

# GENERATING BALANCED SCORECARD AS PERFORMANCE MEASUREMENT FRAMEWORK FOR SECONDARY EDUCATION: A CASE STUDY AT SINGAPORE NATIONAL ACADEMY

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## ABSTRACT

Schools must adopt strategic management practices to survive in turbulent environment. Secondary education, in particular must have strategic goal and must be able to measure the performance of key areas to achieve that goal. This study's main objective is generating a Balanced Scorecard (BSC) as a performance measurement framework for Secondary education, using Singapore National Academy as the case study. The study aims to describe how the school can move from mission to vision using goals and objectives articulated in its strategic plan 2023-2027. It comprises an extensive review of relevant literature, an in-depth analysis of the school's strategic plan, and a comprehensive discussion and face-to-face interview with total of 10 key sources. Benchmarking with similar school was also used to generate the BSC framework. The result shows that there are 12 strategic objectives to achieve the focus goal which have been grouped into four BSC perspectives: Financial, Customer, Internal Business Process and Learning & Growth. These strategic objectives then were broken down into 25 measurement indicators with each one is equipped with a "measurement method" so that it has clear guidelines for calculating BSC achievements. Among BSC perspectives, Finance has 30% weights, Customer 25%, Internal Business Process 30%, Learning & Growth 15%. This BSC framework is recommended to be implemented in order to be able to ensure the achievement of goals in secondary education.

**Keywords:** Balanced Scorecard, Performance Measurement, Strategic Plan

## INTRODUCTION

Continuous improvement in management systems, including in the education system is very important to ensure the continued relevance of the implemented system, as well as to minimize stagnant and ineffective systems. One of the schools that is committed to continual performance improvement is Singapore National Academy (SNA). There are 4 (four) knowingly key factors that influence customer (parents) in choosing school for their child's enrolment, (1) quality of education, (2) price, (3) distance and (4) facilities. The price factors define market into segmented market based on socio-economical levels. Therefore, school's pricing strategy will attract certain segmented market, the higher the price (school fee) the smaller the market. Below is the comparison of school fees between SNA and competitors.

From the different perspective, the SNA Secondary's total withdrawal number of students has an average of 15,32% per academic year from the total number of active student enrolment in the same level. Following the same trend, it is contributed mostly by the incoming Secondary 1 students with 25,22% withdrawals in average from the total active student enrolment per academic year. In regards to withdrawal in the Secondary level, the parent feedbacks are vary including the high price, distance, facility, parent's job/business relocation, and the students taking Diploma program overseas (usually in Australia) compared to SNA upper secondary. These withdrawal numbers are quite impacting to the decreasing number of students as elaborated in below chart.



**Figure 1. Total SNA Secondary Student Enrolment in the Last 5 Years Source: Processed Data (2022)**

As seen from the above figure, based on the student enrolment report in the last 5 (five) academic years from internal SNA Marketing department, the number of students in the SNA Secondary levels (Year 7-12) has been declining around 21,03%, from 271 students in AY 2018-2019 to 214 students in AY 2022- 2023 (current year). If this situation continues with no effective strategic plan to overcome this, the situation may threaten SNA Secondary school financially in the future years. School must focus on strategy to handle this situation for the sustainability of the organization.

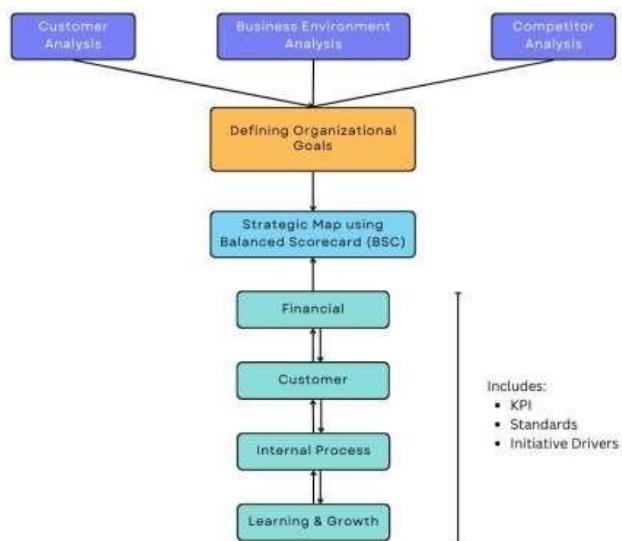
As the competition in educational services has become more intense, many countries have invested in education in an effort to maintain international competitiveness (Chen, et al, 2006). To adapt to the strong competition, there is an immediate requirement for states to improve the quality of their national education (Chen and Ho, 2003). Performance management and evaluation have become the focus of discussion in recent years as a way to aid in the new competitive landscape. To survive in this turbulent environment, schools must adopt strategic management practices. Secondary education, in particular must have strategic goal and must be able to measure the performance of key areas to achieve that goal. In today's knowledge-based economy and dynamic and competitive environment, it is particularly essential for schools to articulate their mission, vision and objectives. The performance evaluation systems could help to address strategic goals (Nazari et al., 2020), and to make them more competitive and sustainable over time (Oliveira, 2018). Moreover, addressing strategic plans would definitely pave the way from school's present position, based on their mission, to their desired future position, as described by their vision. The Balanced Scorecard itself is a management tool that has been used in many contexts including in the field of education. Karathanos & Karathanos (2005) explain that the application of the Balanced Scorecard in higher education institutions and other government institutions can help improve performance. Brown (2012) explained that the Balanced Scorecard can be a strategy that can help educational institutions to clarify their vision and mission and translate their vision into a real strategy. In addition, the Balanced Scorecard is also able to help higher education institutions to better allocate their limited resources strategically (Chen et al., 2006). The Balanced Scorecard method can help management in school organization, by modifying it according to the needs of the organization (Rompho, 2020). Although so far the use of the Balanced Scorecard has been mostly limited to higher education institutions than schools, but if developed properly it can also be applied in a school environment, where the complexity is not as high as in higher education. Management can track and find the causes of school success or failure more easily. The education sector's lagging and leading indicators were discussed in this article.

