

Part C Project Details

I. Goal (short-term and long-term goal)

To develop a comprehensive and evidence-based Positive Behavior Support (PBS) approach for fostering positive learning environment in classroom for secondary school students with Attention-Deficit/Hyperactivity Disorder (AD/HD) in Hong Kong. Also, to develop sustainable packages for teachers and parents to support AD/HD secondary school students in Hong Kong.

Objectives:

1. To conduct a study on the effectiveness of Positive Behavior Support approach for AD/HD secondary school students, to study how AD/HD students be better supported in classroom;
2. To develop teachers and parents support program for the enhancement of teacher-parent collaboration in building up their positive desired behaviors of AD/HD adolescents in classroom;
3. To produce and publish Teachers' Practice Manual and Parents' Handbook in supporting AD/HD students in Hong Kong, and they will be distributed to all secondary schools in Hong Kong.

II. Needs Assessment and Applicant's Capability

A. Characteristics of Attention Deficit and Hyperactivity Disorder Adolescents

Attention-Deficit/Hyperactivity Disorder (AD/HD) is a condition with neurobiological origin that interferes with a person's ability to focus and sustain attention on a task, or inhibit impulsive behavior. It is characterized by developmentally inappropriate attention skills and/or impulsivity and hyperactivity that are maladaptive, persistent and present across different settings, with onset of symptoms occurring before 7 years of age (Barkely, 2006a & 2006b).

The most common behaviors fall into three categories: **inattention, hyperactivity, and impulsivity**. Stepping into adolescence, it is usual for the AD/HD symptom pattern to change, manifested by a noticeable decrease in hyperactivity, yet other problems with attention and impulsivity remain. With their developmental impact ranges from short-term impairments to long-term sequelae, individual, family and society need to pay severe costs: for the individual, there may be serious issues in social interactions and relationship, self-esteem, academic problems and failure, occupational difficulties, injury and accidents and substance abuse. Barkley (2006a) noted that there was about 58% of AD/HD teenagers showed a history of academic failure and 20% to 30% displayed antisocial behaviors. Especially for those receiving insufficient support may even end up with the result of oppositional defiant disorder (ODD) or conduct disorder (CD) (Barkely, 2006a & 2006b).

Economic burden is also incurred significantly to schools, families and society because many of these teenagers may tend to associate with peers who have similar problems; this often results in the escalation of risk-taking behaviors. It is a fact that there is high association of teenagers with AD/HD and criminality. Also, sadly, an estimated 35% of AD/HD teenagers quit school who come along with poor self-concept, low self-esteem, and poor self-confidence, making future success seem unlikely, and end up with long-term work loss in adults with AD/HD.

For secondary school students who are inattentive and disruptive present significant challenges to educational professions (DuPaul & Stoner,2003). From our experience, not only teenagers with AD/HD experience difficulty in attaining satisfactory school performance, they appear in classroom as Impulsivity: disorganization, memory problem, poor motivation, distractibility/daydreaming, poor social relationship and poor self-esteem. (Appendix I)

B. Existing Problems and the Service Gap

1. Limitation of Medication-only Treatment:

Until recently, awareness and support systems for persons with AD/HD have been mainly limited to the medical sector. Medication treatment like the use of Ritalin and Concerta is the most common treatment for AD/HD teenagers. However, there is drug compliance problem after stepping into adolescence because of the shrinking of parental supervision and the adolescents' growing will of fighting for their own autonomy. Therefore, the drug effect may be affected adversely. Moreover, "pills teach no skills", therefore without additional intervention, problems mentioned in previous paragraphs will persist or even deteriorate among our teenagers (Barkely, R.A. 2006a & 2006b).

2. Lack of Training for Teachers and Parents to deal with AD/HD Adolescents:

In Hong Kong, behavioral management training (in the format of group work) conducted by public hospital and NGOs is limited to AD/HD children and parents only. Though adolescents still show their pressing need in this area, there is insufficient service for supporting them.

Besides, Teacher and Parents Trainings in Hong Kong started merely in 2007, and are mostly focused on the nature of AD/HD, proper behavior management techniques and appropriate education accommodation. There is a lack of **classroom and individualized basis intervention approach**.

It is essential that the students should be given positive learning experiences that focus on his or her abilities to cope and adapt to many situations both academic, family and social, and that these skills must generalize and be utilized in future. Thus it is most beneficial to foster an environment that will facilitate AD/HD adolescents to learn the skills in the present school setting.

C. Experience and Capabilities of Hong Kong Christian Service and Hong Kong Association For AD/HD

The project is co-organized by the **Hong Kong Christian Service (HKCS)** and the **Hong Kong Association For AD/HD (Association)**.

1. Hong Kong Christian Service

a. Background:

Founded in 1952, Hong Kong Christian Service is a multi-service non-governmental organization rooted in the city of Hong Kong. We offer more than 55 types of social services and have over 1,500 staff. Our service target covers all age groups ranging from infant to elderly. Our belief in a person-centered orientation compels us to reach out for "an holistic approach to human development" and for "a society that is humane and just". All along, we are ready to serve the needy, especially the deprived groups, to advocate justice and bring hopes. As a vigorous and outstanding provider of youth services, we are presently providing school social work service to 30 mainstream secondary schools in Hong Kong. (Appendix II)

b. Hong Kong Christian Service has already laid the groundwork for conducting

this proposed project:

Hong Kong Christian Service has a strong commitment and rich experience in serving children and adolescents with developmental and special educational needs, including AD/HD. In 1980's, we started our Early Education and Training Center services (EETC) for young children (from birth to 6 years) who are at risk of becoming disabled and with developmental delay. Today, we have five EETCs providing comprehensive services to this target group. We also have Project Bridge which provides comprehensive services for primary school age children with ADHD.

In 2000, when the attention of the government was still focused on Special Educational Needs (SEN) work in primary school, we have already started to devote ourselves to raise public awareness and advocate for the betterment of the secondary school students with SEN. We conducted a Hong Kong wide Research in 2004 on the self-assessed ability and training needs of secondary school teachers in teaching SEN students. The research was the first of its kind in Hong Kong. The result was revealing and alarming and had a great impact on raising the awareness of the government and policy makers and in their development of teacher training polices and the provision of additional support and resources for SEN students in secondary schools.

Since then we have organized and conducted numerous open and school-based teacher seminars on the subject. Our most recent Open Seminar for Teachers on "The Handling of ADHD Secondary School Students" was held on 6 May 2009. A total of 120 teachers attended and the feedback, as usual, was excellent. In 2007, we have also published a Practice Manual for Secondary School Social Workers in working with SEN students (dyslexia) and was distributed to all school social workers in Hong Kong.

