Developing support for inclusion: A professional learning approach for teachers in Hong Kong

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Abstract

Professional learning for teachers is important if they are to be prepared for teaching in inclusive classrooms. This is particularly pertinent in Hong Kong where teachers have little personal experience of inclusion and where teaching continues to be didactic and examination oriented. Since Hong Kong implemented a whole school approach to inclusion in 2003, teachers have been able to access ad hoc courses, attend local conferences or seminars, or enroll in self–funded post graduate programs, if they wanted to upskill in the area of becoming inclusive teachers. A new initiative **i**mplemented in 2007 is a major attempt by the Education Bureau to provide teachers with a structured and consistent professional learning program to enable them to obtain basic skills required of an inclusive teacher. This paper considers the impact of the government funded course on teachers' dispositions about inclusion and their perceived self–efficacy in implementing inclusive practices.

Introduction

Initially the movement towards inclusive education focused on the inclusion of students with disabilities who had previously been excluded from regular schools (Forlin, 2008). The focus on inclusion is now more strongly embedded within a notion of equity and social inclusion. Equity in education is seen to have two dimensions, that of fairness and inclusion (Organization for Economic Cooperation and Development, January, 2008). Making education available to all is seen as one of the most powerful levers to making society more equitable as it enhances social cohesion and trust. Inclusion is now considered to be a much broader philosophy that seeks to address inequity and fairness by focusing on the inclusion of all students regardless of disability, gender, ethnicity or other disadvantage.

The United Nations (2006) *Convention on the Rights of Persons with Disabilities* places an obligation on governments to ensure a fully inclusive education system for all children and forms a guideline for education systems to adopt this approach. The World Education Forum held in Dakar in April 2000 originally promoted this by establishing a goal of providing quality basic education for all children, young people, and adults by 2015.For many countries, though, they are still struggling to manage and implement an education system that justly caters for diversity (United Nations Educational Scientific Cultural Organisation [UNESCO], 2008, Spring). By 2009, which is half way to achieving the Dakar goals, at least 75 million primary school–aged children have still never been to school with more than half of these living in countries affected by conflict (Save the Children, 2009).

Importance of Attitudes and Beliefs

Teachers' attitudes towards including students with diverse needs are influenced by a number of factors. More positive attitudes are generally seen in teachers who teach lower grades; include students with mild learning problems; or who have experienced meeting and associating with people with disabilities in schools and the community (Sharma, Forlin & Loreman, 2008). Teachers, generally, have been found to be less willing to include students with emotional and behavioral disorders (Hastings & Oakford, 2003). Female teachers have commonly been found to have greater tolerance for implementing inclusive education (Ellins & Porter, 2005) and generally have higher levels of sympathy and lower levels of fear than reported by male teachers (Carroll, Forlin, & Jobling, 2003). A teacher's behavior in class is likely to be influenced by their own efficacy expectations and their belief that what they do will be effective (Palmer, 2006). Teachers with positive attitudes towards inclusion more readily change and adapt the ways they work in order to benefit students with a range of learning needs (Sharma et al., 2008). These teachers also influence the attitudes of classroom peers without disabilities towards students with disabilities in a positive way (Norwicki & Sandieson, 2002).

Research tends to suggest that there is a positive correlation between the amount of disability education a teacher has received and educators' positive attitudes towards inclusion (Sharma et al., 2008). Studies that have examined teachers' attitudes and concerns towards inclusive education have reported that successful implementation of any inclusive policy is largely dependent upon holding positive attitudes about it

(Avramidis & Norwich, 2002) and having received appropriate training together with the availability of physical and human resources (Bradshaw & Mundia, 2006).

Inclusion in Hong Kong

Although somewhat slower than other international jurisdictions there has been an increased awareness by governments throughout the Asia–Pacific region to reconsider educational opportunities for previously excluded children, who even if educated may have received this in segregated facilities (Wu, Ashman, & Kim, 2008). This has meant the adoption in most regions of an inclusive perspective to education involving a variety of approaches and catering for a broad range of potentially excluded children (Forlin & Lian, 2008; Sin, 2001). For example, in Hong Kong the government of the Hong Kong Special Administrative Region (HKSAR) is promoting inclusion by encouraging all schools to accept children with special education needs through employing a whole school approach (WSA) towards education (Forlin, 2007a; 2007b).

The first White Paper in Hong Kong in 1977 advocated for the inclusion of students with disabilities (mainly physical disabilities) in regular schools (Hong Kong Government, 1977). In 2003, there was increased promotion of a WSA and with the strong encouragement of the government in recent years (Education Bureau [EDB], 2007b) schools are gradually embracing this by adopting a broader definition of inclusion. The EDB (Education Department, 2002, p. 7) defines a WSA to mean that:

> All school personnel, including the school head, teachers, student guidance teacher / officer, non–teaching staff, students and parents, are willing to accept students with special needs. Hence, a harmonious environment with a caring, supportive and inclusive school culture can be established.

