# The Relationship between Teacher Professional Competencies and School Continuous Improvement in City National Secondary Schools

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# Abstract

Teacher professional competencies associated with highly professional potential has direct relationship with school continuous improvement. The purpose of this study is to identify the level and relationship among these two variables. A survey research design with TPCSCI instrument and simple random sampling were used to conduct the study which involved two hundred fifty four respondents from nine city national secondary schools. The findings showed that the level of teacher professional competencies components and school continuous improvement factors were high with mean 4.38 and 4.41. Both variables had positive large correlation and significance relationship (r=.568, p<.001). The coefficient of determination for teacher professional competencies was 32.26% shared variance. School continuous improvement factors helped to explain nearly 32.3% of the variance in respondents' scores on teacher professional competencies components. The significant correlation between teacher professional competencies and continuous improvement indicated that the null hypothesis was rejected and the alternative hypothesis was accepted.

Keywords: Teacher professional competencies, School continuous improvement, TPCSC instrument, city national secondary school

# 1. Introduction

The world development in terms of economics, social, politics and technology are the basic indicators of a good education system. This will produce quality manpower which are skillful and knowledgeable. As such teachers must play an important role to develop human capital to cope with the challenges in the 21<sup>st</sup> century (Khair Mohamad Yusof, 2016). This shows that teacher professional competencies which include positive values, knowledge and skills are essential elements in teachers' profession. Teachers can obtain professional competencies through Continuous Professional Development (CPD) Master Plan which provides guidance and motivation for teachers to develop their own competencies and potential (Ministry Of Education Malaysia, 2016a).

Teacher professional competencies are usually associated with highly professional potential and have direct relationship with student performance in education (Kulshrestha & Pandey, 2013). Six teacher professional competencies including emotion competency, environment competency, field competency, social culture competency, curriculum competency and lifelong learning competency were investigated in this study. Emotion competency consisted of values, moral, belief, attitude, motivation and empathy of teachers and students. Teachers who possess high emotion competency will be able to provide effective mentors who influence strong on students learning. (Selvi, 2007). Environment competency is an ecology and safety sustainable dimension for learning development (Salite, Ilga, & Pipere, 2006). Teachers who have high environment competency will be able to demonstrate outstanding classroom management skills to make sure that classroom environment is conducive. Field competency is the most important competency which enable teachers to carry out their profession task of content delivery that will consequently ensure students direct interaction with the lesson content (Selvi, 2007). Teachers should be expert in their field to produce meaningful teaching and learning outcomes Social culture competency is the ability to understand students background. Social and cultural background which can improve students' collaborative and learning (Selvi, 2007).

Teacher who possessed high social culture competency can promote and develop collaborative skills and encourage learning. Curriculum competency is the content knowledge and pedagogical skills framework of teachers to achieve learning goals (Selvi, 2007). Teachers' good understanding of curriculum design will enable them to choose suitable teaching and learning strategies which can enhance students achievement. Lifelong learning competency is a person's ability to use any learning instrument to enhance their lifelong learning (Selvi, 2007). Teachers who possessed lifelong learning competency will able to develop students' lifelong learning skills.

Creemers (1994) explained that the process of teaching and learning is a key determinant of school improvement, while Hopkins (2001) recommended the adoption and support of school management to initiate changes in teaching and learning to attain improvement in education. Harris (2002) emphasized several discoveries of the processes of successful school changes such as teacher development, leadership development, improve learning conditions, positive and supportive school culture. The school continuous improvement factors for this study consisted school climate, teacher improvement, leadership, curriculum development and high level performance. School climate is the quality and character of school life which included people's experience, norms, goals, values, interpersonal relationship, teaching, learning, leadership and organizational structures (Cohen et al., 2009). On the other hand, teacher improvement is a process of identifying the strengths and weaknessess of teaching to make positive changes patricularly on students' learning outcomes. Principal leadership distinguished how principals use targeted approaches on teachers to influence their learning and instruction (May & Supovitz, 2011). Curriculum development involved teachers in the process of developing a curriculum that takes account of contextual factors than pre-specifying objectives (Stenhouse, 2012). High level performance is defined as the ability of the school to achieve better results within a set time period.

