COMPARISON OF SPECIAL EDUCATION AND MAINSTREAM TEACHERS' EFFICACY TOWARDS INCLUSIVE EDUCATION PROGRAMME CLASSROOMS IN MALAYSIA

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Abstract: *Teachers' efficacy in catering diverse students' learning needs in Inclusive Education (IE) Programme classrooms is crucial to determine the successfulness of its implementation. The purpose of this study is to identify the difference on the level of teachers' efficacy towards IE Programme classrooms across teachers' groups (special education and mainstream teachers) as some oversea studies showed the level of teachers' efficacy towards IE Programme classrooms teaching depended on the types of teachers. A set of questionnaire with 11 items on Teachers' Sense of Efficacy Scale (TSES) in Malaysian context has been distributed to 267 teachers (mainstream: 217 and special education: 50) from 21 public primary schools with IE Programme. The findings indicated that special education teachers had higher mean scores than mainstream teachers in both of the factors, pedagogy efficacy (TE1) and management efficacy (TE2). However, the multivariate tests in MANOVA demonstrated that teachers' groups (special education and mainstream teachers) had no significant effect towards the level of TE1 and TE2. Therefore, there is no evidence that special education teachers are more efficient than mainstream teachers in IE classrooms. Therefore, well-planned teacher education and professional development programmes are needed to equip both types of teachers with the knowledge and competencies that are required, and also to ensure them to come to a consensus in implementing IE Programme in Malaysia.*

Keywords: Special education teachers, Mainstream teachers, Teachers' Efficacy, Inclusive Education Programme

INTRODUCTION

Teachers who are at the frontline of Inclusive Education (IE) Programme implementation play a key role in the successful IE (Emam and Farrell, 2009). Their perceptions of their competence in catering diverse students' needs in IE classrooms have been highlighted in a number of studies (Smith, 2012; De Boer et al., 2011; Ravet, 2011; Emam and Farrell, 2009; Humphrey and Parkinson, 2006). Teachers require knowledge on special educational needs and specific pedagogy as well as the skills to cater the needs of students with special needs (sSN) in IE classrooms (Keane et al., 2012; Smith, 2012; Loiacono and Valenti, 2010; Leach and Duffy, 2009; Tobias, 2009; Humphrey and Lewis, 2008a). As a way out, training, professional development and teacher education were proven to be effective in enhancing teachers' teaching strategies towards included sSN (Leblanc et al., 2009; Horrocks et al., 2008; Huang and Wheeler, 2007; Robertson et al., 2003).

The purpose of this study is to identify the difference on the level of teachers' efficacy towards IE Programme classrooms across teachers' groups (special education and mainstream teachers).

Literature review

Some international research have revealed that teachers are the vital agents in implementing and influencing the outcomes of their practice in IE (Ulug et al., 2011; Emam and Mohamed, 2011; UNESCO, 1999). Therefore, teachers' efficacy towards teaching the sSN in IE have been

highlighted in many studies (Nidhi, 2014; Astha et al., 2011; Rita, 2008; Tschannen-Moran and Woolfolk-Hoy, 2001). A number of studies on teachers' efficacy towards IE Programme have also been carried out locally (Bailey et al., 2015; Mohd. Zuri and Wan Sharipahmira, 2014; Lee and Low, 2013; Nornadia et al., 2013; Abdul Rahim and Khairul Annuar, 2013; Mohd Zuri and Aznan, 2012; Zalizan, 2010; Abdul Aziz, 2007; Manisah et al., 2006; Haniz, 1998). Teachers revealed that they have limited knowledge and skills on sSN, they needed more trainings and professional developments in equipping them for IE Programme classrooms teaching (Bailey et al., 2015; Supiah et al., 2013; Siti and Zalizan, 2012).

On top of that, a number of studies have reported that the level of teachers' efficacy towards IE Programme classrooms teaching depended on the types of teachers (Humphrey and Symes, 2013; Leyser et al., 2011). Leyser et al. (2011) found that experience with students with SEN as well as training in disabilities and inclusion associated with the level of self-efficacy among teachers. Therefore, special education teachers were claimed to be more efficient in teaching IE Programme classrooms than mainstream teachers. Humphrey and Symes (2013) revealed that special educators were found to have greater self-efficacy in teaching and coping abilities with the behavioral problems among sASD than mainstream educators.

METHODOLOGY

A total of 267 teachers from 21 public primary schools with IE Programme replied the questionnaire. The teachers were divided into two groups (mainstream: 217 and special education: 50) according to their field. There was no significant difference on the amount of teachers in the two disciplines (p=0.769).

INSTRUMENT

A set of questionnaire was developed for this research which comprised of 11 items on Teachers' Sense of Efficacy Scale (TSES) in Malaysian context. The 11-item-TSES was categorised into 2 subscales, namely pedagogy efficacy and management efficacy which aimed to examine the classroom management, student engagement and instructional strategies in IE Programme classrooms.

