



EDUCATION DEVELOPMENT VIA SCHOOL BASED MANAGEMENT & TEACHER EMPOWERMENT

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ABSTRACT

Purpose: Education development and teacher empowerment has become a focus of attention for School Based Management (SBM) in Asia. The HKSAR Government formally introduced a SBM system in Year-2000 with a view to enhancing the quality of education through the empowerment of teachers and other initiatives.

Methodology: This study used quantitative research, asking more than 500 randomly selected teachers to respond to a questionnaire measuring their perception of four constructs under SBM: teacher empowerment, participation in decision-making, collaboration and student achievement under SBM.

Findings: Confirmatory factor analysis showed the questionnaire is valid and reliable, with excellent goodness of fit indices. Analyses show that teachers have significant positive perceptions of teacher empowerment, participation in decision-making, collaboration and students' achievement under SBM. A proposed theoretical model of the relationships between various variables is proposed. Structural Equation Model shows that data fit the model excellently, with teacher empowerment having significant positive effects on the other three variables.

Limitations: Schools are in general reluctant to release their public examination results. Hence evaluation of student achievement is difficult.

Implications – Practical: The theoretical framework developed can be widely used by schools to improve their teaching effectiveness amongst the Asia countries where education system and culture are similar.

Implications – Social: Education is paramount to social development, and hence the implication for the society is highly significant.

Originality/Value: This study is the first of its kind to support the proposed benefits of SBM on the quality of education in Hong Kong. It sheds light on the relationships between teacher empowerment, teacher participation, collaboration and student achievement under SBM in Hong Kong.

Keywords: Asia, Education Development; School Based Management; Teacher Empowerment; Participation in Decision-making, Collaboration, Student Achievement

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1. INTRODUCTION

In the past decades, many countries around the world restructured their education through School Based Management (SBM) with a view to enhancing the quality of education provided by schools (Beare, 1991; Beare & Boyd, 1993; Brian John Caldwell, 2005; Cheng, 2022; Gamage, 2008; Grinshtain & Gibton, 2018). In the 1990s, SBM became one of the most frequently discussed approaches to restructuring in the USA (Hanson, 1991). In March 1991, The Education and Manpower Branch and Education Department of Hong Kong proposed to implement a reform for schools in the public sector, the School Management Initiative, with a view to improving school effectiveness (Education and Manpower Department, 1991). Since 2000, all aided schools in Hong Kong have adopted SBM (Education Commission, 2019). The Education Bureau set up a Task Force in 2019 to review and improve the implementation of SBM (Education Commission, 2019). All the above changes assume that SBM will positively enhance the effectiveness of schools through empowerment of teachers to participate in decision-making, collaboration and enhancing student achievement. Kwan and Li (2015) argued that the advantages of SBM in Hong Kong was yet to be realised and suggested revisiting the SBM to ensure the realisation of the initiative's benefits on the quality of education. Cheng (2022) observed that strong international evidence to support the link between SBM and enhanced student learning was lacking. Since there have been no relevant studies on the advantages and effects of SBM on the outcomes of schools in Hong Kong, this study attempts to study the effects of SBM on teacher empowerment, teachers' participation in decision-making, collaboration and students' achievement.

2. LITERATURE REVIEW

2.1. School Based Management (SBM) as an International Standard

The Harvard Graduate School of Education (2021) investigates the vital role of a shared vision in improving school-based management practices. It emphasizes the importance of collaborative decision-making among educators and community members, which leads to better student outcomes and increased teacher satisfaction. The Stanford Center for Opportunity Policy in Education (2022) highlights the connection between a unified vision and effective school governance.

Through various case studies, it shows that schools with a clear, shared vision have higher engagement levels from both staff and students, resulting in improved academic performance.

Smith and Brown (2023) explore how shared visions foster innovation in school-based management across diverse educational settings. They discuss frameworks for creating a collective vision among educators and stakeholders, which enhances institutional resilience and adaptability. They further examine how shared vision facilitates school improvement initiatives. They identify key strategies for developing a cohesive vision that aligns educational goals with community values, thereby enhancing stakeholder commitment and buy-in.

Here's a summary of key findings on school-based management (SBM) and its relationship with quality education across various regions of developed countries:-

USA: Research indicates that school-based management practices in the USA have led to increased school autonomy, which correlates with improved student achievement. Schools that engage parents and communities in decision-making processes tend to foster a better educational environment, leading to higher graduation rates and more favorable performance on standardized tests (Rorrer, 2008).