Presently, our school social work service is providing Stationing and Visiting Professional Support Services for SEN students in 9 mainstream secondary schools and AD/HD is our focus of work.

As our work experience with ADHD increased, it becomes very clear that classroom experience has one of the great impacts on the well-being and overall development of the ADHD students. At the same time, classroom management poses the greatest challenge for teachers of ADHD students. We are totally convinced and are fully committed in this area of work development.

2. The Hong Kong Association For AD/HD

The Hong Kong Association For AD/HD is a voluntary and non-profit organization founded in December 2006 by a group of local parents with AD/HD children. The Association is supported by professionals in related fields, acting as our honorable consultants (Appendix III). The objective of the Association is to advocate for necessary services and support for children with AD/HD in school as well as in the larger community. The Association is committed to relieve the distress and difficulties of families with AD/HD members by increasing public awareness and understanding of the nature and causes of AD/HD.

Members of the Association can be benefited from the sharing and mutual support among parents with AD/HD children, who show genuine understanding to the hardship and difficulties from a non-judgmental way. The Association provides members and their children with:

- a) Educational talks on all aspects of AD/HD,
- b) Parental training courses and workshops,
- c) Emotional and behavioral training courses for AD/HD teens,
- d) Sports and recreational activities,

- e) Drama and language classes,
- f) Social events, e.g. family outings, games and fun gatherings, etc., and
- g) Useful information and professional advice on all aspects of AD/HD.

The Association is actively involved in raising the public awareness of AD/HD and promoting the needs of families with AD/HD members. The Association also liaises with local groups and organizations to promote the community's understanding on AD/HD and influence service provisions. For the past years, the Association has:

- a) Shared regularly at the AD/HD Parents Information Day organized by the Department of Health and supported its activities promoting AD/HD;
- b) Lectured in HKUSPACE Special Learning Needs Education Course on AD/HD children;
- c) Shared in interviews by media and participated in production of TV/radio programs promoting AD/HD;
- d) Shared at AD/HD related seminars and conferences for teachers, social workers and parents;
- e) Participated in the film production for promoting the employment of AD/HD people by the Labor Department; and
- f) Supported AD/HD research and reports.

III. Targets and Expected Number of Beneficiaries

Targets	Expected Number of Beneficiaries
Secondary School Teachers of participating schools	5-8 schools will be invited to participate. Priority will be given to those schools having highest number of students with AD/HD and facing greatest challenges on managing their classroom behaviors. 2 teachers from each school will be involved in the project. A total of 10-16 Teachers will be equipped with the knowledge and application skill of the Positive Behavior Support approach.
All secondary Schools in Hong Kong	Around 1,500 copies of Teachers' Practice Manual will be sent to all secondary schools in Hong Kong.
Parents of AD/HD students of participating schools	3-4 parents from each participating school will be invited to join the project. A total of 20-24 parents will be equipped with the knowledge and skills to collaborate with teachers to apply Positive Behavior Support approach.
All Parents of AD/HD students in Hong Kong	Around 1,500 copies of Parents' Handbooks will be sent to the targeted Parents in Hong Kong via the schools and the Association.
Students with AD/HD of participating schools	3-4 junior form students with AD/HD from each participating school will be the serving target of the project. A total of 20-24 Students will directly benefit from the Positive Behavior Support Project.
Classmates of AD/HD students of participating schools	2-4 classes will be selected to apply the Positive Behavior Support approach. A total of 350-1,120 students will experience an improved supportive learning environment in classroom.
School Social Workers of participating schools	1-2 school social workers from each school will be involved in the project. A total of 5-16 workers will be equipped with the knowledge and application skill of the Positive Behavior Support approach.
Related Professionals and the Public	An AD/HD seminar and exhibition will be organized for related professionals and the public/ Around 500 copies of Research Reports will be sent to the public and university libraries in Hong Kong

IV. Conceptual Framework

Students demonstrating inattentive, overactive and impulsive behaviors present significant challenges to teachers in classroom. In fact, these behavior control difficulties are the distinguishable features of adolescents who are diagnosed as having AD/HD (Robin, A.L. 1998).

These students were used to be labeled as disruptive, deviant and maladaptive ones in class. Their behaviors are real challenges for teachers who would like to maintain certain amount of order in the classroom in order to have effective teaching. In the past, punishing or removing these students from the class is the most likely result. The project attempts applying positive behavioral support approach to balance the needs of discipline and treatment for those students in the classroom (Jackson & Panyan, 2002). A series of research studies will also be launched.

A. Positive Behavior Support Approach

Positive behavioral support (PBS) is a comprehensive approach that emphasizes on handling challenging behaviors of student via a systemic and assessment-based intervention which is designed by a collaborative team (including teachers, parents and social workers). The intervention is targeting the student's unique social environment. It based on a functional understanding of the challenging behavior to develop hypothesis and support plan as well as intervention strategies. The ultimate goal is not only to reduce challenging behaviors, but also to create a long-lasting change (Bambara & Kern, 2005)

The approach firstly emerged in the mid-1980s in the United States on handling difficult behaviors of severely disabled individual. The approach had been applied successfully to support students across various disabilities and behavioral problems in a variety of school, home, and community settings (Roberts, Sailor, Dunlap, Sugai & Horner, 2009) . The project attempts to apply this approach in the local secondary school context for those junior students (S1 to S3) with AD/HD.

1. Collaborative Team

The project is applying a collaborative team-based intervention. A collaborative team will be formed in each individual school. It consists of teachers, parents, school social worker, educational psychologist and project manager. A series of meetings and sharing sessions will be held. The project manager will serve as a facilitator to assist the team to carry out the positive behavior support process. The project manager, school social worker and teachers will be responsible to implement the designed plan in individual counseling session and the classroom respectively (Bambara & Kern, 2005). Consultation will be offered for the collaborative team by educational psychologist, renowned academics and professionals of the AD/HD field (Appendix IV).

2. The Process of Positive Behavior Support

Stage 1: Identifying Challenging Behaviors:

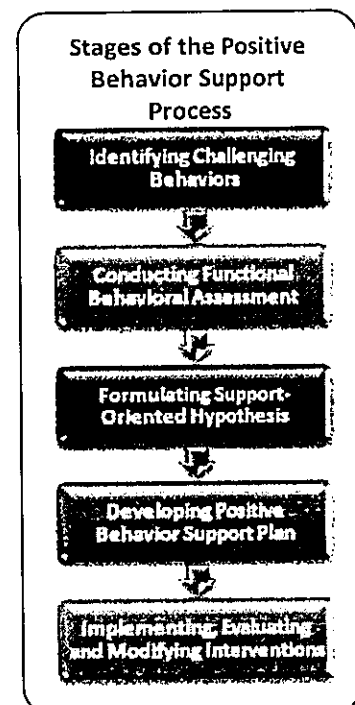
- Collaborative team prioritizes and defines precisely the challenging behaviors (such as poor attention and talk excessively) of AD/HD students.