The content validity of the scale was verified by professionals in related field. Moreover, the construct validity was obtained via Rasch Measurement Model (RMM) and Exploratory Factor Analysis (EFA). The internal consistency of Cronbach's Alpha was also in acceptable level for the scale, which is at 0.88 for 11-item-TSES.

Findings and discussion

In order to identify the significant difference on the level of teachers' efficacy towards IE Programme classrooms across teachers' group, MANOVA was performed. The data normality assumption should be fulfilled prior proceed with the MANOVA. As mentioned in previous section, researchers applied skewness and kurtosis test to determine the data distribution of the variables involved. Z values for both skewness and kurtosis should be located in the acceptable region, -2 to 2 (Hinton et al., 2014). From Table 1, the Z values for skewness were from -1.973 to 1.711 whereas Z values for kurtosis located in between -1.973 and 1.778. Thus, the normality assumption of the data was accepted in this analysis.

Table 1 – Skewness and kurtosis of variables for MANOVA across two teachers' groups

	N	Skewness		Z value for Skewness	Kurtosis		Z value for Kurtosis
	Statistic	Statistic	Std. Error		Statistic	Std. Error	
TE1	267	-0.294	0.149	-1.973	0.528	0.297	1.778
TE2	267	0.060	0.149	0.403	-0.586	0.297	-1.973
Valid N (listwise)	267						

Note: TE1 = pedagogy efficacy, TE2 = management efficacy

Descriptive statistics on teachers' efficacy (TE)

As shown in Table 2 and Figure 1, descriptively, special education teachers were more capable or efficient in pedagogy and management aspects than mainstream teachers in overall. The mean score for pedagogy efficacy (TE1) among special education teachers was at 39.86 (SD = 6.53). However, mainstream teachers' pedagogy efficacy (TE1) mean score was at 37.84 (SD = 7.10). For the management efficacy (TE2), the mean score among special education teachers was at 35.08 (SD = 4.29) whereas mean score among mainstream teachers was at 33.68 (SD = 4.14).

Table 2 – Descriptive statistics on teachers' efficacy (TE)

	Teachers' Groups	Mean	Std. Deviation	N
TE1	special education teacher	39.86	6.534	50
	mainstream teacher	37.84	7.091	217
	Total	38.22	7.023	267
TE2	special education teacher	35.08	4.285	50
	mainstream teacher	33.68	4.136	217
	Total	33.94	4.192	267

Note: TE1 = pedagogy efficacy, TE2 = management efficacy

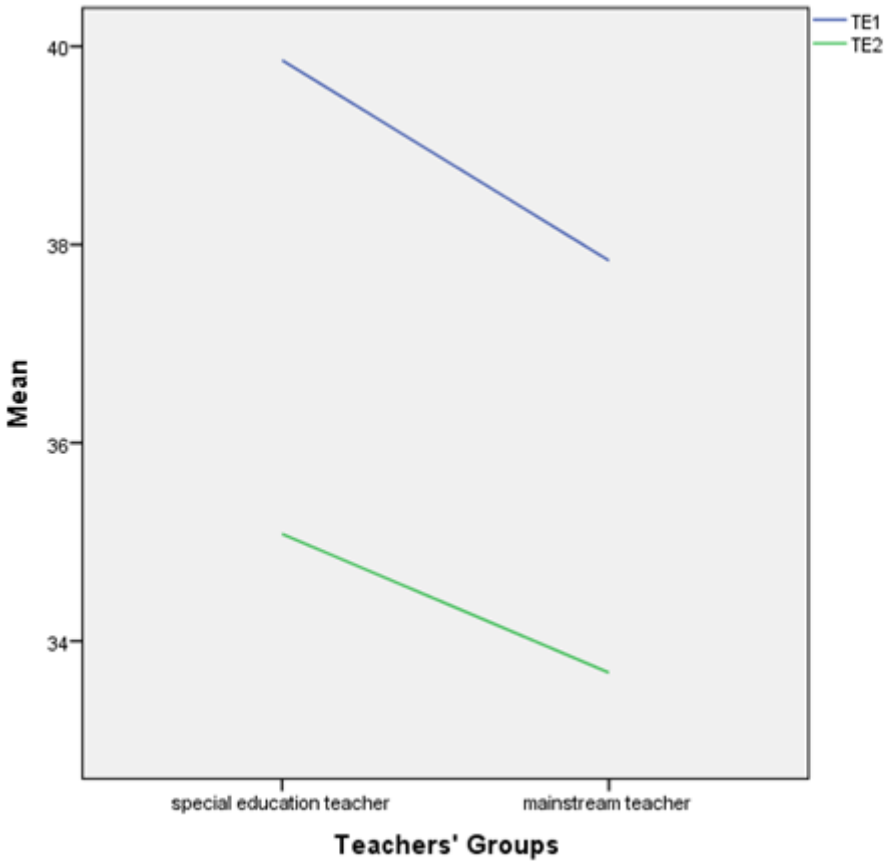

Figure 1 – Multiple line chart on teachers' efficacy across teachers' groups

MANOVA on teachers' efficacy (TE)

MANOVA on teachers' efficacy (TE) was performed where the two-factor subscales of teachers' efficacy, pedagogy efficacy (TE1) and management efficacy (TE2) played the roles as the dependent variables then teachers' groups as the factorial independent variable.