European Union: In the EU, the implementation of SBM varies significantly across member states. Countries that adopt SBM report improvements in educational quality, particularly through enhanced local governance and accountability mechanisms. Studies show that schools with greater autonomy can better tailor educational programs to meet local needs, resulting in higher student engagement and achievement (European Commission, 2019).

UK: The UK has seen a shift towards SBM through policies that grant schools more control over budgets and curricula. Research highlights that schools with effective SBM practices, characterized by strong leadership and community involvement, demonstrate improved academic outcomes. However, challenges remain in ensuring equitable resource distribution (Miller, 2017).

Australia: Australia's approach to SBM has focused on increasing school autonomy and accountability. Evaluations indicate that schools practicing SBM have better student outcomes, particularly in disadvantaged areas. The emphasis on collaboration among teachers, parents, and the community has been pivotal in fostering a supportive learning environment (Lingard & Sellar, 2013).

Japan: In Japan, SBM has been integrated into broader educational reforms aimed at enhancing quality. Research suggests that while SBM has strengthened school accountability and community involvement, the traditional emphasis on centralized control remains a challenge. Schools that effectively implement SBM show improvements in student motivation and achievement (Yoshida, 2015).

Singapore: Singapore's SBM model emphasizes strong leadership and a high degree of school autonomy. Studies show that schools with effective SBM practices are able to innovate and implement tailored programs that significantly enhance educational quality. The focus on professional development for teachers is also a critical factor contributing to improved student outcomes (Tan, 2018).

SBM has shown promise in enhancing educational quality across various regions by increasing school autonomy and fostering community engagement. The effectiveness of SBM, however, depends on the specific contexts and mechanisms of implementation within each country.

2.2. SBM in Hong Kong

Over the years, SBM represented a strong global trend of school restructuring adopted by many countries, which aimed at improving the quality of education through decentralization, autonomy initiatives, site-based decision-making, site-based budgeting and empowerment of teachers (Cheng, 2022). The school-based management in the USA aimed at improving the quality of education through decision-making moved to the school level, empowerment of certain groups of people such as teachers and parents, a school council at the school site, and more flexibility in using resources (Hanson, 1991).

The School Management Initiative (SMI) (Education and Manpower Department, 1991) was introduced in 1991 with 18 recommendations to improve the quality of education with measures similar to the SBM in the USA. Since 2000, all aided schools in Hong Kong have adopted SBM (Education Commission, 2019). There are two basic principles in implementing school-based management: 1. School-based management seeks to provide schools with enhanced flexibility and autonomy in their daily operation and resources management according to the needs of their students. 2. School-based management seeks to enhance transparency and accountability in the use of public funds and school operations by providing a participatory decision-making mechanism where all key stakeholders are involved (Education Bureau, 2019).

Key elements of school-based management consist of defining responsibilities, widening participation, developing the professionalism of teachers, more flexibility for schools to use their financial resources in setting goals through school development plans according to the needs of students, an annual evaluation of effectiveness and developing a culture and characteristics unique to the school (Education Bureau, 2019). The ultimate goal is to improve school effectiveness with better student achievement.

Concerning flexibility of using financial resources, the Government has introduced the Operating Expenses Block Grant (OEBG) and Capacity Enhancement Grant for schools so as to facilitate their implementation of school-based management and formulation of long-term development plans. Schools can make use of these grants to contract out services or employing additional staff on top of the approved establishment. The purpose is to relieve teachers' workload so that they will have enhanced capacity to implement the initiatives of the education reform, such as developing school-based curriculum, enhancing students' language proficiency and coping with the diverse and special learning needs of students. Besides, schools are allowed to retain any unspent provision of the OEBG and use the grant flexibly on special school programmes, such as measures to improve the teaching and learning environment.

To ensure decentralisation with accountability, SBM requires the School Management Committee (SMC), the highest authority in the management of a school, to include the principal, teachers, parents, alumni, and community representatives, in addition to representatives of the sponsoring body of the school to play a significant role in making important decisions regarding school policies, budgeting, and staffing. Before the introduction of SBM, SMC is not registered as a legal entity. After the introduction of SBM, the Incorporated Management Committee (IMC), registered as a legal entity, was later introduced to replace SMC to act as the highest authority in relation to the management of schools with legal responsibilities.