Many of the country's progress had direct impact on the improvement of the national education system (Mahdzir Khalid, 2016). Sleegers dan Leithwood (2010) mentioned that school improvement and education were influenced by the environment. As such, teachers need to improve their teaching and learning strategies and competencies in order to be competent in the 21st century. Teachers are urged to equip themselves with creative thinking skills as well the latest technology (Mahdzir Khalid, 2016). According to the 2016 Malaysian Certificate of Education result, one hundred sixty six national secondary schools obtained Band 6 and one school obtained Band 7 (Ministry Of Education Malaysia, 2016b). Those schools were selected to join the education transformation programme for school continuous improvement for three years. One national secondary school in this city was under that programme since 2017. However, two national secondary schools in this district joined the programme in 2018 (Sarawak Education Department, 2018).

The change in the global education system demands teachers to equip themselves with current knowledge, vast skills and competencies to realize continuous school improvement. Thus, it is desirable for the researchers to carry out this study to identify teacher professional competencies and school continuous improvement level as well as the relationship among those variables in city national secondary schools.

# 2. Methodology

A survey was conducted to measure the level of teacher professional competencies, school continuous improvement and the relationship between those variables using TPCSCI questionnaires. This instrument had three sections which included respondent's demographic, Section A and Section B. Thirty items about teacher professional competencies in section A were adapted from Professional Teaching Competencies (New Teacher Center, 2011) with six components of Selvi's teacher professional competencies. Teacher professional competencies included five items of emotion competency, six items of environment competency, five items of field competency, four items of social culture competency, five items of curriculum competency and five items of life long learning competency. Twenty items in section B about school continuous improvement factors were adapted from Kazi Enamul Hoque, Gazi Mahabubul Alam and Abdul Ghani Kanesean Abdullah (2010). School continuous improvement factors included four items of school climate, three items of teacher improvement, four items of principal leadership, four items of curriculum development and five items of high level performance. Fifty items of TPCSCI instrument developed on five point Likert scale as very frequently (5), frequently (4), occasionally (3), rarely (2) and never (1) (Brown, 2010).

The instrument was distributed to three hundred fifty teachers with simple random sampling in Miri city national secondary schools. After two weeks three hundred copies returned and two hundred fifty four copies were relevant for data analysis.

# 3. Findings and Discussion

Data was analysed using Statistical Package for the Social Sciences (SPSS) version 23.0, Windows 2015. Mean and standard deviation were calculated to identify the level of teacher professional competencies and school continuous improvement. The analysis indicated three mean levels. A mean level of 1.00 to 2.33 was low, 2.34 to 3.67 was medium, 3.68 to 5.00 was high (Richard Levin & David Rubin, 1998). Pearson "r" was used to determine the relationship between teacher professional competencies and continuous improvement in city national secondary schools. The value of correlation r=.10 to .29 was small, r=.030 to .49 was medium, r=.50 to 1.0 was large (Cohen, 1988).

Table 3.1 showed that 30.3% males and 69.7% females as the respondents of this study. The data analysis showed that 57.5% respondents were twenty two to thirty five years old, 40.9% respondents were thirty six to fifty six years old, 1.6% respondents were fifty seven years old and above. However, 92.9% respondents have order to Bachelor's degree, 6.7% respondents have Masters's degree and only 0.4% respondent has PhD. Respondents' education background provided a platform for them to carry out the task of delivering the content of subject profession and competently. When they are clear with their field competency, students interaction with the content of the lesson is more effective. Research showed that teacher knowledge of teaching and learning, subject matter knowledge, experience, and the combined set of qualifications measured by teacher licensure are all leading factors in teacher effectiveness (National Council for Accreditation of Teacher Education, 2015).