Stage 2: Conducting Function Behavioral Assessment:

- The assessment includes gathering information, examining the reasons behind and identifying environmental condition (classroom atmosphere and peer network) that lead to and maintain the challenging behaviors.

Stage 3: Formulating Support-Oriented Hypothesis:

- The hypothesis tries to describe why the AD/HD student is engaging in challenging behavior and what function it serves. It helps the team to link intervention to the assessment.



Stage 4: Developing Positive Behavior Support Plan:

- The plan consists of discrete strategies to increase positive behaviors and tactics to reduce behaviors as well as sustaining long-term positive changes of the AD/HD students.

Stage 5: Implementing, Evaluating and Modifying Interventions:

- The team keeps on monitoring the progress, refining the intervention and evaluating the effectiveness of the plan.

3. Definition of Challenging Behaviors

Most students are responsive to school discipline measures, classroom rules and teacher general instruction. However, for an AD/HD student who is unresponsive to these general interventions, collaborative team will consider to start the PBS process. The team will prioritize the student's challenging behaviors (destructive, disruptive or distracting behavior) to determine which targeted behaviors are important to change first.

4. Functional Behavioral Assessment

It is believed that the challenging behaviors of AD/HD students are functional (with reasons behind), predictable and changeable. The assessment is a joint effort of the collaborative team. Their major task is gathering information about situational events that predict and maintain the challenging behavior of AD/HD students in the classroom. Student's strengths, individual difference and environmental factor are the foci of the assessment (Croone & Horner, 2003).

5. Support-Oriented Hypothesis

An individualized hypothesis will be formulated to drive the support and intervention plan. It tries to identify the antecedents and setting events associated with the specific behavior pattern (challenging or desired behavior) of the AD/HD student. Moreover it also attempts to determine the consequences of the behavior pattern of the AD/HD students.

6. Positive Behavioral Support Plan

Based on the hypothesis, a comprehensive plan is developed. It aims at reducing challenging behaviors and increasing desired or acceptable alternative behavior, as well as sustaining long lasting changes. The plan built around five key components. (Croone & Horner, 2003) These are including:

- 1)Antecedent and Setting Event Interventions: to change the event that set off the challenging behavior;
- 2)Alterative Skill Instruction: to teach appropriate and desired behaviors;
- 3)Responses Interventions: to modify ineffective reactions that maintain the challenging behaviors;
- 4)Crisis management: to handle significant destructive behavior which threatens and affects safety in classroom; and
- 5)Long term supports: to make lifestyle changes of an AD/HD students to support desired outcome over time.

6)

Five Components of Positive Behavior Support Plan				
Antecedent and Setting Event Interventions	Alternative skill Instruction	Responses Interventions	Crisis Management	Long Term Supports
<ul style="list-style-type: none"> • Modify or eliminate problem antecedent and setting events • Introduce positive antecedents and setting events 	<ul style="list-style-type: none"> • Teach replacement skills that serve the same purpose as the challenging behavior • Teach coping and tolerance skills • Teach general skills to expand overall competence 	<ul style="list-style-type: none"> • Reduce outcomes for problem behavior • Provide instructive feedback • Introduce logical consequences, such as rewarding and ignoring. 	<ul style="list-style-type: none"> • Examine actual potential of serious harm and damage • Launch protective measures and procedures to ensure safety • Restore usual classroom activities 	<ul style="list-style-type: none"> • Make student's lifestyle changes • Implement strategies to sustain support

7. Modification and Ongoing Evaluation

The implementation of the plan is mainly carried out by the project manager, school social worker, educational psychologist and teachers. Collaborative team members will meet regularly to review, assess and monitor the progress. The team will need to make decisions about refining, eliminating or introducing new interventions in order to ensure reaching the desired outcomes

B. Research

1. Research Objectives

The aim of this research is to study the effectiveness of using the PBS for junior form secondary students with AD/HD (S.1 to S.3). We believe that the PBS is not only good for AD/HD students, but also benefits teachers and other students. We propose to study the following items.

- a) To compare differences in the performance of AD/HD students before and after using the PBS;
- b) To study the improvement of classroom learning environment after using the PBS; and
- c) To understand the improvement of social relationship between AD/HD students and their classmates and teachers (i.e. school life satisfaction, including school and friends, of AD/HD students) after using the PBS.

2. Methodology

The research will be conducted by pre and post-test. It will be composed of:

Part A: AD/HD Students' Pre and Post-Test:

It includes the questions about self-evaluation of performance, school life satisfaction (including school and friends) and classroom learning environment before and after using the PBS.

Part B: Teachers' Pre and Post-Test:

It includes the questions about the performance of AD/HD students, classroom learning environment and AD/HD students' social relationship with teachers and other students before and after using the PBS.

Part C: Non-AD/HD students' Pre and Post-Test

It includes the questions about classroom learning environment before and after using the PBS.

Part D: Non-Participating Teachers' Pre and Post-Test

Teachers who did not take the training course, but teach in experimental class evaluate the change of AD/HD students' performance, and learning environment inside classroom. The aim of this part is to study the influence of the PBS objectively.

A diagram of a schematic presentation of the research design is attached in the appendix V.

Part A: AD/HD Students' Pre and Post-Test

In Part A, the aim of AD/HD students' pre and post-test is to understand the change of performance and school life satisfaction (including school and friends) and classroom learning environment among AD/HD students after using the PBS. This part is a self-report assessment.

a. Sampling Size and Method:

We will invite all AD/HD students whose teachers are trained and using PBS in the classroom. The estimated number of participated AD/HD students is 20 to 24.

b. Measurement:

In proposed questionnaire, apart from respondents' background information, there are 2 parts as follows:

i. Performance in Classroom

Brown Attention Deficit Disorder Scale, which helps to evaluate "a wide range of symptoms of executive function impairment associated with ADHD/ADD" (Brown 1996), will be used for measurement (Appendix VIa). For children (8-12 years old), adolescents (12-18 years old) and adult, a self-report version is also available.

The Brown ADD Scale is a 40-item self report. The scale was standardized based on a study of 142 adult ADHD patients and 143 healthy subjects, showing a good internal consistency and test-retest reliability (Brown 1996).

ii. School life Satisfaction (including school and friends)

Multidimensional students' life satisfaction scale (MSLSS) (Appendix VIb), which contains 40 questions, is for providing a profile of students' satisfaction with important, specific domains (e.g., school, family, friends and living environment) in their lives. Findings have generalized to school age students in Canada (Greenspoon & Saklofske, 1997) Korea (Park, 2000), and Spain (Casas et al., 2000). In addition, the reliabilities all range from .70s to low .90s; thus they are acceptable for research purposes (Huebner 2001, p.5). However, in this proposed research, we will only use the questions of school and friends domains (17 questions) in order to fit into the purpose of the research.