## LITERATURE REVIEW

The concept of the balanced scorecard (BSC), which was proposed by Kaplan and Norton (1992), is in line with such a collection of metrics. The alignment of these measures with the organization's strategic objectives is a crucial requirement. Organizations would be able to keep track of how well their students are learning while also keeping an eye on how well they are acquiring the skills and resources they need to boost student performance and growth. Kiriri (2022), BSC for the development of human capacity required to support an economy's expansion is the success of Higher Education Institutions (HEIs) should be contributing more to national development. Sharaf-Addin and Fazel (2021) the main objective of their study was to develop a Balanced Scorecard (BSC) model as a

performance management system for Bisha University, creating a strategic plan identifies a non- profit organization goals for a specific time period and how those goals will be achieved. According to the study of Seda Gunduzalp and Imam Bakir Arabaci (2017) BSC framework is suitable to be applied in educational organizations to developed the performance measurement, management, and strategic planning for doing the educational activities. Cheowsuwan (2016) BSC has been used as a management and measurement system and utilized as a method for evaluating an organization's operational effectiveness. Maret (2015) BSC is a framework that allows an organization to implement the chosen strategy as it helps to provide adequate correlations. According to research that was done by Karathanos (2005), BSC in business, very little research has been conducted on its adaptation or application in education.

The research will be started from studying current phenomena within secondary education including customer analysis, business environment analysis and competitor analysis by doing interview with selected sources, literature review, SWOT analysis, benchmarking and other related sources such as website, regulations and documents. In this phase, the researcher will also work on data collection of recent studies and theory related to Balanced Scorecard (BSC) and its implementation to education institutions to complement the data gathered from the interview.



**Figure 2. Model of Analysis Source: Processed Data (2022)**

## RESEARCH METHODS

A qualitative approach was chosen as the research method for this study. The process of research involves empirical work being carried out with the collection of data which can concur, refute or contest theories which in turn allows for understanding and clarification for different observations (May, 1997). Qualitative research involves a process known as induction, whereby data is collected relating to a specific area of study and from this data the researcher constructs different concepts and theories. Benchmarking will be used as method for data collection. There are two types of benchmarking, (1) Internal benchmarking lets an organization see how it's performing year to year, (2) External benchmarking lets an organization compare itself to peers. Benchmarking also can include opportunities to network with peers and learn from their processes and experiences. Semi-structured interviews will also be conducted to carry out this research study. They allowed the participants to elaborate and with that provided more flexibility, range and therefore the capacity to elicit more information from the participant. Semi-structured interviews permit scope for individuals to answer questions more on their own terms than the standardised interview permits, yet still provides a good structure for comparability over that of the focused interview (May, 1997). A voice recorder will be used to record the interviews and all interviews were fully transcribed verbatim. All participants

were contacted through email and telephone containing details of the research. All participants will have the interviews carried out in their own offices.

## RESULT AND DISCUSSION

In this section the researcher will describe and explain related to the results and discussion of the research obtained from the results of direct interviews with sources related to the research title. First, the researcher will present a general description of Singapore National Academy, then, the profiles of the sources interviewed by the researcher and classified according to the questions, while to see the full results of the interviews, you can see the transcripts of the interview results that the researcher has attached in the appendix in this study. Then in this fifth chapter, the researcher also describes the similarities and differences in the answers between the informants. Then finally, the researcher will generate Balanced Scorecard based on the above and further discussion with related parties.

### General Overview of Singapore National Academy

SNA is a premier PreK-12 schools in Surabaya-Sidoarjo that offers international curriculum, teachers and certification with SPK (Satuan Pendidikan Kerjasama) certification. It was established since 2004 under YAY. Singapore Piaget Academy with less than 100 students and continuously grow its enrolment to more than 500 students this year which includes the grade level of Pre- Kindergarten (using Montessori approach), Primary (Year 1-6 using Singaporean Curriculum) and Secondary (Year 7-12 using Cambridge curriculum). Currently SNA has 2 (two) campuses located in Waru (South Surabaya) and Graha Famili (West Surabaya). In terms of National Accreditation, done by BAN SM (Badan Akreditasi Nasional Sekolah/Madrasah), SNA Lower Secondary achieved A score while SNA Upper Secondary achieved B score. Both with the status of SPK (Sekolah Pendidikan Kerjasama) formerly called international schools under the supervision of East Java Province.