2.3. SBM and School Effectiveness

Cheng (2022) pointed out that there are barriers for schools adopting SBM to achieve the aim of enhancing the quality of education due to the lack of understanding of the complex nature of SBM, research and building up the capacity for school effectiveness. The assumption of greater autonomy under SBM leading to enhanced student learning has not yet been confirmed due to a lack of strong international evidence and a comprehensive framework to support it. A literature review showed that there were mixed results on the relationships between SBM and school effectiveness (Arar & Nasra, 2020; Brian John Caldwell, 2005; Cheong Cheng & Mo Ching Mok, 2007; Nir & Hameiri, 2014). Arar and Nasra (2020) found a positive relationship between all dimensions of SBM and school effectiveness using a sample of Arab teachers in Israel. Caldwell (2005) found that SBM significantly improved students' learning in the state of Victoria, Australia. The results of a study in Indonesia indicated that the implementation of SBM had limited success in enhancing learning (Amon & Bustami, 2021).

The assumed positive effects of SBM in Hong Kong on school effectiveness were yet to be validated (Kwan & Li, 2015). Arar and Nasra (2020) suggested that SBM depended on the context in which it was applied and it could be a serious challenge for some of the local Arab governments. The above literature review suggests that research studies are needed to find out the relationships between various measures of SBM and students' learning outcomes under different education systems, contexts and ways of implementation of the policy. This study is designed to investigate the effects of various features of SBM, including teacher empowerment, participation in decision-making, teacher collaboration in teaching and students' achievement in Hong Kong.

2.4. SBM and Teacher Emotion/Empowerment

Teachers are formally empowered under SBM through a formal organization structure with committees in place, roles in developing school plans, modifying curriculum to meet the specific needs of students, and influencing the budget with a view to enhancing the quality of teaching and learning (Education Bureau, 2019). Teachers can participate in decision-making by serving as chairpersons and members. These formal committees are responsible for planning, deciding and implementing matters related to teaching and learning, students and whole-person development policies. Through these formal organization structures, teachers can take part in policy and decision-making according to their expertise with a view to enhancing the quality of education provided by the school through teacher empowerment.

To enhance education quality, a school needs to develop a school development plan (Education Bureau, 2019) through a consultative process involving teachers, administrators, and other stakeholders. This plan serves as a roadmap for the school's development and improvement, and teachers are empowered to contribute their ideas and expertise to its formulation.

SBM provides flexibility for schools to use financial resources and empowers teachers to modify the curriculum to meet the unique needs of their students. Teachers can actively participate in curriculum development and revision committees, tailoring the curriculum to the local context and their students' specific needs and aspirations with support in financial resources through the block grant.

SBM in Hong Kong provides schools a certain degree of financial autonomy. Each school can use the money in a block grant amounting to several millions of dollars flexibly. Schools have control over the block grant to prioritize resources based on their specific needs. Through involvement in school decision-making processes, teachers can influence the budget allocation to support their teaching and learning requirements.

SBM encourages schools to provide professional development opportunities for teachers. With the introduction of SBM, three days in the school calendar can be assigned for teachers' professional development with no students attending school. Schools can also allocate resources for teachers to attend workshops, seminars, and training sessions to enhance their teaching skills and keep up with the latest educational practices. This investment in professional development empowers teachers to improve their pedagogical approaches continually.

From the above literature review, it can be seen that one of the objectives of SBM is to enhance education quality through teacher empowerment.

In order to study whether teacher empowerment is a consequence of SBM, we need to understand the concept of empowerment. Empowerment of teachers under SBM has three aspects: (1) the organization structure and policies enabling a teacher to perform their jobs with the power and autonomy to decide on the goals as required in the school development plan, the procedures, the financial resources and to make changes when necessary under SBM; (2) empowerment behaviour and leadership of principals (Bernd, 1992; Brian J. Caldwell & Spinks, 2021; Murray et al., 1993); and (3) teachers' psychological empowerment (Lee & Koh, 2001).

Empowerment is a process of enhancing self-efficacy among employees by identifying and removing conditions that foster powerlessness by both formal organizational practices and provision of efficacy information (Conger & Kanungo, 1988). Conger et al. (2000) visualised empowerment as an outward process of motivating followers and enhancing followers' internal feelings of self-efficacy.

Thomas and Velthouse (1990) considered empowerment a multi-dimensional concept and defined empowerment as increased intrinsic task motivation manifested in four cognitions reflecting an individual's orientation to work role: meaning, competence, self-determination and impact. Spreitzer (1995) also defined psychological empowerment as a motivational construct manifested in four cognitions: meaning, impact, competence and self-determination. In the above definition, meaning is the value of a work goal or purpose. Competence is similar to self-efficacy. Self-determination is an individual's sense of having a choice in initiating and regulating actions. Impact is the degree to which an individual can influence strategic, administrative or operating outcomes at work. Policies under SBM can enhance the four cognitions as explained below.

