

EFFECTS OF THE TEACHER TRAINING PROGRAM (TTP) ON TEACHER AWARENESS AND READINESS IN SECONDARY SCHOOL INCLUSIVE CLASSROOMS

**Susila Marimuthu
Loh Sau Cheong, PhD**
University of Malaya
Malaysia

This study investigated a Teacher Training Program (TTP) proposed to enhance the awareness and the readiness of general educators in inclusive settings in secondary schools in Malaysia. As the study used the quasi experimental design, it needed an experimental and a control group of regular teachers for the investigation. The aim of this research was to examine if the intervention (experiment) on the experimental group was effective. The intervention comprised five modules covering significant areas for improving the teaching and learning process in inclusive classrooms. The five modules were first evaluated by three experts in special education in the Faculty of Education, University of Malaya, before the intervention. The subjects in the control and experimental groups were general educators from two secondary schools where inclusive education had been implemented. The instrument used was a questionnaire encompassing domains such as teacher awareness and teacher readiness to handle diverse students in an inclusive classroom. Exploratory Factor Analysis and the pilot testing of the instrument released positive results, underpinning the validity and the reliability of the instrument. The data analysis upon intervention revealed statistically significant results which clarified that the Teacher Training Program (TTP) was effective. The general educators participating in the experiment also evaluated the presentations and the module content favorably. Since the sample chosen was a true representative of the larger population of general educators in inclusive settings the findings of the study can be safely generalized.

Keywords: General educators, inclusive education, training program

The Malaysian Education Act of 1996 and the Malaysia Education Blueprint 2015- 2025 refer to Special and Inclusive Education in Malaysia. It can be viewed that the objectives and the process of teaching and learning of Special Education and Inclusive Education, as stated by the International Inclusive Education Institute, are not similar. In Malaysia, students with disabilities are registered in Special Education classes. They are taught by special educators who follow the

“special education curriculum” and not the general curriculum. According to what is stated in the document of UNESCO 1990, learning in these special schools resulted in “exclusion” because it is “leaving children with various needs outside the mainstream of school life and later as adults, outside community, social and cultural life in general.”

In Malaysian schools where inclusive education is practiced, students from these special education classes are recommended by their teachers in collaboration with their parents to be included in classes comprising students without disabilities. They are then taught by general educators who follow the general curriculum and prepare all students for public exams. Students with disabilities sit for the same exam as their normal peers but they are given extra time as approved by the Ministry of Education Malaysia. This enables students with disabilities to receive certificates in *Penilaian Menengah Rendah* (PMR) and *Sijil Pelajaran Malaysia* (SPM) public exams if successful, thus empowering them to find jobs. The student with disabilities’s transition into the world means inclusion into society and this inclusion naturally begins in the student’s ‘school world.’ It is in the classroom that the students genuinely learn to socialize with their typical peers during activities.

Inclusive education started with parent lobbying in the West (Ashman & Elkins, 2002). This was supported by the Dakar Framework for Action (2000) and conferences such as the World Conference on Education for All (1990). A plethora of research findings confirm that the success of inclusion depends significantly on the professional competence of general educators in inclusive schools. A review of inclusive education shows that, “The analysis of inclusive education experience of some countries, which have quite sophisticated inclusion, apparently indicates that the satisfactory results of inclusion turned out only after serious and energy consuming reforms and innovations” (Suleymanov, 2015).

The reform of “inclusive education” has been implemented in many schools in Malaysia. However studies on teacher effectiveness point out a lack of adequate teacher training programs for general educators especially in secondary schools. Students with disabilities who are mainstreamed are managed by general educators who are subject specialists. The majority of general educators in inclusive classrooms are unaware of the neurological disorders that cause learning disabilities, the styles and learning approaches of the students with disabilities and the benefits of inclusive education. Furthermore they lack the knowledge of how to use differentiation in teaching and lesson planning. Therefore an effective teacher training program was discerned to be inevitable resulting in the researcher of this study proposing a Teacher Training Program (TTP) for general educators that could complement and revamp existing teacher training programs for general educators in inclusive settings in Malaysian secondary schools.