**Tabel 1. Profiles and Sources**

| No | Category | Name                | Position   | Q<br>(person) | Code |
|----|----------|---------------------|--|---------------|------|
| 1  |          | Silvia Arista       | Guidance & University Placement Counsellor             | 1             | S    |
| 2  |          | Rahayu Sulistyowati | Local Principal and Teacher                            | 1             | RH   |
| 3  |          | Rudy Susanto        | Head of Human Resources & Diknas Relations             | 1             | R    |
| 4  | Internal | Nisaika Henisuci    | Marketing & Customer Service Supervisor                | 1             | Nis  |
| 5  |          | Stephanie Sugiharto | Finance & Accounting Supervisor                        | 1             | ST   |
| 6  |          | Fenny Kodradjaja    | Board of Management / Dean of Support & Services       | 1             | FK   |
| 7  |          | Prima Harun         | Secondary Parent                                       | 1             | P    |
| 8  |          | Nitya Ninad         | Secondary Student                                      | 1             | Nit  |
| 9  | External | Shinde              |  |               |      |
|    |          | Neha Ninad          | SNA Alumni   | 1             | Ne   |
|    |          | Shinde              |  |               |      |
| 10 |          | Rizky Constantinova | Cambridge University Press & Assessment Unit Indonesia | 1             | RC   |

The researcher has interviewed total of 10 sources which include 6 internal employees, 4 external parties. The interview process was done through offline at Singapore National Academy and online via zoom and the detail result is attached in the appendix of this thesis. Below is the interview summary divided into 4 areas of Balanced Scorecard (BSC).

### Learning and Growth

As part of learning and growth, skill improvement was the main topic of the interview. In terms of teachers, 4 (four) sources including internal and external (parent) stated the same that teachers need to learn more into the teaching skill of which has to leave the conventional / traditional way of teaching, though they are seen as competence already. Below is the result of interview with Silvia as guidance counsellor:

“I think it needs to be more interactive teaching so that learning experience in the class can be more lively, not only transferring knowledge like old-school. In the A level at least, student must be able to use the knowledge to analyse, think critically.”

As local Principal and teacher herself, Rahayu mentioned the need of technology skill into teaching and also English speaking especially for those local Indonesian teachers, stated as follows:

“Because the curriculum continues to grow, technological advances are also growing. Surely, they know that later everything will be associated with technology. How do the children prepare things like that, now that we still don't or we don't have enough. (RH11-13)”

“It must be upgraded, especially for those of us who are local teachers who lack English, etc., we also understand this shortcoming. And we are trying between English and technology, etc., we are also trying to upgrade ourselves. (RH12-31)”

From the customer's point of view, Neha as alumni stated that SNA teachers are already good during her study while Prima as Secondary parent mentioned that teachers need to engage more with students. It relates to the teaching skill as elaborated above, stated as follows:

“I know the teachers directly dealing students. So somehow the teachers have to not only to have the proper knowledge, but how they also can engage with the students can motivate them like that. SNA already have those kind of teachers, but will be better if they could have more personal & professional development. (P35-34).”

Or in the past, we have given scholarships to teachers to take what is called a PGCE (post graduate certificate in education). That's for example if some of our teachers, if they have taken a PGCE like that, they have certification to be able to teach in schools around the world. (R23-31)”

Moreover, in terms of motivation, 4 sources relate motivation with dedication. Teachers' dedication were shown by giving extra lesson for students, so they feel that everyone are motivated. Such as the statement from Silvia below:

“For the teachers we have now, yes. They are very dedicated teachers, they are not afraid of working hard. So like I said, this couple of years, we have the strongest teachers team. Everyone is very motivated. (S4-33)”

Nitya as student (customer) confirm the above effort of SNA teachers as follows:

“Some of the teachers they say, like, “if you want extra lessons, please come to me”, you know. Like, “if you don't understand a subject we'll explain it to you”. I think that's really good for like those who don't really understand or sometimes for me, I like to have more practice. So, sometimes I see teachers like “Can I have more practice?”, They'll give me like, a lot of past papers to do, and I think that's really good to improve in this subject. (Nit37-18)”

From teacher, Rahayu also agreed and added an example when is there a personalized learning innovation at the west campus.

“Interesting, in my opinion teaching innovation really needs to be stimulated, how can teacher innovation in teaching be able to attract students in learning.”

“For example, when is there a personalized learning innovation at the west campus. It is interesting that the teacher does not equate the level and learning style of students because one individual understands different from another. (RH14-33)”

From above interview result, we can summarize that in the learning and growth perspective at SNA Secondary, the teachers are well-known for their competence and dedication as stated by the students, parents and human resources. Based on this interview, the researcher is able to generate indicators in the learning & growth perspective such as: competence, training, English skill, technology (relates to integrated system), and dedication (relates to employee performance).

#### Internal Business Process

SNA Secondary with its Cambridge curriculum is well-known has a strong academic standard where students graduated mostly with an excellent result of As/A level examination and successfully continued their study in reputable university overseas.

“For this year’s cohort, we have quite number of excellent students. We can expect 15% - 20% of students get excel score between A\* (star) to B at least. And we have quite a lot of passing passing the test, 80%. Because it’s either, they will be meeting the requirements anyway, because we have made sure that the acceptance that they get is slightly lower grade which it is attainable. (S3-20)”

“... for AS/A Level, they can definitely enter year 1 at university. Because if you look at it in terms of content, the department also gets it.” (RC45-26)”

In terms of National accreditation standard, both Rahayu and Rudy as persons in charge for this stated that SNA has met the standard for most aspects. Rahayu added that it is 90% fulfilled, only the administration that needs to work on.

“So that when talking about accreditation as a whole, in terms of teaching qualifications and school principals, all of them have met the requirements according to the standards.”

Furthermore, to continuously add value to our students and parents we discussed about what academic program must we excel at. Firstly, is for sure those core program containing subjects for the As/A level examination. Besides that, from parent's point of view who monitor their child's study, their focus is more into how the learning prepares the child for university life.