SBM provides policies to empower teachers by supporting their participation in decision-making, collaboration, and professionalism. Teachers have the autonomy and flexibility to set goals through school development plans and design curricula according to students' needs. This gives meaning and value to their work. As a result, teachers will be psychologically empowered.

Hence, teacher empowerment is defined in this study as a motivational construct manifested in teachers' understanding of four cognitions: meaning, impact, competence, and self-determination. After reviewing SBM policies and related literature, it is proposed that SBM will enhance teachers' psychological empowerment, as Hypothesis-1 in this study.

2.4. Teacher Empowerment, Participation in Decision Making and Collaboration

Employee empowerment has been recognized as an important factor contributing to organizational success (Jose & Mampilly, 2014). The SBM provides an environment to enhance the internal motivation of teachers to perform their duties by nurturing self-sufficiency or reducing their sense of powerlessness (Ergeneli et al., 2007). Arar and Nasra (2020) found that teacher motivation was an important variable mediating between SBM and school effectiveness. Schools under SBM empower teachers to take part in decision-making and work collaboratively to enhance teaching quality through rules and policies in place.

If teachers are psychologically empowered, they will have the motivation to take part in decision-making and collaborate with a view to enhancing the quality of teaching and learning. With the above literature review, it is proposed that teachers' perception of being empowered will positively affect teachers' participation in decision-making and collaboration under the SBM. Hence Hypothesis-2 proposes that teacher empowerment will enhance teacher participation in decision-making, and Hypothesis-3 proposes that teacher empowerment will enhance teacher collaboration.

2.5. Participation in Decision Making and Collaboration

To understand the relationship between teacher participation and teacher collaboration, we need to clarify the concept of collaboration in this study. Collaboration has a similar meaning to the constructs of the professional community (Louis et al., 2010; Voelkel et al., 2017; Wahlstrom & Louis, 2008). The professional community consists of several dimensions, reflective dialogue, deprivatisation of practice, collaborative activity and a shared sense of purpose (Louis & Marks, 1998). Voelkel & Chrispeels (2017) pointed out that professional learning communities, collaboration with colleagues (Rosenholtz, 1989), and professional community (Little, 2003; Louis & Marks, 1998) are terms having similar meanings used in various studies.

Teacher collaboration, which varies widely among teachers and has significant differences among schools, can be classified as instructional collaboration, student collaboration and assessment collaboration (Ronfeldt et al., 2015). Teacher collaboration is affected by school and teacher characteristics (Bryk et al., 1999; Louis et al., 1996). With the literature review, collaboration is defined in this study as teachers' collegial sharing of views on teaching methods and strategies, giving support to colleagues and enhancing teaching and learning quality through teamwork.

Studies on school effectiveness and improvement find a positive relationship between professional community and participation in decision-making (Lomos, 2021). Honingh and Hooge (2014) found that primary school teachers' participation in decision-making positively affects collaboration. Participation in decision-making enhances teachers' mutual understanding, which facilitates professional interaction. There is a significant and positive correlation between participation in decision-making and professional interaction in more than twenty countries (Lomos, 2021). With the above literature review, Hypothesis-4 proposes that teacher participation in decision-making under SBM positively affects teachers' collaboration in teaching.

Teachers' collaboration in management is one of the features of SBM proposed by the Education Bureau of Hong Kong (Education Commission, 1997, 2019). SBM sets the scene in Hong Kong for teachers' increased opportunities to be involved in collaborative management of teaching-related matters, through participation in decision-making. Hence it is proposed that participation in decision-making enhances teacher collaboration as Hypothesis-4.

2.6 Collaboration, Participation in decision-making and Student Achievement

Research studies show that student achievement has a link with teacher collaboration (Goddard et al., 2007), participation in decision-making (Honingh & Hooge, 2014; Smylie, 1994), and collegiality (Ning et al., 2015). Teacher collaboration was found to have a significant effect on improving students' academic achievement (Goddard et al., 2007; Ronfeldt et al., 2015; Saka, 2021). Anwar et al. (2021) found that collaborative team teaching was strongly and significantly correlated to students' achievement motivation. Hence, Hypothesis-5 proposes that teacher collaboration under SBM will positively affect students' achievement.

The underlying principle of SBM is to improve education quality through participation in decision making by stakeholders and teachers, hence Hypothesis-6 proposes that participation in decision-making will positively affect students' achievement.

