Therapy differs from tutoring and classroom teaching

Ed therapy addresses underlying learning skills such as visual and auditory processing, attention and focus, and memory skills on an individual basis. Academic skills such as word retrieval, reading, writing, and math are taught through specific methodologies as weak processing skills are identified and

addressed. The Educational Therapist teaches skills necessary for learning to read, write, calculate, and problem solve. The focus is therefore on skill-building by addressing the specific needs of the student (Learning Centre Foundation, 2009).

Tutoring and classroom teaching, on the other hand, focuses on re-teaching academic subjects and helps with homework. They follow the pace and content of class materials and place emphasis on helping the student keep up with the classes. In addition, there may be the tendency for a teacher to rely mainly on a text book to teach to a large group.

How Ed Therapy can help children with LDs

Through skilled assessment, case management, and alternative teaching methods, Ed therapy empowers children and adults with learning disabilities and other learning challenges to learn and develop optimally.

The goal of NILD Ed Therapy therefore, is to help students develop tools of independent learning in the classroom and in life. It is not only for students with LDs, as all learners have strengths and weaknesses. Even children who excel at school may want to learn new and more efficient ways of producing academic work. Sometimes these students are not being challenged in the general education classrooms and are looking for enrichment material.

It can provide new learning experiences for children both with and without special needs. The intention is that students in Ed Therapy receive two 80-minute sessions of intensive therapy per week. This can be either in individual or small group settings. These sessions include a variety of techniques designed to address students' specific areas of difficulty and to improve their overall ability to think, reason and process information. As such, techniques emphasize basic skill areas such as reading, writing, spelling and math, applying reasoning skills within each area. The focus of the therapy then, is the development of clear, efficient thinking as it teaches students how to think rather than what to think (metacognition).

It is skill-oriented, improving basic learning skills so students can learn and retain content. Students will be better able to:

- stay focused on the teacher's voice
- accurately hear and remember what the teacher is saying
- read visual information on the board, transparencies, or computer screen
- understand the main points of what the teacher is saying and decide the significant information to record
- remember how to spell the words being recorded
- record information legibly

- have a sense of social awareness (Fickman & Adelizzi, 2010).

The focus of the intense individualized sessions is on continual mediation and stimulation for developing deficit areas of perception, basic skills and critical thinking skills. The ultimate goal of Ed therapy then, is to mediate the child's learning through process stimulation; a step-by-step approach to developing basic skills and strategy development so that the student can apply his/her learning to real life situations. All of these components are then integrated to allow the student to become an independent and successful learner in the classroom and in life. However, the program requires a team effort between home and school, with the Ed therapist and classroom teacher(s) being partners with the parents. Parental involvement is critical to the student's progress as they are the beneficiaries.

Most students develop a more positive self-image rather quickly after beginning the programme as it provides a trusting, safe, and challenging learning environment. The student learns through experience that he/she is bright and capable of learning, even in the areas that are difficult. Students and parents also participate in writing annual goals and are given explanations to help them understand why some areas are difficult and what is needed to succeed. Independence, therefore is stressed as a vital part of the intervention.

Current status of Ed Therapy

Although the use of NILD Ed Therapy has grown substantially since its inception more than 25 years ago, the organization has not yet established programme efficacy. Neither of the studies previously completed (Benson & Scott, 2005; Hopkins, 1996) gained professional recognition, which has created a problem for NILD. Because these studies, as well as accumulated anecdotal evidence, appear to suggest efficacy for the NILD program, the organization would like to continue to move beyond private schools

and offer programs in public school and community-based settings. The current educational environment, however, increasingly demands validated, empirical research. Not having an empirical research base has made it difficult to find entrance into the public arena, suggesting the necessity for the NILD program to have a comprehensive, well-designed study that attempts to establish the efficacy of the intervention.

However, in 2002 following NILD's 20th anniversary celebration in Orlando, FL, the board of directors approved VISION 2020 to include the development of a community-based model to serve students outside a private school setting and in other schools and private settings. At that conference Dr. Kathy Hopkins, NILD's Executive Director, launched the vision that by the year 2020, one million students will have been impacted by NILD's methods and intervention. Discovery Program, Inc. is the prototype of the community-based model currently serving a wide area within the cities of Hampton Roads.

In 2007, progress was marked by significant changes, including research and development with group models of intervention, expansion of the community based model, and an online component to courses offered.

Summary

The research and literature reviewed, showed that understanding the phenomenon of academic achievement and the factors that hinder it, can impact upon the nature of teaching and learning style as well as assessment.

The literature and research findings also confirmed that there is a need to re-conceptualize how children effectively learn and perform. In addition, it served as a guide to make the reader aware that a number of structures and policies should be implemented before any steps can be taken towards facilitating and fostering student academic achievement.

It was also concluded that within the framework of therapeutic intervention, there was a need to advocate for a social pedagogy in order to achieve holistic education and well-being. It must be noted however, that the literature indicated that the educational background and training of teachers was critical to effective pedagogical practice.

It was also recognized that there are many students in the system who may have cognitive deficits which impact negatively on the learning process. Ed therapy, as a therapeutic intervention could positively contribute to student academic achievement in T&T as it could be used for all students to foster independent learning. The overall position, therefore is that it can help educators cope with the current dilemmas of low student performance and student violence.

The selected themes in this chapter were guided by the research questions and used as an attempt to better understand the child who struggles to learn and why (s)he might have difficulties doing so. By profiling the school failure child, it makes it easier for educators to spot warning signs and make the necessary referrals. Because of deficiencies within the system, Ed Therapy was suggested as an alternative pedagogical practice to alleviate the problem and lend itself to a successful application of therapeutic intervention.

Chapter 3

Methodology

Introduction

The study is a qualitative one steeped in the tradition of ethnography. This approach was used to address the issue of academic underachievement in English and Mathematics in forms 1, 3 and 5. It thus, relied primarily on conceptualizing the feasibility of adapting therapeutic intervention through Ed Therapy as seen through the perspectives of teachers.

This chapter provides a description of how the research design in the study organized the sampling procedure, data collection and analysis to answer research question 3.

Research Design

Rationale for the use of the descriptive approach

The descriptive method of research was used for this study. To define this type of research, Creswell (1998) stated that the descriptive method is used to gather information about a present existing condition. Emphasis is on describing rather than on judging or interpreting. The aim of descriptive research is therefore to verify formulated hypotheses that refer to a present situation in order to elucidate it. The approach is quick and practical in terms of the financial aspect. Moreover, this method allows a flexible approach, thus when important new issues and questions arise during the duration of the study, further investigation may be conducted.

On the other hand, it is a type of research that is mainly concerned with describing the nature or condition and the degree in detail of the present situation. It is used to describe the nature of a situation, as it exists at the time of the study and to explore the cause/s of a particular phenomenon. Its aim then is to obtain an accurate profile of the people, events or situations (Creswell, 2003). With this research type, it is essential that the researcher already have a clear view or picture of the phenomena being investigated before the data collection procedure is carried out. The researcher used this kind of research to obtain first hand data from the respondents so as to formulate rational and sound conclusions and recommendations for the study.

The Theoretical Perspective

The style of the study was taken from a theoretical perspective for a number of reasons. The most crucial one being that no literature on educational therapy or therapeutic interventions exists in T&T. Although it has existed within the United States for over 25 years, it is an unheard of phenomenon in the local and regional context.

Another reason for choosing this slant is that it can be used to gain basic understanding of a physical process (educational therapy) where further predictions can be made and verified through observation (Popp, 2010). After enough data is obtained, a theoretical study is needed to gain knowledge and understanding of the specific phenomenon. Wagner (2007) opined that theoretical research also provides accounts of social phenomenon in terms of diversity and is based on three components – a set of interrelated theories; a set of substantive and methodological working strategies used to generate and

evaluate these theories and a set of models for empirical investigation and analysis based on these theories.

A theoretical perspective thus became necessary to understand the phenomenon of educational therapy – what it is, why it works, who it is for and how it may be tailored to suit the local context in the traditional English and Mathematics (core subjects that each student has to sit at a national examination) classrooms.

Theoretical study also allowed for a detailed description of a lived in experience supported by scientific research and helped address causal conceptual relationships – in this case, how a child's cognitive deficit impacts on learning, how educators viewed the LD child and how they accommodated that child's learning style. A theoretical view of educational therapy provides the answer to how this can be done to ensure inclusion and adds to the knowledge base of literature that currently exists on inclusive education in T&T.

Justification for a Qualitative Approach

The qualitative paradigm was chosen as it was seen as "richer, more vital, having greater depth and was more likely to present a true picture of life, of people's experiences, their attitudes and their beliefs" (Haralambos, Holborn, and Heald, 2000). In addition, a qualitative approach made it possible for the investigator to construct a complex, holistic picture, analyze words, report detailed views of participants, and conduct the study in a natural setting (Creswell, 1998).

Since data in qualitative research paradigms are essentially presented in words, statements or appraisals (Charles, 1995), the study used focus groups in order to capture data and present findings in a narrative form.

Rationale for Triangulation in the Qualitative Paradigm

Verification of the findings was conducted through the use of data triangulation, member checks of interview transcriptions and content analysis. Bryman (1988) reported on the advantages of triangulation with respect to the qualitative paradigm. This study was specifically concerned with the following:-

1. Qualitative research can be use to formulate hypotheses which in turn can be checked by quantitative methods and
2. Qualitative research can be used to explain further why certain variables are correlated. Barker (1984), Corrigan (1981) and Delamont (1976) all use triangulation successfully in their studies.

Ethnography as a Strategy of Inquiry

The study was grounded in ethnography because this deals with culture. In this case, it is the culture of the schools being studied and how it impacts upon the academic achievement of its students. An ethnography approach was also selected on the basis that it is geographically situated and is problem or topic oriented (Schensul, 2005). It involves participation in the life of the "community" and may contribute to issue clarification or point to directions for targeted social change.

Ethnography also involves research in a natural setting while using the concept of culture as a "lens" through which to interpret results; face-to-face interaction with participants; an accurate reflection of participants' perceptions and behaviours; inductive, interactive and recursive data collection; utilizes multiple sources of data and frames behaviour and action in socio-political and historical contexts (Schensul, 2005).

The researcher adopted the stance of the social anthropologist in order to fully describe the school's climate, culture and social issues that plague youths and inhibit learning while maintaining social distance as a participant observer. The social anthropologist's job therefore, was to report on the beliefs of the people within the lived experience (Association of Social Anthropologists, 2010) – in this case, the perceptions of teachers on educational therapy.

Rationale for the Focus Group Interview and School Selection

The focus group approach was selected as it was viewed to be the most economical as information could be readily derived in a time-saving manner at low cost. In addition, focus groups allows the interviewer to become an active participant rather than merely an observer. Besides providing a wealth of qualitative information, focus groups flexible format allows the facilitator to explore unanticipated issues, and encourages interaction among participants while allowing them to provide checks and balances, thus minimizing false or extreme views (McLafferty, 2005).

Three focus group interviews were conducted in order to conform to the requirements of the research project while engaging in triangulation to identify differences and similarities between two

former senior comprehensive schools and a newly de-shifted former junior secondary, as these were schools identified (from statistics obtained through the Division of Educational Research and Evaluation, DERE) as having a presenting school failure issue. In addition, the schools were selected as they were in close proximity to each other and therefore accessible to the researcher. For ethical reasons, the schools in the study were classified as School A, School B and School C according to the order of the interviews. Participants were also assigned a Study ID# for confidentiality purposes.

Another reason for school selection lay in the fact that senior comprehensive and junior secondary schools were the ones where students from the lower socioeconomic areas originated and were the ones who received the majority of students who had achieved less than 30% in the SEA examinations. They were also the ones profiled as having multiple disciplinary problems. School type as well as locality was pivotal in determining which schools to choose as these two factors are indicators of school underachievement (Thiesen et al, 1983).

Variables in the study

The study was concerned with the independent variable of school climate (as seen in the context of the organization and described as a micro level). In addition, a dependent variable of teacher efficacy which was further categorized into five sub-variables as 1) best practices in teaching 2) best practices in assessment strategies 3) best practices in understanding how children learn 4) academic achievement in subject discipline and 5) professional/personal development.

Limitation of the Study's Design

Because there is an absence of literature about therapeutic interventions and Educational Therapy in T&T, the study was based upon a theoretical perspective which did not lend itself to an actual intervention (practical considerations) being implemented in the schools under study.

Sampling Procedure

The study was conducted using purposive sampling. **Kerlinger (1986)** explained purposive sampling as another type of **non-probability** sampling, which is characterized by the use of judgment and a deliberate effort to obtain representative samples by including typical areas or groups in the sample. He further opined that the power of purposive sampling lies in selecting information rich-cases, for in-depth analysis related to the central issues being studied.

Creswell (2003) also commented that the idea behind qualitative research is to purposefully select participants or sites that will best help the researcher understand the problem and the research question(s).

Snowball sampling (a method used in anthropology where the researcher can ask individuals to name others who would be candidates for the research) was also used. This method is appropriate when anthropologists study a small population because people need to know a majority of the population in order to name appropriate candidates (Bernard, 2002). And so, the relative HODs were asked to identify persons who were interested in Special Education (SPED) and learning about alternative methods of pedagogy.

Participants were chosen on the basis that they had more than five years teaching experience. In most cases, they were trained teachers (possessed a Diploma in Education) with 3 teachers having attained a Masters degree (2 had their Masters in Special Education). One of the teachers at School A, an Art teacher (Teacher #20100322006) who was not part of the original sample, but was interviewed as she had expressed an interest. She has a Masters in Special Education and had been exposed to Educational Therapy before and was able to bring valuable insight to the group discussion. Two of the participants from the sample were still classified as Teacher I (possessed a Teaching Diploma at the primary level).

After distributing questionnaires, the HODs randomly selected both males and females who were interested in participating in the study. At School B however, since the staff is predominantly female (with both English and Maths departments being all female), there was no male perspective to be obtained about the phenomenon under study in that school.

The Target Population

As previously indicated, data from DERE (2007 – 2009) revealed that the selected schools are in crisis in terms of academic achievement. Today's secondary schools are asked to assume responsibility not only for academic skills, but also for the development of character, civic virtue and artistic talent (Danielson, 2002). Moreover, educators and members of the public have finally begun to take seriously the repercussions of failing to meet the needs of the at risk child. With this in mind, the study therefore targets all low performing students in public secondary schools as well as all secondary school teachers in T&T and it is within this context that the accessible population was recognized.

The Accessible Population

The study's accessible population consisted of Principals, HODs and teachers drawn from 3 co-educational government secondary schools in North Trinidad. As such, the population was represented by 24 teachers and 3 Principals as depicted in Table 1. The sample structure for schools which involved principals and teachers is indicated in Table 1.

Table 1

Structure of the sample used

Category	**Number**
Schools	3
Principals	3
Teachers	23
Potential number of Respondents	72

Table 2 provides insight into the response rate of principals and teachers at the different schools.

Table 2

Response rate of Principals and Teachers per school

School	No. of Principals	No. of Teachers in English Dept	Teacher Response	No. of Teachers in Math Depart	Teacher Response	% Teacher Response	% Principal Response
A	1	16	5	13	3	27.6%	100
B	1	14	4	6	3	35.0%	100
C	1	14	4	13	4	29.6%	100
Total	3	44	13	28	10	31.9%	100%

The Sample

The sample was particularly organized to facilitate the objective of cross-checking. It was an attempt to use principals and teachers to verify the trustworthiness or acceptability of their respective perceptions on the factors which can assist in describing the school climate and the level of academic achievement in their respective schools as well as social, emotional and behavioural student problems which hinder effective teaching and learning. An attempt was also made to establish some form of representativeness or trend among the former senior comprehensives and junior secondary schools with implications for all secondary schools in the target population.

Sample Type

For convenience, (accessibility and researcher mobility), three schools were selected on the basis of purposeful sampling. Anderson and Burns (1989), argue that purposeful sampling allows the researcher to concentrate resources on a few cases when resources are limited. It is to be noted that the 24 teachers among the selected schools were absorbed into the sample by a simple sampling process. One participant opted to withdraw from the study from the onset for medical reasons.

The process was affected by those who were willing to participate, had over 5 years teaching experience and possessed a Diploma in Education (Dip Ed). Principals were selected by virtue of their positions as heads of the schools in the sample and to provide an alternative means of acquiring the required data for the study as this was deemed crucial to effect the method of triangulation utilized. Schools were selected as comparison groups, and teachers as members of these groups.

Teacher Characteristics in the Sample

Tables 3, 4 and 5 were provided only as a means to convey a comprehensive understanding of teachers involved in the sample. The variables presented in them were not for analysis, but to give insight into the characteristics that supported the notion of representativeness of respondents.

Table 3 provides insight into how teachers in the sample were distributed according to gender and age while Table 4 indicates the length of teaching experience of teachers per school and Table 5 displays the distribution of the sample teachers' qualifications.

Overview of Teacher Characteristics in the Sample

Table 3

Distribution of Schools by Gender and Age of teachers in the sample

School	**Male**	**Female**	**20 – 30 yrs**	**31 – 35 yrs**	**36 – 40 yrs**	**41+ years**	**Total**
A	3	5	1	-	1	6	8
B	0	7	1	2	4	-	7
C	4	4	-	1	2	5	8
Total	7	16	2	3	7	11	23

The data above indicated that more female teachers than males were interviewed with the predominant age group being > 41 years old while the youngest was between 20 – 30 years of age. No males were interviewed at School B as both departments are all female. School C was the only institution where the researcher was able to gather perceptions from an equal number of male and female participants.

Table 4

Length of Teaching Experience of Teachers by school in the sample

School	**A**	**B**	**C**
< 10 years	1	3	1
11 – 15 years	1	4	2
16 – 20 years	-	-	1
>20 years	6	-	4
Total	8	7	8

The teachers with the highest numbers of teaching experience came from Schools A and C respectively. School C's teachers' experience was stretched over the full spectrum indicated on the questionnaire. As School B recently had a "turn over" of teaching staff, none of the teachers at the school had over 15 years of experience.

Table 5

Distribution of qualifications of teachers in the sample

Academic Qualifications	**No.**	**Professional Qualifications**	**No.**
B.A.	2	Teachers' Dipl (Pri)	2
M.A. / M.Ed.	3	Dip Ed	16

Note:- Code

B.A. – Bachelor of Arts M.A. – Master of Arts

M.Ed. – Master in Education Dip Ed. – Diploma in Education

Teachers' Dipl (Pri) – Teachers' Diploma (Primary School)

The above data indicated that the majority of teachers in the sample were in possession of a Dip Ed. Certificate and were therefore considered trained secondary teachers while the same number of teachers had a first degree or had previously taught in the primary sector.

Principals in the Sample

The 3 principals interviewed consisted of 2 females and 1 male. All 3 principals had less than three years service as principals but have been teaching for over 20 years. Their ages ranged from late 40s to middle 50s. They each have first degrees and post graduate degrees at either the M.A or M.Sc. level along with a Dip Ed, and are considered experienced principals.

Schools in the Sample

School A consisted of 80 teachers with an equal mix of male and female teachers. It is a school that had been recently de-shifted from its former junior secondary status to a 5 year school. Both HODs of the English and Math departments are female and have been teaching for over 20 years. It was also one of the schools earmarked to become a single sex (female) school from academic year 2010 – 2011.

School B has a teaching staff of over 100 teachers but is predominantly female. It is a 7 year school and was a former senior secondary comprehensive. Both English and Math departments also have female

HODs who have been teaching for about 15 years and are in their late 30s. Most of the members of both departments are Dip Ed trained and 2 members of the English department are currently pursuing their Masters, one is a Dean. School B had also been earmarked to become a single sex (male) school.

School C is also a former senior comprehensive school so data triangulation took place in terms of making comparisons and contrasts between the two schools as far as research question 2 was concerned. It has a population of about 100 teachers. However, it differs from Schools A & B in that the teachers form both departments are predominantly male, with the English department having a female HOD. Both HODs have been teaching for over 20 years.

Limitations of the Sampling Procedure

Because the participants are volunteers, the consequence is that an unknown portion of the population is excluded. Since more female teachers opted to participate the male perspective obtained cannot be generalized. Student views were also not taken into account. As a non-probability sample was used, it did not allow the researcher to calculate sampling statistics that provide information about the precision of the results.

Data Collection Instruments and Procedure

The data collection instruments used in the study was a questionnaire and an interview protocol. The questionnaire was used specifically for demographic data and to ascertain teachers' perceptions and the interview protocol to explore teachers' perceptions of academic achievement in English and Mathematics in the sample schools.

A survey (patterned after the Likert Scale Questionnaire) was used to obtain demographic information as well as to ascertain teachers' views on academic achievement in their respective schools and in their subject areas, their views on the importance of knowing how children learn and their speculations on the viability of using a therapeutic intervention as an avenue for pedagogic change. The questionnaire was designed after the Likert Questionnaire as it is an inexpensive form of obtaining quantitative data about a person's attitude towards an existing phenomenon (Anderson & Burns, 1989).

The Questionnaire

The questionnaire (Appendix C) designed by the researcher, consisted of 16 questions with two sections. Section One consisted of 10 items and asked for demographic information so as to better describe the attainable population used in the sample. Table 6 represents the subdivision of the questionnaire into two sub-scales categorizing the data collected.

Table 6

Questionnaire Items by Sub Scales

Section	Item Nos.	Variables
1	1 - 10	Demographics
2	11	Attitude towards overall academic performance in subject area
	12	Attitude towards subscription of best practices in particular department
	13	Knowledge of support systems in place to cater for the LD child
	14	Thoughts about the importance of whether or not teachers need to understand how students learn
	15	Attitude towards using therapeutic interventions in the regular classroom
	16	Attitude towards adopting educational therapy to the local context in terms of promoting academic recovery

Section Two required information about the teachers' personal thoughts, ideas and feelings about the specific phenomenon (school failure). This section was included so as to give the researcher a clearer idea of the cultural context of the situation and teachers' willingness to aspire to become innovative practitioners by learning about an alternative pedagogic practice.

Interview Protocol for Principals

An interview protocol (designed by the researcher), was done with the principals in mind so as to triangulate data collected and compare with that collected from teachers as an alternative mode of data collection. Table 7 gives an overview of how this interview protocol was mapped to the research questions and the related variables involved. Research questions were mapped to questionnaire items. See Appendix D for full interview protocol.

Table 7

Relationship of Principal Interview Protocol with Research Questions

Research Question	Data Tapped	Interview Protocol Items	Variables
1	Perceptions about school climate; the level of academic achievement in the school; teacher commitment to the school and student learning	1, 2 & 3	• school climate • academic achievement in subject discipline • teacher commitment • teacher efficacy
2	Ideas on inclusive education; practices implemented to include LD child; best teaching practices, assessment strategies and teachers understanding of how children learn	5, 6 & 8	• best practices in teaching • best practices in assessment strategies • best practices in understanding how children learn
3	Thoughts on leadership style; recommendations for improving academic achievement	4, 7 & 9	• teacher development

Procedure Used in Instrument Administration

The researcher paid at least four visits to each school to meet with Principals and HODs to inform about the intended study. During this time, the researcher took the opportunity to glean information about the school's culture and their views on academic achievement at their respective schools. Statistics from

the past three years in the SEA, NCSE and CSEC examinations were also provided during these visits (Appendices F, G and H respectively). The questionnaire was distributed (with the Principals' permission) to the respective schools (within the departments of focus – English and Mathematics).

Informal meetings were held with each department in each school to debrief them in terms of the nature of Ed therapy and how it works. A video obtained from the University of Florida's Speech Pathology department was also viewed by participants, as well as a 9 minute video downloaded through YouTube. At this time teachers were invited to question the investigator about what they saw and heard. 24 teachers from the 3 schools responded favourably to participating in the study.

A consent form (Appendix B) designed by the researcher was distributed to the teachers in the sample for their written consent to participate in the study. This was signed and dated by each participant who was then assigned a Study ID# for confidentiality purposes. The form was then countersigned by the researcher, dated and a copy was then given to each participant for their personal records.

Interviews were scheduled at the earliest convenience of the teachers. Internal arrangements were then made to have classes supervised for at least two periods (the duration of the interviews) while the focus group interview was being conducted.

Questionnaire Administration

At the final visit the questionnaire was administered. Its purpose and significance as well as the rationale for each item were explained to each teacher and their concerns addressed. Participants were also assured of complete anonymity and confidentiality before responding to the questionnaire which took about 15 minutes.

The Focus Group

The research issues were investigated through four research questions (see Chapter 1). Data collection was derived through the use of three focus group interviews, participant observation, audio recordings and the investigator's field notes. Krueger (1994) describes the focus group as a viable alternative to the traditional one-to-one interview and sees it as being "a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non threatening environment".

The goal of the focus group therefore, was to elicit a discussion which allowed the researcher to view the situation from the participants' perspectives, and probe both the cognitive and emotional responses of participants while observing the underlying group dynamic. Since participant observation is steeped in ethnography, this form of data collection was utilized as data obtained via participant observation serve as a check against participants' subjective reporting of what they believe and do. Through participant observation, the researcher was also able to uncover factors important for a thorough understanding of the research problem.

The Interview Protocol

Goetz & Le Compte (1984) identified the focus group interview as being most helpful to qualitative research methodology. They report that such interviews make available insights and perceptions that might not be otherwise available to the researcher.

An interview protocol consisting of 11 (See Appendix E) questions was used in order to obtain teachers' perceptions. Questions were based on the research questions. Table 8 is an overview of how the interview protocol was mapped to the research questions and the related variables.

Table 8

Relationship of Interview Protocol with Research Questions

Research Question	**Data Tapped**	**Interview Protocol Items**	**Variables**
1	Perceptions of academic achievement in forms 1, 3 & 5; factors contributing to school failure and knowledge of what other departments are doing to improve student academic achievement	1, 2 & 3	• School climate • assessment strategies • academic achievement per discipline

2	Strategies to generate student learning; outcomes; description of successes/failures	4, 5 & 6	• best practices in teaching • best practices in assessment strategies • best practices in understanding how children learn
3	Attitude towards incorporating alternative clinical intervention in teaching/assessment strategies; Willingness to learn about therapeutic interventions (educational therapy) and include in lesson planning; Thoughts on extent to which therapeutic intervention to pedagogic practice can bring about academic recovery;	7, 8, 9, 10 & 11	• teacher efficacy • teacher professional & personal development

The duration of each interview with teachers was approximately 1 – 1½ hours. Principal interviews lasted about 45 minutes. An interview protocol characterized by open-ended questions was used. The instrument was administered (one designated day per school) during a double period at each school while principal interviews were conducted before the start of the school day.

The venue for teacher interviews was the school's library as it afforded a measure of privacy for participants to voice their opinions freely while principal interviews were conducted in the principal's office. The researcher had to make many adjustments in terms of scheduling especially for the principals. At times there were various interruptions (telephone calls, teachers, students, the secretary, parents etc) while the interview was being conducted.

Nevertheless, once participants were actively engaged, a rich flow of interaction resulted. Participants were very cooperative and enthusiastic and the principals even shared personal administrative problems with respect to their school.

Copious notes were taken by the researcher during (observation) and after each session (field notes). Notes were also derived from audio recordings of the interviews, interactions with the participants and the transcribed interviews. An Emic orientation (insider's perspective) was also used. Lenkeit (2002), reports that the Emic perspective tries to understand a culture through its own lens as it pertains to viewing each behaviour, ritual and practice independently of other cultures viewpoints. This was done with a view of understanding what happens in other schools of similar type and how differing learning styles co-exist in similar school cultural climates.

Instrument Validity and Reliability

For the questionnaire, reliability was tested through internal consistency method as questions that measured the same concept were grouped accordingly. As such, only one administration of the instrument was necessary (Creswell, 2003). Survey research presented all subjects with a standardized stimulus, and so went a long way toward eliminating unreliability in the researcher's observations. Careful wording, format, content, etc. also reduced significantly the subject's own unreliability.

Reliability and validity in the use of the interview was achieved through the use of the interview protocol as well as a scheme of factors (which was distributed to participants and detailed on the consent form) to be considered for evaluation by the participants.

In addition, both the questionnaire and interview protocol were systematically correlated to the research design, literature review and research questions of the study. Moreover, all data were collected from people intimately involved within the secondary system – principals and teachers – and who had experienced school failure in the form of academic underachievement. Anderson and Burns (1989) also remind us that once the criteria for appropriate structure with respect to questionnaires and interviews have been met, there should be no problems with validity.

Triangulation – a crucial research strategy of the study – was also a direct check on the validity of teachers' and principals' perceptions as the investigator was able to cross-check data collected from one group against that collected from the other. This was also done via member checks and content analysis of interviews. Participants were also allowed to review their transcribed information for purposes of member checking.

Data Analysis

Introduction

Data presented as findings from the field research was qualitative in nature using a Grounded theory approach to analysis. This was considered necessary so as to fulfil the prerequisites for triangulation. Data derived from the questionnaire was descriptively interpreted to analyze data collected. The Miles and Huberman (1984) three stage process for qualitative data analysis – data reduction, data display and conclusion and verification was used.

The researcher looked at specific words and phrases used by participants in the process of data reduction (Creswell, 1998). The process of reducing data initially involved a thorough reading of all data collected so as to gain a better understanding of the phenomenon. Raw data were read several times and the researcher's personal thoughts were also recorded within the transcribed interviews, using information from the literature as a triangulation source. A descriptive coding method as described by Neuman (2003) allowed the researcher to condense mass data into categories. This type of coding also gave the option of creating 8 new themes in subsequent analyses.