“... And also Learning Journey. In my opinion, we do have Learning Journey that is the same thing. I mean, for example, we had experience in Year 3 and Year 5 going to the same place. It will be better if the learning journey follows the Piaget 12-year journey. (P36- 5)”

In summary, in the internal business process at SNA Secondary, as academic excellence is the main goal of the education, keeping good-quality teachers is the important way for the school to maintain student's academic achievement. From parent's and student's point of view, their focus is more into how the learning prepares the child for university life. These programs are not only needed by university admission but also equipping the students with life skills such as adaptation, resilience, confidence etc. Aside of that, the teaching and learning also need supportive environment, facility and technology are the most needed to support learning experience. Aside of those aspects, the role of counsellor as dedicated assistant is much needed for students' well-being. From this interview, the researcher has gathered indicators in the internal business process such as university application, As/A level score, CCA, competition, achievement, learning journey, internship, facility and technology improvement.

#### Customer Perspective

From customer's perspective, we gathered that there are factors which influences them to enrol their child to school. 4 sources said that academic excellence is very important for customer in choosing school, this includes quality teachers and curriculum. Stated by Prima and Silvia as follows:

“For me, yes it is. I’m like a traditional parents actually. Yes. I do believe that every school has its own strength like one with Cambridge or IB curriculum. I chose SNA at that time is because with its strong Cambridge curriculum, my children will get a strong basic of knowledge, you know, like a textbook based. Yeah. That somehow we can know exactly what they learn. But on the other hand, they also need non-academic things like soft skills, confidence, presentation skills, teamwork, communication. (P34-22)”

Aside of that, there are other factors involving such as facility, price, university placement, and counsellor role in guiding students. From student point of view, there is also students as factor as they want to bond together as stated by Neha below:

“I think I would say, overall, it’s very good actually. I think the facilities are really nice. Teachers are very supportive, you know, the counsellors, they also do their best to help you with like University applications and to help you with like school activities. The students there are generally also really, at least in my batch, they were really nice and helpful. And yeah what I really liked about the SNA is like the students and the teacher, we can bond. So it’s not just like, oh yeah, just teaching and then that’s it. Like sometimes, you know, we joke around we like it’s like a two-way conversation where we are able to share. For example, if I was able to open up like, let’s say if I had concerns or “Miss, I don’t think you know, I don’t think I really understand this concept. I’m I have difficulties in this” and then they would actually like, go out of their way to help me. So that’s, that was really nice. The only thing that I feel like was quite lacking is the competitions like I already talked about earlier, but the extracurricular activities, they’re quite there were quite plenty of them. Yeah. So I think overall, it’s actually a very pleasant experience. (Ne42-8)”

Furthermore, when we want to know the customer expectation from secondary school they enrolled in, the answer is quite balance between academic and non-academic (skill/character) results. From student point of view, Neha stated that she needed school that was strong in academic and curriculum with rigorous courses as she is very studious and want to enter medical school. She also seeks credibility such as Cambridge like SNA has.

“I think it’s a student. SNA is a very academically oriented school and that is actually very aligns with what I needed as a student because going into medical school I need I needed like very rigorous courses and I actually really enjoyed the curriculum. So we had Biology, Chemistry which are subjects that we need for, at least for me to become to enrol in medical school. So the aspect of like the curriculum and educational for me in SNA is actually quite good. And I also like that we adopted an international curriculum so that in a way we have like credibility because it’s from Cambridge, right? (Ne39-11)”

From parent point of view, Prima stated that see needs school program that is good academically and non-academically (such as CCA). Technology is also the thing she is looking for as stated below:

“I know education is somehow is developing. I want my children to be good in academic things but also non-academic, as holistic for me. I want to also able to face the advanced technology. I hope school can nurture my child to be competitive in facing the changing world. (P34-11)”

In terms of important factors in choosing school, academic excellence is very important for customer, this includes quality teachers and curriculum. Aside of that, there are other factors involving such as facility, price, university placement, and counsellor role in quidding students. From above interviews, in terms the researcher found indicators mostly strengthen the internal business perspective strategic plan, such as university abroad admission, strong academic & non-academic/holistic, good score (A Level exam), facility, technology, communication (which explain operational excellence).

### Financial Perspective

In this perspective, we interviewed the internal and external sources as well, mainly talk about the pricing and how to increase revenue. Stephanie as the Finance & Accounting Spv stated that it is worthy due to quality education and service.

"In terms of price, it's already quite expensive or high. But at that price, it's still worthy, according to one of the parents, at that price they are satisfied, because the quality of the education program, teachers, etc. and stay until graduation. (ST31-30)"

From parent's point of view, price is not the first factor. They will support as long as they got quality education. (P34-32)

Stephanie suggested school to promote facility rental to add revenue, also profit oriented events. Reduction of cost also needed to work on to make better financial for the school.

You can also reduce costs from small things, for example from ELC snacks because if you see the quality is decreasing, you can look for other vendors with better quality or cheaper ones. And if I suggest, the increase of teachers' housing allowance should not be too high. (ST32-20)"

In the financial perspective at SNA Secondary, the researcher found a different statements between internal and external source (customer). From the internal, they view the price (school fee) is high therefore school must evaluate the service especially facility to match the rate. However, from the customer's view, price is not the most important factor which means they will pay as much, as long as the academic quality is good. From this interview, in terms of financial perspectives, the researcher gathered clear indicators such as price, facility rental (as added revenue), tuition revenue, student intake, and reduce cost (explain financial efficiency).