2.7. Effects of SBM

Since SBM was introduced with the goal of enhancing participation, collaboration and students' achievement. Hence it is proposed that SBM enhances collaboration, participation in decision making and students' achievement as Hypothesis-7, 8 & 9, respectively.

Theoretical framework

A theoretical framework of this study related to the hypotheses proposed is put forward to show the relationships among empowerment, teachers' participation in decision-making, collaboration and student achievement in Figure-1.

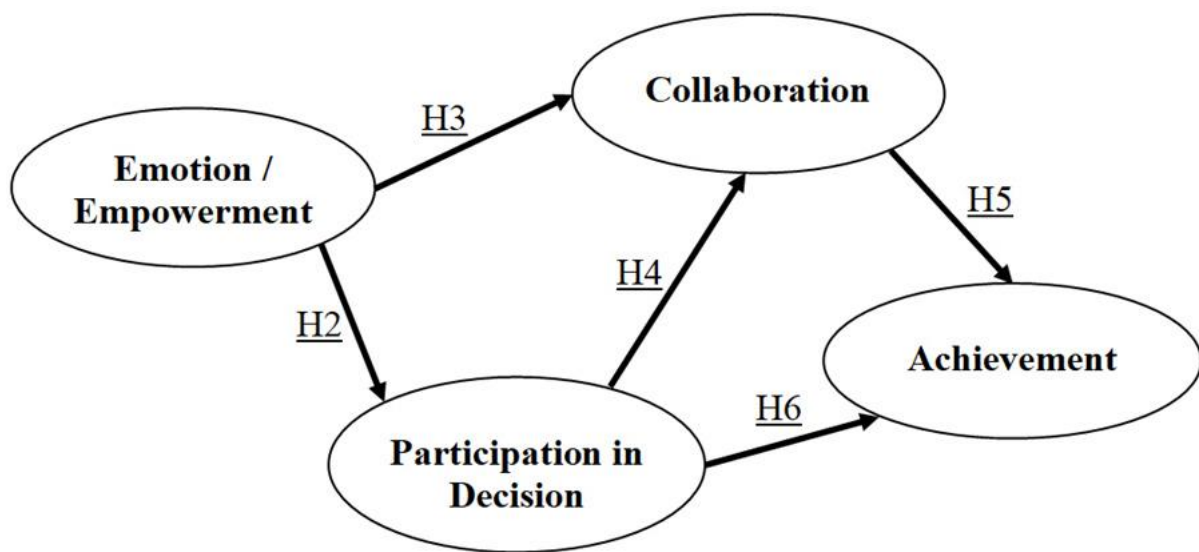


Figure-1: Theoretical Framework of The Study

3. RESEARCH METHODOLOGY

Hypotheses

According to literature review, there are eight hypotheses proposed in this study:

Hypothesis-1: SBM will enhance teachers' psychological empowerment

Hypothesis-2: Teacher empowerment will positively affect teachers' participation in decision-making under the SBM

Hypothesis-3: Teacher empowerment will positively affect teachers' collaboration under SBM.

Hypothesis-4: Teacher participation in decision-making positively affects teachers' collaboration.

Hypothesis-5: Teachers' collaboration will positively affect students' achievement.

Hypothesis-6: Teacher participation in decision-making will positively affect students' achievement.

Hypothesis-7: SBM will enhance teacher collaboration.

Hypothesis-8: SBM will enhance teacher participation in decision-making

Hypothesis-9: SBM will enhance students' achievement.

3.1. Research Design

This research used a cross-sectional survey with a questionnaire developed to measure the four constructs in this study: Empowerment, Participation in Decision-making, Collaboration and Student Achievement. The development of instruments went through the following stages: 1. Review of related literature and instruments already developed; 2. Proposing constructs related to this study and defining the constructs to be measured; 3. Developing instruments according to the proposed construct and situation of secondary schools in Hong Kong and with reference to instruments used by other studies; 4.

Seeking comments from some focused groups and professionals with relevant experience and expertise to refine the proposed instruments; 5. Collection of data to validate the instruments; 6. Confirmatory Factor Analyses for validating the instruments; 7. Using the Structural Equation Model to investigate the relationship among variables according to the proposed theoretical framework.