The internal consistency of this scale is between .70 and .90 (Huebner and Dew 1996; Greenspoon & Saklofske 1997; Huebner 1994; Huebner, Laughlin, Ash, & Gilma, 1998); thus they are acceptable for research purposes. Also, the test-retest coefficients for two- and four-week time periods is .70-.90 (Huebner and Dew 1996; Huebner et al. 1997; Huebner & Terry 1995). Finally, the dimensionality and hierarchy of this scale is also supported by exploratory and confirmatory factor analysis (Huebner, 1994; Gilman et al., 2000; Huebner et al., 1998).

iii. Classroom Learning Environment

Classroom Learning Environment (CLE) Questionnaire (Appendix VIc), which contains 11 questions, is for assessment of classroom climate. Findings have generalized to school age students in USA (Ghee, Lowell and Lemire 2007).

This scales was highly internally consistent (alpha coefficients $\alpha = .75 - .91$) (McGhee, Lowell, Lemire 2007).

Part B: Teachers' pre and post-test

The aim of Part B is to understand the benefit to the teachers who use the PBS in the class. Apart from understanding the difference of performance among AD/HD students in classroom, we also propose to study the change of classroom learning environment, AD/HD students' social relationship with teachers and other students after using the PBS.

a. Sampling size and method:

We will invite all teachers who are trained and using PBS in their class to participate this survey. All participated teachers have to fill in a two sets of questionnaire, including an overall impression of classroom learning environment and an individual evaluation of participated AD/HD students' performance and social relationship with them and other students. The estimated number of participated teachers is 10 to 16.

b. Measurement:

In 1st set of questionnaire, the questions of classroom learning environment will be included.

i. Classroom learning environment

Classroom Environment Questionnaire (CEQ) (Appendix VIId) (Fraser 1986), which contains 18 questions, is to measure student and teacher perceptions of actual and preferred classroom learning environments along dimensions. This questionnaire is designed for middle schools and high schools setting (Arter, J., 1989). In this proposal research, some questions (Q3, 12, 18), which are related to English usage and temperature in classroom, will be deleted since they are not related to our study.

This scale was internally consistent (alpha coefficients $\alpha = .67-.76$) based on a study of about 1,800 Australian students in grades 7-9 (Arter 1989). Furthermore, Fraser (1990, p.14) also contacted a study in New South Wales and Tasmania (sample size: 1,849 students). The alpha coefficients (α) on both actual and preferred using individual as well as class responses is between .70-.92.

In 2nd set of questionnaire, the questions of AD/HD students' Performance in classroom and their social relationship with teachers and other classmates will be included.

ii. ADHD students' Performance in classroom

Attention Deficit Disorders Evaluation Scale –Third Edition (ADDES-3) (McCarney, Arthaud 2004), which contains 60 questions, will be used for measurement (Appendix VIe).

This scale was standardized based on a study of 3,903 students including identified Attention-Deficit/ Hyperactivity Disordered students 4.0 through 18 years of age. According to the description of the scale, "internal consistency of the ADDES-3 was .99 for the total scale. Test-retest reliability correlation coefficients exceeded .87 for each of the subscale. Coefficients for inter-rater reliability of the subscales ranged from .78 to .8 for all age levels. Content validity was established through the initial development process (McCarney, Arthaud 2004, p.1).

iii. AD/HD students' social relationship with teachers and other classmates

Multidimensional students' life satisfaction scale (MSLSS) (Appendix VIb), which contains 40 questions, is for providing a profile of students' satisfaction with important, specific domains (e.g., school, family, friends and living environment) in their lives. Findings have generalized to school age students in Canada (Greenspoon & Saklofske, 1997) Korea (Park, 2000), and Spain (Casas et al., 2000). In addition, the reliabilities all range from .70s to low .90s; thus they are acceptable for research purposes (Huebner 2001, p.5). However, in this proposed research, we will only use the questions of school and friends domains in order to fit into the purpose of the research. In addition, the wordings will be revised from self-report to teacher-report.

According to Manual of the Multidimensional Students' Life Satisfaction Scale (Huebner 2001, p.5), "convergent and discriminant validity have also been demonstrated through predicted correlations with other self-report well-being indexes (Dew et al., 2001; Gilman et al., 2000; Greenspoon & Saklofske, 1997; Huebner, 1994; Huebner et al., 1998), parent reports (Dew et al., 2001; Gilman & Huebner, 1997), teacher reports (Huebner & Alderman, 1993), and social desirability scales (Huebner et al., 1998)".

The internal consistency of this scale is between .70 and .90 (Dew 1996; Greenspoon & Saklofske 1997; Huebner 1994; Huebner, Laughlin, Ash, & Gilma, 1997); thus they are acceptable for research purposes (Huebner 2001, p.5).. Also, the test-retest coefficients for two- and four-week time periods is .70-.90 (Dew 1996; Huebner et al. 1997; Huebner & Terry 1995). Finally, the dimensionality and hierarchy of this scale is also supported by exploratory and confirmatory factor analysis (Huebner, 1994; Gilman et al., 2000; Huebner et al., 1998).

Part C: Non-AD/HD students' pre and post-test

The major objective of Part C is to have a deeper understanding on the change of classroom learning environment after their teachers using the PBS.

a. Sampling method and Sampling size:

We will invite all non-AD/HD students whose teachers are trained and using PBS in the classroom. The estimated number of participated students is 100-160.

b. Measurement:

In proposed questionnaire, apart from respondents' background information, the questions about classroom learning environment will be asked.

i. Classroom learning environment

Classroom Environment Questionnaire (CEQ) (Appendix VIId) (Fraser 1986), which contains 18 questions, is to measure student and teacher perceptions of actual and preferred classroom learning environments along dimensions. This questionnaire is designed for middle schools and high schools setting (Arter, J., 1989). In this proposal research, some questions (Q3, 12, 18), which are related to English usage and temperature in classroom, will be deleted since they are not related to our study.

This scale was internally consistent (alpha coefficients $\alpha = .67-.76$) based on a study of about 1,800 Australian students in grades 7-9 (Arter 1989). Furthermore, Fraser (1990, p.14) also contacted a study in New South Wales and Tasmania (sample size: 1,849 students). The alpha coefficients (α) on both actual and preferred using individual as well as class responses is between .70-.92.