THE TEACHER TRAINING PROGRAM

This program consists of five modules comprising significant areas that involve inclusive education, neurological disorders prevalent in Malaysia, collaborative consultation, differentiated instruction and managing a class of diverse students. The modules for the Teacher Training Program (TTP) are shown in Figure 1.

Inclusive education enhances the general educators' understanding of the philosophy of inclusive education, why it was implemented, how it came to be recognized and its benefits. This was based on the literature review of the Ainscow, Dyson, Goldrick, and West (2011) "Professional Learning Model" that focuses on inclusive education and Barton (1997) who targeted inclusive education. *Inclusive education* enhances the general educators' understanding of the philosophy of inclusive education, why it was implemented, how it came to be recognized and its benefits.

Neurological disorders prevalent in Malaysia deal with disabilities such as Autism, Cerebral Palsy, Attention Deficit Hyperactivity Disorder (ADHD), Down Syndrome. Slow learners are also included. General educators are given relevant information about the disabilities and how and why education is hampered in those students diagnosed with such disorders. This was based on the studies done by Ching (2009) concerning various disabilities. The Diagnostic and Statistical Manual of Mental Disorders, DSM 5 (2013) was also referenced for recent alterations.

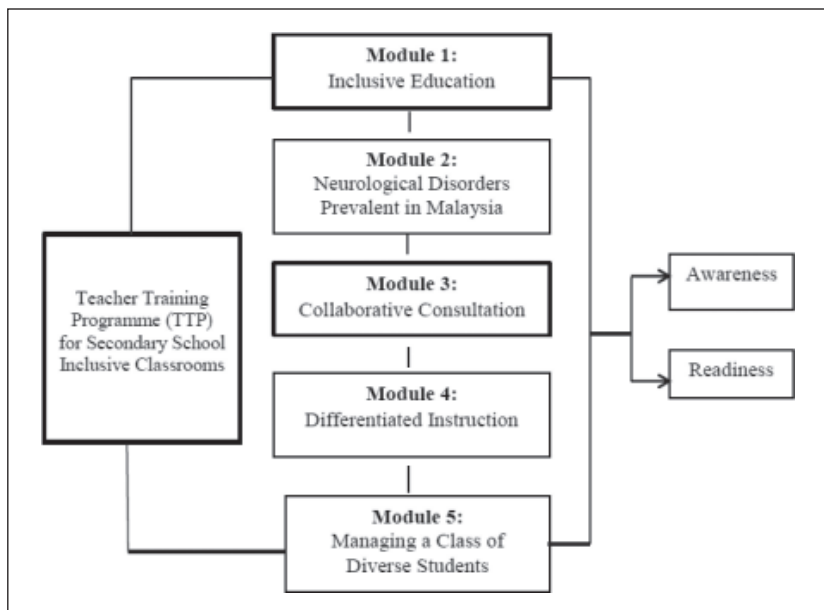


Figure 1. The framework used for building the five modules

Collaborative Consultation touches on the definition of collaborative consultation, reasons for collaboration, its characteristics and the Individualized Education Plan (IEP). This helps the general educators to collaborate and solve problems and also to make decisions in a shared partnership. Ideas were based on writings by Blamires, Robertson, and Blamires (1997) on partnership and writings by Friend and Cook (2000) in their book on ‘Interactions’.

Differentiated instruction refers to the process of planning and teaching in ways which give all students opportunities to show what they know, understand and can do. General educators will be able to adapt content and delivery to accommodate a wide range of abilities and disabilities.

Managing a class of diverse students. Having undergone the intervention the general educators will be ready to cope with the negative behaviors exhibited by students with disabilities as well as manage a class of diverse students successfully. Ideas were based on what Ashman and Elkins mentioned in their book about educating children with diverse abilities (Ashman & Elkins, 2002).

PURPOSE OF THE STUDY

The study involved investigating the effectiveness of the Teacher Training Program (TTP) on the *awareness* and *readiness* of general educators to handle students with and without disabilities. Specifically, the study aimed at answering the following research questions:

1. Are there any significant changes in teacher awareness before and after introducing the Teacher Training Program?
2. Are there significant changes in teacher readiness before and after introducing the Teacher Training Program?