Data analysis also showed that 55.5% respondents had less than ten years of teaching experience, 34.3% respondents had eleven to twenty years of teaching experience and 10.2% respondents had twenty one years and above of teaching experience. Different teaching experience among the respondents in those schools provided various pedagogical knowledge and skills which fostered their learning and contributed to the curriculum competency component. Learning opportunities for teachers are support them to acquire and develop the knowledge and skills essential to be a good professional (Avalos, 2011; Van Veen et al., 2010).

Data analysis showed that 49.6% respondents had less than 5 years experience of teaching in the same school, 29.1% respondents had 6 to 10 years experience of teaching in the same school and 20.9% respondents had 11 years and above experience of teaching in the same school. It was an advantage for them to understand students background which can improve their collaborative and learning. Social competency is required by a person's ability to succeed in dealing with others, including skills in social interaction and social responsibilities (Hamidi & Indrastuti, 2012).

Demographic Variable	Frequency	Percentage (%)
1. Gender		
Male	77	30.3
Female	177	69.7
2. Age		
22-35 years	146	57.5
36-56 years	104	40.9
57 years and above	4	1.6
3. Qualification		
Bachelor's Degree	236	92.9
Master's Degree	17	6.7
PhD Degree	1	0.4
4. Teaching experience		
Less than 1-10 years	141	55.5
11-20 years	87	34.3
21 years and above	26	10.2
5. Experience of teaching in this school		
Less than 1-5 years	126	49.6
6-10 years	74	29.1
11 years and above	53	20.9

#### Table 3.1 City National Secondary Schools Respondents' Demographic Variable (n=254)

Table 3.2 showed that the level of teacher professional competencies among the respondents were high with mean 4.38 and standard deviation .260. Social culture competency component had the highest mean and standard deviation (M=4.39, SD=.348). This result indicated that the respondents were promoted and developed collaborative skills and encouraged learning in the ability of understanding their students background. Thus, social support at school, including relationships between and among students and adults is considered an essential dimension of school climate (You, O'Malley, & Furlong, 2014). A mean score 4.38 for both curriculum and life long learning comptencies showed that respondents had good understanding of curriculum design. This advantage enabled them to choose suitable teaching and learning strategies which can enhance students achievement. In addition, the respondents were able to develop students' lifelong learning skills through their ability in using any learning instrument. Generally knowledge intensive society and lifelong learning becomes essential for careerlong professional development (European Council 2009; ETUCE 2008).

Table 3.2 Mean And Standard Deviation Of Teacher Professional Competencies In City National Secondary Schools (n=254)

Component	Mean	Standard Deviation		
1. Emotion competency	4.40	.345		
2. Environment competency	4.37	.337		
3. Field competency	4.37	.352		
4. Social culture competency	4.39	.348		
5. Curriculum competency	4.38	.331		
6. Life long learning competency	4.38	.334		
Total	4.38	.260		

Table 3.3 showed that city national secondary schools respondents' continuous improvement level was high, mean 4.41 and standard diviation 263. Both school climate and principal leadership scored the highest mean 4.44. The result indicated that those schools had positive school climate. A positive and sustained school climate based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices and organizational structures (National School Climate Council, 2007).

In addition, the principals were able to use targeted approaches on teachers to influence their learning and instruction. The principal's role is to lead the teachers in learning process to improve their teaching, and learning alongside them about what works and what doesn't (Fullan, 2014).