Part D: Non-Participating Teachers' Pre and Post-Test

The major objective of Part D is to have an objective evaluation of the effectiveness of PBS on improving AD/HD students' performance, and learning environment in the class.

a. Sampling method and Sampling size:

The evaluation will be conducted by the teachers who do not take the training course, but teach in experimental class. We will select one teacher from each experimental class to participate this study. The teachers need to fill in a questionnaire before and after introducing PBS based on their daily observation toward the related AD/HD students. This researcher will do observation in all experienced classes. The estimated number of teachers is 10 to 32.

b. Measurement:

In proposed observation, apart from respondents' background information, there are 2 parts as follows:

i. ADHD students' performance in classroom

Attention Deficit Disorders Evaluation Scale –Third Edition (ADDES-3) (McCarney, Arthaud 2004), which contains 60 questions, will be used for measurement (Appendix VIe). This scale was standardized based on a study of 3,903 students including identified Attention-Deficit/ Hyperactivity Disordered students 4.0 through 18 years of age. According to the description of the scale, "internal consistency of the ADDES-3 was .99 for the total scale. Test-retest reliability correlation coefficients exceeded .87 for each of the subscale. Coefficients for inter-rater reliability of the subscales ranged from .78 to .8 for all age levels. Content validity was established through the initial development process (McCarney, Arthaud 2004, p.1).

ii. Classroom learning environment

Classroom Environment Questionnaire (CEQ) (Appendix VIId) (Fraser 1986), which contains 18 questions, is to measure student and teacher perceptions of actual and preferred classroom learning environments along dimensions. This questionnaire is designed for middle schools and high schools setting (Arter, J., 1989). In this proposal research, some questions (Q3, 12, 18), which are related to English usage and temperature in classroom, will be deleted since they are not related to our research.

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3. Expected Finding

We expected that

- 1) the performance of AD/HD students
- 2) classroom learning environment
- 3) social relationship between AD/HD students and their classmates and teachers (i.e. school life satisfaction (including school and friends) of AD/HD students)

will be improved after using the PBS.

V. Innovation

1. In Hong Kong, intervention for adolescents with ADHD has always been neglected as compared to children with ADHD.
2. PBS has never been applied to adolescent students with ADHD in Hong Kong.
3. The effectiveness of PBS for this target group has never been tested by scientific research in Hong Kong.

VI. Extent of Teachers' and Principals' Involvement in the Project

Principals of the participating school will be invited to confirm the entire plan and implementation schedule of the project. They will be asked to nominate and arrange 2 responsible teachers and the responsible educational psychologist to attend the trainings, join the collaborative team and implement the PBS. A whole day training workshop (7 hours) will be organized for the teachers in the experimental and full implementation phase of the project respectively. The 2 teachers and the educational psychologist will be the members of a collaborative team that will be formed in each participating school to carry out the PBS. They will be responsible to implement the interventions of the PBS in their classes.

VII. Implementation Plan and Timeline

A. Implementation Plan

3 project staffs will be recruited to run the project and will be supervised by a supervisor of the School Social Work Service of HKCS. Their job descriptions of the project personnel are listed in the Appendix VII. 5-8 schools will be invited to participate. Priority will be given to those schools having highest number of students with AD/HD and facing greatest challenges on managing their classroom behaviors. The entire project consists of five major parts:

1. **Implementation of the Positive Behavior Support Approach**

The entire implementation schedule will be divided into two phases: experimental and full implementation. The former will try to carry out the PBS approach for 5 months. The later will attempt to apply the approach in an entire academic year. Before the implementation of the PSB, thorough trainings will be given to participating teachers, parents and social workers respectively. Moreover a collaborative team will be formed in each participating schools. Membership will includes 2 teachers, 3-4 parents, 1-2 school social workers, 1 educational psychologist and 1 Project Manager. The team will hold 2-3 meetings and a series of sharing sessions in the experimental and full implementation phase of the project respectively. It is responsible to design, plan, implement, monitor and evaluate the process of PSB. The Project Manager will serve as a facilitator of the team. The roles of member are listed in the Appendix IV.

2. **Trainings for the Collaborative Team Members**

As a collaborative team will be formed in each participating school, different training workshops will be organized for various team members. 2 teachers, 3-4 parents, 1 educational psychologist and 1-2 stationing school social workers will be invited to participate from each participating school. A one day (7 hours) training workshop will be conducted for educational psychologists, teachers and social workers in the experimental and full implementation phase of the project respectively. One half day (3 hours) training workshop will also conducted in the beginning of each implementation phase of the project. All the training workshops are conducted by renowned academics and professionals of the field of AD/HD (Appendix VIII).

Project Number: 2009/0152 (Revised)

3. Research

As mentioned before, the core interventions of the project stresses on its evidence-based knowledge. A series of research studies will be conducted during the full implementation phase of the project. The entire research will be four parts:

Research		
Research Design	Sampling Size	Measurement
AD/HD Students' Pre and Post-Test	20-40 AD/HD students	<ul style="list-style-type: none"> • Brown Attention Deficit Disorder Scale, • Multidimensional students' life satisfaction scale (MSLSS) • Classroom Learning Environment (CLE) Questionnaire
Teachers' Pre and Post-Test	10-16 Teachers	<ul style="list-style-type: none"> • Classroom Environment Questionnaire (CEQ) • Attention Deficit Disorders Evaluation Scale –3rd Edition (ADDES-3) • Multidimensional students' life satisfaction scale (MSLSS)
Non-Ad/HD Students' Pre and Post-Test	100-160 Non-AD/HD Students	<ul style="list-style-type: none"> • Classroom Environment Questionnaire (CEQ)
Non-Participating Teachers' Pre and Post-Test	10-32 Non-Participating Teachers	<ul style="list-style-type: none"> • Attention Deficit Disorders Evaluation Scale –3rd Edition (ADDES-3) • Classroom Environment Questionnaire (CEQ)