3.2. Measures

3.2.1. *Empowerment (the variable is referred to as “Empowerment” hereafter)*

Empowerment is defined as teachers’ psychological empowerment, a motivational construct manifested in four cognitions: meaning, impact, competence and self-determination. Eight items were developed according to the literature reviewed and the definition of *Empowerment* proposed in this study to measure teachers’ psychological empowerment. An example of the items is "teachers motivated to significant level of commitment and action"

3.2.2. *Teacher Participation in Decision-Making (“Participation”)*

This study defines *Participation* as opportunities for teachers to take part in decision-making and to bring about changes in school policy and actions related to teaching, curriculum, and students’ development. Three items were developed to measure teachers’ perceived opportunities in participation in the three aspects and three items were related to teachers’ perception of making changes through their participation in decision making. An example of the six items is “Opportunities to participate in school policy in teaching and curriculum”. Another example is “Bringing changes in school policy in teaching and curriculum through participation in decision making”.

3.2.3. *Collaboration (“Collaboration”)*

In this study, *Collaboration* is defined as teachers’ collegial sharing of views on teaching methods and strategies, frequent exchange of ideas and shared expectations among themselves, giving support to colleagues and enhancing teaching and learning quality through teamwork. Five items were developed accordingly. An example is "Frequent discussion and sharing among colleagues in teaching".

3.2.4. *Student Achievement (“Achievement”)*

This study defines *Achievement* as students’ academic, behavioural and social performance as rated by teachers. Three items were developed to measure *Achievement* accordingly. In many studies, students’ examination scores are indicators of academic achievement. However, schools in Hong Kong adopt no standard evaluation tests. The only common achievement scores of students in secondary schools are the result of a public examination, the Hong Kong Diploma of School Examination, which was participated by all final year students of secondary schools.

Teachers usually have access to their students' performance in the public examination and these results can give an objective indicator to measure students' academic achievement. In addition to the public examination results, the Educational Bureau will also send to every school an analysis of their students' value-added performance in all subjects. Since teachers understand the academic performance of their students through the value-added performance analysis, one item in the questionnaire asked teachers to rate their students' academic performance according to their understanding of students' value-added performance.

There is no objective measurement of the behavioural and social performance of students in Hong Kong. Teachers are usually given the task of including students' performance in social and behavioural aspects in the examination report given to students. So, teachers are in an excellent position to rate their students' academic, social and behavioural performance. In addition to the rating of students' value-added academic performance, two items are designed to measure teachers' rating of students' social and behavioural performance. An example is "Performance in academic performance is good compared to other schools with similar intake of students".

4. ANALYSES AND RESULTS

More than 550 teachers from 48 secondary schools chosen from a random sample responded to the survey. After cleaning data with incomplete responses, 529 cases were analysed by SPSS and AMOS version 28.

4.1. Demographic Data

The demographic data of teachers show that the average age of teachers is 34 years. 42% of teachers have more than 11 years of teaching experience and 40% of them have more than 10 years of teaching experience in their present school. 35% of teachers are in the senior ranks. 57% of them are female teachers and 43 % are male teachers. The demographic data are similar to the statistics of teachers in Hong Kong.

4.2. Confirmatory Factor Analysis

A measurement model with all four constructs, including *Empowerment*, *Participation*, *Collaboration*, and *Achievement*, was confirmed with acceptable goodness of fit indices (CFI=0.957; IFI=0.957; RMSEA=0.051). Table-1 reports the reliability and correlation among five constructs. The Cronbach Alpha reliability of all the scales, measured by SPSS version 28, lies between 0.775 to 0.916. The Composite Reliability coefficients lie between 0.749 to 0.889. Correlation coefficients between the five constructs are significant at 0.01 level, ranging from 0.256 to 0.773. The analyses above show that the five constructs are distinct and have discriminant validity.

Table-1: Correlation Between Collaboration, Achievement, Participation and Empowerment and their Composite Reliability (CR) and Cronbach's Alpha (CA)

	Collaboration	Achievement	Participation	CR	CA
Collaboration				.749	.779
Achievement	.325*			.780	.775
Participation	.492*	.236*		.889	.916
Empowerment	.685*	.335*	.475*	.888	.887

*p < 0.01

4.3. Means and T-tests of The Four Variables

In order to test Hypotheses-1, 6, 7 & 8, the four constructs' means, standard deviation and one sample t-test are analysed with results shown in Table-2. The t-test results show that all the mean values are significantly above three on a five-point Likert scale. The results show that teachers positively perceive empowerment, participation in decision-making, collaboration and students' achievement. The results support Hypotheses 1, 3, 5 and 7, which state that SBM will enhance empowerment, teacher participation in decision-making, collaboration and student achievement, respectively. The results support the assumptions of SBM in enhancing empowerment, teacher participation, collaboration and student achievement.

