# Positive Impacts and Challenges of School-Based Management in New Generation Schools and Resource Schools in Cambodia

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## Abstract

This paper examined the positive impacts and challenges of the school-based management implementation of the New Generation Schools and Resource Schools in Cambodia. Six upper secondary schools, including 3 New Generation Schools and 3 Resource Schools, were purposively selected from three different provinces in Cambodia. 272 teachers (97 females and 175 males) were randomly selected to fill in the paper-based questionnaire and 6 school principals were asked for the semi-structured interviews. The findings showed that the positive impacts of school-based management included school autonomy, accountability, good management structure, and stakeholder involvement. The school-based management provided the school with fruitful results on student enrolment, desired promotion rate and low drop-out, curriculum details, lesson plans, teaching materials, and school administrative processes. It connected the school to the parents, community, and stakeholders with higher attention to student's learning progress and result. On the other hand, the school faced challenges of low teacher encouragement, less meaningful inspection of the District and Provincial Department of Education, fewer workshops for teacher professional development, and limited financial support.

## Keywords

## Introduction

School-based management in Cambodia was established in 1998 called the Education Quality Improvement Project (EQIP) in Takeo Province as the pilot program. This program began with 10 schools and it was extended to around 1,000 schools until 2003 (Patrinos & Fasih, 2009). The program was then called School-Based Management (SBM) as it played a vital role in innovating school development and management (MoEYS, 2018). School-based management was defined as the basic principle to authorize the school upon logical management to better educational service for the students (Caldwell, 2005); in other words, SBM was also considered as the management process of decentralization in which the school was generated with a good governance structure as well as full decision-making to ship the school for a desirable development (Dimmock, 2013; Fullan & Watson, 2000).

Vessman and Hanushek (2007) mentioned that school-based management involved three main characteristics such as *(1) choice and competition, (2) school autonomy, and (3) school accountability*. The choice and competition are understood as complex issues that the school

needs to take into account since the student's decision for school selection is somehow made by parents and the community. Of course, the schools can compete with each other, especially in the city, to attract the students. As the school provides a convenient service to the students with a well-educated system and result, the students are attracted to learning since they want to find a good educational place for their academic lives. In doing so, the autonomy needs to be established in the school for the official decentralization. This decentralization could foster ways of teaching and learning through curriculum development based on the regional needs faced by the school, community, and region. In addition, accountability is also considered one of the crucial characteristics that school management needs to establish. Accountability could produce transparency in the school to avoid conflict of interest among school principals, administrators, teachers, and the community (Patrinos & Fasih, 2009; Thida & Joy, 2012).

Moreover, Gertler et al. (2007) identified the evaluation of the management initiative of the school-based management based on three interventions (1) modifying the current issues through multi-consensus with stakeholders, (2) organizing goals for the school intervention matching with the current needs, and (3) manipulating management strategies for such interventions through implementation, self-reflection, and re-practice. This evaluation of the initiative process could be a self-regulated reflection of the school for long-term implementation of the school-based management system. As school management is a broad term covering various aspects, Di Gropello (2006) narrowed down this term into smaller areas of responsibilities such as personnel management, pedagogy, maintenance and infrastructure, budget, and monitoring and evaluation. The school management provided impacts on school management, administrative processes, ways of teaching and learning, and student results. By the way, those are abstract in terms of their evidence. This may result in concerns about how SBM makes changes in the schools and what challenges they face.

Responding to the issues above, this study aims to examine the positive impacts of school-based management and to identify the challenges faced by school principals and teachers. To achieve these objectives, 2 questions have been formulated to specify the areas of the study: (1) what are the positive impacts of school-based management at New Generation Schools and Resource Schools? and (2) what challenges are there that the New Generation Schools and Resource Schools faced?

## Literature Review
### School Management
School management involves the school autonomy, finance, staff management, student management, the participation of the community, the school environment, and the coordination of the stakeholders (MoEYS, 2018). Gamage (2006) and Moradi et al. (2012) found that the school could hardly run effectively without autonomy and accountability. To be well-operated, the school needs a concrete-accurate-data plan to figure out the school situation in terms of school information, ongoing assessment, student results, teacher abilities, resources, and the community. Cheong Cheng and Mo Ching Mok (2007) conducted the school-based management paradigm in education with 31 secondary schools (1119 teachers and 7063 students). It was found that the student's academic result was the key priority to show the school's achievement. This academic result could be achieved by fostering student-centered teaching with assessment, learning attitude, authentic materials, principal's commitment, and parent involvement. Wohlstetter and Odden (1992) indicated four key factors to accompany school management: skills and knowledge, leadership styles, suitable time, and suitable salary or income. He addressed more about leadership of the school principal to make the school progress followed by the school incomes and well-paid salaries for the teachers. Lack of

leadership skills and a new condition in terms of SBM are the challenges in making good progress in school. In addition, the school also has different parties among the teachers and teachers, teachers and administrators, and administrators and school principals. Bandur (2012b) and Gamage and Sooksomchitra (2006) stated that lack of knowledge in SBM and principal workloads are difficult and this needs training on SBM and support from administrators, teachers, and community.

**School Plan and Policy**
The school development plan and policy were included in the school governance for its establishment of the school visions and missions, divided into four sections: teachers, students, environment, and community. It also includes the student enrolment rate, the student academic results, and estimated results for the next academic year. The number of student failures and promotions could partly identify the school's quality. Khattri et al. (2012), administrating the database of 23 public schools during 2003-2005 in the Philippines, highlighted a statistically significant treatment of school-based management on three subjects (English, Mathematics, and Science), which revealed a higher percentage of 1.5 for the overall indication scores. They also indicated increasing number of student enrolment, reducing student drop-out, and promoting the student promotion rate as the priority factors in the school plan. The school plan also consists of three political practices: (1) equity education, (2) efficiency and quality development, and (3) school autonomy with capacity building (De Grauwe, 2005; Shoraku, 2009). The school culture, staff behavior, and school evaluation are the indicators for in school-based management process, the findings from 22 case studies in North American Schools (Robertson & Briggs, 1998). The practitioners, especially the school principal and the school administrator, may organize the school strategic plan to modify the convenient school culture and take action with administrators, teachers, and the community in driving the school for a desired school climate (Khattri et al., 2012; Robertson & Briggs, 1998).