Codes were highlighted and themes differentiated and classified according to factors contributing to academic underachievement; problems faced by teachers in the classrooms; their recommendations and their perceptions of Ed Therapy. Themes were then linked to patterns as they related to research question 3.

The researcher also opted to utilize the principal data analysis method for case studies –

- **O**bserve -- initial observations were made and tentative hypotheses formulated.
- **T**hink -- consideration was made of what additional information needed to be collected to rule out alternative explanations or confirm initial hypotheses.
- **T**est -- additional information was collected through subsequent observation or review.
- **R**evise -- analysis of subsequent observations and review occurred, and initial hypotheses re-examined (Merriam, 1998).

As such, analysis conducted was an iterative process whereby initial observations were reflected upon so as to shape subsequent data collection. As such, the OTTR process was continued until the initial hypothesis (that Educational Therapy could be a viable alternative towards academic recovery within the secondary school sector) could be confirmed or until an alternative explanation was required to accommodate new data. Finally, the compressed data were organized according to the major categories identified and displayed in a manner facilitating ease of observing patterns related to perceptions.

Data Presentation Procedures

In presenting the data, a descriptive approach was used. Data was obtained from teachers through interviews. Responses to the research questions were organized according to emergent themes and presented by way of verbatim respondent statements. Verification of findings was conducted through data triangulation, member checks of interviews and content analysis.

Summary

The study was a theoretical ethnography which involved purposive (for schools and teachers) sampling procedures. A questionnaire and focus group interviews were used for data collection in addition to participant observation and audio recordings. Qualitative data analysis techniques, were applied in keeping with the study's design. Triangulation was also utilized. This involved using member checks of interview transcriptions and content analysis of data collected to help establish the reliability of findings.

Chapter 4

Data Analysis, Research Findings and Interpretation

Introduction

This chapter presents the findings of the study which were based on the viability of adapting a therapeutic intervention model to the local educational context. Questions from the interview protocols for both principals and teachers (see pages 131 – 132), in addition to the responses that respondents provided, were mapped to research question 3 – **What are teachers' perceptions on therapeutic intervention to pedagogic practice in the schools under study**. An analysis of these responses from group discussions revealed an emerging pattern indicating factors that negatively impacted upon student academic achievement as well as proposed reformation measures (as revealed by respondents). These factors were then categorized by the researcher under two major headings with a listing of themes (so named from *actual* words used by respondents) that emerged from the analysed data and outlined in Table 9. Each theme was then elaborated upon and interpreted in relation to the research question.

Table 9

Emergent themes categorized

Major Category	Emergent Themes
Gaps in the system	• lack of parental involvement • lack of personal value of education • lack of connectedness between curriculum and student ability • lack of social skills training leading to emotional deficit in students • bombardment of external and internal factors
Reformation measures	• training and development of teachers and teacher attitude • using technology in the classroom • adapting therapeutic intervention and Ed therapy

Research Findings

On the basis of the emergent themes, the researcher concluded:-

1. that there still existed definite gaps within the secondary sector (despite reform attempts) and that these gaps continued to put the nations' children at risk for underachievement and increasing violence in schools
2. that there was a need to advocate for new approaches to education by way of new teaching models committed to the social transformation and inclusion of all children in the

classroom and

3. that new reformation measures needed to take into consideration the emotional and cognitive psyche of the child in order to maximise student efficacy as well as focus teacher training and development on fostering innovative best practices.

Gaps in the system

Lack of parental involvement

Respondents divulged that this was the biggest problem they encountered on a daily basis, especially with students who gave "the most trouble" in the classroom. They believed that because many students did not get (or scarcely got) any support from their home environment, that this was a major factor in their disengagement from school and academic studies. Teachers felt that some parents were uninvolved or gave little support at home because they did not understand the type of work their child was doing; they themselves could not read or felt burdened when they had to take time off to visit the schools, which resulted in loss of income for that period.

Teachers reported that parents needed to "come on board" where their child's education was concerned because they conceived that parental interest and involvement was associated with higher student achievement outcomes. The problem however, was **how** to get parents to be accountable.

They believed that most parents "needed to see the long term picture" and they (teachers) were at a loss as to how to change parents' minds about the value of an education as some only sent their child to school because it was the law. Teachers also unanimously agreed that "student achievement improved in a home environment that encouraged learning."

Mr. 003 (School C) agreed with this statement and reflected, "I used to teach abroad and I can honestly tell you that an academically stimulating home environment is one of the chief determinants of learning." Ms. 004 from the same school concurred and added "that parents needed to provide materials that stimulated intellectual development."

Teachers also felt that while there were some parents who were interested in their children's welfare, due to their financial situation, were unable to afford extra lessons to cater for their child's deficit or afford to pay for services (SPED) to assist with their child's learning problem. Thus, teachers'

concerns bordered on not only knowing and understanding which aspects of parental involvement helped student education but also just what components of this involvement were most important to academic achievement (Appendix L).

Principals also opined that there were two vital aspects to encouraging more involvement by parents in their children's school lives. Principal B (School B) laments:

> Parents need to be involved and show an interest... this means dat they have to invest a lot of time in reading and communicating with their child. I think dat there are more subtle aspects to parental involvement for example, parents' style and their expectations. I think dat this would have more of an impact on these children's educational outcomes right?

Principal C (School C) identified three areas that she believed was crucial for any educator to know and understand, in order to acquire parental support and involvement:

> Before we can move further? We first need to get parents' beliefs about what is important...about what is necessary and permissible for them to do with and on behalf of their children ok? Secondly, we need to find out the extent to which parents believe that they could have a positive influence on their children's education good? Thirdly,..um...I think we need to get from parents *(pause*), their feelings...their thoughts on the fact that their children and the school want them to be involved.

And Principal A (School A) observes:

> To be an effective principal you MUST interact with parents and the community so that you can communicate your vision for your school, get input, and ensure that the resulting goals are understood. That home-school-community link is vital and has to be re-established if we are to stand a chance of improving our student outcomes.

Where therapeutic interventions were concerned, teachers and principals opined that they thought that it would help increase parental accountability as parents would be critical to the multi-disciplinary team, and actively involved in the planning and implementation stages of their child's work programme.

Lack of personal value of education

Teachers revealed that most of the students with whom they interacted did not see education as being important. Principal A reflects:

> Besides coming from LES families, their homes were very unstable – most live with one parent who works so there's no adult supervision...others have to work to help to subsidize family's finances.

Principal B stated, "some parents/guardians/caregivers are illiterate themselves so there's no assistance in terms of school assignments" while Principal C observes:

> Some parents are disinterested in learning and so dissuade their children from pursuing higher education...in some cases they allow the children to sell their bodies to make ends meet, they abuse and neglect them, and force them to become street children...so de cycle of poverty, abuse and destitution continues.

Teachers speculated that it became increasingly difficult for children "to get turned on to learning" when they could readily make money without a basic education. That it was difficult for them to function in school when they were hungry, starved for attention or afraid. That it was difficult to impossible to motivate male students when the curriculum failed to address male underachievement or as in the case of School B, where male students "accused" teachers of being gender biased and setting essay topics that only girls were interested in writing about because the department was solely female.

And so, they (students) took it upon themselves to find other avenues of interest during their English classes. They were also "turned off" from Math because they felt that it was a subject for only "bright" students – meaning girls. Teachers generally felt that students perceived education as:

> A waste of time...that it was not important in the grander scheme of things because dey come from backgrounds where education is NOT a first priority... dey don't see the sense of it...academics is NOT on their vital or survival list....

Within the English departments, teachers even believed that at one time the illiteracy rate was high, but had since changed this opinion as they realized that the problem was not that the children could not read, but that they DID NOT WANT TO because the level of student interest was low. They concurred that the whole level of academic pursuit simply was not there.

Some teachers believed that therapeutic intervention through Ed therapy would be "a welcome reprieve" because it would:

> Help children become self-sufficient and encourage them to become self-directed learners...it would help dem to develop a habit of mind tuh cause dem tuh become critical thinkers, problem solvers, persistent learners and to think outside de box.

Others felt certain that therapeutic intervention and Ed therapy would "use students' interests to motivate them and keep their interests while keeping them engaged in meaningful learning.

Lack of connectedness between curriculum and student ability

Respondents deemed this as being crucial to understanding why students were continuing to fail in academic subjects like English and Mathematics. They felt that generally the problem of indiscipline in the former senior comprehensive and junior secondary schools stemmed from "a mismatch with curriculum and student ability."

Mr. 007 (School A) bemoans the fact that what occurred in his school:

> Is not like in other schools like Valencia High an' ting where dey offer dose subjects and dey are selling it at a level so dat dey are able to meet the children where dey are at and we are NOT doing dat. Dey have like...like a formula...an academic formula and dis is NOT working for dese children who are NOT de top academic performers.

Principal C asserted that external examining bodies, as well as internal ones (the school) needed to do more to meet students at their level where examinations are concerned and have appropriate certification to match students' ability. Ms. 005 (School B) also shared this opinion and added, "Everyone has their individual approach to teaching...learning...assessment. But teachers are continuing to fail children with LDs because their strategies are not tailored to children's needs."

Generally, teachers reported that the current English and Math curricula needed to be "re-vamped" because the learner type in the classroom had changed and they believed that other avenues should be sought to support the students' needs. As Mr. 006 (School C) mused, "Maybe we need to think

differently...to teach differently...so they would learn differently." Principal A also agreed that teachers needed to learn (in some circumstances) how to differentiate instruction.

Ms. 006 (School A) was very vocal on this subject and advocated for a universal design to learning:

> We can't continue to go with a one-size-fits-all template any longer. It's an inflexible and ineffective model...so...um...we need to have a universal design for learning and give the child who has a LD a fighting chance.

Ms. 006 (School B) concurs:

> Yuh cyah fix poor academics wid more academics...there's more than one way to learn. Our students fallin' behind and dey not learning wid traditional methods... if dey was...den...den...dey woulda be succeeding right? Dere is also more than one way to assess...an' we can do so while improving dey self esteem yuh know?

Teachers asserted that it was this perceived mismatch that was responsible for the students being unable to handle the rigours of academic subjects thus frustrating them and causing them to feel "locked down." They speculated that "something was radically wrong with our educational system" as some children seemed to have a deep seated psychological fear of reading and doing Math – creating an image of learned helplessness. And as educators, they felt that we now had to "look at alternatives to get answers."

When interviewed on the subject, Principal B concluded:

> We now have to change our thinking and teaching...and maybe clinical practice is the way to go to ensure that children master knowledge and can transfer it creatively...

while Principal A reflected:

> Curriculum officers need to sell the subject they're offering at a level so that They are able to meet the children where they are at and we are NOT doing that. The academic formula that is being used is NOT working...

and Principal C believed :

> Students cannot see the linkages between what dey are studying and real life...that is the problem and so they cannot progress... We continue to fail our students because we are NOT meeting their needs. Learning MUST be meaningful.

Lack of Social skills training leading to emotional gap in students

More English teachers than Maths teacher felt that there was a lack of social skills training from the home leading to an emotional gap in students. These teachers claimed that because so many of these children suffered from underlying learning deficits, they were "emotionally and socially traumatised" by

parents/guardians/caregivers who neglected their emotional needs. And who did not teach them "the value of self discipline or self control".

Principals reasoned that these students needed assistance to channel their frustrations and anger in addition to learning how to cope with their emotional issues. This, they reflected is where the system also failed as it did not take into consideration the emotional needs of students. Many students, according to teachers had not learnt how to balance their emotions because "they have not been taught that emotions can be defined."

Mr. 002 (School A) suggests:

> Dese things affect learning. Dey have not been taught good social skills or to socialize with a class of different children or perhaps children of de same variation...of de same kind of behaviour. Dey don't know how to deal with dese things and so stray from de intellectual...um academic focus....Dey come from a very poor affectionate environment.

Ms. 008 (School C) agreed with this notion and suggested that "children needed to be emotionally comfortable in order to learn." The general feeling was that because children were entering the classroom with a lot of emotional "baggage" then a therapeutic intervention was needed to equip them with the coping skills required for emotional and social survival. Ms. 003 (School B) concurred and states:

> We need to give dem a sense of purpose when dey come here right? An' I think that therapy could be some sort of...um...catharsis? Right? It could be used like dat fuh dem. If we use dat wid...wid..wid de...um...anger management and conflict resolution? Den hopefully, de emotional, social and behaviour would be addressed?

Ms. 006 (School A) agreed and adds:

> What the Ed therapist does is to put together a plan for the child's success using info from that child's background – social, behavioural, educational, psychological etc. So a profile is put together and strategies given to the teacher.

while Mr. 002 (School C) concludes:

> I tink that Ed therapy can help children who are depressed – many come from broken homes, low socioeconomic status and are culturally and socially deprived – if these issues are dealt with in therapy?...it could only help reduce anxiety.

Moreover, teachers were of the opinion that ministry's resources needed to be integrated. They believed that the Ministries of Education, Health and Social Development needed to consult and collaborate to assist the LD child and maximize learning potential. They reported that "clinical intervention could only help towards social integration but we also have to look at health issues".

Bombardment of external/internal factors

Teachers believed that other factors besides the child's capabilities were at play thus accounting for the phenomenon of school failure. Factors cited included the child's socialization (at home and school); unstable and dysfunctional homes, a history of mental and emotional disorders, peer pressure, sexual exploration and the media which they opined, negatively influenced the child's demeanour to the extent that it distracted from the student's goal and he/she was unable to focus on school work. Teachers reflected that these were the defining factors that created indiscipline in the classroom.

Mr. 001 (School A) reports:

> The child is being bombarded by a number of external factors as well as internal. De internal factors actually deal with de child's capability. Um...drawn from information what she/he inherited and de child's exposure to de external factors which I would like to look at from the home....Siblings, parents... ahm... parent type...um neighbourhood...um de nation at large...de mass media...um international
>
> media...exposure to peers....exposure to schoolmates...ahm...classmates (their different backgrounds)...teachers. So de child...um...our children are exposed to these things as others are...but because (is my hoping)...but because of their socio-economic status and because of what we have been reading....their hereditary factors governed by...by bloodline...family line...um...what they haven't inherited...their temperament...their disposition...their capabilities...um...whatever problems are discovered...psychotic problems...Yuh see all dese factors...dey influence of de external factors seem to be

weighin' down on our children such dat they cannot focus well on dey education.

Teachers who shared his opinion further clarified that students were not achieving because they were too distracted by external things which they felt they needed. Ms. 005 (School A) endorses this by stating:

> There is also a sexually charged atmosphere...not only operating at dis school but nationwide. You find dat they are seriously distracted and once children are seriously distracted, dey are not going to take in academics which has a different slant altogether. Instant gratification...some food, clothes, friends, laughter, love is what is important. Basic language is sufficient. Dey looking for other things to make dem happy an' dat is why dey have no discipline.

Principals also reported that they felt that school climate and environment played a part in student/academic achievement. Principal A divulged that he believed a "safe and supportive school environment in which students have positive social relationships and are respected, engaged in their work and feel competent, matters."

Principal C agreed, stating that unfortunately at her school, the quality and character of school life "undermines children's development, learning and achievement", while Principal B acknowledged that "school connectedness is a powerful predictor of adolescent health and academic outcomes, violence prevention and as a protective factor in risky sexual, violence, and drug-use behaviours.

They speculated that since the students were "indisciplined" due to social, emotional and behavioural problems, then Ed therapy would greatly assist because it dealt specifically with other underlying learning deficits. Principal C opined that she thought that by dealing with the root cause, then Ed therapy would "turn the tide on indiscipline." Principal B also shared this belief stating: "We really need an intervention here...serious intervention...not just in academics, but in emotional...um...social behaviour too."

She added that she believes that a therapeutic intervention would also:

> Assist principals to further empower their staff through shared leadership and enhance participative decision-making thus establishing and maintaining a truly collaborative school culture...It can help us to become more effective because we would be at the centre of curricular and instructional improvements in de school.

Reformation Measures

Training and development of teaching staff and teacher attitude

Teachers felt that they needed to be empowered within the classroom and that they needed to be aware of "de different aspects of de chile." Some believed that they were being "stalemated by de very children" they were trying to reach and that indiscipline was further facilitated by teachers because they continued to fail to meet children's needs. Others thought that a teacher's negative attitude towards LD students accounted for the child's own disengagement in English and Math and low student interest in these areas. This attitude (unwillingness to embrace change), they reasoned, was also what made it difficult for policy to be made and implemented because "teachers do not support teachers".

Mr. 002 (School A) laments:

> A lot of teachers are ill-prepared to deal with the chile who has extra baggage....it is a culture shock for dem tuh deal wid chirren who have learning and behaviour problems. Some cannot handle discipline...when dese young teachers have tuh face chirren like dat?...dey go take ah whole set ah sick leave an' stay home...ah doh even kno' whey tuh start tuh begin tuh help an' ah jus' fed up...I better leave teaching before I an' all trip on some chile...imagine we have some behbeh chirren an' no remedial teacher. STEUPS!! I NOT trained fuh dat!!!"

Teachers were concerned that they lacked the necessary knowledge and training required to do more good than harm to the LD child. Even though they believed that all learners can achieve – and that they would respond best to the teacher who showed a genuine interest in their welfare – they felt that they lacked the understanding of the range of learning problems (that began to manifest in the classroom) and the skills needed to assess these children.

Ms. 001 (School B) agreed with this revelation from the others and opines:

> Is not just about money but about an attitude that MUST permeate...teachers MUST have it...then we can transfer it to the children...whatever it is that we have to give...they will learn...we as teachers have to re-train our mindset that children nowadays CANNOT learn the way we did."

Ms. 006 (School A) concurred and further states:

> We fail to realize that we are teaching for transformation and social change... we also need to recognize our limitations and set high but realistic standards...we HAVE to be integrated...in our mind sets...our expectations...we need to teach with meaning...we are supposed to be integrated but we are FAR from that!"

Principals acknowledged their teachers' feeling *"POWERLESS"* to help children with learning problems as they not only lacked training in this area but also the knowledge, time and resources to do so. In addition, they speculated that another missing ingredient from the recipe was a lack of the knowledge of resource personnel. Despite the fact that the Student Support Systems had been active since 2004, it was ironic that teachers felt that there was no real support system in place.

Moreover, teachers felt that dealing with the social, emotional and behavioural problems being manifested was taking too much time from regular classroom activities, and even if they had the information concerning LD students, they would not know what to do with it as there was no one to theorize and corroborate with. Ms. 004 (School C) observes:

> A lot of time is taken from effective teaching so maybe de deans should be the ones to specialize in therapy? You know?...since dey have tuh deal wid all kinds of discipline problems anyway...We as teachers are not really addressing the REAL problems...we don't know how...an' it's too hostile an environment for a child wid so many problems...who would we go to? Ah mean...where to get de

help from?

Principals also reasoned that there a need for more guidance officers and social workers to be assigned to these schools not only because of the size of student population, but also because of the type of issues that were emerging and inhibiting effective teaching and learning as too many children were "slipping through the cracks and deviancy was continually rising.

In retrospect, while sharing their concerns, teachers also reflected on how they thought therapeutic intervention would be able to assist. Ms. 004 (School A) speculates:

> I like the idea of Ed therapy because our chirren would be screened for more than just hearing and sight...we are not aware of behaviour problems right?...until dey act out...so maybe dis can help us be better prepared?

Ms. 002 (School C) reasons:

> I believe that Ed therapy can assist me with strategies to tailor assessment to individual needs and show me what can be done to help students in my content area.

while Mr. 001 (School C) opines:

> It can help us to spot warning signs AND give ideas as to what we can do in the interim. You know?...De way I see it?...the therapist?"...can adapt the curriculum and help us to assess accordingly for dyslexic and dyscalculiac students.

Ms. 005 (School B) claims:

> We need to re-think what we're doing – how and what we teach and what type of materials and resources we use...we also need to consider the students' ages so that we can plan around their interests and needs.

And Ms. 006, (School B) concludes:

> If there is somebody to tell me that dis is de way one learns and dis is de way you should approach methodology and delivery?...I am now able to change my teaching style so that de greater majority receives me?... den I'm willing to learn and adapt...I'm ALL open...de challenge is tuh adopt what works and tailor it to our situation...it's NOT an impossible ting... we jus' have tuh be open tuh de change...and it can only help me tuh develop personally and professionally so dat I can reclaim my classrooms cuz right now? chirren who doh have any problems in a MINORITY...so dat jus'

> tells yuh dat we REALLY badly off an' is now time fuh change...if we continue tuh do nuttin'...den we continue tuh be part ah de problem... We need to be open to alternatives to help our practise...dis means COMING OUT OF YUH COMFORT ZONE!!!

Importance of merging Technology in the Classroom

Teachers who identified technology as being an important and necessary tool to improve student achievement were the ones who had previously used various forms of technology in their classrooms or had been trained in using technology in education. These teachers felt that since children were living in a technology age then lessons using various media should be employed and adapted into lesson plans so as to differentiate instruction.

Mr. 002 (School A) opines:

> Dese chirren cannot read or write print material. Dey born into a world of technology so why not use it? Dis is what dey know. Yuh kno' what ah mean? We have tuh get with it as teachers and use what dey kno' in de classroom.

Mr. 003 (School C) corroborates this and adds:

> I would prefer to use technology to teach my subject cuz when students use technology as a tool or...or...or a support for communicating with others? Dey

> in ah active role den (pause)...not passive...yuh know? Passive?..Um...if dey passive den dey only receiving information dat a teacher or textbook can give. If we use technology for lessons den students can ACTIVELY make choices about how to generate, obtain, manipulate, or display information. Right? Um...more children would do dis. An'...an'..an'...more important dan dat, students would be in ah position tuh define dey own goals, make decisions, and evaluate dey own progress.

However, besides having a lack of computers available to do many interactive sessions, teachers were also burdened by the physical space and layout of the classrooms. In addition, the overcrowding issue did not lend itself for many opportunities to use technology. As Ms. 004 (School B) states:

> The problem is that the classroom is too small to house so many children along with the technology like multi-media projector and in some cases it is even too dark...'cause of de lighting... to see what you're doing...An' some classrooms?...Dey eh even have outlets....so wha' yuh go do?

It was generally believed that the use of technology in lessons would not only benefit struggling students but also those without learning difficulties. In terms of Educational Therapy, teachers saw technology being used as an Assistive Device as its use would also change the role of the teacher who become more of a coach and a facilitator instead of a dispenser of knowledge.

Moreover, it would lead to more cooperative learning approaches while keeping students actively engaged on task, motivated and building their self esteem. Teachers also expressed the idea that using technology in the classroom would allow students to experience greater success as they would be using their abilities (strengths) to work around their disabilities (challenges).

The "flip side" that some teachers expressed with regards to using technology was that it tended to impede creativity. They felt that students would watch a movie rather than read the book being studied; use e-speech e.g. text messaging and abbreviations; students would prefer using email rather than write a letter. They felt that its use was good as an alternative but felt strongly that students had lost the art to spell, write, research etc so there was still a need for traditional methods of instruction to be used.

Principals also revealed that they felt burdened by the fact that funds were not released so as to ensure that computers and lab equipment were purchased. In addition, there was no internet access so teachers were unable to use interactive online strategies as part of their lesson planning.

Teachers' perceptions of Educational Therapy and adapting therapeutic intervention

While all participants agreed that they would like to learn more about therapeutic interventions in pedagogical practice, there were concerns about the practicality of trying to adapt clinical practice to the local context. In addition to working out the logistics of its implementation, participants were favourable in their evaluations of the likelihood of having something like this revolutionize the educational system. One teacher even equated it to Star Trek stating that therapeutic intervention would "take teaching where NO teacher has ever gone before".

Teachers generally felt that the therapeutic intervention being investigated – Educational Therapy – would assist students in teaching them how to learn while developing processing skills, academics and cognitive abilities. Moreover, they speculated that they appreciated the fact that besides assisting with inclusion of the LD child and integrating students' strengths with teaching styles, its focus was on supporting students' needs.

Ms. 006 (School A) agrees and reiterates:

> Ed therapy will lead to the use of IEPs right? You know what I'm talking about right? Individualized Education Programmes? This will in turn lead to tailoring lessons to meet individual needs as the name suggests. What dat means....is dat the class teacher will work together on what yuh call a multi-disciplinary team e.g. with parents, other teachers, special ed teachers, school guidance officer etc) to plan what it is a child can do AFTER he/she has been assessed. And of course, there will be a need to have diagnosticians on board as well as psychologists...yu'all catch my drift? Dis is SERIOUS business!"

Mr. 008 (School C) reflects:

> From what I've heard, the intervention seems to be a plan for the child's overall success because it uses info from the child's background right? I think that by doing this...or trying to do this...it would lead to...to encouraging collaboration and consultations with special ed specialists...This is someting

dat ah tink we need to look more into.

Principals endorsed the idea of clinical practice to education because they viewed it as a way to "revolutionize" education in the former senior comprehensive and junior secondary schools because they perceived the current status of student achievement as well as teacher morale to be low.

Teachers also felt encouraged by the idea of trying to adapt clinical practices into the education system because they reasoned that it would help alleviate the "stress" of regular classroom teachers dealing with issues that is better suited in "the hands of the school's guidance counsellor". Issues identified by the participants included children's social issues e.g. depression (clinical or otherwise); neglect by parents; violence and aggression and the ways in which this is manifested to name a few. Other issues included dealing with examination anxiety; developing positive coping skills; distractions, impulsivity and short attention spans as seen in children with ADD/ADHD, and the development of comprehension skills in English and Math.

Some teachers reasoned that an implementation of a therapeutic intervention would become not only an integral part of children's lives (especially their school life) but also in the lives of the teachers themselves. Mr. 001 (School A) asserts:

> If we are to become an innovative people, then here is where we need to start...
> I tink dat therapy can tackle dat or at the very least...show us WHAT we can do
> and HELP us to help them.

While all participants did agree that they viewed the adaptation of therapeutic intervention to the local context as a positive thing, some teachers did express some concerns about the notion. The main concern being teachers thought that teachers in general would pose a "stumbling block" to change, and that investment would not come from a ministerial level.

Mr. 006 (School C) muses:

> I am enthused...but you know how our (teaching) culture is...I'm just afraid that without more people on board...this would get shelved...if we're going to stay in teaching we might as well find new avenues to work with what we have.

while Mr. 002, (School A) reports:

> I say stream those who are struggling...give them de therapy or whatever...an' den gradually ease dem back...so yuh don't keep back dose who have no problem.

Ms. 005 (School B) also expresses the duality of her concerns about the logistics of the programme:

> I'm thinking about logistics...HOW is it going to work here? 1 therapist per district? HOW will they be paid an' by WHOM? Parents? Ministry?...WHERE will their office be? WHAT will be their perspectives of their roles and responsibilities? WHAT is the ministry's take? I feel dat it's wonderful dat teachers

> be exposed to techniques...um...therapeutic techniques that can help us be better teachers and reach de children. On one hand I want to be a better teacher and therefore I feel that learning about therapeutic...an'...an'....an'....being exposed to somebody who's an expert who can help me is something not only dis school needs but the entire educational system. I believe dat such a ting is needed.
> On the other han' I do not see how practical it is...I don't know if this will EVER happen at a ministry level...I'm scared to get my hopes up and nuttin' happens.... at de end ah de day? 1 therapist will not be able to help all my children or all de secondary schools students who require dat type of help. But personally, I LOVE the idea cuz ah tink dat it would greatly help me and all other schools because we can network and see what strategies worked for who and why.

Ms. 003 (School A) further adds:

> Right now it sounds like a utopian ting...but if we could continue (an' dis is good) to find ways to help students improve and help with other distractions...den I'm all for it.

Conclusion

Teachers identified failings within the secondary educational sector which continued to inhibit their attempts at effective teaching and facilitating learner needs. Throughout the three group discussions, the constant consensus was that what was currently being done has not worked and continues not to work. Teachers felt the system was continuing to fail students thus perpetuating twin problems of low student performance and increased violence in schools. In addition, they believed that they, as well as the current

school environment were ill-prepared to meet the demands and needs of the learning challenged, thereby propagating a climate that was not conducive to positive learning outcomes.

Findings from principal interviews showed consensus with that of teacher perceptions. Moreover, principals agreed that there was a deep seated need for a more proactive approach for remediative measures to be implemented within the system. Principal B was especially concerned as her school was a pilot to become a single sex (male) school and she expressed concern that teachers needed to be specifically trained to appropriately teach and assess boys. There was also a common consensus that there was a need for more synergy among the education, health and social development ministries to help integrate the LD child into the regular classroom.

All respondents expressed an urgent desire to find a version of the "educational grail" that would lead their schools to academic recovery and success. They believed that therapeutic intervention through Ed therapy could be that grail but expressed concerns on how other stakeholders would view this type of change to policy; the practicality of its implementation (as there is no current literature adapted to the local setting) and how else to address the urgency of the pervading problem.

Chapter 5

Summary, Discussion, Conclusion and Recommendations

Introduction

Findings from research question 3 of the study are discussed in this chapter, using insights from the research literature explored in chapter 2 and the teaching experience of the researcher as a participant observer in the system. Recommendations are also submitted for improved practice, policy formation and implementation as well as suggestions for future research.