Table-2: The Means, Standard Deviations and the One-Sample T-test of Participation and Collaboration (Test value=3)

	N	Mean	SD	t	Significance
Collaboration	529	3.292	.740	9.088	<.001
Participation	529	3.228	.924	5.673	<.001
Empowerment	529	3.214	.737	6.687	<.001
Achievement	529	3.079	.894	2.042	.0420

4.4. Structural Equation Model

In order to test the validity of Hypotheses 2, 3, 4, 5 and 6 of this study, a structural equation model is put forward according to the theoretical model for analysis by Amos Version 28. The goodness of fit indices of the SEM Model is excellent (CFI=0.958; IFI=0.958; RMSEA=0.051). Table-3 shows the standardised direct and total effects among the variables.

Table-3: Standardised Total Effects (TE) and Direct Effects (DE) among Variables for the SEM

	Empowerment		Participation		Collaboration	
	TE	DE	TE	DE	TE	DE
Participation	.540*	.540*				
Collaboration	.963*	.870*	.171*	.171*		
Achievement	.430*	0	.064*	ns	.455*	.455*

* $p < 0.001$; ns – Not significant

From Table-3, it can be seen that *Empowerment* has a significant direct and total effect of 0.517 on *Participation*. This result supports Hypothesis-2, which states that teacher empowerment will positively affect teachers' participation in decision-making under the SBM

Teacher empowerment has a significant direct and total effect of 0.963 on Collaboration. This result supports Hypothesis-3, which states that teacher empowerment will positively affect teachers' collaboration under the SBM

Participation has a significant direct and total effect of 0.248 on Collaboration. This result supports Hypothesis-4, which states that teacher participation in decision-making under SBM positively affects teachers' collaboration.

Collaboration has a significant direct and total effect of 0.455 on Achievement. This result supports Hypothesis-5, which states that teacher collaboration under SBM positively affects students' achievement.

Participation in decision-making has no significant direct effect on students' achievement. Hence Hypothesis-6 is not supported.

The theoretical model in this study is also supported by the data collected. However, the results of the above analyses support all nine hypotheses except Hypothesis-6 of this study.

The standardised total effect of *Empowerment* on *Achievement* is 0.371, implying that *Empowerment* accounts for 13.8% of the variance of *Achievement* through intervening variables of *Participation*, and *Collaboration*.

Participation has no significant direct effect on student achievement. However, it has a significant total effect of 0.064 on *Achievement*, implying that *Participation* accounts for 0.4% of the variance of *Achievement* through the intervening variable, *collaboration*.

The standardised total effect of Collaboration on Achievement is 0.461, implying that Collaboration accounts for 21.21% of the variance of *Achievement* directly.

5. DISCUSSION

The results of this study show that, in the context of SBM in Hong Kong, teachers have positive perceptions of psychological empowerment, participation in decision-making, collaboration, and student achievement, as measured by the questionnaire in this study. This study is the first of its kind giving support to the claims of the benefits of SBM in Hong Kong by measuring the perception of 529 teachers through a questionnaire.

The mean values of the four constructs in decreasing rank order are collaboration, participation in decision-making, empowerment and student achievement. Since the most salient feature of SBM is to require and support teachers to collaborate through taking part in decision-making with the introduction of new policies and organization structure, it is reasonable to find teachers' responses with the highest ratings in relation to collaboration and participation in decision-making. It is not easy to enhance students' achievement even with a lot of input from teachers and the implementation of SBM. Hence, it is also reasonable to find that teachers' ratings of students' achievement are significantly positive but are the lowest among the four constructs. The results of Hong Kong students' performance in the Programme for International Student Assessment (PISA) in the past few years also lent support to the significant positive rating of students' academic performance. The Education Bureau announced in 2022 that Hong Kong students' steady performance in mathematical, scientific and reading literacy, with overall scores continuously surpassing the international average. The finding of teachers' positive perception of students' achievement in this study supports the implementation of SBM for enhancing students' achievement.

Teachers are found to be psychologically empowered in this study. SBM provides formal organization structure, policies and support to teachers to play a very important role of enhancing the quality of teaching and learning (Education Bureau, 2019). The measures introduced provide teachers with the environment to understand and experience the four cognitions of empowerment. It takes time for teachers to work under SBM to understand and experience the real benefits of SBM. The finding in this study of teachers having a positive perception of being empowered is in line with the goals and assumptions of the implementation of SBM. Since teacher empowerment has significant positive effects on all other three variables in this study, schools should attach great importance to further enhancing teacher empowerment.