**Teaching and Learning**
The teaching materials, lesson plan, detailed curriculum, and student activeness are the conceptual practice of teaching and learning for student ability improvement (Amon & Bustami, 2021; Cheong Cheng & Mo Ching Mok, 2007; Wohlstetter & Odden, 1992). The teacher may focus more on student participation in the classroom process known as the student-centered approach and/or the constructivism in relation to the teaching materials and curriculum management (Amon & Bustami, 2021). A 3-year longitudinal data, by Nir (2002), with 28 elementary schools in Jerusalem indicated the increase of the teacher's commitment to the professional development and teacher's commitment to student academic achievement after the implementation of SBM in the school. However, the data indicated a decrease of teacher's autonomy, commitment of teacher to the school, and commitment of teachers to student's social interaction.

**Student Parent and Community**
The student's parents and the community are the foundation to connect the students from home to school and from school to home. The school organizes the meeting with the student parent and community to introduce the school's roles, the importance of parents in assisting their children in learning, and the community's roles in coordinating the school progress and partnership (Gamage, 2006; Heyward et al., 2011; Leithwood & Menzies, 1998). However, the participation of the parent and community is limited in terms of assisting the children to learn, participating in school events, and finding charities and partnerships for the school (Amon & Bustami, 2021).

**Training and Technical School Management**

The continuous training for professional development, the technical management of the school subject leader known as the technical team leader, staff management, decision-making, and the student support service are the elements in the school-based management (Amon & Bustami, 2021; Bandur, 2012b; Cheong Cheng & Mo Ching Mok, 2007; Gamage & Sooksomchitra, 2006; Heyward et al., 2011; Moradi et al., 2012). Improving the teacher quality could strengthen the school power that provides the students with practical-based knowledge (Bandur, 2012a; Sumarsono et al., 2019). In this case, the finding by Bandur (2012b) with a survey of 504 school council members and 42 interviews with the group discussion suggested some factors such as capacity building for the professional development, organizing workshops, seminars, or sharing sessions to make a professional learning community at the school level. By the way, the staff management and decision-making at the school level still remain difficulties since the staff commitment is low in terms of performance-based results because of low income and the school principal faced decentralized issues because of vague school policy and low budget (Briggs & Wohlstetter, 2003; Cheng & Chan, 2000; Nir, 2002; Robertson & Briggs, 1998; Wohlstetter & Odden, 1992). In addition, (Bandur, 2012b) and Moradi et al. (2012) suggested that the student support program at the school level such as study clubs and extracurricular activities can foster the student achievement.

**Infrastructure and School Finance**

Building the school infrastructure to meeting the school demand for the school-based management does need not only the financial support from the government, but it also need the charity from the community and partnerships (Cheong Cheng, 1993; Santibanez et al., 2014). Doing this needs a connection with parents, communities, and relevant partners. They involve in the school management committee to foster the school development structures (Fernando, 2020; Lee & Chiu, 2017; Reimers & Cárdenas, 2007). Santibanez et al. (2014) stated that the school need equipment, classroom accessories, teaching materials, rooms for the specific subjects and laboratories, including the environment satisfied the student learning, sports, and life skills known as the elements to foster the student achievement and technical skills. Participation of the stakeholders through trustworthy, showing off the student academic achievement, and quality of school budget management could drive the school to the desirable development (Cabardo, 2016; Nir, 2002). However, the data driven by Cabardo (2016) with the questionnaire administration of 13 school heads, 56 teachers, and 50 stakeholders in the secondary schools indicated minimum standard in terms of the stakeholder's school-initiated activities. The school does need financial support with the accountability and responsibility to develop the school infrastructure since the number of the demands in the school levels in terms of the school accessories, environmental development, documentations, maintenance, and school services are high (Moradi et al., 2012; Nir, 2002; Sumarsono et al., 2019; Wohlstetter & Odden, 1992).

Likewise, this study employed 10 main elements of the school-based management: (1) the situation of school management, (2) plan and policy of the school, (3) teaching and learning, (4) student parents and communities, (5) student support service, (6) training and technical management, (7) human resources, (8) resources and materials, (9) infrastructures and environment of the school, and (10) school finance (Amon & Bustami, 2021; Bandur, 2012b; Briggs & Wohlstetter, 2003; Cheong Cheng & Mo Ching Mok, 2007; Gamage, 2006; Grinshtain & Gibton, 2018; Heyward et al., 2011; Khattri et al., 2012; Lee & Chiu, 2017; MoEYS, 2018; Moradi et al., 2012).

**Methodology**

This study employed the convergent mixed research approach, combining qualitative and quantitative data at the same time for its confirm or disconfirm (Creswell & Clark, 2018). Upper secondary schools in Kampong Cham, Kandal, and Svay Rieng Provinces in Cambodia were chosen to be research sites. 3 New Generation Schools in each province were selected because of its well-known New Generation School (NGS) and the site where NGS was born. 3 Resource Schools in each province were selected because of the well-known school at Upper Secondary Education Sector Development Program School (USESDPS) and its location in three different zones.

The paper-based questionnaire and the interview questions were piloted in Phnom Penh City and Thbong Khmom Province, including one NGS and one Resource School. 38 respondents filled in the questionnaire, 15 females and 23 males, including school principals, vice-school principals, and teachers. As a result, five items of the questionnaire for the teacher were found to be modified: item 21, item 31, item 74, item 83, and item 95. Three items were found to be added: item 36, item 43, and item 103. Moreover, two school principals were invited for the semi-structured interview in the pilot stage. The interview was conducted physically in the school office. As a result, the follow-up questions were found necessary to dig out further information. The teachers and vice-school principals were asked to fill in the paper-based questionnaire with a clear instruction. They were invited to the meeting hall of the school and the researchers explained specifically how to fill in the form. Some teachers and vice-school principals directly asked the researchers at some points that they were not clear.