The results of Box's test in Table 3 indicated that the homogeneity of covariance matric was insignificant as $p = 0.055$ where $p > 0.05$. This has shown that variances of dependent variables, TE1 and TE2 across the independent variable, teachers' groups was the same as its population.

Table 3 – Box's test of equality of covariance matrices on teachers' efficacy across the teachers' groups

Box's M	7.702
F	2.528
df1	3
df2	107283.546
Sig.	0.055

According to Levene's test result in Table 4, variances in both of the dependent variables, TE1 and TE2 across the independent variable, teachers' groups were the same where $p > 0.05$. Therefore, the data complied with the conditions of homogeneity of variances for MANOVA test.

Table 4 – Levene's test of equality of error variances on teachers' efficacy across the teachers' groups

	F	df1	df2	Sig.
TE1	0.126	1	265	0.723
TE2	0.049	1	265	0.825

Note: TE1 = pedagogy efficacy, TE2 = management efficacy

Results from Pillai's Trace test in Table 5 showed that no significant main effect of independent variable, teachers' groups towards the combination of independent variables (TE1 and TE2) was found in this study [$F(2, 264) = 2.38$, $p > 0.05$].

Table 5 – Multivariate tests on teachers' efficacy across the teachers' groups

	Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.977	5541.325	2.000	264.000	0.000
	Wilks' Lambda	0.023	5541.325	2.000	264.000	0.000
	Hotelling's Trace	41.980	5541.325	2.000	264.000	0.000
	Roy's Largest Root	41.980	5541.325	2.000	264.000	0.000
Teachers' groups	Pillai's Trace	0.018	2.380	2.000	264.000	0.095
	Wilks' Lambda	0.982	2.380	2.000	264.000	0.095
	Hotelling's Trace	0.018	2.380	2.000	264.000	0.095
	Roy's Largest Root	0.018	2.380	2.000	264.000	0.095

Note: TE1 = pedagogy efficacy, TE2 = management efficacy

Although multivariate tests above showed that there was no main effect of teachers' groups towards combination of TE1 and TE2, the tests of between-subjects effects indicated that teachers' groups was the significant factor towards management efficacy (TE2) [$F(1, 265) = 4.58$, $p < 0.05$]. R squared under Table 6 revealed that teachers' groups has very low influence on both of the pedagogy efficacy (TE1) and management efficacy (TE2) which were 1.3% and 1.7% respectively.

Table 6 – Tests of between-subjects effects on teachers' efficacy across the teachers' groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	TE1	166.026[a]	1	166.026	3.397	0.066
	TE2	79.417[b]	1	79.417	4.580	0.033
Intercept	TE1	245327.419	1	245327.419	5018.906	0.000
	TE2	192139.133	1	192139.133	11081.557	0.000
Teachers' Groups	TE1	166.026	1	166.026	3.397	0.066
	TE2	79.417	1	79.417	4.580	0.033
Error	TE1	12953.375	265	48.881		
	TE2	4594.740	265	17.339		
Total	TE1	403088.000	267			
	TE2	312307.000	267			
Corrected Total	TE1	13119.401	266			
	TE2	4674.157	266			

a. R Squared = .013 (Adjusted R Squared = .009)
b. R Squared = .017 (Adjusted R Squared = .013)
Note: TE1 = pedagogy efficacy, TE2 = management efficacy

The level of teachers' efficacy among mainstream and special education teachers were also being compared in several previous studies (Humphrey and Symes, 2013; Leyser et al., 2011). Nevertheless, current study showed that there is no evidence indicating that special education

teachers are more efficient than mainstream teachers in IE Programme classrooms. This findings contradicted with Leyser et al. (2011) and Humphrey and Symes (2013) which reported that special educators have higher level of self-efficacy than the subject teachers in teaching sSN.

CONCLUSION

The existing differences between teachers' efficacy among mainstream and special education teachers were mainly resulted from the practices of separate teacher education programmes (Zalizan, 2010). Such education programmes were claimed to fail in equipping both types of teachers with the knowledge and competencies that are required in catering the diverse needs among students in IE Programme classrooms. Therefore, well-planned teacher education and professional development programmes are needed to equip both types of teachers with the knowledge and competencies that are required in catering the diverse needs among students, and also to ensure them to come to a consensus in implementing IE Programme in Malaysia.

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