The rationale of the WSA is to present an array of learning opportunities to cater for all children including those with a range of diverse needs and in particular to provide equal opportunities for students with special education needs to learn collaboratively with their peers. This approach is seen as a means to "enhance team spirit among teachers, and encourage other school personnel to share responsibilities in looking after students' individual differences and special needs" (Education Department, 2002, p.7). This has been supported by the enactment of the *Disability Discrimination Ordinance* (DDO) in 1995 and the *Code of Practice in Education* in 2001 (Equal Opportunities Commission, 2001) to assist schools to develop policies and procedures against discrimination by providing practical guidance. Since 2003, noticeable changes have been observed in Hong Kong schools (Sin, Tsang, Poon, & Lai, 2010). Many schools have formulated policy and practices at the school level to support inclusion, including establishing learning support teams (Tsui, Sin, & Yu, 2007), special schools acting as resource schools (Forlin & Rose, in press), the introduction of co–teaching (Hui, Sin, Ho, & Chan, 2004), the provision of structured teaching, visual cues, paired reading, multisensory approach or social skills training (Hui et al., 2004) and the development of a special education resource centre by the Education Bureau (EDB, 2009).

In 2008, the government of Hong Kong responded to the UN *Convention on the Rights of Persons with Disabilities* (Labour & Welfare Bureau, 2009). By that stage few actions had been taken in schools to eliminate discrimination with respect for the rights and dignity of students with a disability (Sin et al., 2010). Cases of neglect, refusal and discrimination against students with disabilities have been reported in schools (Office of the Ombudsman Hong Kong, 2009). Nevertheless, in the academic school year

of 2008/2009 out of a total of 518 primary and 467 secondary government schools in Hong Kong, 312 primary and 32 secondary schools have elected to adopt the WSA to inclusion. This represents 60% of all primary and 7% of all secondary regular government schools who are actively supporting students with mild to moderate support needs (Education Bureau, 2008).

Even though such a relatively high percentage of primary schools have elected to adopt a WSA to education, there is little evidence to suggest that teachers are accepting of inclusion and are willing participants in this education reform (Forlin, 2007a; 2007b; Poon–McBrayer, 2005; Yuen, Westwood, & Wong, 2004). Likewise, the attitudes of primary school principals towards the inclusion of students with disabilities have been found to be somewhat negative, with very few principals having undertaken any training focusing on the education of these students (Sharma & Chow, 2008). At an international level, discriminatory cultural attitudes, inaccessible schools, language barriers, lack of teacher training and a rigid curriculum have all been identified as potential reasons why children are still unable to access school (Save the Children, 2009). The issues of attitudes and teacher training are particularly pertinent in Hong Kong where teachers have little personal experience of inclusion and where education attainment through high stake examinations is considered a key outcome of schooling.

Professional Learning in Hong Kong

In order to upskill teachers so that they are able to implement the new WSA in Hong Kong the government has undertaken an intensive professional learning (PL) program (Sin, 2004). Since September 2007, The Hong Kong Institute of Education (HKIEd) has been commissioned by the EDB of the HKSAR to run a series of basic courses on *Catering for Diverse Learning Needs* (30 hours) and some thematic courses on children with specific types of need (60 hours), (e.g., ASD, AD/HD) in the consecutive years of 2007–2008, 2008–2009 and 2009–2010. The awarded training places ranged from a minimum figure of 600 teachers (15 classes) to a maximum of 1200 teachers (30 classes) per year. In line with the government five–year teacher professional development framework in integration (EDB, 2007a), it was planned that approximately 10% of teachers in each school would complete the basic 30 hour course aimed to enhance teacher competency in catering for classroom diversity.

Program Development

A program team was established to oversee the development, administration and teaching of these professional courses. As a self–financing program, the *Centre for Special Needs and Studies in Inclusive Education* (CSNSIE) took up the role of coordination and management. Successful program development was considered a crucial factor for satisfactory course implementation. The teaching team, therefore, met frequently to work out the various programs. Course handbooks with details of the objectives, content, schedule, references, assessment, student regulations, criteria of assessment and graduation were prepared. Participants were well informed of the course arrangement in different formats, including the hard copies of the course handbook, e–mails and a website. In relation to the large target number of teachers, course promotion was a challenging task to the program team. Channels of dissemination included the CSNSIE website (http://www.ied.edu.hk/csnsie/training.htm), leaflets, board displays, the EDB training calendar, invitation letters, by fax to all schools, the HKIEd intranet, publicity in the inservice teacher education programs and public seminars. Interested

participants could access the CSNSIE website and download the course details. Having gained the support from their school principal, the eligible applicants could apply through the EDB training calendar. A hot line and email account for enquiries were set up as well. From time to time the program team also made contact with school heads, so as to invite more applications for the remaining vacancies in different cohorts. Consequently, in response to the varying number of applicants each year, the CSNSIE organized a different number of classes in each cohort.