6 school principals (3 Resource Schools and 3 NGS) were purposively selected for the semi-structured interview. The 6 school principals were selected under 4 criteria: (1) three different provinces, (2) more than 40 years old, (3) holding at least a Bachelor's degree, and (4) four years or more working experience in the position of school principal. 272 teachers (97 females and 175 males) of the total population of 732 teachers and 19 vice-school principals, were randomly selected to fill in the paper-based questionnaire physically within onside explanation (see table 1).

The questionnaire was written in Khmer. It consists of 104 items divided into 11 sections: (1) demographic information, (2) situation of school management, (3) school plan and policies, (4) teaching and learning, (5) student's parent and community, (6) student-care service, (7) leadership and management, (8) human resources, (9) textbook and teaching materials, (10) infrastructure and school environment, and (11) finance and accountability. The questionnaire was embedded with 4-level Likert scale responses: 1 for strongly disagree, 2 for disagree, 3 for agree, and 4 for strongly agree. The four Likert scale responses were applied to ask the respondents to make a clear decision whether they agree or not. Mean interval was also classified into four scales: *1:00-1.49 is very negative, 1.50-2.49 is negative, 2.50-3.39 is positive, and 3.50-4.00 is very positive* (Pornel & Saldaña, 2013, p. 18). The questionnaire was separated into two groups: the questionnaire for the teacher and the vice-school principal. In addition, the interview question was also employed in the study, including five open questions followed by the follow-up questions.

To analyze the qualitative data, a thematic analysis was conducted to form codes, themes, and sub-themes into a hierarchy followed by five phases: *compiling, disassembling, reassembling, interpreting, and concluding* (Castleberry & Nolen, 2018, p. 2). The quantitative data was computed into Excel and inserted into IBM SPSS Statistics 25 for frequency and descriptive analysis (George A. Morgan et al., 2011).

**Findings**

As shown in Table 1, there are 97 females among 272 teachers. 26.8% of teachers are aged 41-50 years and 24.6% of teachers are more than 50 years old, which means that 51.4% of teachers are aged 41 or more and they are getting old, whereas 48.5% of teachers are in the working age, 40 years old or lower. Interestingly, 77.9% of teachers in the six high schools finished a Bachelor's degree, and 9.9% is lower than a bachelor. Among 272 teachers, 7% of them are vice-school principals and the rest are teachers who are responsible for teaching grade 10, grade 11, and grade 12. It is also interesting that 59.6% of teachers have been teaching for more than 15 years which means they are rich in teaching and working experiences, whereas only 11.8% of them have worked for 5 years or lower.

Table 1
*Demographic Information of Teachers*

| Characteristics | $n$ | % |
|---|---|---|
| Gender | | |
| Female | 97 | 35.7 |
| Male | 175 | 64.3 |
| Age | | |
| Lower than 30 | 46 | 16.9 |
| 31-40 years old | 86 | 31.6 |
| 41-50 years old | 73 | 26.8 |
| More than 50 | 67 | 24.6 |
| Education | | |
| Lower than bachelor | 27 | 9.9 |
| Bachelor | 212 | 77.9 |
| Master | 32 | 11.8 |
| Doctor | 1 | 0.4 |
| Responsibility | | |
| Grade 10 | 81 | 29.8 |
| Grade 11 | 92 | 33.8 |
| Grade 12 | 80 | 29.4 |
| Vice-School Principal | 19 | 7 |
| Working Experiences | | |
| 5 years or lower | 32 | 11.8 |
| 6-10 years | 42 | 15.4 |
| 11-15 years | 36 | 13.2 |
| More than 15 years | 162 | 59.6 |

*n = Number, % = Percentage*

***What are the positive impacts of school-based management at New Generation Schools and Resource Schools?***

**Situation of School Management**

Table 2 shows that the school that implemented school-based management is autonomous as 93% of the respondents revealed positive responses, indicating $M = 3.06$ and $SD = .49$. The school got good evaluation result from District of Education or Province of Education as the evaluation from DoE or PoE shows 90.1% of positive responses, $M = 3.06$ and $SD = .56$. The school's accountability is 89% of positive responses ($M = 3.02$ and $SD = .57$) and this means that the school has accountability. Similarly, the management structure is 86% of positive response ($M = 2.99$, $SD = .56$), the student management is 85.3% of positive response ($M = 2.94$, $SD = .54$), and the staff management is 85% of positive responses ($M = 2.97$, $SD = .58$).

This means that the school has a good level of school management structure, student management techniques is well-progressed, and staff management is well-connected. By the way, the data shows minor negative responses on the participation of the community which is 18.8% ($M$ = 2.92, $SD$ = .55), higher than the other six characteristics under the school management section. This indicates that the school got limited support and participation from the community.

Table 2
*Mean and Standard Deviation of Situation of School Management*

| Characteristics | $M$ | $SD$ | Response Distribution (%) | | | |
|---|---|---|---|---|---|---|
| | | | SD | D | A | SA |
| School's autonomy | 3.06 | .49 | 1.1 | 5.9 | 79.4 | 13.6 |
| Good evaluation from DoE or PoE | 3.06 | .56 | 1.5 | 8.5 | 72.8 | 17.3 |
| School's accountability | 3.02 | .57 | 2.2 | 8.8 | 73.9 | 15.1 |
| Management structure | 2.99 | .56 | 1.1 | 12.9 | 72.4 | 13.6 |
| Staff management | 2.97 | .58 | 1.5 | 13.6 | 71 | 14 |
| Student management | 2.94 | .54 | 1.5 | 13.2 | 75 | 10.3 |
| Participation of the community | 2.92 | .55 | .4 | 18.4 | 70.2 | 11 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Five of six school principals mentioned that the school was autonomous when school-based management was implemented. They got the evaluation from the District of Education and the Province of Education and the result was acceptable on school progress and student's academic result. The school-based management helped the school with management structure since its support from the Ministry of Education and ASEAN Development Bank on both technical and financial support. In the same way, P5 stated that:
*"…my school is better than before when we implement the school-based management… we do more and… get more support from the Province* [PoE] *and the Ministry* [MoEYS]*…, especially the support team* [ADB mission team] *… help us. We have clear direction… and it is accountable… We do … and we are responsible…"*