Summary of Research Findings

Data analysis from the questionnaire and focus groups revealed that teachers thought that there was an element currently excluded from present pedagogical practice. This element was the knowledge of how to effectively manage, teach and assess children who suffered from learning problems. Teachers admitted that they felt powerless because they had continued to fail to reach these children. As a result of underlying learning deficits, deviant behaviour was becoming more rampant and was manifested in the classrooms as social, emotional and behavioural disturbances that teachers were ill equipped to deal with. This additionally led to the phenomenon of academic underachievement resulting in school failure.

Teachers felt that the secondary sector was in dire straits and they were desperate for a solution and/or alternative measures to deal with increasing discipline issues that continued to inhibit effective teaching and learning. Participants reported that the former senior comprehensive and junior secondary schools were now feeling the “fall out” from the USE (Universal Secondary Education) which they reasoned was not “a bad thing in itself”, but which had failed to address issues for accommodating

students with learning difficulties in the regular classroom i.e. those who had scored less than 30% in the SEA examinations.

They opined that there was a lack of training among teaching staff to instruct students such as these, and believed that the problem was being compounded by other factors – the need to merge technology in lesson planning; a bombardment of other external factors; a lack of social skills leading to an emotional gap in students; a lack of connectedness between the curriculum and student ability; teachers' attitude towards the LD child; a lack of a personal value to education by both student and parents; and a lack of parental involvement in school issues.

Participants also reflected on the fact that what was currently implemented in secondary schools (with respect to pedagogical practice) was not working. As such, there was now an urgent need to learn to differentiate instruction to cater to each learning style and match assessments so that it would meet the needs of the struggling student while assisting in building the confidence and competence of these students.

An alternative pedagogical practice was suggested in the form of therapeutic intervention via educational therapy. Teachers were keen on learning about this concept and discussed numerous advantages that they believed it would bring to the educational system. But also expressed concern in terms of its practicality (even though it was believed that Ed Therapy would be a viable solution to move our nation's schools towards academic recovery), logistics for implementation, as well as other stakeholders' "buy in" to the adaptability of it to our context including the stance that Ministry of Education would take on the subject.

Discussion

According to the research findings emerging from research question 3, the adaptation of therapeutic intervention through Ed therapy to the local context was perceived by both principals and teachers in the sample, as a pedagogical practice that would make a positive contribution to the secondary sector. This meant however, that besides re-conceptualizing the entire educational system, educators would have to be specifically trained in teaching practices and assessment geared towards including the marginalized child.

In addition, this meant incorporating resources not only from the Education ministry, but also from that of the Social Development and Health ministries in order to perpetuate and build teacher and student morale; student performance; teacher commitment to student learning and teaching; teacher efficacy and professional development of teachers in like schools.

However, gaps within the system (observed disparities on a number of educational measures affecting student performance) specified needed first to be addressed. Using insights from this position, the study examined teachers' perceptions in the context of five emergent themes from participants' responses:-

i. lack of parental involvement
ii. lack of a personal value of education
iii. lack of connectedness between curriculum and student ability
iv. lack of social skills training leading to an emotional gap in students and
v. a bombardment of external/internal factors.

Lack of parental involvement

Learning is enhanced when schools encouraged parents to stimulate their children's intellectual development. Research indicates that the home environment powerfully influences what children learn within and outside school and is considered more powerful than the parents' income and education in influencing what children learn in the first six years of life and during primary and secondary school. Sometimes called the "curriculum of the home", the home environment refers to informed parent-child conversations about school and everyday events; encouragement of leisure reading; monitoring and critical review of television viewing and peer activities; deferral of immediate gratification to accomplish long-term goals; expression of affection and interest in the child's academic and other progress as a person.

A home-school-community connection that explains the benefits of these approaches and provides support for parents who wish to develop a strong academic environment for their children, exerts a positive influence on student learning.

Lack of personal value of education

People perceive value within an overall social/cultural environment that defines and forms personal values. As such value towards any phenomenon is a significant determinant of satisfaction. Students' lack of a personal value of education stems from what has been taught in the home environment. The situation is further compounded by the students' lack of personal self value and belief in their potential. Despite the fact that a personal development plan has been adapted to the school's curriculum, there is still significant dissatisfaction surrounding students and their self perceptions because they are unable to make the link between what they perceive they gain from the educational system and the personal

sacrifices that they have to make in order to obtain the specific qualification.

Lack of connectedness between curriculum and student ability

Effective learning experiences are believed to involve the various functions of learning, teaching, and curriculum. Furthermore, the content or substance of what is taught has inherent characteristics that can affect both student and teacher. Success in learning would thus depend in part on an individual's ability to adapt to demands and constraints made by these curricular characteristics.

Assessment is an integral component of a coherent educational experience. The relationship between assessment practices and the overall quality of teaching and learning is often underestimated, yet assessment requirements and the clarity of assessment criteria and standards significantly influence the effectiveness of student learning. Carefully designed assessment contributes directly to the way students approach their study and therefore contributes indirectly, but powerfully, to the quality of their learning.

For most students, assessment requirements literally define the curriculum. Assessment is therefore a potent strategic tool for educators with which to spell out the learning that will be rewarded and to guide students into effective approaches to study. Equally, however, poorly designed assessment has the potential to hinder learning or stifle curriculum innovation.

Lack of social skills training leading to an emotional gap in students

Social skills training is a form of behaviour therapy used by teachers, therapists, and trainers to help persons who have difficulties relating to other people. As such, its major goal is teaching persons who

may or may not have emotional problems about the verbal as well as nonverbal behaviours involved in social interactions. Many students have never been taught such interpersonal skills as making "small talk" in social settings, or the importance of good eye contact during a conversation.

In addition, many students have not learned to "read" the many subtle cues contained in social interactions This leads them to misinterpret signals and often results in the inability to form positive social relationships leading to aggressive or violent behaviour. This type of training when adapted to the curriculum helps students to learn to interpret social signals, so that they can determine how to act appropriately in a variety of different situations.

Bombardment of external/internal factors

There are other factors to consider which may negatively impact upon a child's learning and achievement. They include environmental disadvantage e.g. poverty, long or frequent absences from school, disturbed home situation, poor teaching or lack of motivation; impaired intellectual ability e.g. short attention span, poor memory, difficulty in understanding and expressing simple concepts or cognitive deficits; impaired hearing or vision; SLDs; medical illness in the absence of psychosis and psychological disorders e.g. anxiety, depression, ADHD, disruptive behavioural disorders, psychosis and substance abuse.

As such, it becomes necessary for an educator to be cognizant of a child's emotional "make-up" to gain some understanding of major areas of concern or conflict that may influence school performance. And so, it is critical for the synergy of the three ministries (education, health and social development) to occur.

The study also examined teachers' perceptions on therapeutic intervention as a reformation measure (a way of improving and transforming current practice) to determine the viability of introducing an alternative pedagogical practice, Ed Therapy, to the local setting.

This was done in the context of three emergent themes (as revealed by respondents' responses):-

vi. training and development of teaching staff and teacher attitude

vii. using technology in the classroom

viii. adapting therapeutic intervention and Ed therapy

Training and development of teaching staff and teacher attitude

Even though there is no substantial literature on the relationship between general teacher characteristics and student learning, promoting teacher quality is a desired element in improving primary and secondary education. In addition, teacher expectations, attitudes and instructional strategies are crucial links to effective teaching and positive student outcomes.

Just as there are differences among learners, so exists differences in teachers and what each one brings to the classroom, will have a significant impact on how and what children learn. Knowing how to identify a child's particular learning difficulty is something that has become as critical as knowing what strategies to use to maximize learning potential and teacher expectations and attitude play a vital role.

Too often teachers become desensitized to poor student achievement and as a result expect too little from the children. Raising expectations for academic achievement is tricky because students who struggle and have difficulties learning in some areas can be pushed too far and fail.

Using technology in the classroom

Research has shown that technology has the potential to transform education when integrated with emerging models of teaching and learning. When used effectively, technology applications can support higher-order thinking by engaging students in authentic, complex tasks within collaborative learning contexts. Where at risk students are concerned, using technology in instructional strategies would allow them to utilize their strengths as it caters to differing learning styles, and can be used as a communicative tool.

Adapting therapeutic intervention and Ed therapy

Therapeutic interventions are based on the belief that all children and adolescents have the ability to grow and achieve their full potential. As such, the therapist works to improve attendance and to enhance academic performance, problem solving, conflict resolution, and anger management skills. The primary emphasis therefore, is collaboration, as a team, with the family, school, and community.

Additionally, it may be useful in the comprehensive school setting especially for students with a history of school failure, to re-define their academic identity by "re-authoring" their stories, thereby challenging negative assumptions that both they and significant adults may have made regarding their potential. Ed therapy, in particular, could be used to increase social competence in male students through cognitive-behavioural and social problem solving therapy.

Conclusion

The literature has been used to show that there is a need to re-structure and re-conceptualize the secondary education system and orient educators to the fact that alternative measures to pedagogical practice exists and should be investigated for their feasibility to adapting and implementing within the local context.

While teachers' perception to the notion of therapeutic intervention through Ed therapy was positive, the study however, did not establish that an actual intervention be implemented as that would entail more research and meeting with other stakeholders to facilitate the logistics of its practical application.

On the basis of the findings and discussion generated, it may be argued that greater and more attention needed to be paid to policy and implementation of inclusion and integration in the regular classroom as they impact on creating and sustaining more qualitative teacher performance and student achievement, especially in English and Math at forms 1, 3 and 5.

Additionally, careful policy formulation and implementation would greatly afford the LD child an opportunity to develop critical thinking skills, social skills, self control techniques and anger management and conflict resolution skills alongside their non LD counterparts. Thus ensuring that all learners are prepared to be 21st century innovators while proposing appropriate sanctions to deter future student violence in schools through social pedagogy and fostering academic recovery (Appendix S).

Recommendations

Based on what this study has revealed, the following recommendations have been provided as a guide for any attempts designed to bring about improvement and renewal in the secondary school sector of T&T.

Policy Recommendations

Synergy among the ministries of Education, Health and Social Development is highly recommended for the continued promotion of public awareness of SLDs and their origins. This should also include training programmes for interested persons – especially teachers – to be privy to workshops (with experts in the various fields) which would provide strategies and guidelines for identifying and assessing students with LDs, in addition to the skills they would need to cope with situations as they emerge.

This would also serve to lessen the degree of teacher disengagement that has been steadily rising. Additionally, there should be more collaboration with alternative programmes like The National Open School of Trinidad & Tobago (NOSTT) and schools in every educational district so that students will continue to become empowered.

There is a need for more guidance officers and social workers to be assigned to schools and for parents who have a lower income to have affordable and geographical access to SPED services including counselling, therapy (speech, educational, occupational) and diagnostics. At least two guidance officers and one social worker need to be assigned to schools to cater for the many students who require counselling because of their home situation. A multi-disciplinary team consisting of paraprofessionals, teachers and parents is needed for each educational district as they will be the ones responsible for community education.

In keeping with the recommendations for full inclusion by 2015, a policy for Ed Therapy becomes even more critical at this stage to create avenues for and specialize in Advocacy, Case Management and Diagnostic Testing. This ultimately will involve creating a unit for each educational district to promote personal, social and health education (PSHE) awareness in every school. In this way, the Health and Family Life (HFLE) Regional Curriculum Framework (1996) could be actualized.

A programme to train in-service teachers in Ed Therapy should be launched and additional scholarships offered in this specialized area as the goal would be to attract nationals abroad as well as Caribbean professionals. This is in addition to recruiting and maintaining our trained personnel. These teachers would be trained to use formal and informal measures to assess academic and organizational styles, habits, strengths and difficulties as well as oversee students' progress toward his/her goals through periodic evaluation of work samples and/or follow-up testing.

Moreover, their new skills (for intervention) would include

- devising an individualized plan of action, which can range in scope from remediation of specific academic deficits to a global readjustment of academic life
- focussing on honing meta-cognitive (self-monitoring) skills
- helping students retool their organization and management of materials, time and ideas
- benchmarking organizational and scholastic performance objectives
- improving proficiency of written expression, comprehension of auditory and visual information, and independent research skills
- Implementing remediative recommendations from neuropsychological reports and recommending further interventions
- strengthening self-advocacy tactics in learning environments
- creating custom-designed educational materials for individual client's needs and
- identifying learning and/or psychological issues that may require referrals for additional testing or counselling.

These educators, now highly specialized can now act as consultants and liaise with other foreign professionals to attempt to establish a local programme at either UWI, St. Augustine or UTT.

Suggestions for Further Research

The researcher proposes that future researchers look at avenues for parental education and empowerment (Appendix L). Sample of students who are demonstrating academic failure and who have a severe discrepancy between development age, IQ and standardized achievement scores should be recorded so as to enable the researcher to attribute changes in student scores, grades and general progress in a more precise fashion.

Future study should ideally cover a three- or four-year time period using students who are new to the proposed NILD Ed therapy program. This would then allow the researcher to obtain and chart current information from parents and teachers through a quarterly or bi-yearly questionnaire concerning accommodations made in the students' instructional program, work habits of the students, and level of independent performance of the students at home and in the classroom. As such, parents and teachers would have more direct involvement in the research.

References

Allen, R. H. (2002) *Impact teaching: Ideas and strategies for teachers to maximise student learning*. Boston: Allyn & Bacon.

American Surgeon General. (2000). *Mental Health.* Retrieved from http://www.surgeongeneral.gov/library/mentalhealth/Chapter3/sec4.html on December 11, 2009.

Anderson, L. W., & Burns, R. B. (1989). *Research in classrooms: The study of teachers, teaching and instruction*. New York: Pergamon Press.

Barker, E. (1984). *The making of a Moonie*. Oxford: Blackwell.

Barton, S., & Fuhrmann, B. (1994). Counselling and Psychotherapy for Adults with Learning Disabilities. In P. Gerber & H. Reiff (Eds.). *Learning Disabilities in Adulthood: Persisting problems and evolving issues* (pp 82 – 92). Boston: Andover Medical.

Bernard, R. H. (2002). *Research Methods in Anthropology: Qualitative and quantitative methods*. Walnut Creek: AltaMira Press.

Bowman, S. (1983). Roadmaps of growth. *Academic Therapy, 19*, pp 235 – 240.

Bossman, G. B., & Rallis, S. F. (2003). *Learning in the field: An Introduction to qualitative research*. California: Thousand Oaks, Sage Publications.

Brooks, R. B. (1987). Storytelling and the therapeutic process for children with learning disabilities. *Journal of Learning Disabilities, 20,* pp 546 – 550.

Bryman, A. (1988). *Quantity and quality in social research*. London: Unwin Hyman.

Cameron, C. (2004). Social Pedagogy and care: Danish and German practice in young people's residential care. *Journal of Social Work, 4(2)*, 133 – 151.

Caribbean Symposium on Inclusive Education. Kingston, Jamaica, 5 – 7 December, 2007.

Cartwright, P. G., Cartwright, C. A., & Ward, M. E., (1985). *Educating special learners* (2nd ed.). California: Wadsworth Publishing Company.

Cawelti, G. (Ed.). (1999). *Handbook of research on improving student achievement* (2nd ed.). Virginia: Educational Research Service.

Charles, C. M. (1995). *Introduction to educational research* (2nd ed.). San Diego: Longman.

Corrigan, P. (1981). *Schooling the Smash Street Kids*. London: Macmillan.

Cotton, K. (2003). *Principals and student achievement: What the research says*. Virginia: Association for Supervision and Curriculum Development (ASCD).

Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications.

_____ (2003). *Research Design: Quantitative, qualitative and mixed methods approaches (2nd ed.)*. California: Thousand Oaks, Sage Publications.

Cross, M. & Schwartzbaum, A. M. (1976). Social mobility and secondary school selection in Trinidad and Tobago in P. Figueroa & G. Persaud (eds.) *Sociology of Education: A Caribbean Reader*. Oxford: Oxford University Press.

Danielson, C. (2002). *Enhancing Student Achievement: A framework for school improvement*. Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).

Davies, D., Gibson, W. M. (1967). *Developing youth work: Beyond social education*. NY: Free Press.

Dewey, J. (1916). *Democracy and Education: An introduction to the philosophy of education* (1966 ed.). NY: Free Press.

Delamont, S. (1976). Beyond Flanders Fields: The relationships of subject matter and individuality to classroom style. In M. Stubbs and S. Delamont (Eds.). *Explorations in classroom observation*. Chichester: Wiley.

Dockrell, J., & McShane, J. (1993). *Children's learning difficulties: A cognitive approach*. Oxford: Blackwell.

Fickman, M. & Adelizzi, J. (2010). *The clinical practice of educational therapy*. NY: Routledge.

Friend, M. & Bursuck, W. D. (2009). *Including students with special needs: A practical guide for classroom teachers. (5th ed.)*. New Jersey: Pearson Education.

Geary, D. C., & Hoard, M. K. (2001). Numerical and arithmetical deficits in learning-disabled children: Relation to dyscalculia and dyslexia. *Aphasiology, 15(7)*, 635 – 647.

Goetz, J. P., & Le Compte, M. D. (1984). *Ethnography and qualitative design in educational research*. Orlando: Academic Press.

Government of Trinidad and Tobago (1968). *Draft plan for educational development in Trinidad and Tobago, 1968 – 1983* p 3. Port of Spain: Ministry of Education, Trinidad and Tobago Educational Planning Unit.

Government of Trinidad and Tobago (1985 b). *Education plan 1985 – 1990*. Port of Spain: Schools' Publication Branch, Ministry of Education.

Government of Trinidad and Tobago. (1994). *National policy on persons with disabilities*. Port of Spain: Ministry of Social Development.

Hackett, R. (2002, June 4). Secondary School Sector in Crisis. *Trinidad Express*, p 10.

_____ (2006, January 17). Failing Schools. *Trinidad Express*, p 10.

_____ (2010, February 9). For whom the educational bell tolls. *Daily Express*, p 12.

Hallahan, D. P., & Kauffman, J. M. (2006). *Exceptional Learners: An Introduction to special education (10th ed.)*. Boston: Pearson Education Inc.

Haralamos, M., Holborn, M., & Heald, R.M (2000). *Sociology: Themes and perspectives (5th ed.)*. UK: Harper-Collins Educational.

Hardre, P. L., & Reeves, J. (2003). A motivational model of rural students' intentions to persist in vs. drop out of High School. *Journal of Educational Psychologists, 95(2)*, p 347.

Hergenhelm, B. R., & Olson, M. H. (2001). *An Introduction to theories of learning (6th ed.)*. New Jersey: Prentice Hall.

Herr, E. L., Cramer, S. H., & Niles, S. G., (2004). *Career guidance and counselling through the lifespan: Systematic approaches (6th ed.)*. Boston: Pearson.

Hills, T. W. (1992). Reaching potentials through appropriate assessment. In S. Bredekamp & T. Rogegrant (Eds.). *Reaching potentials: Appropriate curriculum and assessment for children*. NY: Pearson.

Hudson, R., Weakley, R., & Firminger, P., (2005). Developing sites for users with cognitive disabilities and learning disabilities. *School Psychology International, 21(3)*, pp 306 – 321.

Humphrey, C. (2007). Exploring the interfaces between policy, pedagogy, psychology and practice. *Journal of Social Work, 7(2)*, 197 – 216.

Jensen, E. (2000). Different brains, different learners. San Diego, CA: The Brain Store. *Educational Leadership, 9*, 32 – 36.

Jules, V. & Kutnick, P. (1990). Determinants of Academic Success within classrooms in Trinidad and Tobago – Some Personal and Systematic Variables. *Educational Studies 16 (3)*, 217 – 235.

Jules, V. Gender and School Achievement in the Caribbean. *Educational Research Paper* (1997), No. 21 p 126.

Kavale, K. A., & Forness, S. R. (1996). Social skill deficits and learning disabilities: A Meta-analysis. *Journal of Learning Disabilities, 29*, 226 – 27.

Keafer, K. (2009). *Effects of NILD educational therapy for students with learning difficulties*. Retrieved from www.aetonline.org on November 9, 2009.

Kerlinger, F. N. (1986). *Foundations of behavioural research*. New York: Holt, Rinehart and Winston.

Kish, M. (1991). Counselling adolescents with learning disabilities. *Intervention in School and Clinic, 27*, pp 20 – 24.

Kőrös-Mikis, M. (2001). Defining Innovative Pedagogical Practice. *Educational Media International, 47(1)*, pp 45 – 53.

Kovalik, S. (2009). *Six body-brain basics*. Retrieved January 12th, 2009, from http://www.ucet.org/conference/2002/techbrain.pdf .

Krueger, R. A. (1988). *Developing questions for focus groups*. Thousand Oaks, CA: Sage.

Landerl, K., Fussenegger, B., Moll, K., & Willburger, E. (2009). Dyslexia and dyscalculia: Two learning disorders with different cognitive profiles. *Journal of Experimental Child Psychology, 103(3)*, 309 – 324.

Lam, E. (2007). Mathematics Education in Barbados and Trinidad: Challenges and progress. In D. Kuchemann (Ed.). *Proceedings of the British Society for Research into Learning Mathematics, 27(3)*, 110 – 113.

Layard, R., & Dunn, J. (2009). *A good childhood: Searching for values in a competitive age*. London: Penguin Press.

Layne, A., Jules, V., & Kutnick, P. Academic Achievement, Pupil Participation and Integration of Group Work Skills in secondary school classrooms in Trinidad and Barbados. *International Journal of Educational Development 28(2),* March 2008, pp 176 – 194.

Le Compte, M. D., & Pressle, J. (1993). *Ethnography and Qualitative Design in educational research (2nd ed.).* San Diego, CA: Academic Press.

Lenkeit, R. E. (2002). *Introducing cultural anthropology (4th ed.).* Boston: McGraw-Hill.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Matroo, C. (2010, April 18). One in six children has a disability in T&T. *Sunday Newsday, Section B,* p 22.

Mason, J. (2002). *Qualitative research (2nd ed.).* California: Thousand Oaks, Sage Publications.

McLafferty, I. (2004). Focus group interviews as data collection strategy. *Journal of Advanced Nursing, 48(2),* 187 – 194.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: John Wiley & Sons.

Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis: An expanded sourcebook, (2nd ed.).* Thousand Oaks, CA: Sage.

Myrick, A. (2005). *Mastering Challenges: Therapeutic interventions in the classroom*. India: Author House.

Neuman, L. K. (2003). *Social research methods* (5th ed.). Boston: Pearson Educational Inc.

Ormrod, J. E. (2008). Characteristics of Students at risk and why students drop out. Pearson Allyn & Bacon, Prentice Hall. Taken from *Educational Psychology Developing Learners*. Retrieved from www.educational-psychology.edu on November 28, 2009.

Ornstein, A. C., Thomas, J., & Lasley, I. (2000). *Strategies for effectivetTeaching*. NY: McGraw-Hill.

Osuji, R. C. (1982). *Sociology of Education: With a case study of social class and educational achievement in Trinidad*. St. Augustine, Trinidad: Institute of Social & Economic Research.

Pressinger, R. W. (1997). *Cigarette smoking during pregnancy: Links to learning disabilities, attention deficit disorder (ADD), hyperactivity and behaviour disorders*. M.Ed. research project, Special Education Department, University of South Florida.

Richards, J. C., Platt, J., & Platt, H. (2009). *Dictionary of language teaching and applied linguistics (New Edition)*. London: Longman.

Rowan, J. (1998). Therapeutic interventions. *Journal of Psychotherapy Integration, 8(4),* Dec 1998, pp 231 – 248.

Schensul, J. J. (2005). *Introduction to ethnographic research*. Institute for Community Research. Retrieved from http://www.incommunityresearch.org/pdf on January, 9th 2010.

Schiefelbein, E. & Simmons, J. (1980). *The Determinants of school Achievement: A review of the research for developing countries*. O'Hara: IDRC.

Seecharan, H. (2006, August 27). Using research for school improvement. Educational perspectives. *Trinidad Express* p 10.

Shechtman, Z., & Pastor, R. (2005). Cognitive behaviour. *Journal of Counselling Psychology, 48,* pp 251 – 257.

Shepps-Battle, J. (2008). *Underachievement and high-risk behaviour in teens*. Retrieved from http://www.about-underachievingteens.com on April 1st 2010.

Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15(2)*, 4 – 14.

_____ (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57(1)*, 1 – 22.

_____(1992, Sept – Oct). Ways of seeing, Ways of knowing, Ways of teaching, Ways of learning about teaching. *Journal of Curriculum Studies, 28*, pp 393 – 396.

Slavin, R. E. (1994). *Preventing early school failure*. New York: Allyn & Bacon.

Smith, M. K. (1988). *Developing youth work: Informal education, mutual aid and popular practice*. Boston: Milton: Keynes: Open University Press.

Smith, M. K., & Jeffs, T (Eds.) (1988). *Welfare and youth work practice*. London: Macmillan Educators.

Smith, J. K. et al. (2000). *Natural classroom assessment: Designing seamless instruction and assessment*. California: Thousand Oaks, Corwin Press, Inc. A Sage Publications Company.

_____ (2002). Social education – The evolution of an idea. The encyclopaedia of Informal education. Retrieved from http://www.infed.org/biblio/b-social.htm on March 19, 2010.

Subran, D. (2003, July 1). School Failure. *Daily Express*, p 10.

Summer, M. (1983). The warning signs of school failure. *Topics in Early Childhood Special Education, 3(3)*, pp 17 – 27.

Thiesen, G. L., Achola, Paul & Boakori, Francis (1983). The underachievement of cross national studies of achievement. *Comparative Education Review, 27(1)*, pp 46 – 48.

Thompson-Prout, H., & Brown, D. T. (Eds.). (2007) (4th ed.). *Counselling and psychotherapy with children and adolescents: Theory and practice for school and clinical settings*. NJ: John Wiley & Sons, Inc.,

Thorndike, E. L., & Kimble, G. A (2002). *Foundations of conditioning and learning*. NY: Appleton Century Crofts.

Travers, M. (2001). *Qualitative research through case studies*. California: Thousand Oaks.

Ungerleider, D. & Maslow, P. (2001). "Association of Educational Therapists: Position Paper on the SAT." *Journal of Learning Disabilities*, 34, 311-314.

United Nations Development Programme Report (UNDP, 2000) *Youth At Risk*. Retrieved from http://www.hdr.undp.org/en/reports/global/hdr2000/ on November 5, 2009.

United States Medical Licensing Examination (USMLE). *Test accommodations*. Retrieved from http://www.usmle.org/Test_Accommodations on 13th March, 2010.

Vaidya, S. R. (2004). Understanding dyscalculia for teaching. *Education, 124 (4)*, pp 17 – 20.

Wagner, M. (2007). *Experimental and theoretical study*. Retrieved from http://www.ideas.repec.org on January 31, 2010.

Worrell, P. (2002, April 23). Different schools of thought. *Daily Express*, p 10.

APPENDICES

APPENDIX A

LETTER TO MINISTRY REQUESTING PERMISSION TO CONDUCT STUDY IN REQUESTED SCHOOLS, ENDORSED BY PRINCIPALS IN THE SAMPLE SCHOOLS

19th March, 2010

ATTN

The Permanent Secretary
c/o Ministry of Education
Alexandra Street
St. Clair

Cc: The Chief Education Officer
c/o Ministry of Education
Alexandra Street
St. Clair

u.f.s. The School Supervisor III
c/o The Caroni District Office
Camden Court
Couva

u.f.s. Mr. Gregory Francis
The Principal
c/o Barataria North Secondary
Third Avenue Extension, Barataria

Dear Sir/Madam

My name is Lisa-Marcella Henry-Legall and I am a teacher/dean of the Barataria South Secondary. I am currently reading for my Master in Education (M.Ed.) with a concentration in South Guidance, and am in my final year.

As a partial fulfilment towards the award of the degree, I am asked to conduct research and investigate an educational phenomenon of concern which will require admission into a school of choice to conduct the said research.

My study is entitled – *Teacher Perceptions on Academic Recovery through Educational Therapy: A Therapeutic Intervention in Three Co-educational Government Secondary schools in South Trinidad.*

112

The school that I have opted to conduct my research is the Barataria North Secondary where I am hoping to conduct one (1) group interview with teachers from both the English and Math Depts at the form 1, 3 and 5 levels, over a period of a day for approximately one (1) hour.

I am kindly requesting permission from you to conduct my research in the said school.

Please find attached the complete application form along with copies of my proposed interview protocol and teacher questionnaire.

Thank you for your kind consideration in this matter.

Respectfully

Mrs. - Marcella Henry-Legall

-MARCELLA HENRY-LEGALL (DEAN)
ISTRATION # 49707

Recommended and approved

Gregory Francis

PRINCIPAL
BARATARIA NORTH SECONDARY SCHOOL
2010:03:19

113

19th March, 2010

Barataria South Secondary
Third Avenue Extension
Barataria

The Permanent Secretary
Ministry of Education
Alexandra Street
St. Clair

u.f. s. The School Supervisor III
St. George East
Tunapuna Administrative Complex
Cor. Green Street & El Dorado Road

u.f. s. The Principal
Malick Secoøndary
Coconut Drive
Malick

Dear Sir/Madam

My name is Lisa-Marcella Henry-Legall and I am a Teacher/Dean of the Barataria South Secondary school. I am currently reading for my Master in Education (M.Ed) with a concentration in Youth Guidance, and am in my final year.