The Course

The mode of study was a five–day full–time block release with supply teachers provided by the EDB for teachers with regular terms in public sector schools. The course content covered a wide range of topics, with emphasis on successful experience, case analysis, sharing and reflection. As an intensive course, the content was generic and introductory in nature but with more reflective purpose and of greater practical use than a degree course. On completion of the course, participants were expected to develop positive attitudes towards a WSA and understand a range of strategies for catering for diversity within their general classroom practices.

The courses included:

1. The integrated education policy, principles and practices in Hong Kong including the 3–tier intervention model to cater for students with SEN in ordinary schools; The provision and resources for inclusive education in Hong Kong;
2. The Disability Discrimination Ordinance and the related Code of Practice in Education and their implications on educational practices;
3. Overview of the characteristics, identification and educational needs of students with autism, intellectual disabilities, physical disability, specific learning difficulties, visual impairment, hearing impairment, speech and language impairment; and ADHD/emotional and behavioral difficulty;
4. The resources and support in the community;
5. Strategic use of pedagogical methods and motivational techniques in teaching students with diverse learning styles such as peer support; cooperative learning; collaborative teaching; project learning and assistive technology;
6. Assessment and accommodation for students of mixed ability; and
7. Curriculum differentiations to ensure all students gain access to essential knowledge and skills.

The assessments were designed in form of group presentations and the development of action plans. For example, participants formed groups of 4 to 5 members and selected a case of a student with special educational needs. They discussed and analyzed the difficulties and challenges in teaching and learning for this child. The group elaborated their analysis and recommendations of support in form of a group presentation. Secondly, they had to submit an action plan provided with justifications and support from the literature, of feasible strategies or teaching approaches, aimed at helping the case study student in a WSA system. Such arrangement was able to draw out participants' experience, enhance group collaboration and put theory into practice.

This research, therefore, considers the effectiveness of this PL approach that has been adopted by the EDB and implemented by the Hong Kong Institute of Education. The focus of the learning has been towards improving the competence and knowledge of teachers about inclusion and their dispositions towards including students with a range of

learning needs in regular schools. Data are collected pre and post participation in the designated PL courses on inclusion.

Method

Sample

Participants were all teachers working in government schools in Hong Kong. They were enrolled in either one of 14 similarly structured PL courses providing basic instruction about inclusion ($N = 303$), or in one of six courses focusing on educating students with ASD, AD/HD, or speech and language disorders ($N = 267$). The teachers were either recommended by their head teachers to attend the course and were usually selected due to their longer years of service; or were personally interested in participating in the PL. The majority were without training in special needs and having duties in providing learning support for their school. Very few participants were with functional posts at senior rank, e.g., heads or deputy heads. Not many teachers were working in schools with integration program (approx. 11%) or with new funding mode (approx. 4.1%). Their duties were diversified but over 40% of them were involved in school activities for providing learning support.

Procedure

A three part questionnaire was administered to all teachers at the commencement of the course of study and again during the final evaluation session by the tutors. Teachers were identified by using their admission number and the questionnaires were matched upon being entered into a data base. This allowed them to be tracked pre and post. Once data were matched participants were randomly assigned new numbers and their teacher identification numbers were removed. Data were collected between November 2008 and June 2009. A total data set of matched pre/post questionnaires of 570 was obtained.

Instrumentation

Part one of the survey sought information about demographical variables of the teachers. This allowed consideration to be given to a range of independent variables that might explain any variance in teachers' perceptions: school type (primary, secondary, special), gender, age (<30 years, 30–39 years, >40 years), highest qualification obtained (high school, under graduate degree, post graduate degree, other), amount of interaction with people with a disability (considerable, not considerable), previous training in educating students with disabilities (none, some, high [>40 hours]), and level of experience in teaching a student with a disability (nil, some, high [at least 30 full days]). Two further variables (confidence [in teaching students with disabilities]; knowledge [of local legislation pertaining to people with disabilities]) were measured using a six point scale to assess confidence (from 1 = very high; 2 = high; 3 = average, 4 = low, to 5 = very low) and knowledge (from 1 = very good; 2 = good; 3 = average, 4 = poor, to 5 = none). Due to small cell sizes for the variable of confidence, high and very high were combined and for knowledge, very good, good and average were combined into single categories.

Part 2 involved the use of 15 items from the *Sentiments, Attitudes and Concerns about Inclusive Education* scale (SACIE) (Loreman, Earle, Sharma & Forlin, 2007). This measured the three constructs of teachers' dispositions about inclusion by employing a four point Likert scale from 1 (strongly disagree), to 2 (disagree), to 3 (agree), to 4

(strongly agree). Items on the *concerns* and *sentiments* subscales were reverse coded so that a higher mean score indicated more positive dispositions towards inclusion.