**School Planning**
As shown in Table 3, there are 97.5% of positive responses ($M$ = 3.36, $SD$ = .55). This indicates that more than 70% of students passed the lower secondary school leaving exam and students can move to grade 10 for the upper secondary education. In the same way, 95.3% of the respondents show positive responses on characteristic 2 ($M$ = 3.27, $SD$ = .57), meaning that more than 60% of students are moving to the next grade level. The increase in enrolment is 83.8% of the positive responses ($M$ = 3.02, $SD$ = .63) and the school development plan is 81.2% ($M$ = 3.03, $SD$ = .65). This indicates that the number of student enrolment is more than the previous year and the school cooperated with the community to manually update the development plan. The decrease in repeat is 74.3% of the positive responses ($M$ = 2.81, $SD$ = .59) and the decrease in dropout is 69.1% ($M$ = 2.73, $SD$ = .62). This means that the number of student repetitions is slightly decreasing compared to the previous year as well as the decreasing number of student dropout. By the way, 43.7% of the respondents show negative responses on more than 70% passing the upper secondary exam ($M$ = 2.66, $SD$ = .71). This indicates that the number of passing the upper secondary school exam can be lower than 70% in 2020-2021 in terms of the selected schools.

Table 3
*Mean and Standard Deviation of School Planning*

| Characteristics | *M* | *SD* | Response Distribution (%) | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | SD | D | A | SA |
| More than 70% passing lower sec. exam | 3.36 | .55 | .4 | 2.2 | 58.5 | 39 |
| More than 60% moving to next grade | 3.27 | .57 | .7 | 4 | 62.9 | 32.4 |
| School development plan | 3.03 | .65 | .4 | 18.4 | 58.8 | 22.4 |
| Increase of enrolment | 3.02 | .63 | 1.1 | 15.1 | 64.3 | 19.5 |
| Decrease of repeat | 2.81 | .59 | 1.5 | 24.3 | 66.2 | 8.1 |
| Decrease of dropout | 2.73 | .62 | 2.6 | 28.3 | 62.5 | 6.6 |
| More than 70% passed upper sec. exam | 2.66 | .71 | 2.2 | 41.5 | 44.5 | 11.8 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Four of six school principals stated that they got a school plan called school development for every one-year planning and every five years planning. These plans gave them clear direction on where and what the school needed to do. They found that the students' result was better than before and more than 70% of the students could move to the next grade level because the teacher did well in the class to help students learn, and the students themselves tried to learn. It was not every student, but most of them achieved good results.

**Teaching and Learning**
Table 4 shows that the curriculum detail has 98.5% of positive responses ($M = 3.50$, $SD = .56$), classroom administration has 94.4% ($M = 3.24$, $SD = .56$), and the student's participation in studying has 93% ($M = 3.17$, $SD = .57$). This indicates that each school has curriculum details for each subject, the teacher often completes the classroom administration for teaching, and level of student's participation in learning is high. Similarly, four characteristics such as using a lesson plan (92.6%), enough teaching hours (92.3%), student's homework (90.5%), and completing the curriculum on time (90.1%) indicate more than 90% of positive responses on both scales of agree and strongly agree. These mean that the teacher uses a lesson plan during teaching, teaching hours are suitable for teaching and learning, the students often do their assigned homework with well-progressed, and the teachers can finish their lessons on time compared to the school curriculum. In addition, 7 characteristics of more than 60% of good results (89.3%), relationship to the student's parents (89%), updating a lesson plan manually (88.6%), support from technical team leader (87.2%), student's absence lower than 30% (86.4%), using teaching materials (84.9%), and teaching observation (84.6%) indicate between 80% to 90% of positive responses on both agree and strongly agree. This means that these 7 characteristics are well-progressed in schools of school-based management. By the way, the teacher's less absence seems to be slightly argumentative since the negative response is 29% ($M = 2.84$, $SD = .72$).

Moreover, four school principals mentioned that they used the curriculum from the Ministry of Education and the teacher prepared lesson plans for teaching and learning. In this case, the students participated well in the class since the use of the teaching materials was well-progressed, especially for the science subjects because they asked the students to do experiments. The teachers could finish the curriculum on time since they selected important units that were related to the exams, special content knowledge, and real-world activities. They took away some unimportant contents because the teaching hours compared to the curriculum were tough. If they taught all, they would not have enough time to finish the curriculum. One of the principals certified that:

*"... my teachers teach only important units and they take out some unnecessary units… to complete the curriculum on time. They allow the students to do more activities and the students learn through practices…. The students participate well and I see they got good results compared to the previous year…"*

Table 4
*Mean and Standard Deviation of Teaching and Learning*

| Characteristics | M | SD | Missing | Response Distribution (%) | | | |
|---|---|---|---|---|---|---|---|
| | | | | SD | D | A | SA |
| Curriculum details | 3.50 | .56 | | .7 | .7 | 46.7 | 51.8 |
| Finishing curriculum on time | 3.33 | .67 | | .7 | 9.2 | 46.3 | 43.8 |
| Enough teaching hours | 3.31 | .61 | | | 7.7 | 53.3 | 39 |
| Using lesson plan | 3.28 | .60 | .4 | .4 | 6.6 | 57.7 | 34.9 |
| Classroom administration | 3.24 | .56 | | .4 | 5.1 | 64.3 | 30.1 |
| Student's participation in studying | 3.17 | .57 | | 1.1 | 5.9 | 67.6 | 25.4 |
| Student's homework | 3.12 | .57 | | .7 | 8.8 | 68.4 | 22.1 |
| More than 60% of good results | 3.11 | .59 | | .7 | 9.9 | 66.5 | 22.8 |
| Updating a lesson plan manually | 3.11 | .58 | | .4 | 11 | 66.2 | 22.4 |
| Relationship with student's parents | 3.10 | .56 | | | 11 | 68.4 | 20.6 |
| Support from technical team leader | 3.08 | .62 | | 1.5 | 11.4 | 65.1 | 22.1 |
| Student's absence lower than 30% | 3.04 | .65 | | 2.6 | 11 | 65.8 | 20.6 |
| Using teaching materials | 3.03 | .62 | | 1.5 | 13.6 | 65.8 | 19.1 |
| Teaching observation | 2.98 | .59 | | 1.5 | 14 | 69.9 | 14.7 |
| Teacher's less absence | 2.84 | .72 | | 2.9 | 26.1 | 54.8 | 16.2 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