As a partial fulfillment towards the award of the degree, I am asked to conduct research and investigate an educational phenomenon of concern which will require admission into a school of choice to conduct the said research.

My study is entitled – Teacher Perceptions on Academic Recovery through Educational Therapy: A Therapeutic Intervention in Three Co-educational Government Secondary schools in North Trinidad.

The school that I have opted to conduct my research is the Malick Secondary where I am hoping conduct one (1) group interview with teachers from both the English and Math areas at the form 1, 3 and 5 levels, over a period of a day for approximately one (1) hour.

I am kindly requesting permission from you to conduct my research in the said school.

Please find attached the complete application form along with copies of my proposed interview protocol and teacher questionnaire.
Thank you for your kind consideration in this matter.

114

Respectfully

Lisa-Marcella Henry-Legall

LISA-MARCELLA HENRY-LEGALL (DEAN)
REGISTRATION #49707

Cc: The Chief Education Officer

Patricia Perin

Ag. PRINCIPAL
MALICK SECONDARY
SCHOOL

115

19th March, 2010

Barataria South Secondary
Third Avenue Extension
Barataria

The Permanent Secretary
Ministry of Education
Alexandra Street
St. Clair

u.f.s. The School Supervisor III
The Caroni District Office
Camden Court, Couva

u.f.s. The Principal JH 19/03/2010
Barataria South Secondary
Third Avenue Extension
Barataria

Dear Sir/Madam

My name is Lisa-Marcella Henry-Legall and I am a Teacher/Dean of the aforementioned school. I am currently reading for my Master in Education (M.Ed) with a concentration in Youth Guidance, and am in my final year.

As a partial fulfillment towards the award of the degree, I am asked to conduct research and investigate an educational phenomenon of concern which will require admission into a school of choice to conduct the said research.

My study is entitled – Teacher Perceptions on Academic Recovery through Educational Therapy: A Therapeutic Intervention in Three Co-educational Government Secondary schools in North Trinidad.

The school that I have opted to conduct my research is the Barataria South Secondary where I am hoping conduct one (1) group interview with teachers from both the English and Math areas at the form 1, 3 and 5 levels, over a period of a day for approximately one (1) hour.

I am kindly requesting permission from you to conduct my research in the said school.

Please find attached the complete application form along with copies of my proposed interview protocol and teacher questionnaire.

116

Thank you for your kind consideration in this matter.

Respectfully

Lisa-Marcella Henry-Legall

LISA-MARCELLA HENRY-LEGALL (DEAN)
REGISTRATION #49707

Cc: The Chief Education Officer

Seen & Forwarded
19/03/2010

BARATARIA SOUTH
SECONDARY SCHOOL

APPENDIX B

117

MINISTRY OF EDUCATION

Office of the Chief Education Officer
Alexandra Street, St. Clair
Port-of-Spain
Telephone: 628 7350

May 5th, 2010

Ms. Lisa-Marcella Henry-Legall
No. 1 Hummingbird Terrace
River Estate
Diego Martin

Dear Ms. Henry-Legall

I refer to your application in which you requested permission to carry out a research project entitled *"Teacher Perceptions on Academic Recovery through Educational Therapy: A Therapeutic Intervention in Three Co-Educational Government Secondary Schools in North Trinidad."*

Permission is given for you to carry out this activity with forms 1, 3 and 5 students at the following secondary schools:-

Barataria North Secondary School
Barataria South Secondary School
Malick Secondary School

The Ministry of Education trusts that this activity will be beneficial to all. We look forward to receiving a copy of the Final Report and wish this endeavour every success.

Respectfully

Marlene Charles
Specialist Researcher
for Yvonne Lewis
Chief Education Officer

APPENDIX C

Teacher's Name:_____

Teacher's Study ID#:_____

CONSENT TO PARTICIPATE IN RESEARCH STUDY
UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE CAMPUS

TITLE OF STUDY: *Teacher Perceptions on Academic Recovery through Educational Therapy: A Therapeutic Intervention in Three Co-educational schools in North Trinidad*

RESEARCHER: Lisa-Marcella Henry-Legall

E-MAIL: legallmrs@gmail.com

TELEPHONE: 765 – 8589

DEPARTMENT: School of Education

INTRODUCTION:

You are invited to volunteer as a participant in a study being conducted through the University of the West Indies, St. Augustine Campus for completion of the Master in Education programme. This consent form provides you with information you will need when considering whether to participate in this study. If you decide to participate, you will be asked to sign this consent form which states that you have read the Purpose of the Study, that any questions you have about the study have been answered, and that you agree to participate. A copy of this consent form will be available to you upon request.

STUDY PURPOSE:

The primary objective of the study is to explore and evaluate an alternative educational pedagogic intervention and determine if its implementation will improve functional classroom performance

especially for students with Learning Disabilities/Difficulties (LDs). The study also proposes to describe the extent to which teachers engage in appropriate assessment strategies in the schools under study and subscribe to best practices within the context of their school.

DURATION OF STUDY FOR PARTICIPANT:

Your expected duration of participation is one day, for an hour, in an in-depth semi-structured interview. You qualify as a participant in this study because of one or more of the following: 1) you are a teacher of English/Mathematics at either the form 1, form 3, or form 5 level, or 2) you have been teaching for over 5 years or 3) you are a Dean of Discipline at your school or 4) you are a Head of Department (HOD) at your school.

STUDY PROCEDURES:

If you decide to participate in the study you will be asked to provide information concerning your ideas, feelings, perceptions and attitudes on

- the current state of academic achievement in your school
- pedagogical practices in your school
- how students' social issues impact on learning
- your approaches to assessment strategies in your subject area
- interacting with students (in the regular classroom) who you suspect to have learning difficulties
- accommodating students with learning difficulties (LDs)
- your knowledge on therapeutic interventions
- your thoughts on how therapeutic intervention can impact upon teaching/learning, especially for students who have/may have learning difficulties

STUDY BENEFITS:

Benefits to you may include a better understanding of your own development as reflexive practitioner. Credit will also be given in the Acknowledgements section of the study.

Benefits to society may include a better understanding of how therapeutic intervention, in particular how educational therapy can contribute to improving academic achievement in secondary schools.

COSTS TO THE PARTICIPANT:

There are no costs for participating in this study.

CONFIDENTIALITY:

If you consent to participate in this study, your personal information will be kept confidential. To ensure confidentiality of all your responses, you will be assigned a Study ID number that will become your Study ID number throughout this study. The reason for assigning you a Study ID and using that number is

to code all of your responses and so reduce the risk that any response you give can be traced back to you. Access to the file will be limited to myself, and my immediate supervisor.

VOLUNTARY PARTICIPATION IN AND WITHDRAWAL FROM THE STUDY:

The decision whether or not to be in this evaluation is entirely up to you. Participation is voluntary. You can refuse to participate, or withdraw from the evaluation. Signing this form does not waive any of your legal rights.

STATEMENT OF CONSENT:

I have reviewed the information outlined above and have had any questions I have about the study answered to my satisfaction. I understand that my participation is voluntary, I will not be paid for participation and that I can withdraw from participating at any time without prejudice. Signing this form does not waive any of my legal rights.

By signing below, you are indicating that this form has been explained to you, that you understand it, and any questions you have about the study have been answered. You are indicating that you understand the ways the research data may be used and how your privacy will be protected. By signing this form, you are agreeing to participate in the evaluation at the agreed upon dates and times only.

I ACKNOWLEDGE THAT I HAVE READ THE ABOVE EXPLANATION OF THIS STUDY THAT ALL OF MY QUESTIONS HAVE BEEN SATISFACTORILY ANSWERED, AND I AGREE TO PARTICIPATE IN THIS STUDY.

_____ Signature of Participant

_____ Printed name of Participant

_____ ID# of Participant

Date _____

I CERTIFY THAT I HAVE EXPLAINED FULLY TO THE ABOVE PARTICIPANT THE NATURE AND PURPOSE, PROCEDURES AND POTENTIAL BENEFITS OF THIS STUDY.

_____ Signature of Researcher

Date _____

APPENDIX D

THE UNIVERSITY OF THE WEST INDIES
SCHOOL OF EDUCATION
ST AUGUSTINE

QUESTIONNAIRE ON TEACHER PERCEPTIONS OF ACADEMIC PERFORMANCE

This questionnaire represents an attempt to accumulate information which may aid the researcher to identify, understand and put into meaningful context teachers' perceptions on academic recovery in co-educational government secondary schools in North Trinidad. Its significance lies in the following:

- Policy makers will have additional information available to formulate more policies for the child who has a learning difficulty in Reading and Mathematics.
- Teachers will have an opportunity to gain insights into the notion of therapeutic interventions and into factors they think are responsible for school success/failure.
- Teachers will be further empowered on their road towards academic recovery in their respective school.

The researcher thus invites you to take part in an exercise that will ultimately help the cause of not only the educator but also the students, particularly those who are at risk of having learning difficulties. Your honest and frank responses are solicited. Complete anonymity and confidentiality are guaranteed.

SECTION ONE

Please place a tick in the appropriate box.

1) Are you male or female? ☐ Male ☐ Female

2) What is your age?

☐ Less than 25 years ☐ 25 – 34 years
☐ 35 – 44 years ☐ 45+

3) How many years have you been teaching?

☐ Less than 10 years ☐ 10 – 15 years
☐ 16 – 20 years ☐ 21 – 25 years
☐ 25 years +

4) What is your major teaching area in this school? Please tick ONE of the following:-

☐	Business Education	☐	English A/B
☐	Mathematics	☐	Social Studies
☐	Foreign Language	☐	Other

5) What is your current teacher status?

☐ TI ☐ TII ☐ TIII ☐ HOD ☐ Dean ☐ Tech Voc

6) What is the highest level of education you have completed?

☐ B.A. ☐ Dip Ed ☐ Teaching Diploma (Primary) ☐ Masters ☐ Other

7) What types of school have you taught in? Please tick all that apply

☐ Junior sec ☐ Secondary ☐ Senior Comp ☐ Primary ☐ Other

8) Student population size

☐ 500 – 800 ☐ 800 – 1100 ☐ 1100 – 1400 ☐ 1400+

9) What forms do you teach? Please tick all that apply.

☐ Form 1 ☐ Form 2 ☐ Form 3 ☐ Form 4 ☐ Form 5 ☐ Form 6

10) Describe your school?

☐ Single sex ☐ Co-educational

SECTION TWO

11) How do you feel about the overall academic performance in your subject area?

☐ It's Excellent ☐ I'm Satisfied ☐ Could be better ☐ Poor ☐ Undecided

12) Do you think your department subscribes to best practices to ensure academic success?

☐ Yes ☐ We try ☐ Work in progress ☐ Not sure ☐ No

13) Are there support systems in place to cater for students with learning difficulties?

☐ Yes ☐ No ☐ Not sure ☐ Undecided

14) Do you think that it is important that teachers understand how children learn?

☐ Yes ☐ No ☐ Not sure ☐ Undecided

Briefly give a reason for your response to question 14

_____

_____

_____

_____

15) What do you think about using therapeutic interventions in the classrooms?

☐ Would be very helpful ☐ Could be useful ☐ Don't see the need for it

16) Do you think that adapting the principles of educational therapy to the local context could help promote academic recovery in our schools?

☐ Absolutely ☐ Possibly ☐ Not at all ☐ Undecided

APPENDIX E

INTERVIEW PROTOCOL FOR PRINCIPALS

1) How would you describe your school climate?

Note: School climate includes all those conditions which make productive teaching and learning as well harmonious relations possible.

2) How do you feel about the level of academic achievement in

a) your school b) English and Maths?

3) How would you describe your teachers' commitment to the school and student learning?

4) To what extent would you agree that there exists a high level of teacher efficacy among your

a) your staff b) English and Maths teachers?

5) What are your views on inclusive education/schools?

6) What sort of practices do you implement in your school to include the LD child?

7) How would you describe your leadership style?

8) To what extent do teachers in your school subscribe to

a) best practices in teaching?

b) best practices in assessment strategies?

c) best practices in understanding how children learn?

9) What are your thoughts on therapeutic intervention to pedagogical practice?

10) What recommendations would you make so that academic achievement would improve in your school in particular?

APPENDIX F

INTERVIEW PROTOCOL FOR TEACHERS

1) What do you think of student academic achievement in this school? What are your thoughts about academic achievement in forms 1, 3 and 5 in your subject area?

2) What factors in your perception, contribute to the status of academic achievement in

a) the school? b) forms 1, 3 and 5 in your subject area?

3) What have different departments being doing to improve student academic achievement?

4) Have you encountered any students with special education needs in your classroom? If you have, what strategies to generate greater student learning have you employed? What outcomes have your strategies been able to obtain?

5) Can you give me a brief account of your successes/failures; your frustrations/joys?

6) To what extent do you think (teachers in your department) subscribe to

- best practices in teaching?
- best practices in understanding how children learn?
- best practices in assessment strategies?

7) Could you describe your thoughts, attitudes and feelings about incorporating an alternative clinical intervention into your teaching/assessment strategies?

8) Are you prepared to incorporate an alternative clinical intervention into your approach to teaching and assessment?

9) To what extent would you be willing to learn more about such therapeutic interventions such as educational therapy and employ them as part of your teaching repertoire?

10) To what extent do you think that therapeutic intervention to pedagogic practice can bring about improvement in academic achievement in secondary schools?

11) To what extent are you prepared to include educational therapy into your teaching practice?

APPENDIX G

SEA PASS RATE 2007 – 2009 IN THE SCHOOLS UNDER STUDY

School A	**2007**	**2008**	**2009**
Language Arts	30%	35%	36%
Mathematics	39%	42%	31%
Essay	31%	23%	33%

School B	**2007**	**2008**	**2009**
Language Arts	19%	68%	40%
Mathematics	07%	15%	52%
Essay	04%	17%	08%

School C	**2007**	**2008**	**2009**
Language Arts	42%	45%	48%
Mathematics	41%	35%	30%
Essay	17%	20%	22%

N. B. Statistics cited were obtained from school records.

APPENDIX H

NCSE PASS RATE 2006 – 2009 FOR THE SCHOOLS UNDER STUDY

(Language Arts and Mathematics)

School A	**2006**	**2007**	**2008**	**2009**
Language Arts	56%	43%	39%	26%
Mathematics	50%	39%	39%	35%

School B	**2006**	**2007**	**2008**	**2009**
Language Arts	52%	49%	35%	38%
Mathematics	45%	42%	39%	26%

School C	**2006**	**2007**	**2008**	**2009**
Language Arts	51%	36%	37%	30%
Mathematics	40%	30%	40%	30%

N. B. Statistics cited were obtained from school records.

APPENDIX I

CSEC PASS RATE 2006 – 2009 IN THE SCHOOLS UNDER STUDY

(English A and Mathematics Grades I - III)

School B

Subject	Proficiency	2006	2007	2008	2009
English A	General	52%	39%	45%	38%
Mathematics	General	42%	33%	48%	26%

School C

Subject	Proficiency	2006	2007	2008	2009
English A	General	49%	42%	38%	31%
Mathematics	General	36%	40%	32%	25%

N.B. School A was recently converted (September 2009) to a five year school. As such, there were no CSEC marks available at the time of the study. Statistics cited were obtained from school records.

APPENDIX J

EXTRACT FROM INTERVIEW TRANSCRIPT FOR TEACHERS FROM SCHOOL A DEPICTING CODING OF THEMES AND RESEARCHER'S REFLECTIONS (FROM FIELD NOTES)

37. 001: Would you like to repeat the question please? I got lost a bit.
38. LL: Yes. Of course. I was asking what you thought about the level of academic
39. achievement in the school? What factors do you think contribute to this?
40. 001: The child is being bombarded by a number of external factors as well as internal. **[F6]**
41. De internal factors actually deal with de child's capability. Um...drawn from
42. information what she/he inherited and de child's exposure to de external factors which I
43. would like to look at from the home....Siblings, parents ahm parent type...um
44. neighbourhood...um de nation at large...de mass media...um international
45. media...exposure to peers....exposure to schoolmates...ahm...classmates (their different
46. backgrounds)...teachers. So de child...um...our children are exposed to these things as
47. others are...but because (is my hoping)...but because of their socio-economic status and
48. because of what we have been reading....their hereditary factors governed by...by
49. bloodline...family line...um...what they haven't inherited...their temperament...their
50. disposition...their capabilities...um...whatever problems are discovered...psychotic
51. problems...
52. Yuh see all dese factors...dey influence of de external factors seem to be weighing
53. down on our children such dat they cannot focus well on dey education.

There are other underlying factors that contribute to the child's academic success or failure. These include not only environmental factors but also socioeconomic status as well as cognitive deficits (stemming from who and what the child is exposed to e.g. peers, music) leading to mental and emotional frailties in the child's overall psychological well-being. This causes further distractions, inhibits academic progress and has a negative impact on the individual's psyche and militates against productive and constructive learning and teaching.

Right? Um...ah doh want tuh get too detailed. Ah will leave some for de others.

002: De children are bombarded by all dese factors like you said. Dey cannot really see sense of education **[F1]**. Dey don't have a sense of value (somebody made dat point ahready) of educational things because dey are emotionally and socially traumatized and dey have...have NOT learned the skills of how to balance their emotions because dey have NOT been taught dat dey have emotions dat can be defined **[F7]** and dat emotions are suffering. Dey have NOT been

Again, students are negatively affected by social and emotional issues which permeate into the classroom causing disruptions due to acting out and other behavioural manifestations. This also creates a loss of self esteem as well as the need to try, thus infusing an atmosphere of learned helplessness into the mix.

taught good social skills or to socialize with a class of different children or perhaps children of de same variation...of de same kind of behaviour. Dey don't know how to deal with dese things and so stray from de intellectual...um academic focus.

Parental accountability comes to the fore as they are the first teachers. While the school/community life is crucial to socialization, the child's personal background lays the foundation for the adult persona.

LL: So how does this impact upon learning?

001: *(Interrupts)* On another level, de teacher is not prepared with dat culture shock...de children are not ready to learn and move on with what de teacher has prepared. De teacher now suffers a shock and when there are more than 5 – 10 of de same children I'm describing here in de same class...it causes an impossible situation for teaching...learning **[F8]**. Imagine dis is happening on a regular basis. De teacher is frustrated because he/she can't get his/her work done. But ah want tuh go back a bit to

de factors. Children are frustrated by dese external factors and their will to survive? Just to live to get something to eat and to drink. You see *(pause)* dey can't absorb academic training. Academics is NOT on their vital..um...their survival list. Survival is on their vital list (pause) emotional, social, personal, physical – so dey want food...dey want clothes, while looking for affection **[F1]**.

Dey don't know how to find it because dey not finding it. That's my opinion.

Dey come from a very poor affectionate environment **[F6]**. So children in dis situation

> Teachers need to understand the psychological profile of the failing student. This is a child who suffers emotionally as well as academically. Because (s)he is emotionally spent from abuse, neglect they will find other things to fill that gap – be it sex, drugs, associating with those who are considered to be delinquents, food, shopping, acting out etc. Maladaptive behaviours become the norm and the classroom is overloaded with too many children with the same issues and unfortunately, teachers are NOT trained to deal with situations like this AND have to deliver a timely curriculum while preparing students for external examinations. Children need to feel loved and accepted as well – something they may not receive at home.

(um...depleted emotional level) cannot really focus on Mathematics, Science....dat call for a lot of reasoning...a lot of reading skills, mental skills (yeah). On did basis our children are NOT achieving because dey are distracted. The things that attract are what dey feel dey need and education is NOT it as they underachieving **[F7]**. In addition to their socioeconomic condition politics and emotional deficits...there is also a sexually charged atmosphere...not only operating at dis school but nationwide. You find dat they are seriously distracted and once children are seriously distracted, dey are not going to take in academics which has a different slant altogether...

LEGEND

	Themes identified	**F1**	Factors influencing school failure
Prob 1	Problems encountered in effective teaching	**Perc 1**	Teacher perceptions of Educational therapy and therapeutic intervention
Rec 1	Recommendations		Researcher's reflections/observations

N.B. Factors, problems, perceptions and recommendations have been numerically listed in the transcript.

APPENDIX K

LEARNING THEORIES

Constructivism

Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in. Each of us generates our own "rules" and "mental models," which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences.

There are several guiding principles of constructivism:

1. Learning is a search for meaning. Therefore, learning must start with the issues around which students are actively trying to construct meaning.
2. Meaning requires understanding **wholes** as well as parts. And parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts, not isolated facts.
3. In order to teach well, we must understand the mental models that students use to perceive the world and the assumptions they make to support those models.
4. The purpose of learning is for an individual to construct his or her own meaning, not just memorize the "right" answers and regurgitate someone else's meaning. Since education is inherently interdisciplinary, the only valuable way to measure learning is to make the assessment part of the learning process, ensuring it provides students with information on the quality of their learning.

How Constructivism Impacts Learning

Curriculum – Constructivism calls for the elimination of a standardized curriculum. Instead, it promotes using curricula customized to the students' prior knowledge. Also, it emphasizes hands-on problem solving.

Instruction – Under the theory of constructivism, educators focus on making connections between facts and fostering new understanding in students. Instructors tailor their teaching strategies to student responses and encourage students to analyze, interpret, and predict information. Teachers also rely heavily on open-ended questions and promote extensive dialogue among students.

Assessment – Constructivism calls for the elimination of grades and standardized testing. Instead, assessment becomes part of the learning process so that students play a larger role in judging their own progress.

Behaviourism

Behaviourism is a theory of animal and human learning that only focuses on objectively observable behaviours and discounts mental activities. Behaviour theorists define learning as nothing more than the acquisition of new behaviour. Experiments by behaviourists identify **conditioning** as a universal learning process. There are two different types of conditioning, each yielding a different behavioural pattern:

1. **Classic conditioning** occurs when a natural reflex responds to a stimulus. The most popular example is Pavlov's observation that dogs salivate when they eat or even see food. Essentially, animals and people are biologically "wired" so that a certain stimulus will produce a specific response.
2. **Behavioural** or **operant conditioning** occurs when a response to a stimulus is reinforced. Basically, operant conditioning is a simple feedback system: If a reward or reinforcement follows the response to a stimulus, then the response becomes more probable in the future. For example, leading behaviourist B.F. Skinner used reinforcement techniques to teach pigeons to dance and bowl a ball in a mini-alley.

Some criticisms of behaviourism

1. Behaviourism does not account for all kinds of learning, since it disregards the activities of the mind.
2. Behaviourism does not explain some learning–such as the recognition of new language patterns by young children–for which there is no reinforcement mechanism.
3. Research has shown that animals adapt their reinforced patterns to new information. For instance, a rat can shift its behaviour to respond to changes in the layout of a maze it had previously mastered through reinforcements.

How Behaviourism Impacts Learning

This theory is relatively simple to understand because it relies only on observable behaviour and describes several universal laws of behaviour. Its positive and negative reinforcement techniques can be very effective–both in animals, and in treatments for human disorders such as autism and antisocial behaviour. Behaviourism often is used by teachers, who reward or punish student behaviours.

Piaget's Developmental Theory

Swiss biologist and psychologist Jean Piaget (1896-1980) is renowned for constructing a highly influential model of child development and learning. Piaget's theory is based on the idea that the developing child builds cognitive structures–in other words, mental "maps," schemes, or networked concepts for understanding and responding to physical experiences within his or her environment. Piaget further attested that a child's cognitive structure increases in sophistication with development, moving from a few innate reflexes such as crying and sucking to highly complex mental activities.

Piaget's theory identifies four developmental stages and the processes by which children progress through them. The four stages are:

1. *Sensori-motor stage (birth - 2 years old)*–The child, through physical interaction with his or her environment, builds a set of concepts about reality and how it works. This is the stage where a child does not know that physical objects remain in existence even when out of sight (object permanence).
2. *Preoperational stage (ages 2-7)*–The child is not yet able to conceptualize abstractly and needs concrete physical situations.
3. *Concrete operations (ages 7-11)*–As physical experience accumulates, the child starts to conceptualize, creating logical structures that explain his or her physical experiences. Abstract problem solving is also possible at this stage. For example, arithmetic equations can be solved with numbers, not just with objects.
4. *Formal operations (beginning at ages 11-15)*–By this point, the child's cognitive structures are like those of an adult and include conceptual reasoning.

Piaget outlined several principles for building cognitive structures. During all development stages, the child experiences his or her environment using whatever mental maps he or she has constructed so far. If the experience is a repeated one, it fits easily–or is assimilated–into the child's cognitive structure so that he or she maintains mental "equilibrium." If the experience is different or new, the child loses equilibrium, and alters his or her cognitive structure to accommodate the new conditions. This way, the child erects more and more adequate cognitive structures.

How Piaget's Theory Impacts Learning

Curriculum–Educators must plan a developmentally appropriate curriculum that enhances their students' logical and conceptual growth.

Instruction–Teachers must emphasize the critical role that experiences–or interactions with the surrounding environment–play in student learning. For example, instructors have to take into account the role that fundamental concepts, such as the permanence of objects, play in establishing cognitive structures.

Neuroscience

Neuroscience is the study of the human nervous system, the brain, and the biological basis of consciousness, perception, memory, and learning. The nervous system and the brain are the physical foundation of the human learning process. Neuroscience links our observations about cognitive behaviour with the actual physical processes that support such behaviour. This theory is still "young" and is undergoing rapid, controversial development.

Some key findings of neuroscience

The brain has a triad structure. Our brain actually contains three brains: the lower or reptilian brain that controls basic sensory motor functions; the mammalian or limbic brain that controls emotions, memory, and biorhythms; and the neocortex or thinking brain that controls cognition, reasoning, language, and higher intelligence.

The brain is not a computer. The structure of the brain's neuron connections is loose, flexible, "webbed," overlapping, and redundant. It's impossible for such a system to function like a linear or parallel-processing computer. Instead, the brain is better described as a self-organizing system.

The brain changes with use, throughout our lifetime. Mental concentration and effort alters the physical structure of the brain. Our nerve cells (neurons) are connected by branches called dendrites. There are about 10 billion neurons in the brain and about 1,000 trillion connections. The possible combinations of connections are about ten to the one-millionth power. As we use the brain, we strengthen certain patterns of connection, making each connection easier to create next time. This is how memory develops.

How Neuroscience Impacts Education

When educators take neuroscience into account, they organize a curriculum around real experiences and integrated, "whole" ideas. Plus, they focus on instruction that promotes complex thinking and the "growth" of the brain. Neuroscience proponents advocate continued learning and intellectual development throughout adulthood.

Brain-based Learning

This learning theory is based on the structure and function of the brain. As long as the brain is not prohibited from fulfilling its normal processes, learning will occur.

People often say that everyone **can** learn. Yet the reality is that everyone **does** learn. Every person is born with a brain that functions as an immensely powerful processor. Traditional schooling, however, often inhibits learning by discouraging, ignoring, or punishing the brain's natural learning processes.

Core principles of brain-based learning

1. The brain is a parallel processor, meaning it can perform several activities at once, like tasting and smelling.
2. Learning engages the whole physiology.
3. The search for meaning is innate.
4. The search for meaning comes through patterning.
5. Emotions are critical to patterning.

6. The brain processes wholes and parts simultaneously.
7. Learning involves both focused attention and peripheral perception.
8. Learning involves both conscious and unconscious processes.
9. We have two types of memory: spatial and rote.
10. We understand best when facts are embedded in natural, spatial memory.
11. Learning is enhanced by challenge and inhibited by threat.
12. Each brain is unique.

Three instructional techniques associated with brain-based learning

1. **Orchestrated immersion**–Creating learning environments that fully immerse students in an educational experience
2. **Relaxed alertness**–Trying to eliminate fear in learners, while maintaining a highly challenging environment
3. **Active processing**–Allowing the learner to consolidate and internalize information by actively processing it

How Brain-Based Learning Impacts Education

Curriculum–Teachers must design learning around student interests and make learning contextual.

Instruction–Educators let students learn in teams and use peripheral learning. Teachers structure learning around real problems, encouraging students to also learn in settings outside the classroom and the school building.

Assessment–Since all students are learning, their assessment should allow them to understand their own learning styles and preferences. This way, students monitor and enhance their own learning process.

What Brain-Based Learning Suggests

How the brain works has a significant impact on what kinds of learning activities are most effective. Educators need to help students have appropriate experiences and capitalize on those experiences.

As Renate Caine illustrates on p. 113 of her book *Making Connections*, three interactive elements are essential to this process:

- Teachers must immerse learners in complex, interactive experiences that are both rich and real. One excellent example is immersing students in a foreign culture to teach them a second language. Educators must take advantage of the brain's ability to parallel process.
- Students must have a personally meaningful challenge. Such challenges stimulate a student's mind to the desired state of alertness.

- In order for a student to gain insight about a problem, there must be intensive analysis of the different ways to approach it, and about learning in general. This is what's known as the "active processing of experience."

A few other tenets of brain-based learning

1) Feedback is best when it comes from reality, rather than from an authority figure.
2) People learn best when solving realistic problems.
3) The big picture cannot be separated from the details.

Because every brain is different, educators should allow learners to customize their own environments.

The best problem solvers are those that laugh!

Designers of educational tools **must be artistic** in their creation of brain-friendly environments. Instructors need to realize that the best way to learn is not through lecture, but by participation in realistic environments that let learners try new things safely.