4. Package Development

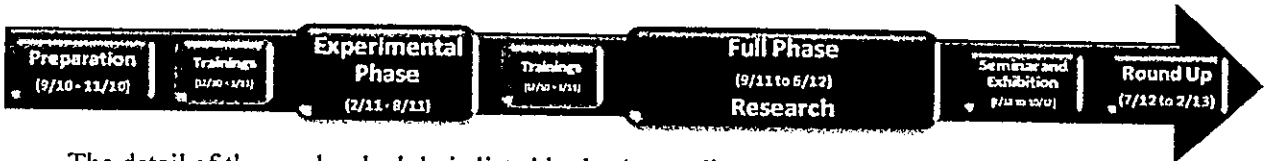
Package		
Publication	Description	Content
Teachers' Practice Manual (CD-ROM)	All the useful training and implement materials of the PBS will be collected and documented in the Practice Manual. The content of the manual will be devised from the training package, practice package and the feedback of teachers. Around 1,500 copies of Teachers' Practice Manual will be sent to all secondary schools in Hong Kong.	<ul style="list-style-type: none"> • The nature and characteristic of AD/HD • The specific features of AD/HD secondary school students in classroom • The approach of PBS and it's process <ul style="list-style-type: none"> -Collaborative Team -Functional Behavioral Assessment -Support-Orientated Hypothesis -Positive Behaviors Plan • Practice Wisdom (Do and Don't)
Parents' Handbook	The parents' handbook will be based on the knowledge gained from the experimental implementation phase and the wisdom of the experienced members of the Association. 2 focus group interviews each consisting of 6-8 parents with ADHD adolescents are proposed to be conducted. Around 1,500 copies of Parents' Handbook will be sent to targeted parents in Hong Kong via the schools and the Association.	<ul style="list-style-type: none"> • The nature and characteristic of AD/HD • The specific features of AD/HD adolescents • The approach of PBS • Collaboration with school system • Practice Wisdom (Do and Don't)
Research Report.	All the research materials, findings and analysis will be documented and written in the academic Research Report. Around 500 copies of Research Reports will be sent to the public and university libraries in Hong Kong	<ul style="list-style-type: none"> • Research Objectives and Research Design • Sampling • Methodology • Data Analysis and Findings • Recommendation

5. Seminar and Exhibition

A seminar and exhibition for the related professionals, educational psychologists, social workers, teacher and parents with AD/HD adolescents will be held at the end of the project. It aims at arousing the public awareness of the challenges that secondary school teachers and AD/HD students are facing. It will also introduce the application of the PSB and present the findings of the research.

B. Time Line

The project will be last for 2.5 years from September 2010 to February 2013.



The detail of the work schedule is listed in the Appendix IX.

VIII. Expected Deliverables and Outcomes

Deliverables	PBS for AD/HD Students	20-24 AD/HD students will receive the service of the PBS. 5-8 Schools will participate and 10-16 teachers will be involved in the project. 5-8 Collaborative teams will be formed (for 20-24 AD/HD students in 10-32 classes)
	Trainings	2 whole day Workshop (7 hours) for 10-16 participating teachers 2 whole day Workshop (7 hours) for 5-16 school social workers 2 half day Workshop(3 hours)for 20-24 parents with AD/HD adolescent
	Package Development	1,500 copies of Teachers' Practice Manual cum CD-ROM for all secondary school in HK 1,500 copies of Handbook for Parents with AD/HD adolescent for all secondary schools 500 copies of Research Reports will be distributed to all libraries and related institutions in HK
	Seminar and Exhibition	A large scale seminar and exhibition will be organized for around 250 participants, including related professionals, educational psychologists, teachers, parents and school social workers.
Outcomes	Entire Project	Targeted challenging behaviors of participating students will be reduced and their targeted desired behaviors will increase.

Project Number: 2009/0152 (Revised)

IX. BudgetTotal Budget of the Project for 2.5 years (30 months):=\$2,176,500 (Details on the Appendix X)

Items	Expenditure (HK\$)				Total
	2010 Sep. to Dec.	2011 Jan. to Dec.	2012 Jan. to Dec.	2013 Jan. to Feb.	
1. Salary					
Project Manager (Salary \$24,326+ \$1,000 MPF) x 30months x including annual leaves)	\$101,304	\$303,912	\$303,912	\$50,652	\$759,780
Project Officer (Salary \$13,120 x 30months x 1.05MPF, including annual leaves)	\$55,104	\$165,312	\$165,312	\$27,552	\$413,280
Project Assistant* (Salary \$8,455 x 30months x 1.05MPF, including annual leaves)	\$35,511	\$106,533	\$106,533	\$17,756	\$266,333
Sub-total	\$191,919	\$575,757	\$575,757	\$95,960	\$1,439,393
2. Training and Package (Including: training packages, workshops, practice manual, teaching and program materials, etc.)					
Parents	\$9,950	\$110,050			\$120,000
Teachers	\$10,500	\$94,500	\$215,000		\$320,000
School Social Workers	\$8,500	\$12,000			\$20,500
Seminar and Exhibition			\$40,000		\$40,000
Training and Consultant Fee	\$20,000	\$40,000	\$40,000		\$100,000
Sub-total	\$48,950	\$256,550	\$295,000		\$600,500
3. Research Study (Including: questionnaires design, copyright, data inputs and analysis, interviewee and observer allowances, publication, etc.)					
Part A		\$1,720	\$1,720		\$3,440
Part B		\$1,960	\$1,960		\$3,920
Part C		\$9,800	\$9,800		\$19,600
Part D		\$2,920	\$3,240		\$6,160
Publication			\$50,000		\$50,000
Sub-total		\$16,400	\$66,720		\$83,120
4. IT Equipments**					
Computer (2 Notebook) and necessary software	\$17,000				\$17,000
Digital Camera	\$2,500				\$2,500
Sub-total	\$19,500				\$19,500
5. Other Expenditures					
General Expenses	\$4,122	\$12,609	\$17,256		\$33,987
Sub-total	\$4,122	\$12,609	\$17,256		\$33,987
Total	\$263,491	\$861,316	\$954,733	\$95,960	\$2,176,500

● **Assets Usage Plan**

Category	Item / Description	No. of Units	Total Cost	Proposed Plan for Deployment
Audio and Video Equipment	Digital camera	1	\$2,500	All the assets will be continually used by the Hong Kong Christian Service and the Hong Kong Association For AD/HD to support the continuation and expansion of the PBS application in different schools.
Computer	Notebook Computer and necessary software	2	\$17,000	

****The Job Description of the Project Assistant**

Job Description

1. To be responsible for the clerical work and bookkeeping of the project;
2. To assist in conducting program activities;
3. To assist in production of program materials;
4. To assist in the gathering, classifying and summarizing information related to the project.

X. Report Submission Schedule

Hong Kong Christian Service will commit to submit proper reports in strict accordance with the following schedule:

Project Management		Financial Management	
Type of Report and covering period	Report due day	Type of Report and covering period	Report due day
Progress Report 1/9/2010 - 28/2/2011	31/3/2011	Interim Financial Report 1/9/2010 - 28/2/2011	31/3/2011
Progress Report 1/3/2011 - 31/8/2011	30/9/2011	Interim Financial Report 1/3/2011 - 31/8/2011	30/9/2011
Progress Report 1/9/2011 - 29/2/2012	31/3/2012	Interim Financial Report 1/9/2011 - 29/2/2012	31/3/2012
Progress Report 1/3/2012 - 31/8/2012	30/9/2012	Interim Financial Report 1/3/2012 - 31/8/2012	30/9/2012
Final Report 1/9/2010 - 28/2/2013	31/5/2013	Final Financial Report 1/9/2010 - 28/2/2013	31/5/2013

XI. Evaluation Parameters and Methods

Hong Kong Christian Service will be responsible for conducting the overall evaluation of the project.