METHODOLOGY

Research Design

The research design chosen for this study was the *quasi experimental design* incorporating a control and an experimental group (Campbell & Stanley, 1963). In a quasi experimental design the researcher uses intact groups such as teachers in schools to assign them to the control or the experimental groups. “The researcher conducts experimental treatment activities with the experimental group only and then administers a posttest to assess the differences between the two groups” (Creswell, 2008). The pre- and post- tests are given to both the groups.

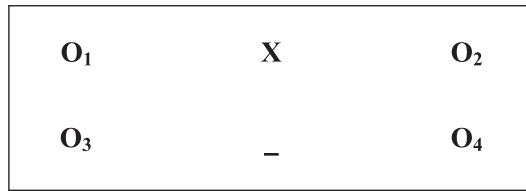


Figure 2. Quasi experimental research design

Note: O₁ and O₃ represent the pretests; X represents the treatment; O₂ and O₄ represent the posttests.

Sample

The investigation was done using an experimental group of general educators in a secondary school where inclusive practices had been implemented. Participants in the experiment were 33 general educators from a public school in Penang, where inclusive education had been implemented. The control group consisted of 33 general educators from another public school in Penang with inclusive settings.

According to Navidi (2011), “Statistical methods are based on the idea of analyzing a sample drawn from a population.” The sample chosen was **a true representative** of the actual population or the target population (Fraenkel & Wallen, 2006). This would facilitate generalization of the program to the whole population of general educators in all inclusive secondary schools in Malaysia.

Outcome Measures

In this study the independent variable is the *Teacher Training Program* (TTP) and the dependent variables are *awareness* and *readiness*. *Awareness* in this study refers to *knowledge* and *values* in relation to the five domains of the teachers as outlined in the Teacher Training Program (TTP), which include the factors tested under each of the domains mentioned: knowledge, values, skills and emotions. The instrument used was built on these four factors.

Instrumentation

The instrument used in the pre- and post- tests was in the form of a questionnaire consisting of 72 items investigating four domains, namely *knowledge*, *values*, *skills and emotions*. The pilot testing was done at one of the public schools in Penang, a secondary school where inclusive education for learning disabilities had been implemented for students with disabilities. The pilot study sample was not involved in the actual study. Thirty teachers took part in this test. The

Cronbach's alpha was obtained using SPSS and the result was more than .71 and this confirmed the internal validity of the instrument.

Further analysis was done to confirm the significance of the validity and the reliability of the instrument, as shown in Table 1. According to Pallant (2010) factor analysis is appropriate if Kaiser-Meyer-Olkin's Measure of sampling Adequacy (KMO) value is .6 or above. The Bartlet's test of Sphericity value is significant in this study:

KMO = .901

Bartlet's Test of Sphericity = .000

Table communalities: all the items were above .3

In this study the first four components explained a total of 50.33% of variance. This analysis provides the interpretation that the instrument is *valid* and *reliable*.

Table 1
KMO and Bartlet's Test

Kaiser-Meyer Olkin Measure of Sampling Adequacy	Sig.	.901
Bartlet's Test of Sphericity	Approx. Chi Square	12254.70
	df	1540
	Sig.	.00

The Exploratory Factor Analysis was done for 360 items. The four factors in the questionnaire which were *knowledge, values, skills and emotions* totalled up to 72 items. The total number of subjects for factor analysis was 362 from six secondary schools in Penang and Seberang Prai. This did not include the schools used for pilot testing and those schools used as experimental and control groups.

Procedure of the Experiment

The control and the experimental groups were given the pretest in the form of questionnaires before the intervention. The experiment extended for four months (from June 2015 till September 2015) on the days available to the researcher. These days were selected by the school principal so that the experiment will not interfere with State Education Department courses conducted for the teachers. When attending the experiment, the teachers signed the attendance form at all sessions. The researcher presented the modules through Power Point presentations to the

experimental group and each session lasted two and a half hours. Other activities followed the presentation.