The third part of the survey used the *Teacher Efficacy for Inclusive Practice* (TEIP) Scale (Sharma, Loreman, & Forlin, submitted) which measured teachers' perceptions of self–efficacy in using inclusive instructions, managing behavior and in working collaboratively. The TEIP consisted of 18 items using a six point Likert scale from 1 (strongly disagree); 2 (disagree); 3 (disagree somewhat); 4 (agree somewhat); 5 (agree); 6 (strongly agree). Similarly, higher mean scores indicated greater self–efficacy regarding inclusion.

Results

The teachers were currently employed in primary (N = 298), secondary (N = 220) or special schools (N = 46). Seventy six percent were female (N = 432) with 135 being male. The males were teaching in both primary (N = 54) and secondary (N = 71) schools, with the majority of the females teaching in primary schools (N = 243). A further 37 females were teaching in the special schools compared to nine males. Of the sample just under 20% (N = 85) were less than 30 years old. A further 218 were in the 30–39 year age range and 167 were older than 40 years. A relatively large number of teachers (N = 100) did not include their age on the survey. Seventy one percent held a bachelor's degree and 12% a Masters degree. Only five teachers did not have a degree.

At the onset of the course, 40% of teachers indicated that they had already had previous considerable interaction with people with disabilities, although only 11% had received at least 40 hours of training on educating students with disabilities, with the majority of 60% having had no training prior to the course. Similarly, only 13.5% had at least 30 full days of teaching experience with students with disabilities, although 40.5% had some experience. Their knowledge of policy as it related to people with disabilities was generally non existent (60%) or poor (39%). Just over one half of the teachers held average confidence in teaching students with disabilities, with 37% expressing low or very low levels of teaching confidence.

Reliability of the scales and subscales was determined using Cronbach's alpha. The total scale score (*TSS*) for SACIE (Pre α = .64; Post α = .73), and the subscales of *Sentiments* (Pre α = .57; Post α = .69), *Attitudes* (Pre α = .59; Post α = .65), and *Concerns* (Pre α = ..62; Post α = .70), indicated acceptable, although somewhat low reliability in some scales. The reliabilities for the TEIP were all high ranging from the total scale score (*TSS*) (Pre α = .90; Post α = .92), to the subscales *Efficacy to use inclusive instructions* (Pre α = .73; Post α = .81), *Efficacy in managing behavior* (Pre α = .90; Post α = .90), and *Efficacy in collaboration* (Pre α = .82; Post α = .85).

Initially consideration was given to overall changes in dispositions towards inclusion and perceptions of self–efficacy during the course. A repeated measures within subjects analysis indicated significant differences for both the SACIE and TEIP scales over time (Table 1). On investigating the subscales, further differences were noted. While the teachers in general expressed significantly more positive attitudes towards including students with a range of learning needs and significantly less concerns about inclusion following the course, their sentiments about disability and perspectives about personal contact with people with disabilities did not alter. Similarly, significant increases were found for perceptions of self–efficacy about inclusion but these were visible across all three subscales. The larger the value of

partial eta–square, the more variance the effect explains in the dependent variable. Thus, for the SACIE scale the greatest variance was explained by the subscale of *concerns about inclusion* which accounted for 19% of the variance. For the TEIP scale, 23% of the variance was accounted for by the sub scale of *efficacy in collaboration* with 15% being accounted for by *efficacy to use inclusive instructions*.

Table 1
Pre and Post Measures of Perceptions Regarding Inclusive Education

Variable	Pre Data			Post Data						
	N	M	SD	M	SD	□²	*SS*	*df*	*F*	*p*
SACIE										
Total Scale Score	534	2.5	.25	2.6	.29	0.19	1.63	1	123.81	.00
Concerns	562	2.2	.39	2.4	.42	0.19	13.99	1	132.87	.00
Sentiments	559	2.8	.41	2.8	.46	0.00	0.14	1	1.63	.20
Attitudes	552	2.5	.36	2.7	.37	0.12	5.48	1	73.66	.00
TEIP										
Total Scale Score	569	4.4	.49	4.6	.45	0.20	17.19	1	141.96	.00
Efficacy to use inclusive instructions	569	4.4	.50	4.6	.46	0.15	13.95	1	101.40	.00
Efficacy in managing behavior	569	4.4	.66	4.7	.57	0.12	16.51	1	78.13	.00
Efficacy in Collaboration	569	4.1	.61	4.5	.55	0.23	32085	1	170.52	.00

Subsequently, consideration of the independent variables for their impact on teachers' dispositions and self efficacy towards inclusion was undertaken by employing a series of separate ANOVAs for the total scale scores and sub scale scores for both the SACIE and the TEIP scales for the pre and post data.

Analysis of the total scale score for the SACIE indicated significant main effects at the pre stage for gender, interaction, training, experience, and confidence. Significant main effects at the post stage were obtained for interaction, policy and confidence (Table 2). Even though these were statistically significant the effect sizes according to Cohen (1988) where small, medium, and large effect sizes for eta–square are considered to be .01, .06, and .14, respectively, were with the exception of confidence that had high partial η^2 of .15, still very small, indicating little accountability for variance.