1. In Training Workshops for Educational Psychologists, Teachers, Social workers and Parents, evaluation for learning outcome will be conducted in the form of questionnaire.
2. Application of evidence-based PBS Approach will be overseen by the Project Manager. Feedback from involved teachers and principals will be collected in the mid-term and by the end of both experimental implementation phase and full implementation phase.
3. An evaluative feedback form will be attached to each Teachers' Practice Manual and Parents' handbooks so as to collect qualitative and quantitative information from the users.
4. All feedback and evaluation collected will be analyzed scientifically.

XII. Sustainability of the Outcomes of the Projects

Other than the documentation, publication and full distribution as described in Part XII below, Hong Kong Christian Service will continue to collaborate with the participating schools for the continuation and expansion of the PBS application. After the project ended, Hong Kong Christian Service will also continue to provide ongoing open and school based PBS trainings for teachers, parents and school social workers.

XIII. Dissemination and Promotion

The teachers' practice manual and parents' handbook will be published and distributed to all secondary schools in HK. The research report will be distributed to all libraries and related institutions. A seminar and exhibition will also be organized to present the findings and share the experiences of applying PBS on the secondary school students with AD/HD. Mass media will be invited.

Challenging Behaviors of Secondary Students with AD/HD in Classroom

Impulsivity	Appear fidget and respond in ways that reflect a lack of thought process. Seek out more stimulation than would be forthcoming from typical hyperactive behavior. Creating some type of excitement by getting out of the seat, disturbing the class or engaging in clowning behavior.
Disorganization	Showing constant and continuing difficulty keeping track of books and papers, arranging complicated schedules, dealing with multiple teacher expectations.
Memory problem	Particular difficulty with working memory, include forgetting things in daily routines, such as books or needed tools for a project.
Poor motivation	Though seemingly bright, their academic performance may show variability. Little motivation to achieve in areas that are perceived as boring.
Distractibility/ Daydreaming	A state of low arousal in a sleepy state in class or in some other "boring" situation.
Poor social relationship	Misread or ignore social cues and impulsively exhibit socially inappropriate behaviors. Also being bossy and intrusive among peers. Conflict will easily occur with peers
Poor self-esteem	Experience of harsh criticism and negative feedback from peers, siblings and adults. Self-perception is poor and become increasingly more doubtful about their ability to cope with academic and social situations during adolescence.

Names of Serving Secondary Schools

Names of Serving Secondary Schools			
1.	CCC Chuen Yuen College	16.	Delia Memorial School (Yuet Wah)
2.	CCC Heep Woh College	17.	ECF Saint Too Canaan College
3.	CCC Hoh Fuk Tong College	18.	HKSYCIA Wong Tai Shan Memorial College
4.	CCC Kei Heep Secondary School	19.	Jockey Club Ti-I College
5.	CCC Kei To Secondary School	20.	Kowloon True Light Middle School
6.	CCC Kwei Wah Shan College	21.	Lai Chack Middle School
7.	CCC Ming Kei College	22.	Lok Sin Tong Young Ko Hsiao Lin Secondary School
8.	CCC Ming Yin College	23.	Maryknoll Fathers' School
9.	CCC Rotary secondary School	24.	Munsang College
10.	CCC Tam Lee Lai Fun Memorial Secondary School	25.	Pooi To Middle School
11.	CCC Yenching College	26.	Pui Ching Middle School
12.	Chan Shu Kui Memorial School	27.	True Light Girls' College
13.	Christ College	28.	United Christian College (Kowloon East)
14.	Delia Memorial School (Hip Wo)	29.	Wa Ying College
15.	Delia Memorial School (Matteo Ricci)	30.	Ying Wa College