Learning Styles

This approach to learning emphasizes the fact that individuals perceive and process information in very different ways. The learning styles theory implies that how much individuals learn has more to do with whether the educational experience is geared toward their particular style of learning than whether or not they are "smart." In fact, educators should not ask, "Is this student smart?" but rather "How is this student smart?"

The concept of learning styles is rooted in the classification of psychological types. The learning styles theory is based on research demonstrating that, as the result of heredity, upbringing, and current environmental demands, different individuals have a tendency to both perceive and process information differently. The different ways of doing so are generally classified as:

1. ***Concrete*** *and* ***abstract*** *perceivers*–Concrete perceivers absorb information through direct experience, by doing, acting, sensing, and feeling. Abstract perceivers, however, take in information through analysis, observation, and thinking.
2. ***Active*** *and* ***reflective*** *processors*–Active processors make sense of an experience by immediately using the new information. Reflective processors make sense of an experience by reflecting on and thinking about it.

Traditional schooling tends to favour abstract perceiving and reflective processing. Other kinds of learning aren't rewarded and reflected in curriculum, instruction, and assessment nearly as much.

How the Learning Styles Theory Impacts Education

Curriculum–Educators must place emphasis on intuition, feeling, sensing, and imagination, in addition to the traditional skills of analysis, reason, and sequential problem solving.

Instruction–Teachers should design their instruction methods to connect with all four learning styles, using various combinations of experience, reflection, conceptualization, and experimentation. Instructors can introduce a wide variety of experiential elements into the classroom, such as sound, music, visuals, movement, experience, and even talking.

Assessment–Teachers should employ a variety of assessment techniques, focusing on the development of "whole brain" capacity and each of the different learning styles.

Multiple Intelligences

This theory of human intelligence, developed by psychologist Howard Gardner, suggests there are at least seven ways that people have of perceiving and understanding the world. Gardner labels each of these ways a distinct "intelligence"–in other words, a set of skills allowing individuals to find and resolve genuine problems they face.

Gardner defines an "intelligence" as a group of abilities that:

- Is somewhat autonomous from other human capacities
- Has a core set of information-processing operations
- Has a distinct history in the stages of development we each pass through
- Has plausible roots in evolutionary history

While Gardner suggests his list of intelligences may not be exhaustive, he identifies the following seven:

1. *Verbal-Linguistic*–The ability to use words and language
2. *Logical-Mathematical*–The capacity for inductive and deductive thinking and reasoning, as well as the use of numbers and the recognition of abstract patterns
3. *Visual-Spatial*–The ability to visualize objects and spatial dimensions, and create internal images and pictures
4. *Body-Kinaesthetic*–The wisdom of the body and the ability to control physical motion
5. *Musical-Rhythmic*–The ability to recognize tonal patterns and sounds, as well as a sensitivity to rhythms and beats
6. *Interpersonal*–The capacity for person-to-person communications and relationships

7. *Intrapersonal*–The spiritual, inner states of being, self-reflection, and awareness

How Multiple Intelligences Impact Learning

Curriculum–Traditional schooling heavily favours the verbal-linguistic and logical-mathematical intelligences. Gardner suggests a more balanced curriculum that incorporates the arts, self-awareness, communication, and physical education.

Instruction–Gardner advocates instructional methods that appeal to all the intelligences, including role playing, musical performance, cooperative learning, reflection, visualization, story telling, and so on.

Assessment–This theory calls for assessment methods that take into account the diversity of intelligences, as well as self-assessment tools that help students understand their intelligences.

Right Brain vs. Left Brain

This theory of the structure and functions of the mind suggests that the two different sides of the brain control two different "modes" of thinking. It also suggests that each of us prefers one mode over the other.

Experimentation has shown that the two different sides, or hemispheres, of the brain are responsible for different manners of thinking. The following table illustrates the differences between left-brain and right-brain thinking:

Left Brain	**Right Brain**
Logical	Random
Sequential	Intuitive
Rational	Holistic
Analytical	Synthesizing
Objective	Subjective
Looks at parts	Looks at wholes

Most individuals have a distinct preference for one of these styles of thinking. Some, however, are more whole-brained and equally adept at both modes. In general, schools tend to favour left-brain modes of thinking, while downplaying the right-brain ones. Left-brain scholastic subjects focus on logical thinking, analysis, and accuracy. Right-brained subjects, on the other hand, focus on aesthetics, feeling, and creativity.

How Right-Brain vs. Left-Brain Thinking Impacts Learning

Curriculum–In order to be more "whole-brained" in their orientation schools need to give equal weight to the arts, creativity, and the skills of imagination and synthesis.

Instruction–To foster a more whole-brained scholastic experience, teachers should use instruction techniques that connect with both sides of the brain. They can increase their classroom's right-brain learning activities by incorporating more patterning, metaphors, analogies, role playing, visuals, and movement into their reading, calculation, and analytical activities.

Assessment–For a more accurate whole-brained evaluation of student learning, educators must develop new forms of assessment that honour right-brained talents and skills.

Communities of Practice

This approach views learning as an act of membership in a "community of practice." The theory seeks to understand both the structure of communities and how learning occurs in them.

Basic Elements

The Communities of Practice concept was pioneered by the Institute for Research on Learning, a spin-off of the Xerox Corporation in Palo Alto, CA. The Institute pursues a cross-disciplinary approach to learning research, involving cognitive scientists, organizational anthropologists, and traditional educators. Communities of Practice is based on the following assumptions:

Learning is fundamentally a social phenomenon. People organize their learning around the social communities to which they belong. Therefore, schools are only powerful learning environments for students whose social communities coincide with that school.

Knowledge is integrated in the life of communities that share values, beliefs, languages, and ways of doing things. These are called **communities of practice**. Real knowledge is integrated in the doing, social relations, and expertise of these communities.

The processes of learning and membership in a community of practice are inseparable. Because learning is intertwined with community membership, it is what lets us belong to and adjust our status in the group. As we change our learning, our identity–and our relationship to the group–changes.

Knowledge is inseparable from practice. It is not possible to **know** without **doing**. By doing, we learn.

Empowerment–or the ability to contribute to a community–creates the potential for learning. Circumstances, in which we engage in real action that has consequences for both us and our community, create the most powerful learning environments.

How Communities of Practice Impacts Education

This approach to learning suggests teachers understand their students' communities of practice and acknowledge the learning students do in such communities. The communities of practice theory also suggests educators structure learning opportunities that embed knowledge in both work practices and social relations–for example, apprenticeships, school-based learning, service learning, and so on. Plus, educators should create opportunities for students to solve real problems with adults, in real learning situations.

Control Theory

This theory of motivation proposed by William Glasser contends that behaviour is never caused by a response to an outside stimulus. Instead, the control theory states that behaviour is inspired by what a person **wants** most at any given time: survival, love, power, freedom, or any other basic human need.

Responding to complaints that today's students are "unmotivated," Glasser attests that all living creatures "control" their behaviour to maximize their need satisfaction. According to Glasser, if students are not motivated to do their schoolwork, it's because they view schoolwork as irrelevant to their basic human needs.

Boss teachers use rewards and punishment to coerce students to comply with rules and complete required assignments. Glasser calls this "leaning on your shovel" work. He shows how high percentages of students recognize that the work they do–even when their teachers praise them–is such low-level work.

Lead teachers, on the other hand, avoid coercion completely. Instead, they make the intrinsic rewards of doing the work clear to their students, correlating any proposed assignments to the students' basic needs. Plus, they only use grades as temporary indicators of what has and hasn't been learned, rather than a reward. Lead teachers will "fight to protect" highly engaged, deeply motivated students who are doing quality work from having to fulfil meaningless requirements.

How the Control Theory Impacts Learning

Curriculum–Teachers must negotiate both content and method with students. Students' basic needs literally help shape **how** and **what** they are taught.

Instruction–Teachers rely on cooperative, active learning techniques that enhance the power of the learners. Lead teachers make sure that all assignments meet some degree of their students' need satisfaction. This secures student loyalty, which carries the class through whatever relatively meaningless tasks might be necessary to satisfy official requirements.

Assessment–Instructors only give "good grades"–those that certify quality work–to satisfy students' need for power. Courses for which a student doesn't earn a "good grade" are not recorded on that student's transcript. Teachers grade students using an absolute standard, rather than a relative "curve."

Observational Learning

Observational learning, also called social learning theory, occurs when an observer's behaviour changes after viewing the behaviour of a model. An observer's behaviour can be affected by the positive or negative consequences–called vicarious reinforcement or vicarious punishment– of a model's behaviour.

There are several guiding principles behind observational learning, or social learning theory:

1. The observer will imitate the model's behaviour if the model possesses characteristics– things such as talent, intelligence, power, good looks, or popularity–that the observer finds attractive or desirable.
2. The observer will react to the way the model is treated and mimic the model's behaviour. When the model's behaviour is rewarded, the observer is more likely to reproduce the rewarded behaviour. When the model is punished, an example of vicarious punishment, the observer is less likely to reproduce the same behaviour.
3. A distinction exists between an observer's "acquiring" a behaviour and "performing" a behaviour. Through observation, the observer can acquire the behaviour without performing it. The observer may then later, in situations where there is an incentive to do so, display the behaviour.
4. Learning by observation involves four separate processes: *attention, retention, production and motivation.*
    - Attention: Observers cannot learn unless they pay attention to what's happening around them. This process is influenced by characteristics of the model, such as how much one likes or identifies with the model, and by characteristics of the observer, such as the observer's expectations or level of emotional arousal.
    - Retention: Observers must not only recognize the observed behaviour but also remember it at some later time. This process depends on the observer's ability to code or structure the information in an easily remembered form or to mentally or physically rehearse the model's actions.
    - Production: Observers must be physically and/intellectually capable of producing the act. In many cases the observer possesses the necessary responses. But sometimes, reproducing the model's actions may involve skills the observer has not yet acquired. It is one thing to carefully watch a circus juggler, but it is quite another to go home and repeat those acts.
    - Motivation: In general, observers will perform the act only if they have some motivation or reason to do so. The presence of reinforcement or punishment, either to the model or directly to the observer, becomes most important in this process.
5. Attention and retention account for acquisition or learning of a model's behaviour; production and motivation control the performance.
6. Human development reflects the complex interaction of the person, the person's behaviour, and the environment. The relationship between these elements is called *reciprocal determinism*. A person's cognitive abilities, physical characteristics, personality, beliefs, attitudes, and so on influence both his or her behaviour and environment. These influences are reciprocal, however. A person's behaviour can affect his feelings about himself and his attitudes and beliefs about others. Likewise, much of what a person knows comes from environmental resources such as television,

parents, and books. Environment also affects behaviour: what a person observes can powerfully influence what he does. But a person's behaviour also contributes to his environment.

How Observational Learning Impacts Learning

Curriculum– Students must get a chance to observe and model the behaviour that leads to a positive reinforcement.

Instruction– Educators must encourage collaborative learning, since much of learning happens within important social and environmental contexts.

Assessment–A learned behaviour often cannot be performed unless there is the right environment for it. Educators must provide the incentive and the supportive environment for the behaviour to happen. Otherwise, assessment may not be accurate.

Vygotsky and Social Cognition

The social cognition learning model asserts that culture is the prime determinant of individual development. Humans are the only species to have created culture, and every human child develops in the context of a culture. Therefore, a child's learning development is affected in ways large and small by the culture–including the culture of family environment–in which he or she is enmeshed.

1. Culture makes two sorts of contributions to a child's intellectual development. *First*, through culture children acquire much of the content of their thinking, that is, their knowledge. *Second*, the surrounding culture provides a child with the processes or means of their thinking, what Vygotskians call the tools of intellectual adaptation. In short, according to the social cognition learning model, culture teaches children both what to think and how to think.
2. Cognitive development results from a dialectical process whereby a child learns through problem-solving experiences shared with someone else, usually a parent or teacher but sometimes a sibling or peer.
3. Initially, the person interacting with child assumes most of the responsibility for guiding the problem solving, but gradually this responsibility transfers to the child.
4. Language is a primary form of interaction through which adults transmit to the child the rich body of knowledge that exists in the culture.
5. As learning progresses, the child's own language comes to serve as her primary tool of intellectual adaptation. Eventually, children can use internal language to direct their own behaviour.
6. Internalization refers to the process of learning–and thereby internalizing–a rich body of knowledge and tools of thought that first exist outside the child. This happens primarily through language.
7. A difference exists between what child can do on her own and what the child can do with help. Vygotskians call this difference the zone of proximal development.

8. Since much of what a child learns comes form the culture around her and much of the child's problem solving is mediated through an adult's help, it is wrong to focus on a child in isolation. Such focus does not reveal the processes by which children acquire new skills.
9. Interactions with surrounding culture and social agents, such as parents and more competent peers, contribute significantly to a child's intellectual development.

How Vygotsky Impacts Learning

Curriculum–Since children learn much through interaction, curricula should be designed to emphasize interaction between learners and learning tasks.

Instruction–With appropriate adult help, children can often perform tasks that they are incapable of completing on their own. With this in mind, scaffolding–where the adult continually adjusts the level of his or her help in response to the child's level of performance–is an effective form of teaching. Scaffolding not only produces immediate results, but also instills the skills necessary for independent problem solving in the future.

Assessment–Assessment methods must take into account the zone of proximal development. What children can do on their own is their level of actual development and what they can do with help is their level of potential development. Two children might have the same level of actual development, but given the appropriate help from an adult, one might be able to solve many more problems than the other. Assessment methods must target both the level of actual development and the level of potential development.

APPENDIX L

144

"Show me how this helps teachers teach and children learn."
MICHIGAN DEPARTMENT OF EDUCATION
DECISION MAKING YARDSTICK
2001

MICHIGAN Department of Education

WHAT RESEARCH SAYS ABOUT PARENT INVOLVEMENT IN CHILDREN'S EDUCATION

In Relation to Academic Achievement

Where Children Spend Their Time

- School age children spend 70% of their waking hours (including weekends and holidays) outside of school.[1]

When Parents Should Get Involved

- The earlier in a child's educational process parent involvement begins, the more powerful the effects.[2]
- The most effective forms of parent involvement are those, which engage parents in working directly with their children on learning activities at home.[3]

Impact

- 86% of the general public believes that support from parents is the most important way to improve the schools.[4]
- Lack of parental involvement is the biggest problem facing public schools.[5]
- Decades of research show that when parents are involved students have[6]:
  - Higher grades, test scores, and graduation rates
  - Better school attendance
  - Increased motivation, better self-esteem
  - Lower rates of suspension
  - Decreased use of drugs and alcohol
  - Fewer instances of violent behavior
- Family participation in education was *twice* as predictive of students' academic success as family socioeconomic status. Some of the more intensive programs had effects that were *10 times* greater than other factors.[7]
- The more intensely parents are involved, the more beneficial the achievement effects.[8]
- The more parents participate in schooling, in a sustained way, at every level -- in advocacy, decision-making and oversight roles, as fund-raisers and boosters, as volunteers and para-professionals, and as home teachers -- the better for student achievement.[9]

Parent Expectations and Student Achievement

- The most consistent predictors of children's academic achievement and social adjustment are parent expectations of the child's academic attainment and satisfaction with their child's education at school.[10]
- Parents of high-achieving students set higher standards for their children's educational activities than parents of low-achieving students.[11]

Major Factors of Parent Involvement

- Three major factors of parental involvement in the education of their children[12]:
  1. Parents' beliefs about what is important, necessary and permissible for them to do with and on behalf of their children;
  2. The extent to which parents believe that they can have a positive influence on their children's education; and
  3. Parents' perceptions that their children and school want them to be involved.

Type of Involvement

- Although most parents do not know how to help their children with their education, with guidance and support, they may become increasingly involved in home learning activities and find themselves with opportunities to teach, to be models for and to guide their children.[13]
- When schools encourage children to practice reading at home with parents, the children make significant gains in reading achievement compared to those who only practice at school.[14]
- Parents, who read to their children, have books available, take trips, guide TV watching, and provide stimulating experiences contribute to student achievement.[15]

Type of Involvement (continued)

- Families whose children are doing well in school exhibit the following characteristics:[16]
  1. **Establish a daily family routine.** Examples: Providing time and a quiet place to study, assigning responsibility for household chores, being firm about bedtime and having dinner together.
  2. **Monitor out-of-school activities.** Examples: Setting limits on TV watching, checking up on children when parents are not home, arranging for after-school activities and supervised care.
  3. **Model the value of learning, self-discipline, and hard work.** Examples: Communicating through questioning and conversation, demonstrating that achievement comes from working hard.
  4. **Express high but realistic expectations for achievement.** Examples: Setting goals and standards that are appropriate for children's age and maturity, recognizing and encouraging special talents, informing friends and family about successes.
  5. **Encourage children's development/ progress in school.** Examples: Maintaining a warm and supportive home, showing interest in children's progress at school, helping with homework, discussing the value of a good education and possible career options, staying in touch with teachers and school staff.
  6. **Encourage reading, writing, and discussions among family members.** Examples: Reading, listening to children read and talking about what is being read.

Student Interest

- Most students at all levels – elementary, middle, and high school – want their families to be more knowledgeable partners about schooling and are willing to take active roles in assisting communications between home and school.[17]
- When parents come to school regularly, it reinforces the view in the child's mind that school and home are connected and that school is an integral part of the whole family's life.[18]

School and District Leadership

- The strongest and most consistent predictors of parent involvement at school and at home are the specific school programs and teacher practices that encourage parent involvement at school and guide parents in how to help their children at home.[19]
- School initiated activities to help parents change the home environment can have a strong influence on children's school performance.[20]
- Parents need specific information on how to help and what to do.[21]

Federal and State Requirements

- Parent involvement components are required in the federal Elementary and Secondary Education Act (ESEA), and various federal and state education programs including Early On, Michigan School Readiness Program and Title 1.

Obstacles

- School activities to develop and maintain partnerships with families decline with each grade level, and drop dramatically at the transition to middle grades.[22]
- Teachers often think that low-income parents and single parents will not or cannot spend as much time helping their children at home as do middle-class parents with more education and leisure time.[23]

Epstein's Six Types of Parent Involvement

Joyce Epstein of Johns Hopkins University has developed a framework for defining six different types of parent involvement. This framework assists educators in developing school and family partnership programs. "There are many reasons for developing school, family, and community partnerships," she writes. "The main reason to create such partnerships is to help all youngsters succeed in school and in later life."

Epstein's framework defines the six types of involvement and lists *sample practices* or activities to describe the involvement more fully. Her work also describes the *challenges* inherent in fostering each type of parent involvement as well as the expected *results* of implementing them for students, parents, and teachers.

Epstein's Framework of Six Types of Involvement

1. **PARENTING**: Help all families establish home environments to support children as students.
   - Parent education and other courses or training for parents (e.g., GED, college credit, family literacy).
   - Family support programs to assist families with health, nutrition, and other services.
   - Home visits at transition points to pre-school, elementary, middle, and high school.
2. **COMMUNICATING**: Design effective forms of school-to-home and home-to-school communications about school programs and children's progress.
   - Conferences with every parent at least once a year.
   - Language translators to assist families as needed.
   - Regular schedule of useful notices, memos, phone calls, newsletters, and other communications.
3. **VOLUNTEERING**: Recruit and organize parent help and support.
   - School and classroom volunteer program to help teachers, administrators, students, and other parents.
   - Parent room or family center for volunteer work, meetings, and resources for families.
   - Annual postcard survey to identify all available talents, times, and locations of volunteers.
4. **LEARNING AT HOME**: Provide information and ideas to families about how to help students at home with homework and other curriculum-related activities, decisions, and planning.
   - Information for families on skills required for students in all subjects at each grade.
   - Information on homework policies and how to monitor and discuss schoolwork at home.
   - Family participation in setting student goals each year and in planning for college or work.
5. **DECISION MAKING**: Include parents in school decisions, developing parent leaders and representatives.
   - Active PTA/PTO or other parent organizations, advisory councils, or committees for parent leadership and participation.
   - Independent advocacy groups to lobby and work for school reform and improvements.
   - Networks to link all families with parent representatives.
6. **COLLABORATING WITH COMMUNITY**: Identify and integrate resources and services from the community to strengthen school programs, family practices, and student learning and development.
   - Information for students and families on community health, cultural, recreational, social support, and other programs/services.
   - Information on community activities that link to learning skills and talents, including summer programs for students.

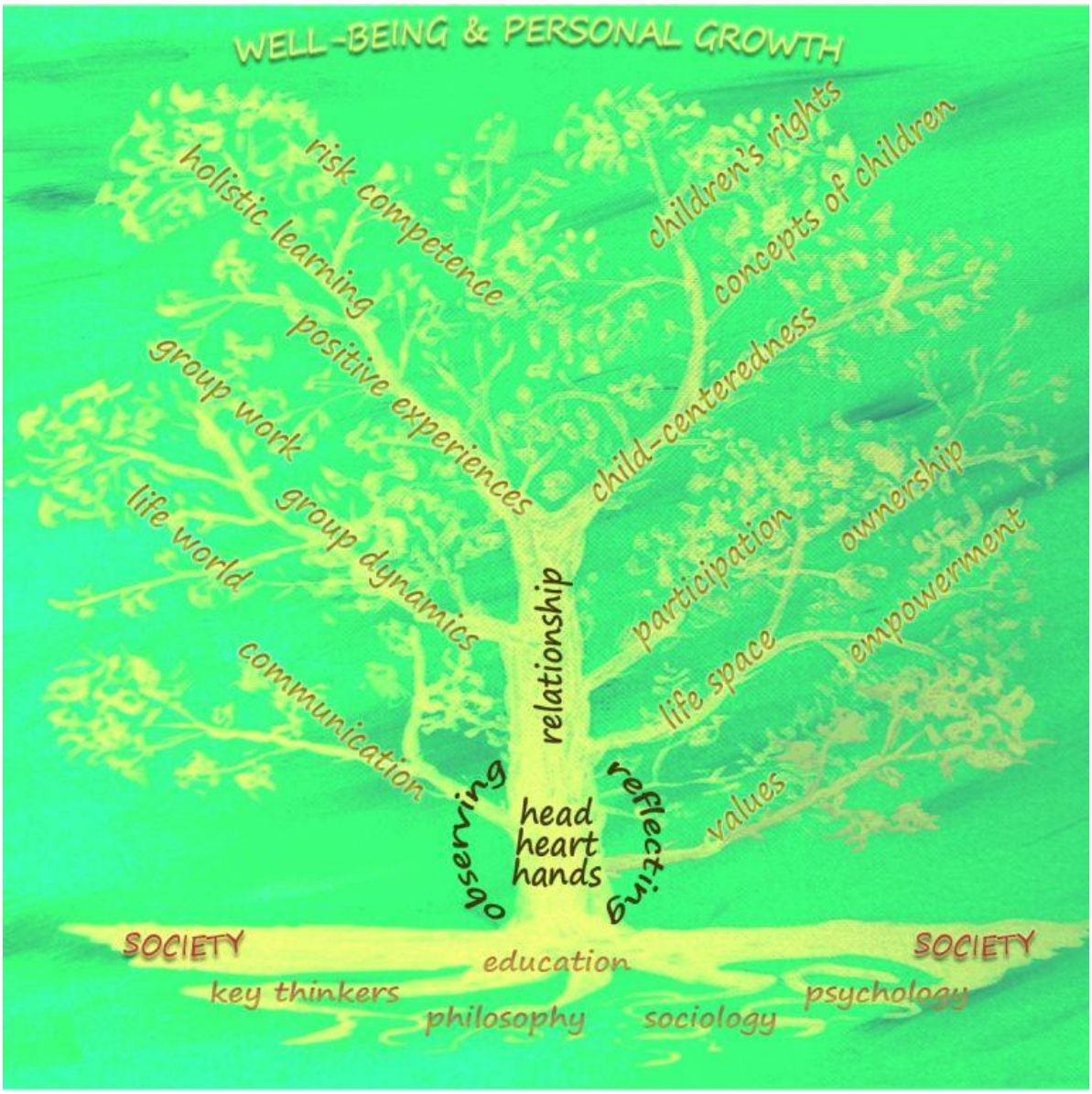
National Standards for Parent/Family Involvement
Building upon the six types of parent involvement identified by Joyce L. Epstein, Ph.D., of the Center on School, Family, and Community Partnerships at Johns Hopkins University, National PTA created program standards of excellence.

National Standards for Parent/Family Involvement Programs	
Standard 1:	Communicating—Communication between home and school is regular, two-way, and meaningful.
Standard II:	Parenting—Parenting skills are promoted and supported.
Standard III:	Student Learning—Parents play an integral role in assisting student learning.
Standard IV:	Volunteering—Parents are welcome in the school, and their support and assistance are sought.
Standard V:	School Decision Making and Advocacy—Parents are full partners in the decisions that affect children and families.
Standard VI:	Collaborating with Community—Community resources are used to strengthen schools, families, and student learning.

[1] Clark, R.M. (1990). Why Disadvantaged Children Succeed. Public Welfare (Spring): 17-23.
[2] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[3] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[4] Rose, Gallup, & Elam, 1997
[5] Rose, Gallup, & Elam, 1997
[6] Parent Teacher Association
[7] Walberg (1984) in his review of 29 studies of school–parent programs.
[8] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[9] Williams, D.L. & Chavkin, N.F. (1989). Essential elements of strong parent involvement programs. Educational Leadership, 47, 18-20
[10] Reynolds, et, al., (6)
[11] Clark (7:85-105)
[12] 1997 Review of Educational Research, a journal of the American Educational Research Association
[13] Roberts, 1992. In Online Resources for Parent/Family Involvement. ERIC Digest by Ngeow, Karen Yeok-Hwa, 1999.
[14] Tizard, J.; Schofield, W.N.; & Hewison, J. (1982). Collaboration Between Teachers and Parents in Assisting Children's Reading.
[15] Sattes (5:2)
[16] Henderson (1:9)
[17] Epstein, 1995, p. 703
[18] Steinberg (8)
[19] Dauber and Epstein (11:61)
[20] Leler, H. (1983) Parent Education and Involvement in Relation to the Schools and to Parents of School-aged Children.
[21] Morton-Williams, R. "The Survey of Parental Attitude and Circumstances, 1964."
[22] Epstein, J.L. (1992) School and Family Partnerships.
[23] Epstein J.L. (1984, March). Single Parents and Schools: The effects of marital status Parent and Teacher Evaluations. [23] Clark, R.M. (1990). Why Disadvantaged Children Succeed. Public Welfare (Spring): 17-23.
[23] Rose, Gallup, & Elam, 1997
[23] Rose, Gallup, & Elam, 1997
[23] Henderson and Berla, 1994
[23] Walberg (1984) in his review of 29 studies of school–parent programs.
[23] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[23] Williams, D.L. & Chavkin, N.F. (1989). Essential elements of strong parent involvement programs. Educational Leadership, 47, 18-20
[23] Parent Teacher Association
[23] Reynolds, et, al., (6)
[23] Clark (7:85-105)
[23] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[23] Cotton, K., Wikelund, K., Northwest Regional Educational Laboratory, School Improvement Research Series. In Parent Involvement in Education.
[23] Epstein, 1995, p. 703
[23] Steinberg (8)
[23] 1997 Review of Educational Research, a journal of the American Educational Research Association
[23] Roberts, 1992. In Online Resources for Parent/Family Involvement. ERIC Digest by Ngeow, Karen Yeok-Hwa, 1999.
[23] Tizard, J.; Schofield, W.N.; & Hewison, J. (1982). Collaboration Between Teachers and Parents in Assisting Children's Reading.
[23] Sattes (5:2)
[23] Henderson (1:9)
[23] Dauber and Epstein (11:61)
[23] Leler, H. (1983) Parent Education and Involvement in Relation to the Schools and to Parents of School-aged Children.
[23] Morton-Williams, R. "The Survey of Parental Attitude and Circumstances, 1964."
[23] Epstein, J.L. (1992) School and Family Partnerships.
[23] Epstein J.L. (1984, March). Single Parents and Schools: The effects of marital status Parent and Teacher Evaluations.

APPENDIX M

THE SOCIAL PEDAGOGY TREE



The Social Pedagogy Tree symbolizes that social pedagogy has organically grown out of societal conditions. It is solidly rooted in society, with the different roots representing different

strands of particular influences on social pedagogy, such as theories from related disciplines or influential key thinkers that have shaped the development of social pedagogy.

The trunk forms the core of what social pedagogy represents in theory and in practice: the holistic approach to education in the broadest sense, the centrality of relationships, and the use of observation and reflection as a tool for continuous development of all (systems and people) that are included in the pedagogic process.

The branches outline various predominant elements that form part of social pedagogy, and each of them is underpinned in its significance by theory and research. This makes it helpful to apply theory to practice. For instance, the knowledge of communication models makes practitioners more self-reflective about and conscious of how they communicate.

As with every tree, growth takes place in two opposite directions, both away from and further into the ground. This reflects how social pedagogy interacts between society and the individual, towards independence and interdependence. In Goethe's words 'children need two things from their parents: roots and wings.