**Student's Parents and Community**
As shown in Table 5, the characteristic of meeting with the school support committee is 89% of positive responses ($M = 3.20$, $SD = .63$), meaning that the school organized meetings regularly with the school support committee. In this case, the participation of the school support committee in helping with developing the school plan ($M = 3.17$, $SD = .61$), participant in solving the school's problems ($M = 3.13$, $SD = .65$), and meeting with student's parents ($M = 2.99$, $SD = .62$) are well progressed since the percentage of positive responses are between 85.7% up to 89%. In addition, the level of regular help from the community and parents in the school is 76.9% of positive responses ($M = 2.88$, $SD = .61$), and meeting with teacher, community, and students is 75.4% of positive responses ($M = 2.85$, $SD = .60$). This means that the school got helps from the community and student's parents in positive sign, and they often meet with key people such as teacher, community, and students to solve problems.

By the way, the level of parent's help to teach their children at home is 75% of the positive responses ($M = 2.79$, $SD = .60$). It is on the positive side, but it is lower than other characteristics in Table 5. This indicates that the parents help their children to learn occasionally, not often. Four school principals indicated that they had meetings with the school support committee to solve the school's problems. They also organized meetings with the student's parents, especially during the opening of the early academic year, and encouraged them to help their children study at home.

Table 5
*Mean and Standard Deviation of Student's Parent and Community*

| Characteristics | M | SD | Response Distribution (%) | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | SD | D | A | SA |
| Meeting with school support committee | 3.20 | .63 | .4 | 10.7 | 57.4 | 31.6 |
| Participation in school development plan | 3.17 | .61 | | 11.4 | 60.7 | 27.9 |
| Participation in solving school's problems | 3.13 | .65 | .7 | 13.2 | 58.5 | 27.6 |
| Meeting with student's parents | 2.99 | .62 | 2.6 | 11.8 | 69.5 | 16.2 |
| Regular help from community and parents | 2.88 | .61 | 1.1 | 22.1 | 65.1 | 11.8 |
| Meeting with teacher, community, and students | 2.85 | .60 | 1.1 | 23.5 | 65.1 | 10.3 |
| Parents' help to teach their children at home | 2.79 | .60 | 2.6 | 22.4 | 68 | 7 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

**Student's Care Service**
Table 6 shows that library in the school is 99.3% of the positive responses (*M* = 3.69, *SD* = .48) as the characteristic of students' entering the library for studies is 83.8% of the positive responses (*M* = 3.08, *SD* = .67) and time table for the library is 84.9% of the positive responses (*M* = 3.05, *SD* = .78). This means that the level of student's entering the library for additional studies and time table for students to enter the library are lower than the library. The school has the library, but the students might not go to the library very often for studies. One of the reasons is because of the vague schedule for the library. In addition, the data also shows that laboratory in the school is 99.5% of the positive responses (*M* = 3.47, *SD* = .53) whereas the level of enough materials for the laboratory is 75.7% of the positive responses (*M* = 2.97, *SD* = .70). This indicates that the school has the laboratory but it has fewer materials for scientific experiment. The last three characteristics of Table 6 on study club to help poor students (*M* = 2.68, *SD* = .76), program to support students in learning (*M* = 2.61, *SD* = .65), good progress of study club (*M* = 2.60, *SD* = .70) show a significant point that the school may need to put more attention on these three factors since they are slightly higher than the negative side.

Table 6
*Mean and Standard Deviation of Student's Care Service*

| Characteristics | M | SD | Response Distribution (%) | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | SD | D | A | SA |
| Library in the school | 3.69 | .48 | | .7 | 29.4 | 69.9 |
| Laboratory in the school | 3.47 | .53 | | 1.5 | 49.6 | 48.9 |
| Scholarship for poor students | 3.32 | .62 | .4 | 7.4 | 52.2 | 40.1 |
| Receiving scholarship of poor students | 3.20 | .65 | .4 | 12.1 | 54.8 | 32.7 |
| Timetable for laboratory | 3.13 | .70 | 1.5 | 13.6 | 55.1 | 29.8 |
| Students' entering to the library for studies | 3.08 | .67 | 1.1 | 15.4 | 58.1 | 25.4 |
| Time table for the library | 3.05 | .78 | 2.6 | 20.2 | 46.7 | 30.5 |
| Good progress of youth committee in school | 3.04 | .63 | .7 | 15.4 | 62.9 | 21 |
| Enough materials for the laboratory | 2.97 | .70 | .7 | 23.5 | 53.3 | 22.4 |
| Study club to help poor students | 2.68 | .76 | 4 | 37.5 | 44.9 | 13.6 |
| Program to support students in learning | 2.61 | .65 | 2.6 | 40.1 | 51.1 | 6.3 |
| Good progress of study club | 2.60 | .70 | 3.7 | 41.2 | 46.3 | 8.8 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

In addition, four school principals mentioned that the school offered scholarships for poor students and this was funded by the government. The scholarship was offered in cash and it was transferred to the students every month or every three-months sometimes. My school also

had a library, but not many students were interested in reading books or studying more in the library. Maybe we needed to make some events or competitive activities to encourage students to read more and learn automatically. Similarly, we had labor room for the science class, but we did not have enough materials for the experiment, especially for chemistry and physics subjects. By the way, the study club to help poor students did not work well because we needed more time, effort, and a focal person to be responsible for it. One principal stated that:

*"… we want the study club work well… but we, in fact, faced some problems such as time, key person who can take responsibility, and effort. Sometimes, the students do not involve in the activities of study club because they want to spend more time for individual study. If they have time, they help their family because… their parents need help from their children … because they faced financial problem…"*

### *What challenges are there that the New Generation Schools and Resource Schools faced?*
### Leadership and Management

As shown in Table 7, the teacher encouragement factor in the school faced challenges since it indicates 34.5% of the negative responses ($M = 2.72$, $SD = .57$). In addition, the mean score of regular inspection of DoE is 2.66, $SD = .63$, indicating 30.9% of negative responses. This means that the school has received fewer inspections from the District of Education, responsible for school support. The District of Education may have fewer school visits to see the school's progress and what the school needs for further improvement. Similarly, the inspection of the Province of Education (PoE) also reveals lower scores, ($M = 2.77$, $SD = .63$), indicating 27.9% of negative responses. This means that the Province of Education has visited the school not very often since the school needs further support from PoE for consultants and support to achieve the school's directions and goals.