 Table 3.3. Mean and Standard Deviation Of School Continuous Improvement In City National Secondary

 Schools (n=254)

Factor	Mean	Standard Deviation
1. School climate	4.44	.309
2. Principal leadership	4.44	.405
3. Teacher improvement	4.40	.374
4. Curriculum development	4.35	.372
5. High level performance	4.41	.394
Total	4.41	.263

Table 3.4 showed that emotion competency and school climate (r=.234, p<.001), teacher improvement (r=.206, p<.001), curriculum development (r=.289, p<.001), and high level performance (r=.217, p<.001) had positive small correlation and significant relationship. This result showed the need for improvement in values, moral, beliefs, attitudes, motivation and empathy among the respondents. Teachers need to understand the emotional practice of their job in order to create a suitable environment for students' learning, interact positively with students, and build authentic teacher-student relationships (Hargreaves, 1998; Madalinska-Michalak & Goralska, 2012). In the other words, emotional competency should enable teachers to develop personal well-being and effectiveness in implementing teaching and learning to supplement students socio-emotional development. Besides, emotion competency produce positive school climate which fosters youth development and learning for a productive, contributive and satisfying life in a democratic society. It includes norms, values and expectations that build healthy social relationship, harmonies as well as safe working and learning environment (Thapa et al., 2013). In addition, respondents' emotion competency was under the consideration among their improvement because it will influence the students learning outcomes. Emotion intelligent not only to identify individual own areas of strength, but capable of actively seeking strengths in other individuals (Neale et al. ,2011). The city national secondary schools respondents' emotion competency influenced students achievement which supported by Grant (1993) that the role of teacher's emotional regulation as a means of directing student performance. Moreover, Brackett and Katulak (2006) proved that the level of teachers emotion competency can be manifested in the form performance of students.

The positive medium correlation and significant relationship between environment competency and school climate (r=.309, p<.001), principal leadership (r=.459, p<.001), teacher improvement (r=.416, p<.001), curriculum development (r=.421, p<.001), and high level performance (r=.355, p<.001). This result indicated that city national secondary schools ecology and safety sustainable dimension for learning development. Respondents' environment competency enabled them to demonstrate outstanding classroom management skills which make sure that classroom environment was conducive. Those schools positive climate were built indirectly and enhanced the teachers improvement. Everybody perceive, appreciate natural environment and artificial environment, present the knowledge of natural systems and ecological concepts, understand current environmental issues, even make responsible decisions for the environment by survey, critical thinking, writing, and communication abilities, as well as develop the behavior to balance the quality of life and the environmental quality and solve environmental problems (Chelonis et al. ,2011).

Field competency and school climate (r=.195, p<.001), teacher improvement (r=.213, p<.001), and high level performance (r=.265, p<.001) had positive small correlation and significant relationship. This result showed that respondents need to carry out their profession task of content delivery to ensure students direct interaction with the lesson content. Thus, the involvement of teachers in professional leaning community is necessary to enhance their field competency, professional improvement and school climate. The help from the other stakeholders like teacher trainers, parents, administrators and colleagues, teachers' cognitive processing can be better via discussion and reflection (Wolff, van den Bogert, Jarodzka, & Boshuizen, 2014).

Social culture competency and school climate (r=.214, p<.001), principal leadership (r=.192, p<.001), teacher improvement (r=.183, p<.001), curriculum development (r=.291, p<.001), and high level performance (r=.229,  $\cdot$ p<.001) had positive small correlation and significant relationship. This result indicated that respondents need improve students' collaborative and learning. Systemic social competency integrated into classroom practice and through partnerships with families and community members, implemented schoolwide with the whole school community, and aligned with targeted services for students. This competency is to understand and manage emotions, set and achieve positive goals, feel and show caring and concern for others, establish and maintain positive relationships, and make responsible decisions (Weissberg et al., 2015)

Curriculum competency and school climate had positive small correlation and significant relationship (r=.294, p<.001). The coefficient of determination for curriculum competency was 8.64% shared variance. School climate helped to explain 8.6% shared variance in respondents' scores on the curriculum competency scale. This result showed that city national secondary schools respondents should have good understanding of curriculum design. The content knowledge and pedagogical skills framework will enable them to choose suitable teaching and learning strategies which can enhance students achievement. However, curriculum development is a process and is socially constructed. Teachers are involved in the process of developing a curriculum that takes account of contextual factors rather than pre-specifying objectives (Stenhouse, 2012).