Table 2
Analysis of Variance for SACIE

	Pre Data				Post Data			
	df	*F*	□²	*p*	*df*	*F*	□²	*p*
Variable								
School type	2	2.84	0.01	.06	2	2.04	0.01	.13

Gender	1	8.58	0.02	.00	1	1.30	0.00	.25
Age	2	0.49	0.00	.61	2	1.11	0.00	.33
Qualification	2	1.25	0.01	.29	2	2.13	0.01	.12
Interaction with people with a disability	1	15.09	0.03	.00	1	8.94	0.02	.00
Previous training	2	9.13	0.03	.00	2	1.15	0.00	.32
Teaching experience	2	8.60	0.03	.00	2	1.95	0.01	.14
Policy	2	2.60	0.01	.08	2	3.76	0.01	.02
Confidence	3	30.67	0.15	.00	3	4.20	0.02	.01

The lack of significant differences in dispositions post course for training is not surprising as all teachers had now completed the full training course. It is interesting to note that the differences prior to the course that were significantly higher for teachers with previous teaching experience were post course no longer noticeable even though the teachers had not undertaken any actual teaching experience during their course. It would seem that the course had compensated for the lack of teaching experience by improving dispositions about inclusion. It had, though, not made any significant difference overall regarding the more positive dispositions which continued to be held by teachers who had considerable interactions with people with disabilities and initial higher levels of confidence.

Table 3
Mean and Standard Deviation of all ANOVAs Pre Course for SACIE

Variable		Total Score		Concerns		Sentiments		Attitudes	
	N	M	SD	M	SD	M	SD	M	SD
Area Teaching									
Primary/ Elementary	284	2.5	.24	2.2	.38*	2.7	.40*	2.6	.35*
Secondary	210	2.5	.27	2.2	.40*	2.8	.39*	2.5	.35*
Special education	43	2.6	.29	2.3	.44*	3.0	.46*	2.4	.40*
Gender									
Male	128	2.6	.26*	2.2	.39	2.9	.41*	2.6	.37*
Female	411	2.5	.25*	2.2	.39	2.8	.40*	2.5	.36*
Interaction With People with a Disability									
Significant	202	2.6	.26*	2.2	.40*	2.9	.42*	2.6	.36
Not significant	335	2.5	.25*	2.1	.39*	2.7	.39*	2.5	.36

Previous Training									
High	57	2.6	.22*	2.4	.33*	2.9	.39*	2.6	.40
Some	159	2.5	.24*	2.2	.39*	2.8	.44*	2.6	.35
None	320	2.5	.26*	2.1	.39*	2.7	.39*	2.5	.36
'aching Experience									
High	71	2.6	.24*	2.3	.35*	3.0	.42*	2.5	.37
Some	220	2.5	.23*	2.2	.38*	2.8	.41*	2.5	.35
Nil	251	2.5	.27*	2.1	.40*	2.7	.38*	2.6	.38
Confidence									
High/Very high	38	2.7	.22*	2.5	.36*	3.0	.41*	2.5	.41*
Average	300	2.6	.23*	2.2	.37*	2.8	.40*	2.6	.35*
Low	141	2.4	.23*	2.1	.36*	2.7	.35*	2.5	.35*
Very low	63	2.3	.26*	1.9	.36*	2.6	.43*	2.5	.41*

Note. *p = < .05. Mean response range from 1 (strongly disagree), to 2 (disagree), to 3 (agree), to 4 (strongly agree).

A small effect size was noticed for gender differences prior to the course with males holding slightly more positive dispositions towards inclusion (Table 3). Even though this direction was maintained after the course, the differences were not significant (Table 4). Consideration of the subscales for gender highlighted that the significant differences noted at the pre stage were only for sentiments and attitudes about inclusion as the concerns of all teachers did not vary significantly according to gender.

Table 4
Mean and Standard Deviation of all ANOVAs Post Course for SACIE

Variable	Total Score			Concerns		Sentiments		Attitudes	
	N	M	SD	M	SD	M	SD	M	SD
Area Teaching									
Primary/ Elementary	293	2.6	.29	2.5	.41*	2.8	.44*	2.9	.37*
Secondary	216	2.6	.27	2.3	.41*	2.8	.47*	2.7	.37*
Special education	46	2..7	.29	2.5	.45*	3.0	.48*	2. 6	.34*
Gender									
Male	133	2.7	.27	2.4	.42	2.8	.44	2.7	.36
Female	425	2.6	.29	2.4	.42	2.8	.46	2.7	.37
Interaction With People with a Disability									
Significant	214	2.7	.27	2.4	.39	2.9	.45*	2.7	.34
Not significant	342	2.6	.29	2.4	.44	2.8	.45*	2.7	.39
Previous Training									
High	61	2.7	.27	2.5	.41	2.9	.44	2.7	.37