Table 7
*Mean and Standard Deviation of Leadership and Management*

| Characteristics | *M* | *SD* | Response Distribution (%) | | | |
|---|---|---|---|---|---|---|
| | | | SD | D | A | SA |
| Teacher encouragement | 2.72 | .57 | 2.9 | 31.6 | 56.3 | 9.2 |
| Regular inspection of DoE | 2.66 | .63 | .4 | 30.5 | 61 | 4.4 |
| Regular inspection of PoE | 2.77 | .63 | 2.9 | 25 | 64.3 | 7.7 |
| Responsibility of the management system | 3.12 | .58 | | 11.4 | 65.1 | 23.5 |
| School evaluation | 3.13 | .58 | .7 | 9.2 | 66.5 | 23.5 |
| Good administration in school | 3.11 | .54 | .7 | 7.4 | 72.1 | 19.9 |
| Participation in monthly technical meeting | 3.21 | .58 | .4 | 7.7 | 62.9 | 29 |
| Patience of teacher in teaching | 3.11 | .54 | .7 | 7.4 | 72.1 | 19.9 |
| School uniform | 3.18 | .56 | | 8.1 | 66.2 | 25.7 |
| School rules | 3.18 | .53 | | 6.6 | 68.4 | 25 |
| Good management system | 3.33 | .53 | | 2.6 | 61.4 | 36 |
| Permission with reasonable answer | 3.32 | .50 | | 1.5 | 64.7 | 33.8 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Moreover, four of six principals stated that the teacher encouragement factor in the school was low because they had less budget to support this activity. To encourage the teacher to mutually work together, this needed training programs, emotional support, or gifts as encouragement at the end of the year or during special events. So far, the school could just support teacher's emotions through teacher's support teams or consultations. It was hard to support the teacher on the technical and financial problems since the school had a limited budget. They also

mentioned that the number of the inspections from the Province of Education (PoE) and District of Education (DoE) was less that made smaller effects on school development. In addition, one school principal said that:

*"…of course, we got supports from District* [PoE] *and Province* [DoE]*, but those supports are likely to push the school move a bit… it did not touch main issues that the school wants to solve… what we want is to support rather than coming to evaluate and making comments…"*

**Human Resources in School**
Table 8 shows that the school faced challenges in organizing workshops for the teacher professional development since it indicates 41.5% of the negative responses ($M = 2.62$, $SD = .68$). They may need more workshops to develop the teacher's skills and professions since the contents in the textbook are updated. In addition, the teacher's ability to use Information Communication Technology for teaching is limited as indicated in 34.6% of the negative responses on the ability to use ICT ($M = 2.80$, $SD = .77$). The teachers are not sure how to use labor materials since Mean and Standard Deviation is ($M = 2.74$, $SD = .65$), indicating 32.4% of the negative responses. The teacher may need more training on how to use labor materials professionally and accurately so they can transform them into their students. Moreover, the school, but not all, is likely to face challenges in teacher's ability in specialized subjects ($M = 2.98$, $SD = .68$) and lack of teachers for particular subjects ($M = 2.96$, $SD = .66$) since they indicate around 20% of the negative responses.

Table 8
*Mean and Standard Deviation of Human Resources in School*

| Characteristics | M | SD | Response Distribution (%) | | | |
|---|---|---|---|---|---|---|
| | | | SD | D | A | SA |
| Workshop for teacher professional development | 2.62 | .68 | 4 | 37.5 | 51.1 | 7.4 |
| Teacher's ability in using labor materials | 2.74 | .65 | 2.6 | 29.8 | 58.8 | 8.8 |
| Ability to use ICT | 2.80 | .77 | 3.3 | 31.3 | 47.4 | 18 |
| Enough teacher for each subject | 2.96 | .66 | 1.5 | 19.5 | 60.3 | 18.8 |
| Teaching on specialized subject | 2.98 | .68 | 1.1 | 20.6 | 57.4 | 21 |
| Action plan for teacher professional development | 3.08 | .63 | 1.1 | 12.5 | 63.2 | 23.2 |
| Teacher's ability in using teaching techniques | 3.13 | .47 | | 5.1 | 76.5 | 18.4 |
| Teacher's ability on specialized subject | 3.33 | .49 | | 1.1 | 64.7 | 34.2 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Moreover, three principals stated that the teachers needed more workshops to upgrade their professional development. Some teachers were unable to use labor materials since some materials were new to the teacher and they needed guidance on how to use it effectively, especially the materials for science subjects and the experimentation. Some teachers also faced challenges in using ICT for education. They taught the students using the ways they were familiar with and it was less integration to the technology in education.

**Teaching Materials**
As shown in Table 9, the teacher is likely to face challenges in creating materials since it indicates 24.6% of the negative responses on creating materials for teaching ($M = 2.82$, $SD = .56$). The teacher may need more time and effort for material production. In addition, it is shown that teaching materials for teachers ($M = 2.92$, $SD = .57$) and learning materials ($M = 2.97$, $SD = .60$) for students are likely challenging since they indicate almost 20% of the negative responses. In this case, they need more support in teaching and learning materials for both teachers and students for a productive classroom.