### Benchmarking Result

One of the efforts made to find out the best practices for BSC design in education is by benchmarking with Sekolah Citra Kasih/Sekolah Citra Berkah (SCK/SCB). SCK/SCB has previously implemented the BSC as a performance measurement tool. The benchmarking interview process with SCK/SCB was carried out by direct meeting at the source's residence, the interview results can be seen in Appendix IJ. As this school has implemented BSC framework long time ago, currently what they do is to develop it to be better and relevant with the changing of education. The first step is to explore/review the existing one, whether it is in accordance with the stages that should be arranged in the score card. Starting from preparing the vision and mission, whether it is appropriate or not, then what things already exist but need to be reviewed before finally exploring the intentions of the management and leaders where they want to take the school to. After knowing the goal, they will make what is called a strategic objective. Only later will it be reduced to indicators, measurements, how to measure it, then the weight and then program initiatives, what can we do to achieve this. SNA has similar view with SCK/SCB in the general perspectives and measurement indicators. Due to similarities, SNA Secondary will benchmark SCK/SCB's strategic map in generating new BSC framework

### Readiness Assesment

#### 1. Analysis on Availability of Resources

The following is the result checklist for readiness on facilities, skills and resources at SNA Secondary.

**Table 2. Availability of Resources at SNA Secondary**

| No | Availability of Resources   | Score1 | Score2 | TotalScore | Avg Score | Remarks                                |
|----|---|--------|--------|------------|-----------|--|
| 1  | Do the facilities provided have a computer network?                                       | 1      | 1      | 2          | 1         | Yes, network provided                  |
| 2  | Does senior leadership have a computer?   | 1      | 1      | 2          | 1         | Yes, computer provided                 |
| 3  | Do senior leaders have access to the Internet?  | 1      | 1      | 2          | 1         | Yes, access provided                   |
| 4  | Does senior leadership know how to use a word processing program? (eg Word, Word Perfect) | 1      | 1      | 2          | 1         | Yes, they know how to use word program |

|    |  |   |   |   |   |  |
|----|--|---|---|---|---|--|
|    | Does senior leadership know how to use a spreadsheet program? (eg. excel)          | 1 | 1 | 2 | 1 | Yes, they know how to use excel program        |
| 5  | Do senior leadership know how to use the software presentation? (eg. PowerPoint)   | 1 | 1 | 2 | 1 | Yes, they know how to use presentation program |
| 6  | Does the academic HODs have a computer?  | 1 | 1 | 2 | 1 | Yes, they have computer                        |
| 7  | Does the academic HODs have access to the Internet?                                | 1 | 1 | 2 | 1 | Yes, they have access                          |
| 8  | Does the academic HODs know how to use the processing program say? (eg. Word)      | 1 | 1 | 2 | 1 | Yes, they know how to use word program         |
| 9  | Does the academic HODs know how to use a spreadsheet program? (eg. Excel)          | 1 | 1 | 2 | 1 | Yes, they know how to use excel program        |
| 10 | Does the academic HODs know how to use the software presentation? (eg. PowerPoint) | 1 | 1 | 2 | 1 | Yes, they know how to use presentation program |
| 11 | Are existing facilities able to pay fees for consultants?                          | 1 | 1 | 2 | 1 | Yes, they are able to pay fee                  |
| 12 | Can your facility afford the cost of benchmarking data?                            | 1 | 1 | 2 | 1 | Yes, they could                                |
|    | Average  |   |   |   | 1 |  |

Note: Yes (score: 1); No (score: 0)

Both Score 1 and 2 are gathered from Senior Management. Score 1 is from the researcher as Asst. Dean of Support & Services and score 2 is from the BOM / Dean of Support & Services. From table above, it is stated that the average score is 1. It means that SNA Secondary has a complete 13 resources as mentioned in above table which are also functioning well to support school leadership in implementing Balanced Scorecard in the future.

#### Analysis on Leadership Assessment

Both Score 1 and 2 are gathered from Senior Management. Score 1 is from the researcher as Asst. Dean of Support & Services and Score 2 is from the BOM / Dean of Support & Services. From above table, we found that the average of total score is 1,3. The Leadership Commitment, Strategy Defined, Necessity and Resources are above the average, while the Participant Supports and Data Availability are below the average. Since this performance measurement is new to SNA Secondary, especially with the use of Balanced Scorecard, the participants will need clear communication and Focus Group Discussion with senior leaderships before BSC implementation in order to support the process. While data availability is seen still lacking as some supportive documents are still in the process of generating together with this research. Therefore, SNA school leaderships must pay attention to these Participant Supports and Data Availability factors in order to have smooth implementation of BSC framework.

**Table 3. Leadership Assessment at SNA Secondary**

| No | Criteria              | Score1 | Score2 | Avg Score | Value | Total Score | Remarks  |
|----|-----------------------|--------|--------|-----------|-------|-------------|--|
| 1  | Leadership commitment | 7      | 8      | 7,5       | 30%   | 2,25        | Senior leadership are quite committed to BSC.    |
| 2  | Strategy defined      | 8      | 7      | 7,5       | 25%   | 1,875       | School strategic plan proposal has been defined. |

|   |                      |   |   |     |     |      |  |
|---|----------------------|---|---|-----|-----|------|--|
| 3 | Necessity            | 9 | 9 | 9   | 15% | 1,35 | It is necessary to implement BSC.                |
| 4 | Resources            | 9 | 9 | 9   | 15% | 1,35 | Resources are available for BSC implementation.  |
| 5 | Participant Supports | 7 | 8 | 7,5 | 10% | 0,75 | Participant are still learning on this new task. |
| 6 | Data Availability    | 7 | 7 | 7   | 5%  | 0,35 | Some data are unavailable since it is new.       |
|   | Average              |   |   |     |     | 1,3  |  |