Some	162	2.6	.27	2.4	.39	2.8	.45	2.7	.37
None	332	2.6	..29	2.4	.43	2.8	.46	2.6	.38
'aching Experience									
High	77	2.7	.26	2.5	.40	2.9	.47*	2.6	.36
Some	225	2.6	.27	2.4	.38	2.8	.43*	2.7	.38
Nil	259	2.6	.30	2.4	.45	2.8	.44*	2.7	.37
Confidence									
High/Very high	41	2.7	.24*	2.5	.39*	2.9	.38*	2.6	.39
Average	312	2.7	.28*	2.4	.41*	2.8	.47*	2.7	.36
Low	142	2.6	.29*	2.3	.44*	2.7	.45*	2.7	.39
Very low	66	2.6	.28*	2.3	.39*	2.7	.40*	2.7	.36

Note. *p = < .05. Mean response range from 1 (strongly disagree), to 2 (disagree), to 3 (agree), to 4 (strongly agree).

The variable of confidence recorded the highest effect size accounting for 31% of the variance pre course. Increase in confidence was positively associated with more positive sentiments towards people with disabilities, more positive attitudes about including students with different support needs, and less concerns about inclusion. This was maintained post course, although the effect size was smaller.

When considering the school type the teachers were working in there was no significant main effect, however, each of the subscales of the SACIE did indicate significant differences at both pre and post course, albeit with relatively small effect sizes. In all instances teachers from the special schools held more positive sentiments about engaging with people with disabilities and less concerns about inclusion. Of particular note, though, was that they were less supportive of the inclusion of students with different learning needs than were the teachers in the regular schools.

A second consideration was on the perceived self–efficacy of teachers in their ability to use inclusive instructions, manage student behavior and in working collaboratively. Analysis of the total scale score for the TEIP indicated significant main effects at the pre stage for gender, age, interaction, training, experience, policy, and confidence (Table 5).

Table 5
Analysis of Variance for Self–Efficacy

	Pre Data				Post Data			
	df	*F*	□²	*p*	*df*	*F*	□²	*p*
Variable								
School type	2	0.37	0.00	.69	2	1.40	0.00	.25
Gender	1	11.33	0.02	.00	1	2.80	0.00	.10
Age	2	4.25	0.02	.02	2	2.73	0.01	.07

Qualification	2	1.73	0.01	.18	2	0.31	0.00	.74
Interaction with people with a disability	1	9.47	0.02	.00	1	1.74	0.00	.19
Previous training	2	5.69	0.02	.00	2	1.39	0.00	.25
Teaching experience	2	4.35	0.02	.01	2	5.06	0.02	.01
Policy	2	10.69	0.04	.00	2	2.51	0.01	.08
Confidence	3	19.72	0.09	.00	3	8.68	0.04	.00

Similar to teachers' dispositions towards inclusion as measured on the SACIE all effect sizes for the significant TEIP interactions were, though, quite small with the exception of confidence that indicated a medium effect size at the pre course stage. Further examination of the subscales indicated that significant differences were found across all three subscales except for the variables of school type, age and interaction (Table 6). At the pre course stage for the total scale score and all three subscales the male teachers reported higher self–efficacy. Previous training, teaching experience, knowledge of policy and greater confidence were all positively related to self–efficacy. School type was only significant for the subscale of working collaboratively, with teachers from the special schools being significantly more self–efficacious than those in regular schools. Age was significantly different only for the subscale of managing behavior with teachers in the middle age group of between 30 and 39 years indicating higher levels of self efficacy in this regard. For previous interaction with people with disabilities all scales were significant except the subscale of managing behavior.

Table 6
Mean and Standard Deviation of all ANOVAs Pre Course for Self–Efficacy

Variable		Total Score		II		MB		WC	
	N	M	SD	M	SD	M	SD	M	SD
Area Teaching									
Primary/ Elementary	298	4.3	.51	4.4	.49	4.4	.68	4.2	.60*
Secondary	220	4.3	.47	4.4	.53	4.4	.63	4.1	.62*
Special education	46	4.4	.52	4.5	.47	4.4	.43	4.4	.54*
Gender									
Male	135	4.5	.41*	4.5	.49	4.6	.52*	4.2	.52*
Female	432	4.3	.51*	4.4	.50	4.4	.69*	4.	.63*
Age									
20 – 29	85	4.3	.53*	4.4	.52	4.2	.73*	4.1	.65*
30–39	218	4.4	.43*	4.5	.48	4.5	.61*	4.2	.55*
40 +	167	4.4	.51*	4.4	.52	4.4	.67*	4.1	.61*