Table 9
*Mean and Standard Deviation of Teaching Materials*

| Characteristics | *M* | *SD* | Response Distribution (%) | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | SD | D | A | SA |
| Creating materials for teaching | 2.82 | .56 | .7 | 23.9 | 67.6 | 7.7 |
| Enough teaching materials | 2.92 | .57 | .4 | 19.5 | 68 | 12.1 |
| Enough materials for students to learn | 2.97 | .60 | 1.5 | 15.1 | 68.4 | 15.1 |
| Enough textbooks for students | 3.27 | .68 | 1.1 | 9.9 | 50 | 39 |
| Enough books in the library | 3.25 | .61 | .4 | 8.1 | 58.1 | 33.5 |
| Using textbook | 3.24 | .56 | .4 | 5.1 | 64.7 | 29.8 |
| Good classroom environment | 3.25 | .53 | | 4.4 | 65.8 | 29.8 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

In addition, three school principals stated that the teachers did not have enough time to prepare teaching materials since they spent more time on lesson plans, administrative work, and student assessment. They also faced challenges in teaching materials because some materials were expensive and the school could not have enough effort to buy them. This needed contribution from the community or sponsor from the stakeholders, especially labor materials.

**School Infrastructure and Environment**
Table 10 shows that the school does not have enough dormitory for teachers as it indicates 65% of the negative responses on enough dormitory for teachers (*M* = 2.27, *SD* = .86). The school needs dormitory for teachers to stay, especially for those who are far from school. The school also faced challenges in lack of garbage kiln since it shows 61.8% of the negative responses (*M* = 2.41, *SD* = .90). In addition, the biology block is 47.1% of the negative responses (*M* = 2.63, *SD* = .79) and the vegetable block is 40.8% of the negative responses (*M* = 2.72, *SD* = .83). This means that the school, but not all, lacks the biology and vegetable block for the students to learn how to growth plants and vegetable. It is also mentioned that the characteristic of the sanitation food stores indicates 21.4% of the negative responses (*M* = 2.90, *SD* = .65). This means that food stores in the school still need to check on sanitation.

Table 10
*Mean and Standard Deviation of School Infrastructure and Environment*

| Characteristics | *M* | *SD* | Response Distribution (%) | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | SD | D | A | SA |
| Enough dormitory for teachers | 2.27 | .86 | 17.6 | 47.4 | 25.4 | 9.6 |
| Garbage kiln | 2.41 | .90 | 12.9 | 48.9 | 22.8 | 15.4 |
| Biology block | 2.63 | .79 | 4.8 | 42.3 | 38.2 | 14.7 |
| Vegetable block | 2.72 | .83 | 5.5 | 35.3 | 40.8 | 18.4 |
| Sanitation food stores | 2.90 | .65 | 2.6 | 18.8 | 64.7 | 14 |
| Volleyball pitch | 3.01 | .78 | 4.4 | 16.5 | 52.9 | 26.1 |
| Football pitch | 3.07 | .77 | 4.8 | 11.8 | 54.8 | 28.7 |
| Enough equipment for administrative work | 3.01 | .58 | .4 | 15.1 | 68 | 16.5 |
| Enough toilets | 3.17 | .61 | .7 | 9.2 | 62.9 | 27.2 |
| Basketball pitch | 3.22 | .64 | 1.8 | 6.3 | 60.3 | 31.6 |
| Enough rooms for administrative work | 3.23 | .57 | | 7.4 | 62.1 | 30.5 |
| Enough classroom | 3.36 | .60 | | 6.6 | 50.4 | 43 |
| Good environment for student's learning | 3.20 | .51 | | 5.1 | 69.9 | 25 |
| Motor and bicycle keeper with security | 3.30 | .55 | .4 | 3.3 | 62.1 | 34.2 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Moreover, five school principals mentioned that the school did not have a dormitory for the teachers because we did not have a budget to build it. Those who stayed far from the school needed to rent a room, stay with their friends or villagers, or take time to travel. In addition, we did not have biology and vegetable block because these needed more budget and it was not their prioritized activities. Mostly, they spent the budget on important activities since the school income was limited. One school principal said that:

*"...we do not have a dormitory for teachers because we do not have remaining rooms or building... and we do not have enough space and budget for the vegetable block... since it is not an important action... our money is limited so we need to spend money on the urgent important activity..."*

**School Finance**
As shown in Table 11, the only incomes from the student's parents could not make the school run well since it indicates 62.1% of the negative responses on the income of the student's parents ($M = 2.38$, $SD = .72$). Of course, they need other incomes to satisfy the school payments. In addition, the school income from the community is less compared to the school payment per month ($M = 2.56$, $SD = .68$), indicating 46.6% of the negative responses. The accuracy of the school payment ($M = 2.96$, $SD = .69$) and no-argument on finance ($M = 2.98$, $SD = .63$) in school show good scores, but it is likely to remain fewer accuracy and more argument to some extent since the negative responses on these two characteristics are around 20%.

Table 11
*Mean and Standard Deviation of School Finance*

| Characteristics | *M* | *SD* | Response Distribution (%) | | | |
|---|---|---|---|---|---|---|
| | | | SD | D | A | SA |
| Additional income from the student's parent | 2.38 | .72 | 7 | 55.1 | 30.9 | 7 |
| Additional income from the community | 2.56 | .68 | 4 | 42.6 | 46.7 | 6.6 |
| Accuracy of school payment | 2.96 | .69 | 2.2 | 19.5 | 58.8 | 19.5 |
| Publication of the school income and outcome | 2.99 | .70 | 2.9 | 16.2 | 59.6 | 21.3 |
| Additional income from charity and/or partners | 2.93 | .67 | 3.7 | 14.7 | 66.2 | 15.4 |
| School plan for income and outcome | 2.99 | .68 | 2.6 | 15.4 | 62.1 | 19.9 |
| No argument on finance in school | 2.98 | .63 | 1.5 | 16.5 | 64.7 | 17.3 |
| Additional income from food stores and/or motor-bicycle keeper | 3.20 | .58 | 1.5 | 4 | 67.6 | 26.8 |