Note: Score 1-2: Very Low; Score 3-4: Low; Score 5-6: Enough; Score 7-8: High; Score 9-10: Very High

### Analysis of Environment

As mentioned in the Model of Analysis, the researcher will have analysed 3 (three) areas including Customer, Business Environment and Competitor. From this competitor research, we understand that it is such red ocean in west Surabaya, area where SNA's target market is located. Therefore, distance is one weak factor for SNA Secondary as its location are 1-hour distance at Sidoarjo, South Surabaya. Therefore, SNA needs strategy in order to win the customer and also strengthen its value. Based on the reputation, SNA is well known for its strong academic standard. Student achievements in A Level exam score and top world-university entrance are able to be achieved every year. Therefore, on terms of creating strategic plan and KPI, SNA must focus on this aspect (academic excellence) in the internal business process as well as the non-core program (Holistic/ PIAGET 12-Year Journey) which is needed by customer (student and parents) based on interview, such as learning journey, IAYP, competition, events and internship program.

### Planning

From the results of interviews with the key sources and benchmarking with Sekolah SCK/SCB, insights were obtained in generating the appropriate BSC to be implemented in SNA Secondary

#### 1. SNA Secondary Strategic Objective

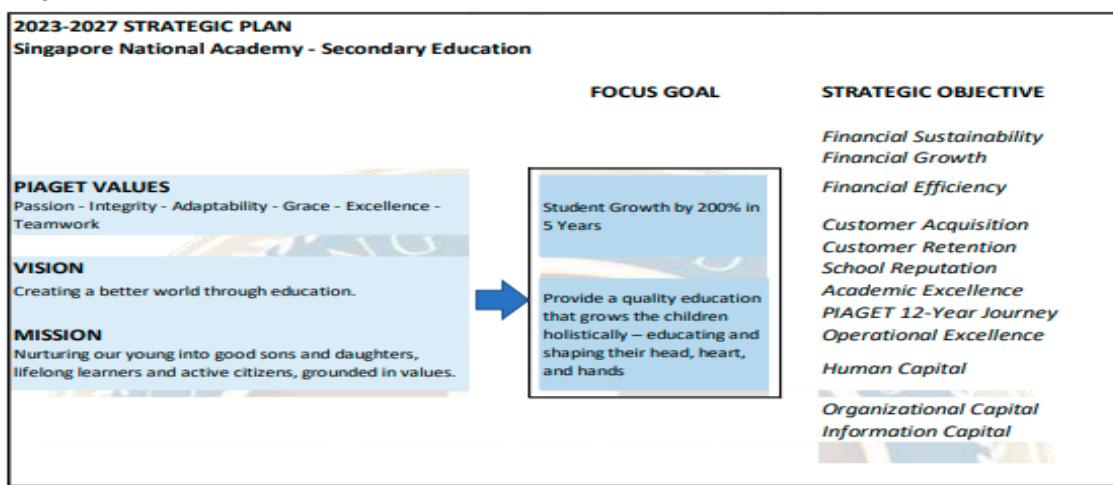
From the results of interviews with key sources in SNA Secondary, we know that the 5 (five) year focus goal in AY 2023 – 2027 is Student Growth by 200%. There are 12 strategic objectives to achieve that have been grouped into BSC perspectives:

- From a financial perspective, SNA Secondary wants to achieve Financial Sustainability. It refers to the capability to design a financially strong structure that will help the school to grow, survive any natural or artificial risk year after year. Within financial sustainability there are 2 strategic objectives that support it, namely Financial Growth and Financial Efficiency. With an increase of student number followed by school revenue, it will directly affect the capital obtained by the school, which will later be used to finance all school operations. Meanwhile, to control the operational costs incurred by schools, efficiency measures also need to be taken so that the available funds can be used as fully as possible.
- From a customer perspective, SNA Secondary wants all of its customers to feel satisfied and have pride in being part of the school community. Aside of that, maintaining a Good Reputation as quality school is also the top priority to maintain customer's trust. As a school, customer satisfaction and trust will have huge impact on Customer Retention and Customer Acquisition. All of these will determine the number of students.
- In the internal business process perspective, SNA Secondary wants to provide 'beyond academic excellence' service to all students and parents as customer. It is a result of combination between academic excellence, PIAGET 12-Year Journey and operational excellence. SNA Secondary is continuously improving to create graduates who are excellence not only in the academic field, but also in the character and skill which are nurtured through PIAGET 12- Year Journey. Using 3H model (HEAD: Cognitive and

Development Thinking Skills, HEART: Values and Life Skills, HANDS: Application of Knowledge Community Involvement and Social Responsibility Projects), SNA believes their graduates will be best positioned for the future. Operational excellence is also continuously seeking improvement especially in terms of school facility and technology usage in order to improve work efficiency.

d. From a learning and growth perspective, SNA Secondary wants to achieve 3 things, namely in Human Capital, Organizational Capital and Information Capital. For human capital, the human resources in SNA, both teachers and staff, are expected to develop competence especially in technology and teaching skills to support student learning. Apart from that, employee wellbeing is also a strategic objective they want to achieve under the organization capital so that everyone are motivated and perform well together in one. In information capital, maximizing the use of information technology to support learning is one of the concern from both internal and external sources so it is good to make it as one of strategy.