Invited professionals such as the physiotherapist, the speech pathologist and an officer from the State Education Department of Penang also presented at these sessions. These were short presentations usually done after the researcher had presented the module for the session. Their presentations allowed the general educators to comprehend how physiotherapy and speech pathology help students diagnosed with cerebral palsy to speak and also aided in their movement. The education department officer elaborated on “Inclusive education and why it is implemented”. At the end of each session the educators were encouraged to ask questions and clear their doubts. Notes were distributed, followed by an evaluation of the presentation. The experiment participants, however, were *not* tested on the information disseminated. In fact they internalized this information and then used what they had learnt to complete the questionnaire during the post test. Furthermore, the adult teachers preferred cognitive activities as they were experiencing too many workshop activities. When the experiment was completed, both the experimental and control groups completed the post test.

Data Analysis

Data analysis was done using SPSS. As the purpose of the study was to find the effectiveness of the independent variable upon the dependent variables a test such as the paired sample ‘*t*’ test was inevitable. Other tests included, Levene’s test of equality of variance, assumption test of homogeneity of variance and assumption test of normality including the Kaiser- Meyer- Olkin measure of Sampling Adequacy (KMO) and the Bartlett’s test.

RESULTS

Teacher Awareness and Readiness after the TTP Training

For teacher Awareness, it was shown in the two domains, namely *knowledge* and *values*. In the paired sample *t* test there was a statistically significant increase in *knowledge* scores from before intervention where [$M = 3.04, SD = .34$] to after intervention where [$M = 3.34, SD = .39$], with $t(29) = -3.408$, whereas for *values* scores, it was with $M = 3.80, SD = .39$ before intervention to after intervention [$M = 3.88, SD = .43$], where $t(29) = .669, p > .05$.

As for the Readiness, which was measured by readiness in skills and emotions, the result for *skills* shows that, before intervention where [$M = 3.28, SD = .33$] to after intervention where [$M = 3.52, SD = .33$], with $t(29) = -2.59, p < .05$. For *emotions* before intervention where [$M = 3.14, SD = .37$] and after intervention to [$M = 3.45, SD = .45$], with $t(29) = -2.75, p < .05$].

Thus the findings of the data analysis of the two variables: Awareness (i.e. knowledge, and values), as well as *Readiness* (i.e. skills and emotions) show that the level of teacher *awareness* and *readiness* was low before the intervention and the level was raised after the intervention. Therefore through the positive results and statistically significant differences revealed, it may be concluded that the Teacher Training Program (TTP) was effective.

Evaluation of Module

In the module evaluation by the experimental group participants, the scores are shown in Table 2. The total score for *excellent, very good and good* was **98.30%**. Thus it may be concluded that the regular teachers who participated in the experiment were supportive of the teacher training program.

Table 2
Levels of Scores and Percentages of Evaluation of Modules

Levels	Scores	Percentages
Excellent	188	37.39
Very Good	208	41.27
Good	99	19.64
Fair	9	1.79
Total	504	100 %

In addition, Figure 3 shows a Histogram of the evaluation of the modules, content and the presentation; by teachers who participated in the experiment. The frequency polygon of distribution is positively skewed to the right.

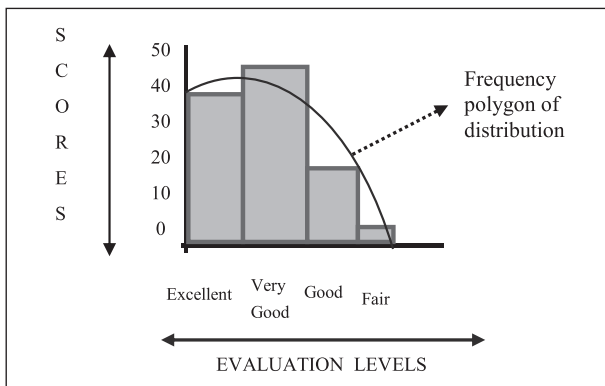


Figure 3. Histogram of the evaluation of the modules

DISCUSSION

The data analysis and the findings proved that the results of the analysis favored the experiment and the instrument used in this study. All the research questions were answered with regard to the study. The expectations of this study materialized with the implementation of the treatment or the five-module Teacher Training Program (TTP).