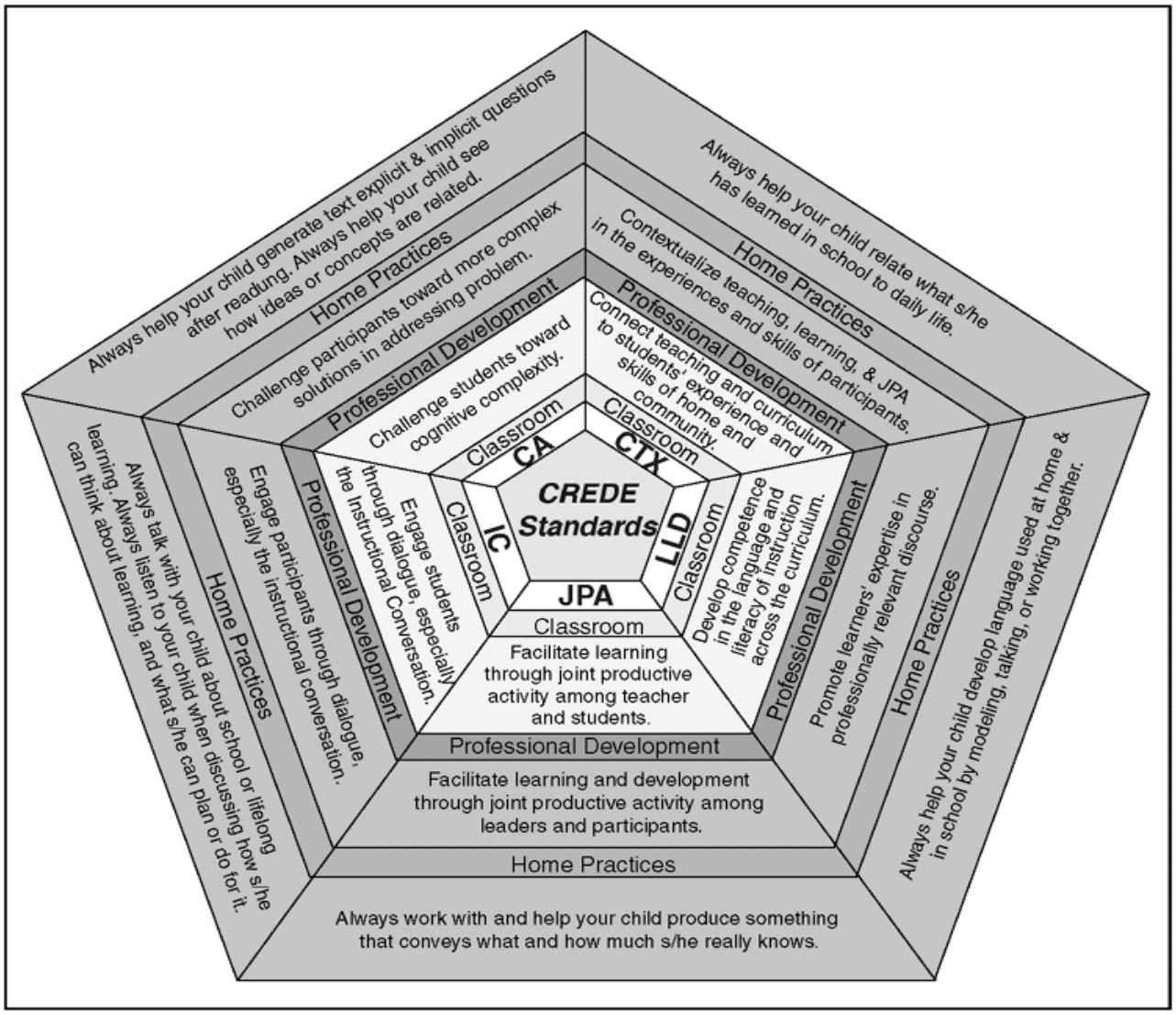
Similar to this is the growth of social pedagogy itself: through dialogue, social pedagogy takes influence on how society is constructed, and in reverse these constructions take influence

on how social pedagogy is shaped. Because of this vital relationship with society, social pedagogy cannot simply be transplanted. It flourishes best when embedded into the culture and existing practice, and therefore it takes time and constant care to grow.

Adapted from http://www.socialpedagogy.co.uk

APPENDIX N

CREDE'S FIVE STAGE MODEL OF EFFECTIVE PEDAGOGY



Code

CA – Cognitive Activities
CTX – Connecting Teaching ExperienceIC – Instructional Conversation
LLD – Language & Literacy Development
JPA – Joint Productive Activity

From Centre for Research on Education, Diversity and Excellence

APPENDIX O

WHEN ARE THERAPEUTIC INTERVENTIONS RECOMMENDED?

When should you consider therapeutic interventions? This question haunts many people for the simple fact that intervention services aren't generally covered by health insurance plans. Therefore, the question is not only a matter of, "Will this work?" But it is also a question of, "Can we afford this not to work?" Since counselling is so contingent upon the intervention specialist-patient relationship, it sometimes takes a few different specialists to yield results.

Today, therapeutic interventions are used in all sorts of cases, such as for misbehaving toddlers, abused children, adolescents with behavioural disorders, elderly patients with degenerative diseases and people suffering middle-aged obesity. The end goal of intervention programs is to inspire people to make the necessary changes to take control of their own lives again.

Treating mental/emotional disorders is one common use for a therapeutic intervention. In some cases, a brief intervention of 20 meetings will be enough to get someone out of their funk. Other times, those suffering from chronic patterns of behaviour will require ongoing therapy. During the meetings, patients will undergo relaxation training/stress management, couples/family counselling, individual cognitive and behavioural therapy, biofeedback training and work group/education assistance.

Whether a person suffers from ADHD, Bipolar Disorder, anxiety or depression, a therapeutic intervention can provide the groundwork for change. Homework assignments encourage clients to apply the lessons they've learned in therapy.

Sometimes, young children require therapeutic interventions. Perhaps the child has extremely emotional mood swings, behavioural outbursts of extreme anger in school, chronic truancy, antisocial behaviour/difficulty making friends, patterns of excessive risk taking that endangers his or her life, chronic listlessness or depression. Research suggests that even preschoolers can benefit from certain types of behavioural intervention.

For children as young as three years old, the early childhood intervention program usually centres on play therapy. By encouraging storytelling, painting, drama creation, using puppets and other free-expression activities, therapists can uncover the root of the child's trouble and help them express themselves in a healthy, creative manner.

Researchers say the younger the child at the time of the therapeutic intervention, the better! Long-term therapy has shown to have an impact on the biology of the brain, influencing the amount and type of neurotransmitters released.

In some cases, developmental disorders are treated with therapeutic interventions. Physical therapy, occupational therapy and speech-language therapy are common intervention techniques for these patients.

Children, teens or adults with Cerebral Palsy, Down Syndrome, Autism Spectrum Disorders, Learning Disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Prematurity, Fetal Alcohol Syndrome (FAS), Traumatic Brain Injury (TBI), Developmental Delay, Spina Bifida, Failure to Thrive, Shaken Baby Syndrome, Meningitis, Genetic Disorders and Craniofacial Anomalies may all benefit from the interpersonal support offered by an intervention specialist.

Adapted from http://www.therapeuticinterventions.org

APPENDIX P

TEACHING AND ASSESSING STRATEGIES FOR STUDENTS WITH LEARNING DIFFICULTIES

Learning Disability (LD) is the result of a neurological disorder which may cause the learner to receive and process some information inaccurately. The most common LD found in the tertiary environment is dyslexia. Other learning disabilities are dysgraphia and aphasia. LD can have a significant impact on learning.

Research indicates that at least 5% of tertiary level students have a LD which can cause significant difficulties in perceiving and/or processing auditory, visual or spatial information. Manifestations of the disability may vary somewhat over time. Many students who have been diagnosed as learning disabled in childhood have already established avoidance or protective or compensatory strategies to minimise the impact of the disability. However, these strategies may not necessarily be appropriate at university.

LD is, to all intents and purposes, a 'hidden' disability. Often the first indication for staff will be a discrepancy between the knowledge or ability a student demonstrates in class or in discussions, and results on written assignments or in examinations.

While it is never desirable to generalise about any disability or to rely on stereotypes, there are a number of characteristics considered common to students with a learning disability. Difficulties resulting from errors in perceiving and processing information appear particularly in written work:

- through unusual and inconsistent spellings
- reversals or transpositions of letters in words, or of numbers in figures, formulae, dates
- omission of parts of words or sentences, or omission of auxiliary words, pronouns and prepositions
- lack of proper order or demonstrated sequence in writing and mathematical calculations.

Students may also mispronounce or misread words and have difficulty acquiring new vocabulary or a new language. Reading rate is generally slower than average, though not necessarily in all areas. Students may exhibit difficulties in time and task management, and in prioritizing and organising generally.

Making changes and adjusting to new situations have been shown to be especially difficult for students with learning disabilities. Students may begin university with an unclear understanding of their own disability, though some will be very clear about their particular strengths and weaknesses. It is important to recognise that a student with perceptual or processing impairment will have difficulty with some academic tasks but not with others. Performance may appear uneven.

Impact of LDs

The learning processes of students with learning disabilities may be affected in a number of ways:

- Deficiencies in short-term memory, and cognitive processing limitations are common. This means that students may have difficulty following sequences or complicated directions and with integrating material from a number of sources.
- Problems following or creating a sequence will interfere with many things in the learning environment: following and understanding the structure of a lecture; remembering facts presented chronologically; seeing the relationship between a main idea and subordinate ideas in a text.
- Students with a learning disability sometimes report information overload and confusion resulting from having more ideas (and having to hold on to them) than they can manage to translate into acceptable words or structures. They may have difficulty in moving from the role of writer to that of reader, and objectively viewing the ideas, organisation, and style of their written assignments, and achieving coherence in writing.
- Students may have difficulty with the 'search and locate' strategies required in library work and in independent learning generally.
- When reading rate and reading comprehension are slow, difficulties are compounded when large amounts of material must be dealt with in a short space of time, or when many new words or concepts must be learned and incorporated into understanding.
- Visual memory skills may be poor. By comparison, oral language and discussion skills are often exceptional, though students are likely to be extremely reluctant to read aloud.
- Manual dexterity or coordination problems may be evident, often as a result of difficulties in judging distance. Students may also have difficulty interpreting two- or three-dimensional models or diagrams and following maps or directions.
- Heightened anxiety levels are common in test or performance situations. Anxiety about performing in front of others may affect participation in tutorials. Students will deal with anxiety in any number of ways – from medication to meditation, or simply by avoidance.
- Being labelled 'learning disabled' has a considerable impact on emotions, confidence and self-esteem. Students will often have years of negative attitudes and dismissive feedback about their abilities behind them, and this will have an impact on learning.
- Students with a learning disability coming straight from the school system may have been used to a structured and controlled learning environment, and may be uncomfortable taking some of the learning risks associated with the relatively free and unstructured environment of university.

Teaching Strategies

There is a range of inclusive teaching strategies that can assist all students to learn but there are some specific strategies that are useful in teaching a group which includes students with learning disability.

- Refer students to the excellent resource Learning Strategies for Students with LD.
- Provide reading lists well before the start of a course so that reading can begin early. Consider tailoring reading lists and provide guidance to key texts. Allow work to be completed on an in-depth study of a few texts rather than a broad study of many.
- Whenever you are introducing procedures or processes or giving directions, for example in a laboratory or computing exercise, ensure that stages or sequences are made clear and are explained in verbal as well as written form.
- Students may benefit from using assistive technology.
- Use as many verbal descriptions as possible to supplement material presented on blackboard or overhead. Students with a learning disability often have a marked preference for an auditory mode of learning.
- Present information in a range of formats – handouts, worksheets, overheads, videos – to meet a diversity of learning styles.
- Use a variety of teaching methods so that students are not constrained by needing to acquire information by reading only. Where possible, present material diagrammatically - in lists, flow charts, concept maps etc.
- Keep diagrams uncluttered and use colour wherever appropriate to distinguish and highlight.
- Ensure that lists of technical / professional jargon which students will need to learn are available early in the course. Students with a learning disability find it difficult to listen and write at the same time. Being able to record lectures will assist those students who have handwriting or coordination problems and those who write slowly as well as those who have a tendency to mishear or misquote.
- Students will be more likely to follow correctly the sequence of material in a lecture if they are able to listen to the material more than once.
- Repetition is important for students with a learning disability. Wherever possible, ensure that key statements and instructions are repeated or highlighted in some way.
- Students with a learning disability are generally not efficient users of time and so will benefit from discussion on time management and organisation issues. Such discussions can be built in to tutorial activities.
- Extra tutoring in subjects where processes and sequences are important may be desirable.
- Students with a learning disability may benefit from having oral rather than written feedback on their written assignments.
- Do not make students over-anxious about making mistakes, asking questions, getting through the work or meeting learning goals. It may be helpful for students with a learning disability to have an individual orientation to laboratory equipment or computers to minimise anxiety.

Assessment Strategies

There is a range of Inclusive assessment practices which will enhance the learning of all other students in the class but students with learning disabilities may need particular adjustments to assessment tasks. Once you have a clear picture of how the disability impacts on learning you can consider alternative assessment strategies.

In considering alternative forms of assessment, equal opportunity not a guaranteed outcome is the objective. You are not expected to lower standards to accommodate students with a disability but rather are required to give them a reasonable opportunity to demonstrate what they have learned.

Students with a learning disability may need particular adjustments to assessment tasks. Once you have a clear picture of how the disability impacts on performance you can consider alternative assessment strategies.

- Allow extensions to assignment deadlines if extensive reading has been set.
- Students with a learning disability may take longer to organise thoughts and sequence material. In drafting an essay some students will write, read on to tape, listen and then correct. This all takes time. Students will benefit from discussing their outlines with particular attention being paid to appropriate relationships and connections between points.
- Encourage the student to submit an early draft of assignments to allow the opportunity for feedback to the student as a formative process.
- Students with a learning disability will need extra time in an examination for reading and analysing questions and for planning their answers. Some students will request that examination questions be read to them. Some students may prefer to dictate their answers to a scribe. They will need a venue which is quiet and distraction-free.
- Many students with a learning disability will prefer oral assessment to written. Allow students to read written examination responses aloud and correct as they read. Some students need to hear what they have written in order to determine whether they have written what they intended. An oral examination is not an easy option for students. Give the same time for an oral examination as for a written exam but allow extra time for the student to listen to and refine or edit taped responses. In your assessment, allowance should be made for the fact that spoken answers are likely to be less coherent than written answers.
- Keep written examination instructions and sentences within examination questions short. Questions using bullet points, lists or distinct parts are more likely to be correctly interpreted.
- Because students with a learning disability find it difficult to read multiple choice questions in a way that allows them to appreciate subtle changes in the arrangement of words, short answer questions will be a better test of their knowledge.
- Many students with a learning disability are chronic misspellers and use dictionaries only with great difficulty. Allow students to use a word processor in examinations so that they have access to a spell checker.

Learning Strategies in Reading

If your learning disability is reading disability (Dyslexia) you may be slow, inaccurate and/or have poor comprehension when you read. You may have difficulty keeping up with the amount of reading required. It is also possible that you have poor reading habit's or strategies, or that you have unrealistic expectations about the ease of university study.

There are many ways that students with reading disabilities can improve their reading skills and their reading efficiency:

- Prioritise your reading. Ask lecturers what it is most important to read.
- If possible, ask lecturers for reading lists before semester starts and being your reading early.
- Work out how long you can comfortably read and understand before tiring. Break your reading up into chunks of an appropriate size so that your time is spent efficiently and so that you are not overwhelmed by the amount you have to read.
- Before you start reading, clarify why you are reading. Look in the index or at the headings and subheadings to find the section where your question is most likely to be answered. Write out the questions you want answered so you can keep them in mind as you read.
- Study pictures, diagrams and graphs for information about the material.
- It is a myth that good readers only need to read something once. At university level, most students need to reread complex books and papers, sometimes several times, to understand them well.
- If an article or passage is vital for understanding or learning, read slowly, carefully and reflectively until you fully understand it. Reread sections as necessary.
- Explaining what you have read or learned to someone else will help you clarify the gaps in your own understanding. If no-one is available, explaining to your budgie or teddy bear (even though there is no critical response) is sometimes enough to help you clarify what you do not know.
- It is not always necessary to read every word, sentence and paragraph. If you are reading for a general understanding, or to answer a specific question, be selective and read only the relevant or critical sections. The introductory and summary sections provide sufficient information for many purposes. Skim or omit other sections.
- To skim for main ideas:
    - Read titles carefully to find out what to expect.
    - Look at the headings and subheadings for clues about the main ideas being presented.
    - Words in italics or bold print are usually important terms or definitions.
    - If ideas are repeated they are usually important.
    - In each paragraph the first sentence usually introduces the topic and the last sentence summarises the paragraph. Sometimes just reading the first and last sentences in each paragraph is sufficient.
- Underlining or highlighting key words, concepts or points can help you focus and understand.
- If you have trouble reading unfamiliar words, put time into learning critical words for each new topic so that these become automatic for you.
- If your reading problem is severe, talk to your Disability Liaison Officer about getting course texts on tape, disc or CD-ROM and use screen reader software to listen to materials.

- If your course texts are too difficult for you, search in the library for books that cover similar topics but use simpler language or more user-friendly layouts. If you cannot find anything ask your lecturer or tutor for suggestions.
- Discuss reading topics with other students to ensure you have understood the material accurately, to reinforce your understanding, and to learn the correct pronunciation of any words or names you had difficulty reading.
- Supplement your reading with other sources of information, such as videos or hands-on learning.
- The Learning Skills Advisers at your university or a private tutor may be able to help you better understand your reading problems, and to help you learn and practice appropriate strategies.
- If your eyes hurt when you read, the print seems distorted or you tire very quickly, have an optometrist check your eyesight. If there is no evident vision problem, or corrective lenses do not take care of the symptoms, you may have Scotopic Sensitivity Syndrome.

Learning Strategies in Maths

Students with mathematics disabilities may have difficulty with maths calculations and with maths problem solving. Language disorders and visuo-spatial problems may also affect mathematics performance.

- If you have difficulty remembering maths facts (e.g., addition or multiplication facts) consider whether you have ever really tried to master them. Flash cards and computer programs may be helpful. Being able to recall these facts automatically is important, as it frees up your short-term memory to deal with other aspects of the problem.
- If you really cannot master maths facts despite considerable effort, use a calculator.
- Highlight mathematical signs as you work to ensure you are attending to them and thinking about them.
- Whenever possible, use concrete materials to make the mathematics more meaningful.
- If you have difficulty writing figures in the correct places underneath each other, reduce errors by turning the paper sideways so that the lines become columns. If this does not work, try using unlined paper.
- If you have difficulty with the language of maths problems, highlight key words to help yourself focus on them.
- Students with maths disabilities often have difficulty with some of the early concepts in mathematics. An assessment by a maths specialist will clarify areas of confusion and provide suggestions for remediation.
- If you cannot find a psychologist or remedial teacher who specialises in working with maths problems, call the maths specialist in the Education Department of your nearest university for advice on who to talk to.

Inclusive Assessment Strategies

There are some inclusive assessment practices which will enhance the learning of all other students in the class:

- Know what you are testing whether it be decision-making, strategic planning, creative application of information, data collection and processing, logical sequencing or argument. Develop assessment tasks accordingly.
- Create assessment activities in which students have the opportunity to link their learning to what they already know and to past experience.
- Make your expectations clear so that students know what they are required to demonstrate.
- Avoid using assessment methods which encourage students to rote learn material. Open book examinations are one way of doing this.
- Make explicit the way in which marks will be allocated both in discussion with the class beforehand and on the examination paper.
- Provide optional pathways towards meeting stated objectives: options which allow for flexibility in approach, in organisation and assessment. You might provide project-based exercises in which students choose their own topic for exploration. The greater the diversity in methods of assessment, the fairer the process for the greatest number of students.
- Make accommodations based on individual circumstance and need. Remember that students may need the opportunity to experiment to find the adaptation or accommodation which best meets their learning style or needs.
- Include self-assessment as a component of the course. Self-assessment involves discussion with students about the criteria according to which they assess their own performance and the level of performance required for different grades.
- Discuss and collaborate on assessment alternatives with staff who have had previous experience teaching students with disabilities. You (and your department) should regularly review any alternative arrangements to ensure that these meet both the student's needs (which may change over time) and stated course objectives.
- There are inclusive teaching strategies which will enhance the learning of all other students in the class

Inclusive Teaching Strategies

Inclusive teaching means providing learning opportunities that are free from bias and that take into account a diversity of individual needs and learning styles related to disability, race, socio-economic status, gender, language, ethnicity, geographical isolation, sexuality, work commitments and family responsibilities.

While some students with disability may learn differently, they are have the same rights and responsibilities as other students. However, students with disability are not an homogeneous group. Their individuality, particular strengths, aspirations and needs must be recognised. It is important to remember

that it is not the disability itself that should be of interest but its impact on the student's ability to access material and demonstrate knowledge.

Approaches to teaching which assist all students to learn include:

- **Making sure students know what and how they are expected to learn**: that is, they are told or can accurately work it out for themselves. This can be done by:
    - previewing new topics and showing how the new material fits in with other parts of the subject
    - making explicit what you expect students to learn from a lecture or tutorial
    - summarising the main points of a topic and making clear how that topic will be assessed
- **Integrating instructions on how to learn with teaching content** and designing the workload so that students have time to reflect on what they have learned, to see how it fits in with their previous learning and experience, and to work out what they will need to learn next
- **Helping students see the relevance** of their learning to broader personal and vocational goals. Provide opportunities for students to relate what is taught in class to their own experiences and values
- **Demonstrating your interest and enthusiasm** for your subject. Your students will better appreciate the intellectual challenge if you relate your teaching to your research interests and activities
- **Providing adequate feedback** on how students are progressing with their learning, particularly in regard to their learning goals
- **Assessing students' learning in line with what they thought they had to learn** and providing opportunities for students to learn how to deal with assessment tasks before the final assessment

Students may also learn best when:

- **They have some choice about what they learn** and how they learn, that is, when teaching is student-centred. Where possible, provide short "electives" within a subject, and introduce a variety of learning tasks – project work, problem-based and resource-based activities
    - **They can talk through the material with other students or a tutor.** You might provide opportunities for structured group activities in your subject so that students experience both individual and collaborative learning. Have students research selected areas of a topic independently, but then collaborate in small groups for the purposes of completing a report, assignment or presentation on the topic. There are many benefits to be gained from shared experiences in learning.

      Encourage the establishment of student self-help, discussion or focus groups. Such groups could be organised on the basis of existing tutorial or lab groups, but can also be organised beneficially across years and levels. Students thus have experience of a wider range of approaches and attitudes from which to draw for their own learning.

- **They can apply their learning** in a practical or vocationally relevant way. Project work can take into account various career or further study options available
- **They are able to move from the concrete to the abstract**. In your explanations, begin with examples or applications of theory to "real life" situations, and then move to discussion of the more abstract ideas

Adapted from a publication in the UniAbility series **OAO - Fact Sheet –** from www.adcet.edu.au

APPENDIX Q

Opening all Options

Learning difficulty versus learning disability

When describing learning problems in Australia, two frameworks are most commonly used by the education, community and government sectors. These are the learning difficulties framework, and the learning disability framework. Below is a summary of the main features of these two frameworks, and the differences between them.

Learning difficulty framework	Learning disability framework
Learning difficulty is a non-categorical definition, including all those who have difficulties learning one or more of the basic academic skills. The National Health & Medical Research Council estimates 10 -16% of population have learning difficulties. Note: This framework includes those who would be classified as having a learning disability under the learning disability framework; such people are often referred to as having specific or severe learning difficulties.	Learning disability is a categorical definition based on diagnosis. The National Health and Medical Research Council estimates 2-4% of the population have learning disabilities.
Does not recognise the term 'learning disability' as distinct from the term 'learning difficulty'.	Makes a distinction between 'learning difficulties' and 'learning disabilities'. Learning difficulties readily respond to intensive educational intervention. Learning disabilities are lifelong and pervasive, and do not respond readily to intensive education intervention.
Does not focus on the primary cause of the learning difficulty. The focus is on the functional educational difficulties rather than on specific causes, except where the cause may influence the type of educational intervention applied.	Views learning disabilities as being of neurological origin. Views learning difficulties as resulting from specific causes, such as physical, educational, emotional, or environmental factors.
Learning difficulties are viewed as responsive to intensive educational intervention.	learning disabilities are viewed as lifelong conditions which are highly resistant to educational interventions. Even with intensive,

	proven educational interventions, skills do not improve quickly or significantly.
Effective educational intervention will improve basic academic skills such as reading and writing, and will result in an improvement in the individual's academic achievement levels.	Intensive educational intervention alone will assist individuals with learning difficulties, but will provide minimal results for individuals with learning disabilities. Academic adjustments and accommodations, and individualised learning strategies are necessary to enable individuals with learning disabilities to achieve at their ability level.
The term 'learning difficulty' is used by some services, support groups and peak bodies, as well as in most areas of primary and secondary education.	The term 'learning disability' is used by universities, TAFEs, most educational and clinical psychologists, speech pathologists and in some areas of school education
Learning difficulties are not recognised as disabilities under the Disability Discrimination Act and under state disability legislation. Learning difficulties arising from physical, emotional or environmental causes are not covered by the legislation because they are not assumed to be underlying disorders or malfunctions (Puplick, 1995).	Learning disabilities are legally recognised as disabilities. The rights of individuals with learning disabilities are covered by the federal Disability Discrimination Act and by state disability legislation.

APPENDIX R

Learning Disabilities Checklist

Domains and Behaviors *Shaded area indicates a characteristic is more likely to apply at that stage of life. Check all that apply.*	Preschool Kindergarten	Grades 1–4	Grades 5–8	High School & Adult
Gross and Fine Motor Skills				
Appears awkward and clumsy, dropping, spilling, or knocking things over				
Has limited success with games and activities that demand eye-hand coordination (e.g., piano lessons, basketball, baseball)				
Has trouble with buttons, hooks, snaps, zippers and trouble learning to tie shoes				
Creates art work that is immature for age				
Demonstrates poor ability to color or write 'within the lines'				
Grasps pencil awkwardly, resulting in poor handwriting				
Experiences difficulty using small objects or items that demand precision (e.g., Legos, puzzle pieces, tweezers, scissors)				
Dislikes and avoids writing and drawing tasks				
Language				
Demonstrates early delays in learning to speak				
Has difficulty modulating voice (e.g., too soft, too loud)				
Has trouble naming people or objects				
Has difficulty staying on topic				
Inserts invented words into conversation				
Has difficulty re-telling what has just been said				
Uses vague, imprecise language and has a limited vocabulary				
Demonstrates slow and halting speech, using lots of fillers (e.g., uh, um, and, you know, so)				
Uses poor grammar or misuses words in conversation				
Mispronounces words frequently				
Confuses words with others that sound similar				
Inserts malapropisms ('slips of the tongue') into conversation (e.g., a rolling stone gathers no moths; he was a man of great statue)				
Has difficulty rhyming				
Has limited interest in books or stories				
Has difficulty understanding instructions or directions				
Has trouble understanding idioms, proverbs, colloquialisms, humor, and/or puns (note: take into account regional and cultural factors)				

Domains and Behaviors *Shaded area indicates a characteristic is more likely to apply at that stage of life. Check all that apply.*	Preschool Kindergarten	Grades 1–4	Grades 5–8	High School & Adult
Language (con't)				
Has difficulty with pragmatic skills (e.g., understands the relationship between speaker and listener, stays on topic, gauges the listeners degree of knowledge, makes inferences based on a speaker's verbal and non-verbal cues)				
Reading				
Confuses similar-looking letters and numbers				
Has difficulty recognizing and remembering sight words				
Frequently loses place while reading				
Confuses similar-looking words (e.g., beard/bread)				
Reverses letter order in words (e.g., saw/was)				
Demonstrates poor memory for printed words				
Has weak comprehension of ideas and themes				
Has significant trouble learning to read				
Has trouble naming letters				
Has problems associating letter and sounds, understanding the difference between sounds in words or blending sounds into words				
Guesses at unfamiliar words rather than using word analysis skills				
Reads slowly				
Substitutes or leaves out words while reading				
Has poor retention of new vocabulary				
Dislikes and avoids reading or reads reluctantly				
Written Language				
Dislikes and avoids writing and copying				
Demonstrates delays in learning to copy and write				
Writing is messy and incomplete, with many cross outs and erasures				
Has difficulty remembering shapes of letters and numerals				
Frequently reverses letters, numbers and symbols				
Uses uneven spacing between letters and words, and has trouble staying 'on the line'				
Copies inaccurately (e.g., confuses similar-looking letters and numbers)				
Spells poorly and inconsistently (e.g., the same word appears differently other places in the same document)				

Domains and Behaviors *Shaded area indicates a characteristic is more likely to apply at that stage of life. Check all that apply.*	Preschool Kindergarten	Grades 1–4	Grades 5–8	High School & Adult
Written Language (con't)				
Has difficulty proofreading and self-correcting work				
Has difficulty preparing outlines and organizing written assignments				
Fails to develop ideas in writing so written work is incomplete and too brief				
Expresses written ideas in a disorganized way				
Math				
Has difficulty with simple counting and one-to-one correspondence between number symbols and items/objects				
Difficulty mastering number knowledge (e.g. recognition of quantities without counting)				
Has difficulty with learning and memorizing basic addition and subtraction facts				
Has difficulty learning strategic counting principles (e.g. by 2, 5, 10, 100)				
Poorly aligns numbers resulting in computation errors				
Has difficulty estimating (e.g., quantity, value)				
Has difficulty with comparisons (e.g., less than, greater than)				
Has trouble telling time				
Has trouble conceptualizing the passage of time				
Has difficulty counting rapidly or making calculations				
Has trouble learning multiplication tables, formulas and rules				
Has trouble interpreting graphs and charts				
Social/Emotional				
Does not pick up on other people's mood/feelings (e.g., may say the wrong thing at the wrong time)				
May not detect or respond appropriately to teasing				
Has difficulty 'joining in' and maintaining positive social status in a peer group				
Has trouble knowing how to share/express feelings				
Has trouble 'getting to the point' (e.g., gets bogged down in details in conversation)				
Has difficulty with self-control when frustrated				
Has difficulty dealing with group pressure, embarrassment and unexpected challenges				
Has trouble setting realistic social goals				

Domains and Behaviors *Shaded area indicates a characteristic is more likely to apply at that stage of life. Check all that apply.*	Preschool Kindergarten	Grades 1-4	Grades 5-8	High School & Adult
Social/Emotional (con't)				
Has trouble evaluating personal social strengths and challenges				
Is doubtful of own abilities and is prone to attribute successes to luck or outside influences rather than hard work				
Attention				
Fails to pay close attention to details or makes careless mistakes in schoolwork, work, or other activities				
Has difficulty sustaining attention in work tasks or play activities				
Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace				
Has difficulty organizing tasks and activities				
Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort such as homework and organizing work tasks				
Loses things consistently that are necessary for tasks/activities (e.g., toys, school assignments, pencils, books, or tools)				
Is easily distracted by outside influences				
Is forgetful in daily/routine activities				
Other				
Confuses left and right				
Has a poor sense of direction; slow to learn the way around a new place; easily lost or confused in unfamiliar surroundings				
Finds it hard to judge speed and distance (e.g., hard to play certain games, drive a car)				
Trouble reading charts and maps				
Is disorganized and poor at planning				
Often loses things				
Is slow to learn new games and master puzzles				
Has difficulty listening and taking notes at the same time				
Performs inconsistently on tasks from one day to the next				
Has difficulty generalizing (applying) skills from one situation to another				

The **National Center for Learning Disabilities (NCLD)** works to ensure that the nation's 15 million children, adolescents and adults with learning disabilities have every opportunity to succeed in school, work and life.