The positive small correlation and significant relationship between life long learning competency and school climate (r=.248, p<.001), high level performance (r=.298, p<.001). This result indicated that those city national secondary schools respondents need to enhance their lifelong learning competency through formal learning, nonformal learning, and informal learning. Lifelong learning literacy as teachers, after acquiring teaching positions, continuously acquiring, updating, promoting knowledge, skills, and attitudes with formal, non-formal, and informal methods to enhance the attitudes, abilities, habits of self-actualization and professional growth, to develop the quality of skills and affection for the cognition of lifelong learning (Skaalvik, 2010; Marcia, 2015). When teachers develop students lifelong learning skills, a positive learning school climate will be create indiretly. In addition, lifelong learning not only enhance the students knowledge but communication, collaboration, critical, creative and innovatice thinking skills. The content of lifelong learning literacy for elementary students contained the abilities to cultivate enthusiastic learning attitudes, present fundamental cognition, learn how to learn, learn transformation, well use learning resources, and teamwork (Murphya et al., 2011).

Continuous improvement ractors in City National Secondary Schools (n=234)					
TPC Components	SC	PL	TI	CD	HLP
1. Emotion competency	.234**	.347**	.206**	.289**	.217**
2. Environment competency	.309**	.459**	.416**	.421**	.355**
3. Field competency	.195**	.414**	.213**	.384**	.265**
4. Social culture competency	.214**	.192**	.183**	.291**	.229**
5. Curriculum competency	.294**	.401**	.332**	.364**	.332**
6. Life long learning competency	.248**	.402**	.350**	.334**	.298**

Table 3.4 Pearson Correlations between Teacher Professional Competencies Components and School Continuous Improvement Factors In City National Secondary Schools (n-254)

\*\* p <.001 (2-tailed)

Instruction:

TPC = Teacher Professional Competencies

SC = School Climate

PL = Principal Leadership

TI = Teacher Improvement

CD = Curriculum Development

HLP = High Level Performance

Table 3.5 showed that teacher professional competencies and school continuous improvement factors had positive large correlation and significant relationship with school continuous improvement (r=.568, p<.001). The coefficient of determination for teacher professional competencies was 32.26% shared variance. School continuous improvement factors helped to explain nearly 32.3% of the variance in respondents' scores on the

teacher professional competencies scale. This result indicated that teacher professional competencies which included emotion competency, environment competency, field competency, social culture competency, curriculum competency and life long learning competency were correlated with school continuous improvement factors which consisted school climate, teacher improvement, principal leadership, curriculum development and high level performance.

 Table 3.5 Pearson Correlations Between Teacher Professional Competencies and School Continuous

 Improvement

Variable	Correlation value	
1. Teacher Professional Competencies	.568 **	
2. School Continuous Improvement	.568 **	

\*\* p <.001 (2-tailed)

The overall findings indicated that teacher professional competencies level was high with mean 4.38 and .260 standard deviation, school continuous improvement level was also high with mean 4.41 and .263 standard deviation. In addition, teacher professional competencies and school continuous improvement factors had positive large correlation and significant relationship (r=.568, p< .001). The significant correlation between teacher professional competencies and school continuous improvement in city national secondary schools showed that the null hypothesis was rejected and the alternative hypothesis was accepted. This result matched of a study by Zulfija, Indira and Elmira (2013) which showed the success factor in inclusive education which was contributed by teacher professional competencies.

### 4. Conclusion

The findings of this study showed that teacher professional competencies and school continuous improvement levels were high. These two variables had positive large correlation and significant relationship which provided latest information for stakeholders to achieve their school continuous improvement goal. The researchers recommended the items for teacher professional competencies and school continuous improvement increased and a comparison among the types of schools like cluster secondary school, missionary secondary school or Islamic secondary school be conducted. The study also can involve students and principals as respondents to evaluate the outcome of school continuous improvement.

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