Honorable Consultants of the Hong Kong Association For AD/HD

Dr. CHAN Chok-wan 陳作耘醫生

Professor Patrick W.L. Leung 梁永亮教授

Dr. HUNG Se-fong 熊思方醫生

Dr. Catherine Lam 藍芷芊醫生

Professor Shiu Ling-po 蕭寧波教授

Miss Ophelia Chan 陳肖齡女士

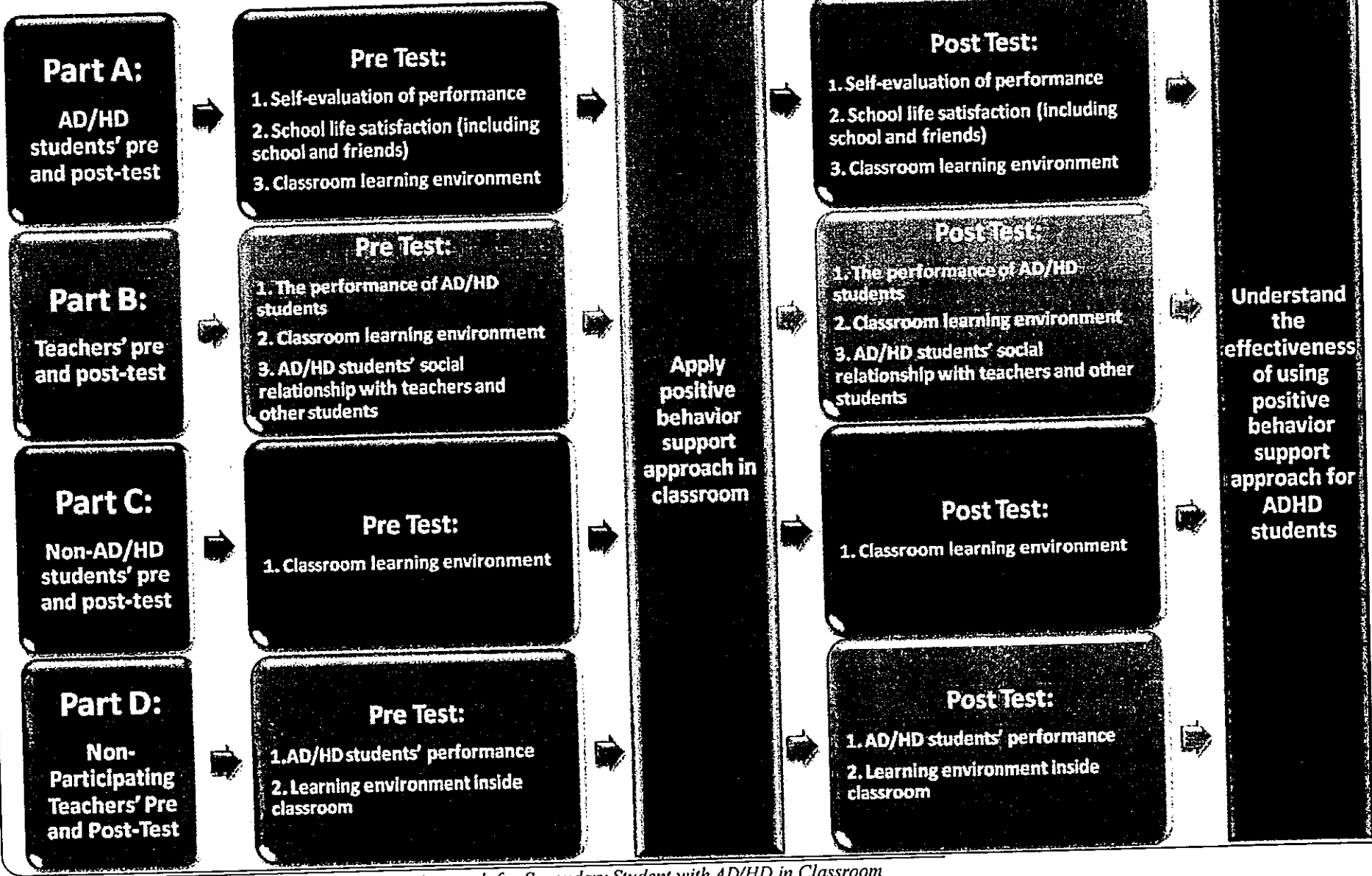
Mr. Joseph Lau Kai-tai 劉啓泰先生

Roles of Collaborative Team

Appendix IV

Roles of Collaborative Team		
Project Personnel (Team Facilitator)	School Social worker	Teachers and Parents
<ul style="list-style-type: none"> • Guides team to articulate and work within stated values, purposes, and expectations • Keeps the team moving and focused on the team's agenda and goals • Encourage all team members to participate. • Coaches the team members to demonstrate good teaming skill. • Guides team to resolve conflict. • Ensures that team functions are assigned and carried out. • Serves as the contact point for communicating with extended team members. • Takes care of logistics during team meetings. 	<ul style="list-style-type: none"> • Guides team decisions in Positive Behavior Support values and practices. • Ensures the technical adequacy of the functional assessment and the behavior support plan. • Serves as a resource to the team; shares knowledge and materials on functional assessment, positive behavior support plans, and specific intervention. • Guides team to adapt positive behavior support practices to settings, cultures, and resources of the team. • Helps team members to develop skills in assessment, planning, and implementation 	<ul style="list-style-type: none"> • Works within team values, goals, and expectations. • Actively participates in team discussions; offers opinions and shares expertise and information. • Listens to other team members' suggestions and opinions; accepts alternative ways of doing things that meets the team's purpose or goals. • Communicates openly and respectfully with other team members. • Accepts and supports team consensus decisions.

Research Design



Evidence-Based Positive Behavior Support Approach for Secondary Student with AD/HD in Classroom

Staffing and Brief Job Description

A school social work service supervisor of the Hong Kong Christian Service will be responsible to supervise all the following staffs of the project.

Project Manager**Job Description**

1. To give advice on the planning and implementation of the project;
2. To liaise with advisors, collaborative parties, school principals and teachers for program planning and implementation;
3. To prepare and deliver teachers' and parents' training programs and seminars;
4. To conduct evaluation of training programs;
5. To produce Teachers' Practice Manual and Parents' Handbook after implementation of the programs.

Qualification

Senior Social Worker with Bachelor Degree (preferable with experience in working with AD/HD secondary school students) having 2 years or more working experiences including conducting research study

Project Officer**Job Description**

1. To support and assist in the planning and implementation of the project;
2. To assist in the gathering, classifying and summarizing information related to the project.
3. To prepare and deliver teachers' and parents' training programs and seminars;
4. To produce Teachers' Practice Manual and Parents' Handbook after implementation of the programs.

Qualification

Bachelor Degree holder with a year or more working experience including research study

Project Assistant**Job Description**

1. To be responsible for the clerical work and bookkeeping of the project;
2. To assist in conducting program activities;
3. To assist in production of program materials;
4. To assist in the gathering, classifying and summarizing information related to the project.

Qualification

Form 5 graduated (subjects studied should include Chinese Language, English Language and Mathematics);

Possession of bookkeeping skills and computer application knowledge.

Collaborative Team Trainings

Collaborative Team Trainings				
Target	Experimental/Implementation Phases		Full Implementation Phase	
	Objectives	Content	Objectives	Content
Teachers (7 hours, 10-16 participants)	<ul style="list-style-type: none"> To enhance their understanding of the nature and the characteristics of AD/HD To equip them with the basic knowledge of the Project and the PBS To introduce the function and the role of the team 	<ul style="list-style-type: none"> Introducing the nature and characteristics of AD/HD Addressing the specific features of AD/HD adolescents and their challenging behaviors in classroom Instructing the nature and characteristics of the PBS Understanding their function and role in the team 	<ul style="list-style-type: none"> To equip them with the advance skills and methods of carrying out PBS. To enhance their skill and methods of applying various PBS intervention Strategies. To enable the operation of the team 	<ul style="list-style-type: none"> Introducing the process of PBS Conducting Functional Behavioral Assessment Formulating Support-Oriented Hypothesis Developing PBS Plan Applying various intervention strategies The operation of the team
School Social Workers (7 hours, 5-16 participants)	<ul style="list-style-type: none"> To enhance their understanding of the nature and the characteristics of AD/HD To equip them with the basic knowledge of the Project and the PBS To introduce the function and the role of the team 	<ul style="list-style-type: none"> Introducing the nature and characteristics of AD/HD Addressing the specific features of AD/HD adolescents and their challenging behaviors in school Instructing the nature and characteristics of the PBS Understanding their function and role in the team 	<ul style="list-style-type: none"> To equip them with the advance skills and methods of carrying out PBS. To enhance their skill and methods of applying various PBS intervention Strategies. To enhance the operation of the team 	<ul style="list-style-type: none"> Introducing the process of PBS Conducting Functional Behavioral Assessment Formulating Support-Oriented Hypothesis Developing PBS Plan Applying various intervention strategies The operation of the team
Parents (3 hours, 20-24 participants)	<ul style="list-style-type: none"> To enhance their understanding of the nature and the characteristics of AD/HD To equip them with the basic knowledge of the Project and the PBS To introduce the function and the role of the team 	<ul style="list-style-type: none"> Introducing the nature and characteristics of AD/HD Addressing the specific features of AD/HD adolescents Instructing the nature and characteristics of the PBS Understanding their function and role in the team 	<ul style="list-style-type: none"> To facilitate their cooperation with the school and school social worker. To enhance the operation of the team 	<ul style="list-style-type: none"> Cooperating with the school system Introducing the process of PBS Instructing PBS Plan and it's intervention strategies The operation of the team

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