NCLD provides essential information to parents, professionals and individuals with learning disabilities, promotes research and programs to foster effective learning, and advocates for policies to protect and strengthen educational rights and opportunities.

The National Center for Learning Disabilities
381 Park Avenue South, Suite 1401
New York, NY 10016-8806
(212) 545-7510 • (888) 575-7373

For more information visit our web sites:
www.LD.org
www.GetReadytoRead.org

National Center for Learning Disabilities
The power to hope, to learn, and to succeed

Learning Disabilities Checklist

Most people have problems with learning and behavior from time to time. During the school years, parents and educators should be on the alert for consistent (and persistent) patterns of difficulty that children and adolescents may experience over time as they may signal an underlying learning disability (LD). While variations in the course of development are to be expected, unevenness or lags in the mastery of skills and behaviors, even with children as young as 4 or 5, should not be ignored. And because LD can co-occur with other disorders, it's important to keep careful and complete records of observations and impressions so they can be shared among parent, educators and related service providers when making important decisions about needed services and supports.

Keep in mind that LD is a term that describes a heterogeneous ('mixed bag') group of disorders that impact listening, speaking, reading, writing, reasoning, math, and social skills. And remember: learning disabilities do not go away! A learning disability is not something that can be outgrown or that is 'cured' by medication, therapy, or expert tutoring. So, early recognition of warning signs, well-targeted screening and assessment, effective intervention, and ongoing monitoring of progress are critical to helping individuals with LD to succeed in school, in the workplace, and in life.

The following Learning Disabilities Checklist is designed as a helpful guide and not as a tool to pinpoint specific learning disabilities. The more characteristics you check, the more likely that the individual described is at risk for (or shows signs of) learning disabilities. When filling out this form, think about the person's behavior over at least the past six months. And when you're done, don't wait to seek assistance from school personnel or other professionals.

Sheldon H. Horowitz, Ed.D.
Director of Professional Services, NCLD

Deanna Stecker, M.A.
Senior Associate, Education Programs, NCLD

APPENDIX S

IDENTIFYING DYSLEXIA IN THE CLASSROOM

For consideration

In order to properly identify dyslexia in the classroom, it is important to rule out other factors that may inhibit a student's ability to learn. Other conditions like poor eyesight, hearing impairments, etc. can contribute to a student having difficulties with reading and spelling.

Dyslexia in preschool

It is possible to recognize dyslexia in students as early as preschool. Dyslexia symptoms can appear in children as early as two, so it is important for teachers to be aware of the signs. Preschoolers who are dyslexic can often have a short attention span, and have difficulties with motor skills like catching and throwing a ball. Other identifiers include difficulty with putting objects in order, jumbling words and letters together, and confusing directional words like "up" and "down".

Dyslexia in primary school

In primary school, much of a student's time is focused on improving his/her reading, writing, and language skills, so teachers should be alert to certain identifiers. Students may have difficulty writing words in order, or may even write letters in a backward form. Also, dyslexic students might enjoy literature that is read to them, but when told to read and interpret passages, they may guess at meanings. Students may also have difficulties putting the alphabet and days of the week in order, or may need to use their fingers to compute math functions.

Dyslexia in secondary school

In some instances, students can reach secondary school without ever having been diagnosed with dyslexia. Students who are dyslexic may have difficulty following the teacher's instructions, and may have difficulty taking notes. Many times, a dyslexic student may need instructions, lists, phone numbers, etc. repeated to them numerous times. Also, dyslexic students may have very poor handwriting, and may take a much longer time to complete assignments than their classmates.

Dyslexia in higher education

Adults can suffer from dyslexia, and never have been properly diagnosed. Adults with dyslexia may have difficulty following a detailed conversation, and therefore, may shy away from participating in classroom discussion. They may also have poor spelling skills, and find it very challenging to fill out forms or work out equations in their heads. Adult dyslexic students may also take a much longer time than their classmates to read a page from their textbook.

Students who have never been diagnosed as dyslexic are often frustrated and angry that they cannot perform as well as their peers in certain situations. They may feel ashamed at their need for extra assistance, so it is important for teachers to intervene and encourage their students seek help for their dyslexia. Learning to recognize dyslexia in the classroom is crucial for all educators, since students can advance through preschool, elementary school, high school, and even enter into higher education without ever knowing that they are dyslexic.

From http://www.edubook.com

APPENDIX T

DYSLEXIA CHECKLIST FOR TEACHERS

Name of student:_____ Date:_____

School:_____ Form:_____

Date of Birth:_____Month _____Day _____Year

Checklist completed by:_____ Position:_____

YES **NO**

PERCEIVED ACADEMIC POTENTIAL

1. Does the student seem to have the intellectual ability or academic

___ potential to develop reading, writing, and spelling skills? ___

2. Are the student's reading, spelling, or writing skills below what you would

___ expect in view of perceived intellectual ability or academic potential? ___

READING SKILLS

___ 3. Does the student have difficulty identifying basic sight words? ___

___ 4. Does the student have difficulty sounding out words using phonics skills? ___

___ 5. Does the student comprehend text read aloud by others? ___

___ 6. Does the student read slowly with many inaccuracies? ___

SPELLING SKILLS

___ 7. Does the student have difficulty with spelling? ___

___ 8. Does the student often spell the same word differently in a single writing task? ___

9. Does the student frequently make spelling errors that involve changing the order of the letters within the word (*left/felt* or *spelt/slept)* or invert letters

___ or words or numbers (was/saw; b/d; 6/9? ___

WRITING SKILLS

___ 10. Is handwriting often illegible or messy? ___

___ 11. Is pencil/pen grip awkward, tight, or fist-like? ___

___ 12. Does the student procrastinate or avoid writing? ___

___ 13. Does the student have difficulty summarizing or outlining? ___

OTHER SKILLS

___ 14. Does the student have problems with organization or memory? ___

15. Does the student have problems with spatial orientation (i.e., before/after, left/right)?

___ ___

16. Does the student have difficulty "finding the right word" or seem to hesitate

___ when trying to answer direct questions? ___

N.B. If 10 or more of these questions are answered "yes" then that will need to be assessed and diagnosed by a reading specialist.

Adapted from http://www.dyslexia-test.com

APPENDIX U

ADD / ADHD in Children

What is ADD / ADHD?

We all know kids who can't sit still, who never seem to listen, who don't follow instructions no matter how clearly you present them, or who blurt out inappropriate comments at inappropriate times. Sometimes these children are labelled as troublemakers, or criticized for being lazy and undisciplined. However, they may have ADD/ADHD.

Attention deficit hyperactivity disorder (ADHD) is a disorder that appears in early childhood. You may know it by the name *attention deficit disorder*, or ADD. ADD/ADHD makes it difficult for people to inhibit their spontaneous responses—responses that can involve everything from movement to speech and attentiveness.

The signs and symptoms of ADD/ADHD typically appear before the age of seven. However, it can be difficult to distinguish between attention deficit disorder and normal "kid behaviour." If you spot just a few signs, or the symptoms appear only in some situations, it's probably not ADD/ADHD. On the other hand, if your child shows a number of ADD/ADHD signs and symptoms that are present across all situations¾at home, at school, and at play¾it's time to take a closer look. Once you understand the issues your child is struggling with, such as forgetfulness or difficulty paying attention in school, you can work together to find creative solutions and capitalize on strengths. The bottom line: you don't have to wait for a diagnosis or rely on a medical professional to help your child.

Signs and Symptoms of Attention Deficit Disorder

It's normal for children to occasionally forget their homework, daydream during class, act without thinking, or get fidgety at the dinner table. But inattention, impulsivity, and hyperactivity are also signs of attention deficit disorder (ADD/ADHD). ADD/ADHD can lead to problems at home and school, and affect your child's ability to learn and get along with others. It's important for you to be able to spot the signs and symptoms, and get help if you see them in your child.

Myths about Attention Deficit Disorder

Myth #1: All kids with ADD/ADHD are hyperactive.

Some children with ADD/ADHD are hyperactive, but many others with attention problems are not. Children with ADD/ADHD who are inattentive, but not overly active, may appear to be spacey and unmotivated.

Myth #2: Kids with ADD/ADHD can never pay attention.

Children with ADD/ADHD are often able to concentrate on activities they enjoy. But no matter how hard they try, they have trouble maintaining focus when the task at hand is boring or repetitive.

Myth #3: Kids with ADD/ADHD choose to be difficult and could behave better if they wanted to.

Children with ADD/ADHD may do their best to be good, but still be unable to sit still, stay quiet, or pay attention. They may appear disobedient, but that doesn't mean they're acting out on purpose.

Myth #4: Kids will eventually grow out of ADD/ADHD.

ADD/ADHD often continues into adulthood, so don't wait for your child to outgrow the problem. Treatment can help your child learn to manage and minimize the symptoms.

Myth #5: Medication is the best treatment option for ADD/ADHD.

Medication is often prescribed for Attention Deficit Disorder, but it might not be the best option for your child. Effective treatment for ADD/ADHD also includes education, behaviour therapy, support at home and school, exercise, and proper nutrition.

Signs and symptoms of ADD/ADHD

When many people think of attention deficit disorder, they picture an out-of-control kid in constant motion, bouncing off the walls and disrupting everyone around. But this is not the only possible picture. Some children with ADD/ADHD are hyperactive, while others sit quietly—with their attention miles away. Some put too much focus on a task and have trouble shifting it to something else. Others are only mildly inattentive, but overly impulsive.

The three primary characteristics of ADD/ADHD are inattention, hyperactivity, and impulsivity. The signs and symptoms a child with attention deficit disorder has depends on which characteristics predominate. Children with ADD/ADHD may be:

Which one of these children may have ADD/ADHD?

A. The hyperactive boy who talks nonstop and can't sit still.
B. The quiet dreamer who sits at her desk and stares off into space.
C. Both A and B

The correct answer is "C."

- Inattentive, but not hyperactive or impulsive.
- Hyperactive and impulsive, but able to pay attention.
- Inattentive, hyperactive, and impulsive (the most common form of ADHD).

Children who only have inattentive symptoms of ADD/ADHD are often overlooked, since they're not disruptive. However, the symptoms of inattention have consequences: getting in hot water with parents and teachers for not following directions; underperforming in school; or clashing with other kids over not playing by the rules.

Inattentive signs and symptoms of ADD/ADHD

Symptoms of inattention in children:

- Doesn't pay attention to details or makes careless mistakes
- Has trouble staying focused; is easily distracted
- Appears not to listen when spoken to
- Has difficulty remembering things and following instructions
- Has trouble staying organized, planning ahead, and finishing projects
- Frequently loses or misplaces homework, books, toys, or other items

Children with ADD/ADHD can pay attention when they're doing things they enjoy or hearing about topics they enjoy. But when the task is repetitive or boring, they quickly tune out.

Not paying close enough attention is another common problem. Children with ADD/ADHD often bounce from task to task without completing any of them, or skip necessary steps in procedures. Organizing their schoolwork and their time is harder for them than it is for most children. Kids with ADD/ADHD also have trouble concentrating if there are things going on around them; they usually need a calm, quiet environment in order to sustain attention.

Hyperactive signs and symptoms of ADD/ADHD

Symptoms of hyperactivity in children:

- Constantly fidgets and squirms
- Often leaves his or her seat in situations where sitting quietly is expected
- Moves around constantly, often running or climbing inappropriately
- Talks excessively, has difficulty playing quietly
- Is always "on the go," as if driven by a motor

The most obvious sign of ADD/ADHD is hyperactivity. While many children are naturally quite active, kids with hyperactive symptoms of attention deficit disorder are always moving.

They may try to do several things at once, bouncing around from one activity to the next. Even when forced to sit still – which can be very difficult for them – their foot is tapping, their leg is shaking, or their fingers are drumming.

Impulsivity signs and symptoms of ADD/ADHD

Symptoms of impulsivity in children:

- Blurts out answers without waiting to be called on hear the whole question
- Has difficulty waiting for his or her turn
- Often interrupts others
- Intrudes on other people's conversations or games
- Inability to keep powerful emotions in check, resulting in angry outbursts or temper tantrums

The impulsivity of children with ADD/ADHD can cause problems with self-control. Because they censor themselves less than other kids do, they'll interrupt conversations, invade other people's space, ask irrelevant questions in class, make tactless observations, and ask overly personal questions.

Children with impulsive signs and symptoms of ADD/ADHD also tend to be moody and to overreact emotionally. As a result, others may start to view the child as disrespectful, weird, or needy.

Positive effects of ADD & ADHD in children

In addition to the challenges, there are also positive traits associated with people who have attention deficit disorder:

- **Creativity** – Children who have ADD/ADHD can be marvellously creative and imaginative. The child who daydreams and has ten different thoughts at once can become a master problem-solver, a fountain of ideas, or an inventive artist. Children with ADD may be easily distracted, but sometimes they notice what others don't see.
- **Flexibility** – Because children with ADD/ADHD consider a lot of options at once, they don't become set on one alternative early on and are more open to different ideas.
- **Enthusiasm and spontaneity** – Children with ADD/ADHD are rarely boring! They're interested in a lot of different things and have lively personalities. In short, if they're not exasperating you (and sometimes even when they are), they're a lot of fun to be with.
- **Energy and drive** – When kids with ADD/ADHD are motivated, they work or play hard and strive to succeed. It actually may be difficult to distract them from a task that interests them, especially if the activity is interactive or hands-on.

Keep in mind, too, that ADD/ADHD has nothing to do with intelligence or talent. Many children with ADD/ADHD are intellectually or artistically gifted.

Helping a child with ADD / ADHD

Whether or not your child's symptoms of inattention and hyperactivity are due to ADD/ADHD, they can cause many problems if left untreated. Children who can't focus and control themselves may struggle in school, get into frequent trouble, and find it hard to get along with others or make friends. These frustrations and difficulties can lead to low self-esteem – as well as friction and stress for the whole family.

But treatment can make a dramatic difference in your child's symptoms. With the right support, your child can get on track for success in all areas of life.

Parenting tips for children with ADD / ADHD

If your child is hyperactive, inattentive, or impulsive, it may take a lot of energy to get him or her to listen, finish a task, or sit still. The constant monitoring can be frustrating and exhausting. Sometimes youmay feel like your child is running the show. But there are steps you can take to regain control of the situation, while simultaneously helping your child make the most of his or her abilities.

While attention deficit disorder is not caused by bad parenting, there are effective parenting strategies that can go a long way to correct problem behaviours. Children with ADD/ADHD need structure, consistency, clear communication, and rewards and consequences for their behaviour.

They also need lots of love, support, and encouragement.

There are many things parents can do to reduce the signs and symptoms of ADD/ADHD – without sacrificing the natural energy, playfulness, and sense of wonder unique in every child.

School tips for children with ADD / ADHD

Think of what the school setting requires children to do: Sit still. Listen quietly. Pay attention. Follow instructions. Concentrate. These are the very things kids with ADD/ADHD have a hard time doing—not because they aren't willing, but because their brains won't let them.

But that doesn't mean kids with ADD/ADHD can't succeed at school. There are many things both parents and teachers can do to help children with ADD/ADHD thrive in the classroom. It starts with evaluating each child's individual weaknesses and strengths, then coming up with creative strategies for helping the child focus, stay on task, and learn to his or her full capability.

Treatment for ADD / ADHD

If your child struggles with ADD/ADHD-like symptoms, don't wait to seek professional help. **You can treat your child's symptoms of hyperactivity, inattention, and impulsivity without having a diagnosis of attention deficit disorder.** Options to start with include getting your child into therapy,

implementing a better diet and exercise plan, and modifying the home environment to minimize distractions.

If you do receive a diagnosis of ADD/ADHD, you can then work with your child's doctor, therapist, and school to make a personalized treatment plan that meets his or her specific needs. Effective treatment for childhood ADD/ADHD involves behavioural therapy, parent education and training, social support, and assistance at school. Medication may also be used. However, it should never be the sole attention deficit disorder treatment.

Adapted from http://www.helpguide.org/mental/adhd/_add_signs_symptoms.htm

APPENDIX V

ADHD CHECKLIST

If you decide to use the checklist below, look to see if it appears to "fit" the child. Remember **you are not making a diagnosis but simply trying to determine if it would be useful to refer the child onto professionals who are in a position to diagnose and prescribe medication if that is the approach you wish to take**.

1. The child is much less likely than the other children in class to pay attention to school work and makes seemingly inexplicable mistakes.

2. The young person appears to have substantially more difficulty sustaining concentration when engaged in practical or play activities.

3. The child is described as failing to listen even when spoken to directly.

4. When the child is given a task which they are motivated to engage with, they do not complete it.

5. The child does not seem able to get hold of themselves and the set task sufficiently to be able to organize their thoughts and plan a reasonable plan of action, yet they do understand what is expected of them when questioned about the task.

6. Will actively avoid and clearly dislikes tasks and activities that demand sustained concentration and thought.

7. Teachers and parents complain that the child always manages to lose things. This becomes particularly apparent with respect to school essentials like pens; pencils etc. but they will also be mislaying items precious to them such as toys.

8. The child is easily distracted. When observed they appear to turn toward movement and noise. The child appears to be over alert.

9. Routine tasks are often forgotten, leading to frustration in those who have to manage the child, who may complain of the child deliberately avoiding routine tasks.

10. When observed, the child appears much more restless than peers. When on the carpet for instance they may squirm from one side of the carpet to the other seemingly oblivious to what they are doing.

11. There is a very clear pattern of wandering around the classroom when the task demands the children are seated. They appear to be looking for any reason to leave their seat.

12. The child will take any opportunity to engage in running around or climbing this is particularly noticeable when it is an inappropriate activity and other children in the class are not engaging in these activities.

13. Quiet play is not something you would associate with the child.

14. An observer would see the child as persistently active having little need for rest periods.

15. The child would be described as saying things which are not thought out and as talking for the sake of it.

16. Answers are blurted out and hands are raised well before any of the other children in the class because the question has not been completed and the child would therefore have no real chance of knowing the answer.

17. Has real problems with turn taking.

18. Social skills are weak, using few appropriate strategies to join conversation or play beyond barging in.

19. The current position is not a recent phenomenon. There were strong signs of this type of behaviour pattern pre-school.

APPENDIX W

DYSCALCULIA LEARNING DISABILITY

Dyscalculia learning disability is the inability of a person to comprehend math calculations. These people find it difficult to add, subtract and even remember formulas. This is a specific learning disability that involves innate difficulty in learning math and understanding the subject. This learning disability bears semblance to dyslexia and involves confusion regarding recognition of math symbols. Also known as 'math dyslexia', this disability causes children to invert numerals and conduce to several difficulties in performing basic math functions.

What Causes Dyscalculia?

One of the most common causes of math difficulties is the inability to visualize numbers and math calculations. To understand math, a person needs to visualize numbers and symbols and connect them to specific functions. However, this visualization does not happen in such children. People with sequencing problems also find it difficult to remember formulas needed for math calculations. Dyscalculia can also be caused due to some injury caused to the brain or even due to some negative experiences related to math in the past, where the child develops a fear of mathematics.

Dyscalculia Symptoms

Symptoms of dyscalculia are wide ranging, however, their diagnoses must be differentiated from actual dyscalculia symptoms to 'not interested in studying maths'. Although most of these symptoms go beyond simple arithmetic to mental calculation, in most cases it is these simple mathematical errors that are the first, subtle exhibited dyscalculia symptoms.

- Comprehension of time and its passage maybe limited.
- Difficulties in understanding arithmetic, signs: +, −, ÷ and ×, and often confusing their operational need.
- Difficulty in learning and understanding the basics of arithmetic like multiplication, subtraction, addition and division tables, as well as mental arithmetic, etc.
- A high degree of navigational impairment.
- The concept of distance and its measurement is difficult to establish.
- Difficulty in reading analog clocks.
- Difficulty in performing simple tasks like daily expense calculation to higher financial planning and budgeting.
- A very poor sense of mathematical concepts, rules, formulas and sequences.
- May also have trouble grasping the mechanics of a calculator.

- A common noted symptom is that people with this disorder do fairly well in science and geometry, especially where no formulas or calculation are involved.
- Difficulty in playing games where a score needs to recorded, like a cards game or even games like soccer or basketball where scores need to be kept.
- May have difficulties in counting backwards (10, 9, 8, and so on), and/or transposing numbers (12 to 21, 43 to 34, etc).
- Errors become more common and pronounced, and simple arithmetic learnt may be easily forgotten.
- Some degree of absentmindedness about any form of mathematical calculation can occur chronically.

Dyscalculia Symptoms in Children

Some of the common dyscalculia characteristics observed in children with this disability is as follows:

- Difficulty in reading numbers
- Difficulty in learning the meaning of numbers (number sense)
- Difficulty in recalling the numbers in a sequence
- Difficulty in matching numbers
- Slow to learn counting and math skills
- Trouble with tasks like sorting objects by colour, shape or size
- Inability to tell time from a non-digital clock
- Difficulty in recognizing groups and patterns
- Difficulty in playing strategy or role-playing video games
- Difficulty in keeping score when playing games

As these kids grow, they are encountered with more challenging math at school. They find it extremely difficult to solve basic math calculations like addition, subtraction, multiplication and division. They even find it difficult to memorize multiplication tables. The child may sometimes also understand the math facts, however, may not be able to put them down on paper. Children with this learning disability find passing in math exams extremely difficult. Parents who are unaware of their child's disability, end up pulling their hair out in frustration in the course of getting their kids to learn basic functions like addition and subtraction. The frustration in parents or teachers can erupt in the form of condemnation. They keep telling the child how stupid they are for not being able to learn simple math. This causes the child to condemn himself/herself for not being able to comprehend simple calculations like his/her peers.

Dyscalculia Symptoms in Adults

If the foundational math facts have not been mastered, then children growing up with dyscalculia learning disability will grow to become adults who find more advanced calculations even more difficult. Their math knowledge is very shaky and they find solving equations and complex problem solving very difficult. Some of the difficulties they face are as follows:

- Noting phone numbers incorrectly
- Inability to read music notes
- Forgetting dates and addresses
- Inability to count money
- Difficulty in adding up costs at the grocery store without a calculator
- Difficulty in remembering the passwords and PIN for using an ATM card

Dyscalculia Diagnosis and Treatment

The teacher or trained professional will evaluate the child's learning disabilities in math by various techniques to understand how much the child understands about numbers. The dyscalculia checklist helps the observer to understand the level of learning disability. Once the diagnosis of the disability is made, the teacher and parents will try to find different ways to teach the child mathematics. Concrete examples are taken to teach calculations before jumping into the abstract form. Therapy or tutoring is an extremely powerful tool, which helps the child learn slowly at his or her own pace.

Children with dyscalculia learning disability need a lot of emotional support from their parents, siblings and teachers. They can easily enter a state of self pity and condemnation and totally withdraw from the subject. However, having an encouraging environment can help them agree to learn the subject.

APPENDIX X

DYSCALCULIA CHECKLIST

The following is a checklist on Dyscalculia (pronounced: Dis-cal-qu-lee-ah). However, when children start school, they may make several of the mistakes listed below. It is only if these symptoms continue beyond the time that the average child/student has grown out of them, they may indicate dyscalculia and advice should be sought.

Do you/your child frequently:

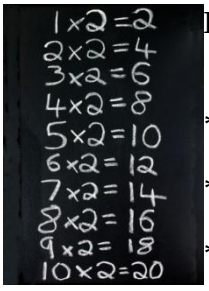
* Confuse numbers i.e., 51 for 15?

* Transpose and reverse numbers, when reading or writing?

*Confuse: Minus, Subtract, Take away, Less?

* Confuse: Add, Plus, Add on, More?

* Confuse: Times, Multiply?



Do you/your child have problems:

* Learning the times tables?

* Working out simple money and change?

* Estimating numbers: Tens, Hundreds, Thousands?

* Working out percentages?

* Working out averages?

* Understanding fractions?

* Has difficulty understanding concepts of place value, carrying and borrowing?

* With understanding 2 + 5 = 7 (but not understand 5 + 2 = 7)?

* Working out the speed miles per hour?

* Telling the time and concepts related to time such as days, weeks, quarters etc?
* Learning the date?
* Can the answer a question correctly but cannot tell you how he got the answer?

Dyscalculia may not have the same stigma surrounding it as dyslexia or ADD/ADHD but it is very important that it is recognised as soon as possible.

If these problems are not picked up at an early age, they impact on a child's self-esteem and it takes a longer time to correct.

APPENDIX Y (i)

ADAPTING MATHEMATICS INSTRUCTION IN GENERAL EDUCATION CLASSROOMS FOR STUDENTS WITH MATHEMATICS DISABILITIES

Adaptations and modifications come in many forms. Students with learning disabilities (LD) are increasingly receiving most of their mathematics instruction in general education classrooms. Studies show that these students benefit from general education mathematics instruction if it is adapted and modified to meet the individual needs of the learners (Salend, 1994). Adaptations and modifications come in many forms. They can be as simple as using graph paper to help student with mathematics disabilities keep columnar addition straight or as complex as solving calculus equations with calculators. To ensure effective instruction, adaptations and modifications for instruction are necessary in the areas of lesson planning, teaching techniques, formatting content, adapting media for instruction, and adapting evaluation (Wood, 1992).

In general education classrooms, adaptations and modifications in mathematics instruction are appropriate for all students, not just students with LD. Teachers of mathematics will find that simple changes to the presentation of mathematical concepts enable students to gain a clearer understanding of the process rather than a merely mechanically correct response. Additionally, adapting and modifying instruction for students creates a more positive atmosphere that encourages students to take risks in problem-solving, which strengthens student understanding of the concept (McCoy & Prehm, 1987).

For many teachers with limited or no preparation for working with students with LD, inclusion of students with mathematics disabilities may create concern. This article provides information on how to adapt and modify mathematics instruction to promote success and understanding in the areas of mathematical readiness, computation, and problem-solving for students with math disabilities. It also presents techniques that promote effective mathematics instruction for these students.

How can general education teachers facilitate the learning of mathematical skills?

Ariel (1992) stresses the need for all students to develop skill in readiness, computation, and problem-solving skills. As illustrated below, adaptations and modifications can be implemented to help students succeed in all three areas.

Readiness

According to Ariel (1992), students with LD must acquire (a) general developmental readiness, and (b) conceptual number readiness. General developmental readiness includes ability in the areas of classification, one-to-one correspondence, seriation, conservation, flexibility, and reversibility. Knowledge of the student's level of general readiness allows the teacher to determine how adaptations and modifications must be enacted to allow for the student to progress. For some students, mathematics readiness instruction may need to include the development of language number concepts such as big and small and smallest to largest; and attributes such as colour, size, or shape. Instruction, review, and

practice of these concepts must be provided for longer time periods for students with mathematics disabilities than for other students.

Conceptual number readiness is essential for the development of addition and subtraction skills (Ariel,1992). Practice and review with board games or instructional software are effective ways to develop conceptual number readiness for students with mathematics disabilities. Manipulatives, such as Cuisenaire rods and Uni-fix math materials (e.g.,100 block trays) allow students with math disabilities to visualize numerical concepts and engage in age-appropriate readiness skills (see Lambert in this series for additional suggestions about manipulatives).