In all the categories of analysis, the evaluation of module presentation by the general educators was very significant to the researcher. In this category of analysis the evaluators had selected the three categories of excellent, very good and good to support the modules which included several segments. The total of these levels of scores was 98.95 and this greatly underpinned the intervention.

The intervention had raised the general educators' awareness and readiness to handle diverse students. This was revealed in the results of the data analysis which showed significant increases in the performance of the general educators in the experimental group. It may be concluded from the results of the analysis that the experiment was successful and the instrument valid and reliable to be used for future in-service teacher training courses for general educators in inclusive secondary school classrooms in Malaysia.

Inclusive education is an international movement in the world. Education policies and reforms such as "The Universal Declaration of Human Rights (1948)", "Education for All (1990)" and "The Incheon Strategy" (2012) aim at meeting the needs of all children, youths, adults and stress that education is a fundamental human right. The persons with disability on the other hand need training to merge themselves into society. This culture should take place in the school. Inclusive education requires well equipped knowledgeable and competent teachers who are able to foster the needed values, confidence and support for students with special educational needs to become part of society. It is crucial that society views persons with disabilities as 'normal' and not 'abnormal'.

Present and future general educators cannot remain within a paradigm of thinking in which "one size fits all". They might have used one particular curriculum and few methods in teaching normal students but the implementation of "inclusive education" expects broad changes in every aspect. General educators need to realize that in inclusive practices, they are the key players to bring about successful learning in special educational needs students. Success is possible as proven by the Malaysian winners of the gold medals at the Paralympics in Rio de Janeiro in 2016. If special needs students are coached properly and given full motivation they could excel in their studies as well. General educators could be supported to do so through programs that will enrich them with knowledge about 'inclusion' and 'disorders' that cause learning disabilities and learning difficulties, such as the program proposed for the teacher training program investigated in this study.

As mentioned in the literature review, teachers in inclusive settings need levers or changes in their thinking (Ainscow, 2005). The intervention conducted in this study, on the other hand, brought changes to the general thinking patterns of the experimental group participants. They did remark that what was introduced at the treatment benefited them in managing and teaching a class of normal as well as students with special needs. According to Watkins (2001), embracing effectiveness in handling ambiguity, solving complex problems and being flexible as well as self-reflective improved the teaching and learning process. Teachers should also be able to use multiple perspectives for evaluation including self-evaluation. In performance competences, the teacher needs to plan instruction, and monitor students' learning as well as present information. The competence model by Watkins reflects what is proposed in the Teacher Training Program in this study. In the Teacher Training Program (TTP), the competences required are: Awareness involving knowledge, and values, and Readiness involving skills and emotions which form the four main factors upon which the questionnaire was based.

CONCLUSION

This study aimed at supporting the inclusive education policy of the Ministry of Education in Malaysia. The success of inclusive education depends on the general educators teaching in secondary schools which have implemented inclusive education. Teaching students with learning disabilities is a challenging task. General educators need to be well equipped with the necessary skills and in applying differentiated methods of planning and instruction to cater for diversity. Therefore this study focused on an in-service teacher training program to enhance the ability of secondary school teachers in inclusive settings to manage a diverse class in the teaching and learning process.

The Teacher Training Program (TTP) introduced in this study, comprising the five modules will support general educators in their effort to educate students with special needs in inclusive settings. The five modules were applied in the intervention over four months and proved to be effective as the findings of the data analysis showed positive results. Furthermore the teachers who underwent the intervention were supportive, as they evaluated the content and the module presentation with high scores. Successful inclusive education needs general educators who are equipped and adequately trained to handle students with learning disabilities. This proposed Teacher Training Program (TTP) will serve the purpose of such training, as it can be generalized to the whole population of general educators in inclusive secondary schools in Malaysia.

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