Interaction With People with a Disability									
Considerable	218	4.4	.45*	4.5	.48*	4.5	.60	4.3	.55*
Not considerable	347	4.3	.51*	4.4	.52*	4.4	.70	4.1	.63*
Previous Training									
High	62	4.5	.45*	4.6	.43*	4.6	.56*	4.4	.60*
Some	165	4.3	.52*	4.4	.55*	4.4	.67*	4.2	.60*
None	337	4.3	.49*	4.39	.49*	4.4	.68*	4.1	.61*
Teaching Experience									
High	77	4.5	.48*	4.57	.43*	4.6	.67*	4.4	.58*
Some	231	4.3	.50*	4.39	.51*	4.4	.67*	4.2	.60*
Nil	262	4.3	.49*	4.41	.52*	4.4	.65*	4.0	.61*
Policy									
Average – Very good	17	4.7	.44*	4.76	.37*	4.7	.70*	4.7	.45*
Poor	223	4.4	.47*	4.48	.47*	4.5	.62*	4.3	.56*
None	328	4.3	.50*	4.36	.52*	4.4	.68*	4.0	.62*
Confidence									
High/Very high	42	4.7	.52*	4.66	.51*	4.8	.73*	4.5	.57*
Average	317	4.4	.43*	4.49	.44*	4.5	.58*	4.2	.56*
Low	145	4.2	.48*	4.29	.53*	4.3	.66*	4.0	.56*
Very low	66	4.10	.61*	4.22	.59*	4.2	.84*	3.8	.67*

Note. *p = < .05. Mean response range from 1 (strongly disagree); 2 (disagree); 3 (disagree somewhat); 4 (agree somewhat); 5 (agree); 6 (strongly agree).
II = *Inclusive instructions*; MB = *Managing behavior*; WC = *Working collaboratively*

Significant main effects at the post stage were only obtained for experience and confidence, although there were some significant differences for the subscales of school type, gender, age and policy (Table 7). Similar to pre course data, greater confidence and more teaching experience were still related to higher levels of self–efficacy. Similarly, special school teachers were more comfortable with working collaboratively, although significant gender differences were only noted for the sub scale of managing behavior when males continued to express greater self–efficacy in this than did the female teachers. The impact of age was noticeable for the younger teachers of 20 to 29 years who expressed that they were less capable of providing inclusive instructions than all other teachers. At the post course stage knowledge of policy was also only significantly different for inclusive instructions.

Table 7
Mean and Standard Deviation of all ANOVAs Post Course for Self–Efficacy

Variable	Total Score			II		MB		WC	
	N	M	SD	M	SD	M	SD	M	SD
Area Teaching									

Primary/ Elementary	298	4.6	.44	4. 7	.45	4.7	.55	4.5	.53*
Secondary	219	4.6	.47	4.4	.47	4.7	.58	4.4	.58*
Special education	46	4.6	.48	4.6	.51	4.6	.65	4.6	.48*
Gender									
Male	134	4.7	.48	4.7	.51	4.8	.56*	4.5	.57
Female	432	4.6	.44	4.6	.45	4.6	.57*	4.5	.54
Age									
20 – 29	85	4.5	.50	4.5	.56*	4.6	.57	4.4	.59
30–39	217	4.6	.41	4.7	.41*	4.7	.52	4.5	.50
40 +	167	4.6	.48	4.7	.47*	4.7	.62	4.5	.59
Teaching Experience									
High	77	4.6	.47*	4.6	.46*	4.6	.66*	4.5	.54*
Some	231	4.7	.43*	4.7	.44*	4.7	.53*	4.5	.52*
Nil	261	4.5	.46*	4.6	.48*	4.6	.56*	4.4	.57*
Policy									
Average–/Very good	17	4.7	.56	4.8	.48*	4.6	.70	4.6	.67
Poor	222	4.6	.44	4.7	.46*	4.7	.58	4.5	.52
None	328	4.6	.45	4.6	.46*	4.6	.55	4.4	.55
Confidence									
High/Very high	42	4.6	.55*	4.7	.52*	4.6	.77*	4.5	.61*
Average	316	4.7	.41*	4.7	.42*	4.7	.51*	4.6	.51*
Low	145	4.5	.43*	4.6	.47*	4.6	.54*	4.4	.54*
Very low	66	4.4	.52*	4.5	.51*	4.5	.66*	4.2	.62*

Note. *p = < .05. Mean response range from 1 (strongly disagree); 2 (disagree); 3 (disagree somewhat); 4 (agree somewhat); 5 (agree); 6 (strongly agree).
II = *Inclusive instructions*; MB = *Managing behavior*; WC = *Working collaboratively*

Discussion

At the start of the PL course the majority of the teachers had at least some contact with people with disabilities, although they reported little or no training in preparation for inclusion, limited relevant teaching experience and no knowledge of pertinent legislation. Many had elected to undertake the course because they were directly involved in providing learning support within their schools. Their confidence in teaching students with disabilities was average to low. Following participation in the 30 hour course they had become significantly more positive about including students with a range of needs and less concerned about inclusion. Similarly, their perceptions of self–efficacy in using inclusive instructions, managing behavior, and working collaboratively had all increased significantly. As has been found previously (e.g., Sharma et al., 2008) the teachers' dispositions towards inclusion, nonetheless, continued to remain more positive for teachers who had previously had considerable interactions with people with disabilities and who considered they were more confident about teaching students with disabilities. Greater confidence and more teaching experience were also related to higher levels of self–efficacy. Differences depending on the type of school the teachers worked in were also noted with the

special school teachers remaining more comfortable with working collaboratively, reporting less concern about inclusion, yet also being less supportive of the inclusion of students with different learning needs than the regular school teachers.