Psychological empowerment of teachers has significant positive effects on teachers' participation in decision-making, collaboration and student achievement. The results are in line with studies suggesting that employee empowerment is an important factor contributing to organizational success (Jose & Mampilly, 2014). If teachers feel psychologically empowered, they will have the motivation and make contributions to take part in decision-making and collaborate among themselves to enhance students' achievement. The effects of teachers being psychologically empowered on enhancing students' achievement is also supported by the finding that teacher motivation is a very important mediating variable between SBM and school effectiveness (Arar & Nasra, 2020).

Teachers' collaboration receives the highest rating from teachers and has the most significant effect on student achievement. This result is supported by other studies findings on the importance of teacher collaboration on student achievement (Goddard et al., 2007; Ronfeldt et al., 2015; Saka, 2021). It also supports the assumption and rationale of adopting SBM for improving school effectiveness through teachers' participation and collaboration. This study supports the implementation of SBM to improve teacher collaboration, participation in decision-making and student achievement.

Teachers' participation in decision-making has no significant direct effect on student achievement in this study. Participation in decision-making requires teachers to spend extra time in addition to their teaching duties. Adverse effects may result if the time spent is not related to improving teaching effectiveness. Although participation in decision-making has no direct effect on students' achievement, it has a very small positive significant effect on students' achievement through teacher collaboration as a mediating variable. This study finds that teachers' participation in decision-making significantly enhances teacher collaboration, which in turn positively affects students' achievement.

The positive significant relationship between participation in decision-making and collaboration suggests that teachers' participation in decision-making should relate to teaching and managing teaching matters as far as possible so as to enhance teacher collaboration. If teachers' participation in decision-making is not related to teaching, collaboration in teaching may not be enhanced and adverse effects such as the perception of extra workload may result.

Judging from Hong Kong students' performance in the PISA in the past decades, one can conclude that students' academic performance is quite good as compared to other countries. This study also finds that students' achievement is quite positive, as rated by teachers responding to this study. There are various factors related to students' performance. The relationships among teacher empowerment, teacher participation in decision-making, collaboration and students' achievement found in this study suggested that teacher empowerment and teacher collaboration could have 17.1% and 22.1% on the variance of students' achievement respectively. The findings showed that as a result of the implementation of SBM in Hong Kong, teacher empowerment, teacher participation in decision-making and teacher collaboration were enhanced.

The results of the analysis by Structural Equation Modelling may cast light on the strategies of improving students' achievement through enhancing the above three variables.

6. CONCLUSION

The results of this study support the assumption and goals of SBM to positively enhance teacher empowerment, participation in decision-making, collaboration and student achievement. The government should further enhance the implementation of SBM, with research and experience sharing of schools that effectively adopt the policy of SBM with positive results of enhancing the quality of education. This study finds that teacher empowerment and teacher collaboration have significant positive effects on students' achievement. Further research is needed to find out what factors may enhance teacher empowerment and teacher collaboration in addition to the management structure of SBM to further improve the effects of SBM on improving quality of education.

Professional development courses are needed to enable stakeholders, especially principals and teachers, to better understand the rationale, strengths and weaknesses of SBM and to unleash the potential of SBM in enhancing the quality of education.

The rapid development of AI technologies can certainly bring about changes in teaching and learning. SBM can empower teachers and schools to try out innovative ways of improving teaching and learning quality through autonomy and flexibility, such as adopting new teaching technologies and tailoring curricula for the diverse needs of students. Schools can use the flexibility of financial resources to support and inspire teachers in acquiring new skills and knowledge collaboratively, such as how to apply AI technologies to improve the quality of education under SBM.

Research to find out ways of delivering quality of education under SBM is also needed. One special feature of SBM is the autonomy and flexibility in using financial resources to improve teaching and learning quality. Before the introduction of SBM, aided schools did not have a substantial fund to be used with autonomy and flexibility. Under SBM, many aided schools can have a fund amounting to millions of dollars to be used with flexibility for educational purposes such as purchasing equipment and facilities, introducing new teaching methodologies, or providing special services to students. Research and sharing of effective use of financial resources with flexibility are needed to enable schools further to use the financial resources with the goal of improving the quality of students' learning and development.

As most, if not all, countries' governments put the highest percentage of national expenditure in education, education development has become an important topic of study globally. Consequently, the findings of this paper has put light to the important issue of teacher empowerment which has become a focus of attention for School Based Management (SBM) worldwide. This is eminent as from the literature survey in **Para.2.1**, other Asian countries are facing similar problems as is in HK. Therefore, the relevance and usefulness of findings to other educational contexts are hereby explicitly implied.

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