Overall, the vision, mission and values that are translated into strategic objectives of the organization can be seen in Figure below:

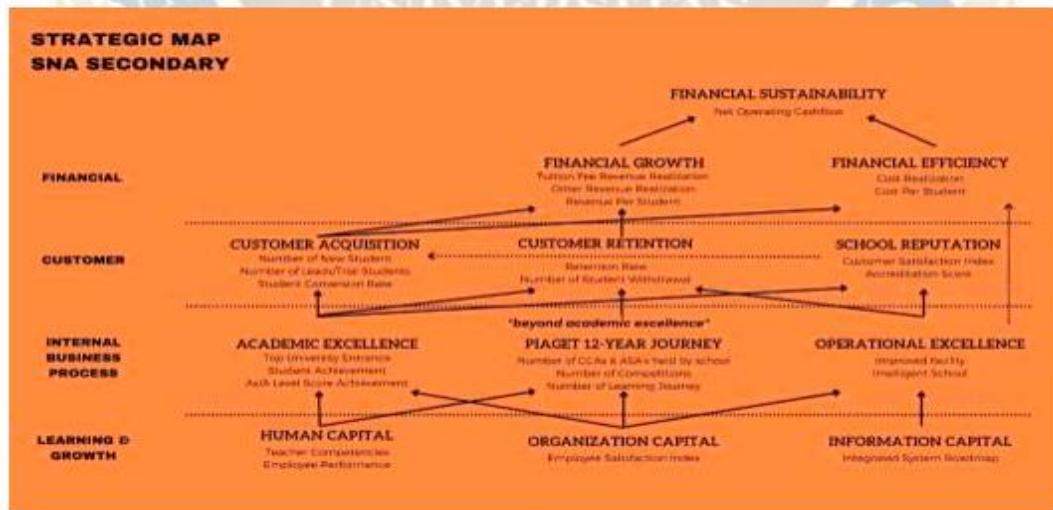


**Figure 3. Strategic Objective SNA Secondary**

The above strategic objective is the first generated by the researcher and member of BOM/Dean of Support & Services though in-depth discussion. There was no organizational strategic goal in the previous years, therefore the researcher cannot provide comparison or elaborate evaluation.

## 2. Identifying the Performance Measure of the Strategy (Key Performance Indicator)

From the strategic objectives to be achieved, it is necessary to determine the performance measure of each strategy (Key Performance Indicators). Aside from interview with key sources, one of the factors taken into consideration in determining indicators is compliance with the external standards that are used as references by schools, in this case is the Accreditation Assessment System (Sipena) issued by the National Accreditation Board for Schools/Madrasahs (BAN- S/ M). To describe how an organization creates value by linking strategic goals explicitly in causal relationships grouped in four BSC perspectives, a strategic map needs to be made (Kaplan et al., 2004). Strategic map is a strategic part of the BSC framework that is used in describing strategies to create value. Strategic Objective Map of SNA can be seen in Figure below.



**Figure 4. Strategic Map SNA Secondary**

From the Strategic map above, it can be seen that the learning and growth perspective which consists of 3 strategic objectives namely human capital, organizational capital and information capital is the basis for achieving the strategic objectives from the internal business process perspective. Human capital will influence academic excellence and PIAGET 12-year Journey / holistic; Organization capital influences academic excellence, PIAGET 12-year Journey and operational excellence; and information capital will influence operational excellence. While in the internal business perspective, academic excellence will influence customer acquisition, customer retention and school reputation; PIAGET 12-Yr Journey will influence customer retention; while operational excellence will influence customer retention and directly to financial efficiency. In the customer perspective, customer acquisition will influence financial growth and financial efficiency, customer retention will influence financial growth; while school reputation influences customer acquisition. In the financial perspective, financial growth and financial efficiency will impact the financial sustainability as the final measurement of goal achievement. So, everything here are correlated each other. The success of one indicator will influence others. To use BSC as an effective performance management tool, strategic goals and performance measures must be determined based on SMART principles namely Specific, Measurable, Achievable, Realistic, Timely. The measurement indicators determined in below table are gathered from the discussion with SNA school's senior leadership, the current departments strategic plan (sample file attached in appendix 6), as well as through benchmarking from Sekolah Citra Kasih/Citra Berkat (SCK/SCB).

### 3. Plan, Set Targets, Align and Integrate Strategic Initiatives to Reach Goals

Planning and target setting are carried out through coordination with school leaders, in this case the member or Board of Management and Senior Leadership. Input from the Leader of each school is also taken into consideration in planning and setting targets (aligned with SNA Secondary conditions). The next stage is the preparation of initiative programs that are integrated with strategic objectives. In determining the weight (bobot) of each indicator, it is adjusted to the level of importance of each perspective, as well as the level of importance of each strategic objective. Taking this into account, the weight for each perspective is determined as follows:

**Table 5. Determining Weight in BSC Perspectives at SNA Secondary**

| No | Perspectives              | WeightScore 1 | WeightScore 2 | WeightAvg |
|----|---------------------------|---------------|---------------|-----------|
| 1  | Financial                 | 30%           | 30%           | 30%       |
| 2  | Customer                  | 28%           | 22%           | 25%       |
| 3  | Internal Business Process | 25%           | 35%           | 30%       |
| 4  | Learning & Growth         | 20%           | 10%           | 15%       |
|    | Total                     |               |               | 100%      |

Both Weight Score 1 and Score 2 are gathered from Senior Management during in-depth discussion. Score 1 is from the researcher as Asst. Dean of Support & Services and Score 2 is from the BOM / Dean of Support & Services. Aside of this, the researcher also looks into the weight of benchmarked document belongs to SCK/SCB and see if this is applicable to SNA.