Unlike previous research findings where male teachers have recorded less tolerance for implementing inclusion (Ellins & Porter, 2005) and lower levels of sympathy (Carroll et al., 2003) the male teachers in this Hong Kong cohort initially reported significantly more positive attitudes and sentiments towards inclusion with higher levels of self–efficacy than did the female teachers. Following the course, the only significant difference was found in their perceived efficacy in being able to better manage student behavior.

Upon completion of the course, the younger teachers were more concerned about providing inclusive instructions for students, with all teachers only reporting slightly positive efficacy in this regard. To enact an inclusive policy it is critical for teachers to be able to modify the curriculum to meet the needs of a wide range of student diversity within a heterogeneous class. Recent curriculum reform agendas in schools in Hong Kong have not met with overly positive outcomes. For example, an initiative to implement task–based learning as a means of discouraging existing and dominant teacher centred approaches resulted in teachers adopting ways that diverged significantly from the intended curriculum, due to "factors such as unclear conceptions of the reform, the lack of teacher enthusiasm, weak collaborative cultures and, most notably, the lack of leadership from school principals, deputies and other senior teachers" (Adamson & Yin, 2008, p. 180).

Likewise, when other innovative student centered curricula reforms such as the *Activity Approach*, the *Target–Oriented Curriculum*, and *Curriculum Integration* have been introduced into Hong Kong schools in previous years, studies have shown that sustained changes have not occurred and that such progressive ideas are for the most part implemented at a superficial level (Yeung, 2009). According to Yeung, " Evidence consistently implies that the student–centered approach is mere rhetoric and has not been successfully applied in Hong Kong" (2009, p. 377). Teachers find it extremely hard to evolve from a teacher directed approach to one where students are actively involved in guiding their own learning.

In Hong Kong many teachers continue to replicate the teaching they received that was a didactic approach to disseminate knowledge from the teacher to the student. Such an approach fails to take into account the different learning needs of students and is contradictory to the pedagogy that is needed to enable teachers to provide an equitable and accessible education for all. A suitable curriculum for students with diverse learning needs requires teachers to be able to modify and adapt the regular curriculum and in particular adopt inclusive pedagogies to present it. To date there has been little evidence of a student– centered approach to schooling in Hong Kong and it has been argued that it would be difficult to achieve this within a fundamentally conservative system (Adamson & Yin, 2008).

Conclusion

To engage fully with inclusive education requires teachers to be able to accept responsibility for modifying the curricula for different learners. It also requires a different type of pedagogy that is student centred to allow for achieving different learning outcomes. Most importantly it requires school leaders to fully support inclusion and

consequently accept that teachers are professionals who need to be able to adopt more creative and inclusive approaches to pedagogy. Continuing to promote an examination orientated curriculum as the only means of assessing learning and attainment is not conducive to inclusion for Hong Kong (Forlin, 2007a; 2007b; Poon–McBrayer, 2005). Further, this hinders the capacity of teachers to be able to differentiate their teaching, if their own teaching ability is being assessed purely on student outcomes as measured by examination results. While teacher accountability is important it needs to be defined and measured in different and more inclusive ways.

On going PL for teachers is, inevitably, an essential component of the move towards a WSA approach in Hong Kong and should include not only knowledge and skill development but also greater awareness training if teachers are to gain appropriate dispositions towards inclusion. Even though this new PL program is a very comprehensive one, working with approximately 2000 teachers per year, it will still only be able to provide basic training on inclusion for approximately 10% of all teachers in Hong Kong. It would seem imperative that alternative approaches should now be considered for disseminating the information gained by these few teachers so that all teachers can have the opportunity for enhancing their ability to support inclusion by at least possessing a fundamental understanding and appreciation of the philosophy with some basic skills to implement it.

Nonetheless, it is important to remain cognizant that providing PL for teachers about inclusion and encouraging them to become more positive about adopting this approach, as has been an affirmative outcome for those undertaking these basic training course for inclusion, will not, by itself, enable greater inclusion. Unless this PL is supported by a change in mindset about how students learn and how learning can be measured, then teachers while becoming more supportive of inclusion will in reality continue to be constrained in implementing this by a lack of much needed systemic changes to curriculum, pedagogy and assessment to support such a major educational reform.

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