Computational skills

Adaptations and modifications in the instruction of computational skills are numerous and can be divided into two areas: memorizing basic facts and solving algorithms or problems.

Basic Facts. Two methods for adapting instruction to facilitate recall of basic facts for students with math disabilities include (a) using games for continued practice, and (b) sequencing basic facts memorization to make the task easier. Beattie and Algozzine (cited in McCoy & Prehm, 1987) recommend the use of dice rolls, spinners, and playing cards to give students extra practice with fact memorization and to promote interest in the task by presenting a more game-like orientation. Further, McCoy and Prehm (1987) suggest that teachers display charts or graphs that visually represent the students' progress toward memorization of the basic facts. Sequencing fact memorization may be an alternative that facilitates instruction for students with LD. For example, in teaching the multiplication facts, Bolduc (cited in McCoy & Prehm, 1987) suggest, starting with the xO and x1 facts to learn 36 of the 100 multiplication facts. The x2 and x5 facts are next, adding 28 to the set of memorized facts. The x9s are introduced next, followed by doubles such as 6 x 6. The remaining 20 facts include 10 that are already known if the student is aware of the commutative property (e.g., 4 x 7 = 7 x 4). New facts should be presented a few at time with frequent repetition of previously memorized facts for students with LD.

Solving Algorithms. Computation involves not only memorization of basic facts, but also utilization of these facts to complete computational algorithms. An algorithm is a routine, step-by-step procedure used in computation (Driscoll, 1980 cited in McCoy & Prehm, 1987). In the addition process, McCoy and Prehm (1987) present three alternatives to the standard renaming method for solving problems, including expanded notation (see Figure 1) partial sums (see Figure 2), and Hutchings' low-stress algorithm (see Figure 3). Subtraction for students with mathematics disabilities is made easier through the use of Hutchings' low-stress subtraction method (McCoy & Prehm, 1987) (see Figure 4) where all renaming is done first. Multiplication and division (McCoy & Prehm, 1987) can be illustrated through the use of partial products (see Figure 5) . Further, arrays that use graph paper to allow students to plot numbers visually on the graph and then count the squares included within the rectangle they produce. Arrays can be used in combination with partial products to modify the multiplication process, thereby enabling students with math disabilities to gain further insight into the multiplication process.

Providing adaptations is often very effective for helping students with mathematics disabilities successfully use facts to solve computational problems. Salend (1994) lists suggestions for modifying mathematics assignments in computation.

Further adaptations and modifications in computational instruction include colour coding of the desired function for the computation problem (Ariel, 1992), either ahead of time by the teacher or during independent practice by the student. This process serves as a reminder to the student to complete the desired function and also may be used as an evaluation device by the teacher to determine the student's knowledge of the mathematical symbols and processes they represent.

Matrix paper allows students a physical guide for keeping the numbers in alignment (Ariel, 1992), thus decreasing the complexity of the task and allowing the teacher and student to concentrate on the mathematical process. In simplifying the task, the teacher then can identify problems in the student's understanding of the process rather than in the performance of the task.

Finally, modeling is another effective strategy for helping students solve computational problems. For example, Rivera and Deutsch-Smith (cited in Salend, 1994) recommend the use of the demonstration plus permanent model strategy, which includes the following three steps designed to increase skill in comprehending the computation process: (a) the teacher demonstrates how to solve a problem while verbalizing the key words associated with each step in solving the computation problem; (b) the student performs the steps while verbalizing the key words and looking at the teacher's model; and (c) the student completes additional problems with the teacher's model still available. Other modeling examples provided by Salend (1994) include the use of charts that provide definitions, correct examples, and step-by-step instructions for each computational process.

Problem-solving:

Problem-solving can be adapted and modified for students with mathematics disabilities in several different ways (see Kelly & Carnine in this series for additional word problem-solving instructional strategies). Polloway and Patton (1993) note that students with math disabilities improve their problem-solving skills through teacher-directed activities that include (a) having students read or listen to the problem carefully; (b) engaging students in focusing on relevant information and/or significant words needed to obtain the correct answer while discarding the irrelevant by writing a few words about the answer needed (e.g., number of apples), by identifying aloud or circling the significant words in the problem, and by highlighting the relevant numbers; (c) involving students in verbalizing a solution for the problem using a diagram or sketch when appropriate; (d) developing strategies for working through the story problem by writing an appropriate mathematical sentence; and (e) performing the necessary calculations, evaluating the answer for reasonableness, and writing the answer in appropriate terms.

Lack of critical thinking skills compounds problem-solving difficulties. Several cognitive and meta-cognitive strategies can be used effectively. For example, Ariel (1992) recommends the use of six problem-solving strategies that students can monitor on an implementation sheet. Students verbalize the

steps while completing the problem and note their completion of the steps on the monitoring sheet. The six steps are:

1. Read and understand the problem.
2. Look for the key questions and recognize important words.
3. Select the appropriate operation.
4. Write the number sentence (equation) and solve it.
5. Check your answer.
6. Correct your errors.

Further, Mercer (1992) identifies the components necessary for students to engage in successful problem-solving. According to Merger, the problem-solving process involves 10 steps, which can be expanded into learning strategies to enable students with math disabilities to be more effective in solving word problem.

The 10 steps are:

1. Recognize the problem.
2. Plan a procedural strategy (i.e., identify the specific steps to follow).
3. Examine the math relationships in the problem.
4. Determine the math knowledge needed to solve the problem.
5. Represent the problem graphically.
6. Generate the equation.
7. Sequence the computation steps.
8. Check the answer for reasonableness.
9. Self-monitor the entire process.
10. Explore alternative ways to solve the problem.

Hammill and Bartel (in Polloway & Patton, 1993) offer many suggestions for modifying mathematics instruction for students with LD. They encourage teachers to think about how to alter instruction while maintaining the primary purpose of mathematics instruction: Competence in manipulating numbers in the real world. Their suggestions include:

1. Altering the type or amount of information presented to a student such as giving the student the answers to a story problem and allowing the student to explain how the answers were obtained.
2. Using a variety of teacher-input and modeling strategies such as using manipulatives during the instructional phase with oral presentations.

Techniques to enhance mathematics instruction

For students with math disabilities, effective mathematics instruction is the difference between mathematics as a paper-and-pencil/right-answer type of task and an important real-life skill that continues to be used throughout their lifetime. This section examines effective instructional techniques that the general educator can incorporate into the classroom for all learners, and especially for students with math disabilities.

Increasing instructional time

Providing enough time for instruction is crucial. Too often, "math time" according to Usnick and McCoy (cited in McCoy & Prehm, 1987) includes a long stretch of independent practice where students complete large numbers of math problems without feedback from the teacher prior to completion. Instructional time is brief, often consisting of a short modeling of the skill without a period of guided practice. By contrast, small-group practice where students with math disabilities complete problems and then check within the group for the correct answer, use self-checking computer software programs, and receive intermittent teacher interaction are positive modifications for increasing time for mathematics instruction. Additionally, time must be provided for students to engage in problem-solving and other math "thinking" activities beyond the simple practice of computation, even before students have shown mastery of the computational skills. Hammil and Bartel (cited in Polloway & Patton, 1993) suggest slowing down the rate of instruction by using split mathematics instructional periods and reducing the number of problems required in independent practice.

Using effective instruction

Polloway and Patton (1993) suggest that the components of effective instruction play an important role in the success of students with disabilities in general education mathematics instruction. One suggested schedule for the class period includes a period of review of previously covered materials, teacher-directed instruction on the concept for the day, guided practice with direct teacher interaction, and independent practice with corrective feedback. During the guided and independent practice periods, teachers should ensure that students are allowed opportunities to manipulate concrete objects to aid in their conceptual understanding of the mathematical process, identify the overall process involved in the lesson (i.e., have students talk about "addition is combining sets" when practicing addition problems rather than silent practice with numerals on a worksheet), and write down numerical symbols or mathematical phrases such as addition or subtraction signs.

Teaching key math terms as a specific skill rather than an outcome of basic math practice is essential for students with LD (Salend, 1994) . The math terms might include words such as "sum," "difference," "quotient," and "proper fraction," and should be listed and displayed in the classroom to help jog students' memories during independent assignments.

Varying group size

Varying the size of the group for instruction is another type of modification that can be used to create an effective environment for students with math disabilities. Large-group instruction, according to McCoy and Prehm (1987), may be useful for brainstorming and problem-solving activities. Small-group instruction, on the other hand, is beneficial for students by allowing for personal attention from the teacher and collaboration with peers who are working at comparable levels and skills. This arrangement allows students of similar levels to be grouped and progress through skills at a comfortable rate. When using grouping as a modification, however, the teacher must allow for flexibility in the groups so that students with math disabilities have the opportunity to interact and learn with all members of the class (see Rivera in this series for cooperative learning information).

Using real-life examples

Salend (1994) recommended that new math concepts be introduced through everyday situations as opposed to worksheets. With everyday situations as motivators, students are more likely to recognize the importance and relevance of a concept. Real-life demonstration enables students to understand more readily the mathematical process being demonstrated (see Scott & Raborn in this series for additional ideas). Further, everyday examples involve students personally in the instruction and encourage them to learn mathematics for use in their lives. Changing the instructional delivery system by using peer tutors (see Miller et al. in this series for ideas about peer tutoring); computer-based instruction; or more reality-based assignments such as "store" for practice with money recognition and making change also provide real life math experiences (Hammill & Bartel cited in Polloway & Patton, 1993).

Varying reinforcement styles

Adaptations and modifications of reinforcement styles or acknowledgment of student progress begin with teachers being aware of different reinforcement patterns. Beyond the "traditional" mathematical reinforcement style, which concentrates on obtaining the "right answer," students with mathematics disabilities may benefit from alternative reinforcement patterns that provide positive recognition for completing the correct steps in a problem regardless of the outcome (McCoy & Prehm, 1987). By concentrating on the process of mathematics rather than on the product, students may begin to feel some control over the activity. In addition, teachers can isolate the source of difficulty and provide for specific accommodations in that area. For example, if the student has developed the ability to replicate the steps in a long division problem but has difficulty remembering the correct multiplication facts, the teacher should reward the appropriate steps and provide a calculator or multiplication chart to increase the student's ability to obtain the solution to the problem.

Summary

The mathematical ability of many students with LD can be developed successfully in the general education classroom with proper accommodations and special education instructional support. To this end, teachers should be aware of the necessity for adapting and modifying the environment to facilitate appropriate, engaging instruction for these students. Use of manipulatives is encouraged to provide

realistic and obvious illustrations of the underlying mathematical concepts being introduced. Reliance on problem-solving strategies to improve students' memories and provide a more structured environment for retention of information also is appropriate. Finally, teachers must evaluate the amount of time spent in instruction, the use of effective instructional practices, student progress (see Bryant in this series), and the use of Real-life activities that encourage active, purposeful learning in the mathematics classroom.

References

Ariel, A. (1992). Education of children and adolescents with learning disabilities. NY: Merrill.

McCoy, E. M., & Prehm, H. J. (1987). Teaching mainstreamed students. Methods and techniques. Denver, CO: Love Publishing Company.

Mercer, C. D. (1992). Students with learning disabilities (4th ed.). NY: Merrill.

Polloway, E. A., & Patton, J. R. (1993). Strategies for teaching learners with special needs (5th ed.). NY: Merrill.

Salend, S. J. (1994). Effective mainstreaming. Creating inclusive classrooms (2nd ed.). NY: MacMillian.

Wood, J. W. (1992). Adapting instruction for mainstreamed and at risk student (2nd ed.). NY: Merrill.

The University of Texas at Austin - LD Forum: Council for Learning Disabilities - Winter 1996 *By: Robin H. Lock (1997)*
Adapted from http://www.LDonline.org/article/5928

APPENDIX Y (ii)

AET Brochure

AET MISSION

The mission of the Association of Educational Therapists is to define and set standards for the professional practice of educational therapy; to promote professional training, development, and research; and to create public awareness of and access to educational therapy services.

WHO BELONGS TO AET?

In addition to educational therapists, professionals from many disciplines join AET, among them…

- Speech-Language Professionals
- Social Workers, LCPC's, MFT's
- Psychologists
- Psychiatrists
- Occupational Therapists
- Regular Ed and Special Ed Teachers
- School Counselors
- Pediatricians
- Developmental Optometrists

All questions and concerns regarding AET membership can be directed to the Membership Manager at 800-286-4267 or membership@aetonline.org.

AET

Association *of* EDUCATIONAL THERAPISTS

11300 W. Olympic Blvd
Suite 600
Los Angeles, CA 90064
Tel. 800.286.4267
Fax 310.437.0585
aet@aetonline.org

APPENDIX Q

The Association of Educational Therapists: making a *real* difference in people's lives!

AET

Association *of* EDUCATIONAL THERAPISTS

"AET provides the missing link in the treatment of children with reading and learning disabilities: an understanding of the social-emotional-behavioral correlates of learning problems. They are almost always there, and too often neglected. AET helps to ensure a more comprehensive approach to all the issues our children confront."

Maryanne Wolf, Ph.D.
Director, Center for Reading and Language Research
Tufts University
Member of the AET Advisory Board

What is AET?

The Association of Educational Therapists is the national professional association for educational therapists. AET defines and sets standards for the professional practice of educational therapy. Educational therapists provide a broad range of individualized educational interventions for children and adults with learning disabilities and other learning challenges.

What is Educational Therapy?

Educational therapy is the clinical practice of providing intensive, individualized compensatory and remedial intervention. Intervention approaches take into account the social, emotional, and neuro-biological factors that impact an individual's learning. These services are generally provided to individuals with various types of learning disabilities and other learning challenges, such as dyslexia; ADD; language processing problems; math difficulties; poor motivation; low academic self-esteem; poor social, organizational, and study skills; and performance anxiety.

What are the Benefits of AET Membership?

- Subscription to AET's professional journal, *The Educational Therapist*
- A membership directory that facilitates referrals and reaches over 1,000 professionals
- Access to the Members Only area of the AET website that provides valuable information and resources for practitioners
- Continuing education opportunities for educational therapists, speech/language professionals, social workers, and other allied professionals
- Discounted rates for AET conferences, workshops, tapes, and CDs
- Free regional study groups that provide professional support and opportunities for the exchange of ideas and experiences
- Access to information regarding business practices, including information about low- cost professional liability insurance for Professional and Board Certified members

Educational Therapists are Professionals Who...

- Comprehensively address the learning experience, including the academic, social, and emotional aspects of learning.
- Conduct formal and informal assessments and integrate the results to develop a wide range of learning methods and strategies.
- Tailor remediation strategies, curriculum, and instructional methodology with consideration of the client's unique learning needs.
- Understand the ways in which underlying learning issues have an impact on other areas of academic and social functioning.
- Foster independence and self-advocacy in their clients to help them take control of their learning.
- Communicate with significant members of the client's world—including family, teachers, other professionals, and employers—for the purpose of developing productive support strategies and/or accommodations.

What Are the Types of Membership?

- **Board Certified Educational Therapist**

  Board Certified membership (BCET) is granted to professional educational therapists with a Master's degree, who have been Professional members in good standing for at least one year, and have met additional requirements as specified by the AET Certification Board, including satisfactorily completing a peer-reviewed case study and exam.

- **Educational Therapist/Professional**

  Professional membership (ET/P) is granted to educational therapists who have a Master's degree (or who have met the requirements of graduate level and/or upper division level courses), are engaged in educational therapy in private practice, public or private schools, private clinics, hospitals, or public agencies, and who have met a direct service minimum of 1,500 hours and supervision/mentoring requirements of AET.

- **Associate Educational Therapist**

  Associate membership is open to individuals who have completed all academic training requirements and will complete the direct service hours and supervision/mentoring requirements before becoming Professional members of AET.

- **Allied Professional**

  Allied Professional membership is open to any licensed or certified professional who works with learning disabled individuals in professions that interface with educational therapy (e.g., speech and language therapists, psychologists, pediatricians, school and/or learning center directors, etc).

- **Student**

  Student membership is open to students who can verify that they are enrolled in a university program leading to qualification for professional membership.

- **General Member**

  Open to any individual interested in the field of educational therapy.

APPENDIX I

Use a Map While Travelling the Road!

Although you may have a general destination of recovery, it's easy to get lost without a map. So, following a commitment to the recovery process, mapping out a plan and strong follow through with that plan will guarantee success! Because everyone has different factors contributing to poor academic performance and different obstacles in the face of recovery, a personalized recovery plan is essential. You'll want to set specific goals in writing (your map!), check-in with yourself regularly (as well as someone else, see below) on your progress toward your goals and adjust your efforts where needed, and anticipate roadblocks. Continually referring back to the 12 Steps to Academic Recovery will help guide you when roadblocks do emerge.

What the scientific research says about a structured recovery (that is, having a map):

Data suggests that students involved in a formal academic recovery program aimed at goal setting, developing time management skills, organization, and balancing academic and social demands, have significantly better academic performance the semester following being placed on academic probation than do students not involved in an academic recovery program. (Source: www.lynchburg.edu/x4251.xml)

Research also suggests that counseling for personal issues can assist in enabling a student to return to academic success. Past research at Florida Tech Counseling and Psychological Services revealed a five year graduation rate of 86% for those who received services at CAPS vs. 51% for all students enrolled in 1998.

Don't Travel the Road Alone

Because everyone who struggles academically does so for different reasons, counselors at CAPS can assist you in developing a personalized plan for your academic recovery. Moreover, once you've developed your plan counselors are good sources of support in your efforts to implement your plan; they can help you maintain focus and be realistic in your efforts toward recovery. With the aid of your map, counselors can provide you with the skills necessary to efficiently navigate the terrain.

The Road Awaits You Now

Don't wait to start your academic recovery; the sooner the better. Although "academic recovery" implies significant academic problems, strategies geared toward maximizing academic success can be implemented with even slight deviations from the road to graduation. Being proactive at the first signs of academic trouble may prevent one from getting lost on their journey.

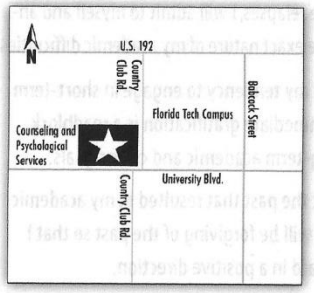
If you need assistance with starting your recovery, call or stop into the Counseling and Psychological Services (CAPS) office on campus today.

Counseling and Psychological Services (CAPS)

CAPS is a counseling facility operated by Florida Institute of Technology's School of Psychology. Its goals are to promote the best possible academic, vocational and emotional health. Our services are available to students and their immediate families. Counseling services are available on campus at CAPS (674-8050), off campus at the Women's Center (727-2200) or through your private health care provider.

Center Hours
Monday–Thursday, 9 a.m. to 5 p.m. • Friday, 9 a.m. to 4 p.m.

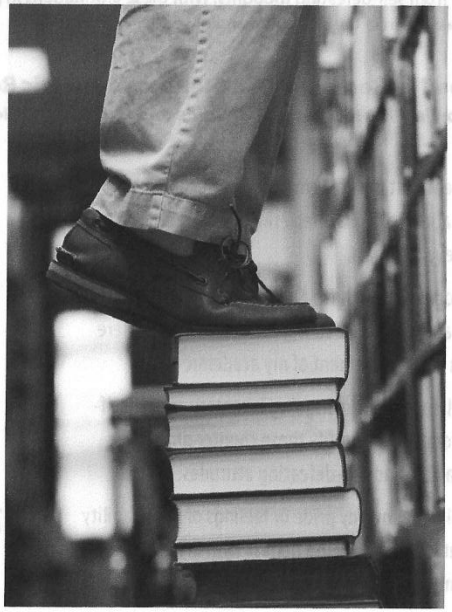
Location
Intersection of Country Club Road and University Boulevard, west of Babcock Street



For additional counseling, academic success resources and helpful articles, visit www.fit.edu/caps or call 674-8050.

PY-462-807

Academic Recovery



Florida Institute of Technology
Counseling and Psychological Services

Academic Recovery: The Road Back to Academic Success

By Justin C. Koenitzer, M.S., and James Oelschlager, Psy.D.

There are many reasons why students fall out of "good standing" in their academic pursuits (see Factors Limiting Success side bar). When this happens, thoughts that it may be impossible to recover are common. These thoughts can lead to general feelings of negativity toward school, pushing a student further and further away from his or her academic interests. Whatever the reasons are that led to unsatisfactory academic progress, there is hope for bringing that GPA back up and regaining satisfaction in one's academic pursuits. Embracing the following 12 Steps to Academic Recovery after a period of academic struggles can help guide you away from self-defeating thoughts. With these affirmations in place, and once a real commitment is made, you can begin to find success again in the classroom and beyond.

The Road to Recovery—12 Steps to Academic Recovery—J. Oelschlager, Psy.D.

The following 12 steps serve as a Guide and Commitment to the Recovery Process:

1. I accept that my academic life has become unmanageable and is interfering with my ability to achieve my goals.
2. I recognize that I have developed counter-productive and/or self-defeating attitudes that interfere with the achievement of my academic goals.
3. I will engage in an ongoing inventory and/or self-exploration to identify these counter productive behaviors and self-defeating attitudes.
4. I will not allow my pride or feelings of vulnerability to interfere with being honest with myself regarding my difficulties.
5. Once identified through honest exploration, I will implement a plan to make a positive change in these behaviors and attitudes.
6. I will challenge my tendency toward denial, excuses, placing blame and rationalization for my academic difficulties.
7. I will positively seek assistance from Florida Tech Academic Support Services (for tutoring, etc.), CAPS (for supportive counseling, study skills training, etc.) and academic advisers when I cannot modify my behaviors and attitudes.
8. I recognize that there will be a tendency to revert back to past behaviors.
9. To prevent these relapses, I will admit to myself and another person the exact nature of my academic difficulties.
10. I recognize that my tendency to engage in short-term thinking and immediate gratification is a roadblock toward my long-term academic and career goals.
11. I will not forget the past that resulted in my academic difficulties, but will be forgiving of the past so that I can move forward in a positive direction.
12. Having developed a realization regarding my academic difficulties, I will make an attempt to carry this message to my peers who may be struggling academically as I did.

Factors Limiting Success:

Do your grades and motivation suffer as a result of any of these or other related factors?

Lack of Strong Academic Goals/Direction

- No clearly defined goals for future
- Unsure of interests
- Concern about fit with chosen major

Time Management Problems

- Unsure how to schedule time efficiently
- Too many hours in social engagements
- Procrastination tendency
- Working too many hours in outside job

Poor Study Skills

- General inefficient approach to studying
- Poor organizational skills
- Poor note taking abilities
- Difficulty understanding course content

Personal Issues

- Overwhelming stress
- Relationship problems
- Emotional difficulties
- Family problems

Health-Related Problems

- Substance use
- Disability
- Chronic fatigue
- Sleep issues
- Attendance due to health

APPENDIX I

Use a Map While Travelling the Road!

Although you may have a general destination of recovery, it's easy to get lost without a map. So, following a commitment to the recovery process, mapping out a plan and strong follow through with that plan will guarantee success! Because everyone has different factors contributing to poor academic performance and different obstacles in the face of recovery, a personalized recovery plan is essential. You'll want to set specific goals in writing (your map!), check-in with yourself regularly (as well as someone else, see below) on your progress toward your goals and adjust your efforts where needed, and anticipate roadblocks. Continually referring back to the 12 Steps to Academic Recovery will help guide you when roadblocks do emerge.

What the scientific research says about a structured recovery (that is, having a map):

Data suggests that students involved in a formal academic recovery program aimed at goal setting, developing time management skills, organization, and balancing academic and social demands, have significantly better academic performance the semester following being placed on academic probation than do students not involved in an academic recovery program. (Source: www.lynchburg.edu/x4251.xml)

Research also suggests that counseling for personal issues can assist in enabling a student to return to academic success. Past research at Florida Tech Counseling and Psychological Services revealed a five year graduation rate of 86% for those who received services at CAPS vs. 51% for all students enrolled in 1998.

Don't Travel the Road Alone

Because everyone who struggles academically does so for different reasons, counselors at CAPS can assist you in developing a personalized plan for your academic recovery. Moreover, once you've developed your plan counselors are good sources of support in your efforts to implement your plan; they can help you maintain focus and be realistic in your efforts toward recovery. With the aid of your map, counselors can provide you with the skills necessary to efficiently navigate the terrain.

The Road Awaits You Now

Don't wait to start your academic recovery; the sooner the better. Although "academic recovery" implies significant academic problems, strategies geared toward maximizing academic success can be implemented with even slight deviations from the road to graduation. Being proactive at the first signs of academic trouble may prevent one from getting lost on their journey.

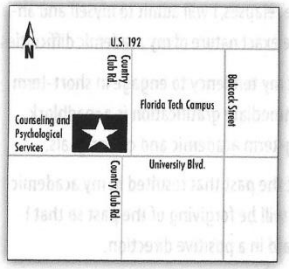
If you need assistance with starting your recovery, call or stop into the Counseling and Psychological Services (CAPS) office on campus today.

Counseling and Psychological Services (CAPS)

CAPS is a counseling facility operated by Florida Institute of Technology's School of Psychology. Its goals are to promote the best possible academic, vocational and emotional health. Our services are available to students and their immediate families. Counseling services are available on campus at CAPS (674-8050), off campus at the Women's Center (727-2200) or through your private health care provider.

Center Hours
Monday–Thursday, 9 a.m. to 5 p.m. • Friday, 9 a.m. to 4 p.m.

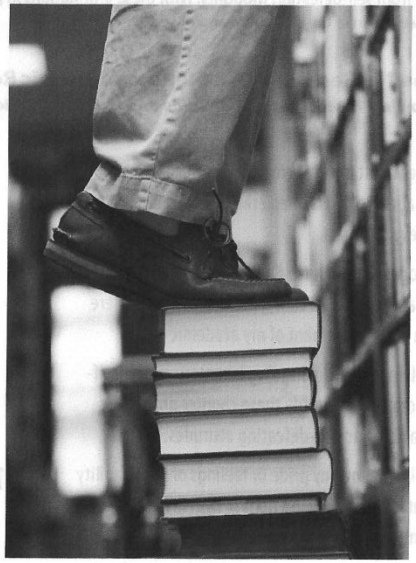
Location
Intersection of Country Club Road and University Boulevard, west of Babcock Street



For additional counseling, academic success resources and helpful articles, visit www.fit.edu/caps or call 674-8050.

PY-462-807

Academic Recovery



Florida Institute of Technology
Counseling and Psychological Services

Academic Recovery: The Road Back to Academic Success

By Justin C. Koenitzer, M.S., and James Oelschlager, Psy.D.

There are many reasons why students fall out of "good standing" in their academic pursuits (see Factors Limiting Success side bar). When this happens, thoughts that it may be impossible to recover are common. These thoughts can lead to general feelings of negativity toward school, pushing a student further and further away from his or her academic interests. Whatever the reasons are that led to unsatisfactory academic progress, there is hope for bringing that GPA back up and regaining satisfaction in one's academic pursuits. Embracing the following 12 Steps to Academic Recovery after a period of academic struggles can help guide you away from self-defeating thoughts. With these affirmations in place, and once a real commitment is made, you can begin to find success again in the classroom and beyond.

The Road to Recovery—12 Steps to Academic Recovery—J. Oelschlager, Psy.D.

The following 12 steps serve as a Guide and Commitment to the Recovery Process:

1. I accept that my academic life has become unmanageable and is interfering with my ability to achieve my goals.
2. I recognize that I have developed counter-productive and/or self-defeating attitudes that interfere with the achievement of my academic goals.
3. I will engage in an ongoing inventory and/or self-exploration to identify these counter productive behaviors and self-defeating attitudes.
4. I will not allow my pride or feelings of vulnerability to interfere with being honest with myself regarding my difficulties.
5. Once identified through honest exploration, I will implement a plan to make a positive change in these behaviors and attitudes.
6. I will challenge my tendency toward denial, excuses, placing blame and rationalization for my academic difficulties.
7. I will positively seek assistance from Florida Tech Academic Support Services (for tutoring, etc.), CAPS (for supportive counseling, study skills training, etc.) and academic advisers when I cannot modify my behaviors and attitudes.
8. I recognize that there will be a tendency to revert back to past behaviors.
9. To prevent these relapses, I will admit to myself and another person the exact nature of my academic difficulties.
10. I recognize that my tendency to engage in short-term thinking and immediate gratification is a roadblock toward my long-term academic and career goals.
11. I will not forget the past that resulted in my academic difficulties, but will be forgiving of the past so that I can move forward in a positive direction.
12. Having developed a realization regarding my academic difficulties, I will make an attempt to carry this message to my peers who may be struggling academically as I did.

Factors Limiting Success:

Do your grades and motivation suffer as a result of any of these or other related factors?

Lack of Strong Academic Goals/Direction

- No clearly defined goals for future
- Unsure of interests
- Concern about fit with chosen major

Time Management Problems

- Unsure how to schedule time efficiently
- Too many hours in social engagements
- Procrastination tendency
- Working too many hours in outside job

Poor Study Skills

- General inefficient approach to studying
- Poor organizational skills
- Poor note taking abilities
- Difficulty understanding course content

Personal Issues

- Overwhelming stress
- Relationship problems
- Emotional difficulties
- Family problems

Health-Related Problems

- Substance use
- Disability
- Chronic fatigue
- Sleep issues
- Attendance due to health