- a. For a financial perspective, a weight of 30% is set because it is the top priority of the school in the next 5 years as well as an important support so that school operations and development can continue to run well.
- b. Customer perspective, assigned a weight of 25% because customer satisfaction and trust (reputation) in this case is students and parents are important things, which need to be considered. If the customer is satisfied, it will increase the customer's interest in the school so that in the end it can increase the student body.
- c. Internal business process perspective, assigned a weight of 30% because it contains indicators that show school excellence. This perspective supports the school so that it is able to meet what the customer expects so that customer satisfaction can increase.
- d. The learning and growth perspective is assigned a weight of 15% because this perspective is the basis for achieving internal business processes. It contains what is needed so that SNA has the advantages as expected.

Like SCK/SCB, the determination of the weights between these perspectives at SNA Secondary does not differ too significantly from one another, because each perspective has an almost balanced level of importance. The difference is that in SCK / SCB, Finance has 25% weights, Customer 25%, Internal Business Process 30%, Learning & Growth 20%. However, still that everything is interrelated in a causal relationship, which has the ultimate goal of achieving the vision, mission and strategic objectives set by the organization. Below is the sample result of BSC framework calculated from above table for school guidance in evaluating the achievement of goals.

**Table 7. Target Achievement Scoring in BSC**

| No          | Perspectives             | No of Indicator | Weight | Target Achievement | Score    |
|-------------|--------------------------|-----------------|--------|--------------------|----------|
| 1           | Financial                | 6               | 30%    | 100%               | 30%      |
| 2           | Customer                 | 7               | 25%    | 100%               | 25%      |
| 3           | Internal BusinessProcess | 8               | 30%    | 100%               | 30%      |
| 4           | Learning & Growth        | 4               | 15%    | 100%               | 15%      |
| Total Score |                          |                 |        |                    | 100% (A) |

Total score range: <60% = E, 61-70% = D, 71-80% = C, 81-90% = B, 91-100% = A.

The target achievement will depend on the evaluation from school leadership on each perspective's strategy. After generating the first Balanced Scorecard above as performance measurement framework at SNA Secondary, approval needs to be carried out. This is important considering that the number of personnel involved in the implementation is increasing, validation needs to be done as a form of agreement (commitment) between those who carry out and those who implement the achievement targets. In addition, validation needs to be done as a force to keep the information provided valid. After that, as the initial step of the internalization, it is necessary to disseminate information to all PICs who are responsible for achieving targets so that the BSC can be well understood. Socialization is carried out at the beginning before BSC begins to be implemented, it can be done when there is a joint event or through FGD (Focus Group Discussion) which is considered more effective because it is more focused on conducting discussions related to BSC in smaller groups. Furthermore, periodic socialization can be carried out to new employees only. In daily life, socialization is carried out by the leaders in their respective work units periodically, so that later the BSC will be an effective measuring tool.

### Data Triangulation

In this particular research, the researcher uses the data triangulation of source to test the validity and credibility. The main purpose is to examine data from different persons/sources but collected using the same method. If we consider that each participant has a unique and valid world view, the researcher looks for a pattern or contradictions beyond the individual experience as direct source and government regulations as secondary data

### Managerial Implications

The managerial implications of designing a balanced scorecard as a performance measurement tool are as follows:

- a. In order to achieve its focus goal, SNA Secondary must not rely only on the current financial measurement system as there are many factors involving to the success of goal achievement.
- b. The Balanced Scorecard framework generated in this research is recommended to be implemented at SNA Secondary starting this year to ensure the achievement of AY 2023-2027 focus goal. Not only financial aspect as they have now to be measured, but there are also customer, internal business and learning & growth aspects provided as guidance here in balanced weight and related to each other. The success of each factor affects others and ended up to the achievement result

## **CONCLUSIONS AND PRACTICAL IMPLICATION**

After conducting detailed research and analysis regarding the design of the BSC as a performance measurement in SNA Secondary, researchers can formulate the following conclusions:

### 1. Readiness Assessment

Both the availability of resources and leadership assessment result of SNA Secondary are ready to implement Balanced Scorecard as performance measurement framework.

### 2. Planning

From the results of interviews with key sources in SNA Secondary, we know that the 5 (five) year focus goal in AY 2023 – 2027 is Student Growth by 200%. There are 12 strategic objectives to achieve that have been grouped into BSC perspectives: 1). Financial Sustainability, 2). Financial Growth, 3). Financial Efficiency, 4). Customer Acquisition, 5). Customer Retention, 6). School Reputation, 7). Academic Excellence, 8). PIAGET 12-Year Journey, 9). Operational Excellence, 10). Human Capital, 11). Organizational Capital, and 12). Information Capital.

The 12 strategic objectives that have been set together with the school leadership, broken down into 25 measurement indicators (can be seen in Table 16. Measurement Indicator in SNA Secondary BSC). Each BSC measurement indicator is equipped with a "measurement method" so that it has clear guidelines for calculating BSC achievements. In the Plan, Set Targets, Align and Integrate Strategic Initiatives to Reach Goals, the weights, targets and initiative programs to achieve them are determined (can be seen in Table 18. Weight Design, Target and Initiative Program in SNA Secondary BSC). Through the above steps, the Balanced Scorecard framework has been successfully generated to be able to ensure the achievement of organization's goals in the Secondary education.

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