*Rating response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree*

Additionally, the school's income from the student's parent and the community was limited because it is related to the possibility of their effort. In this case, to satisfy the school's payment, the school needed to combine the incomes supported by the government, charities, and sponsors into one. To some extent, the school also needed to organize a water system or clean water in school and this needed a big amount of money, so the school called for the contribution from the student's parents and the community. This contribution was still not enough, so the school owed the money and decided to pay it back later. One school principal said:

*"...this year, we owe preparers* [water system preparers] *money because we want clean water for the students... we do not have enough money for this... but we still do it... because it is important for us..., so we collected all money we have... and prepared the water system... now we owe them the money... and we are asking the community for help and will pay it back to them later when we have... if we do not do it, we do not have what we want..."*

**Discussion**

Regarding research question one, the findings indicated that the school has autonomy, accountability, and a good management structure. These findings show similar result compared to (Gamage, 2006; MoEYS, 2018; Moradi et al., 2012) that the school is independent, full of responsibility, and well-connected among the key practitioners: principals, teachers, and students. In addition, the finding seems to indicate the significant importance on the participation of the community in the school since the level of community participation is not as high as Cheong Cheng and Mo Ching Mok (2007); Wohlstetter and Odden (1992) stated in their studies. Of course, it mentioned the importance of community involvement in the school's progress, but the reality is that the community also has another role in community development. Hence, the level of community participation in the school can be slightly reduced.

The findings indicated the increase of the student's enrolment compared to the previous academic year that is similar to Khattri et al. (2012), mentioning that the increase in enrolment shows the trust of the community and parents because the school could bring good quality to the students. It is also mentioned that the school development plan drives the school to have a high passing rate since the school has a clear direction, strategic action, and plan of action in terms of teaching, environment, and structure that are in line with the findings of De Grauwe (2005); Khattri et al. (2012); Robertson and Briggs (1998). This finding revealed additional characteristics that the school could achieve more than 70% of students passed lower secondary school and more than 60% are able to move to the next grade level.

Moreover, the curriculum, lesson plan, and teaching materials are important to drive for achievement of the expected outcomes. This shows the same track to the findings of Amon and Bustami (2021); Cheong Cheng and Mo Ching Mok (2007); Wohlstetter and Odden (1992) that teaching and learning can be well-achieved when the three triangles of curriculum, planning lessons, and materials are gathering and implementing toward student self-directed learning. The finding suggested additional points in terms of teaching and learning that the school also needs high attention to students' homework, relationship with the student's parents, and support from the technical team leader. In addition, the parents and community play a vital role in supporting school progress as stated in Gamage (2006); Heyward et al. (2011); Leithwood and Menzies (1998). The finding suggested that the school may organize a specific time table or meeting schedule with the school support committee and call for their participation in the school development process and solving the school's problem.

The findings showed the school practices on the support of study club to help poor students. Amon and Bustami (2021); Nir (2002) stated that the study club helps the students with both personal and technical progress in learning. They are able to ask and learn more and this makes students engaged and curious. In this case, the library and laboratory are the factors to make the students learn since the students have opportunities to explore more on their interest topics to answer their curiosities (Amon & Bustami, 2021; Robertson & Briggs, 1998; Santibanez et al., 2014). The findings also show a significant point on the scholarship for poor students to support their learning by providing learning materials, monthly cash, and/or transportation (motor or bicycle) for learning purposes.

Regarding research question two, the findings showed challenges in teacher's ability in labor materials, especially for science subjects, and information communication technology in education. Similarly, Fernando (2020) and Reimers and Cárdenas (2007) stated that teachers need a support team as a community of learning and sharing to shape up-to-date knowledge. In this case, the result also suggested that the teachers need workshops or consultations for their

professional development. Moreover, it is mentioned that the inspections from the District of Education and Province of Education are less since the school needs monitoring and support for further improvement (Cabardo, 2016; Moradi et al., 2012; Nir & Miran, 2006). Similarly, the finding showed that the school needs more support from the stakeholders and teachers need more support from the school, especially from the community and education family (district, province, and national levels).

The finding indicated that financial support is very important to make the school run well. This shows a similar view to the findings of Cheong Cheng (1993); Santibanez et al. (2014) which mentioned that the school cannot go far without financial support. It is hard to live alone. This means that the school needs to be very friendly and convincingly to promote the school system and results in order to look for support from the stakeholders (Cabardo, 2016; Fernando, 2020; Reimers & Cárdenas, 2007). The budget supported by the government is not enough to make the school run smoothly. The school principals and key practitioners need to be on track to show excellent academic results and call for funding or eventually save the income from charities or partners for prioritized educational purposes of the school (Sumarsono et al., 2019; Wohlstetter & Odden, 1992). It is interesting that since the school still looks for more support from the community and stakeholders and since the school budget is limited, a dormitory for teachers is needed, especially those whose houses are far from the school, and some schools need garbage kilns, biology and vegetable blocks, and experiment materials for science subjects. This makes the school even more difficult and stakeholder involvements are required.

## Conclusion

The positive impacts of the school-based management implementation are autonomy, accountability, well management structure, and participation of the community and student's parents. The school changed itself to be good at planning toward action-based solutions for student enrolment, high promotion rate, and low drop-out. In addition, clear curriculum details, lesson plans, teaching materials, and well administrative processes within the connection to the student's parents drove the school to achieve the student's desired outcomes. The school-based management implementation made connections between the school, parents, community, and stakeholders with high attention to student's learning progress and achieving knowledge, skills, and attitudes. By the way, school-based management implementation in the target study sites also faced challenges such as low teacher encouragement, fewer inspections from DoE and PoE, fewer workshops on teacher professional development, shortage of abilities in using new labor materials and up-to-date ICT, and limited financial support.

The result of this study can be notified for only the target schools since the study selected only 3 of 11 New Generational Schools and 3 of 50 resource schools from three provinces out of 25 provinces in Cambodia. The next study might examine possibilities to overcome challenges in the rest of the New Generation Schools and Resource Schools and employ a new paradigm of the upper secondary school since the school-based management in Cambodia has been updated to the model school standard.

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