



Transformation Based On Outcomes Performance Assessment Instrumentation Model Of The National Standard Of Education To The Balanced Scorecard (Case Studies in Senior High Schools in North Sumatra Province, Indonesia)

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ABSTRACT

The performance assessment of the outcomes of a high school must use a valid and reliable assessment instrument. The instrument model for an outcomes performance assessment that is built from the transformation of the National Education Standards to the Four Balanced. Scorecards perspectives produces 65 assessment items that are valid and have high reliability. High school outcomes performance assessment in North Sumatra can be done by using a formulated model of an outcomes performance assessment instrument so that the hope is that the quality of SMA can be improved.

Keywords: assessment instrumentation, process, output, outcomes, National Education Standards, Balanced Scorecard.

A. INTRODUCTION

Humans are thinking creatures. Humans will strive to acquire knowledge that develops their thinking abilities, and make it an investment in themselves and their relatives and their environment. Wright, at. All. in Kasmawati states that intellectual capital consists of human capital, social capital, and organizational capital ^[1]. Knowledge becomes an asset for humans, because with the high knowledge possessed by humans, humans have the ability to solve problems, ease of life, power, honor, improve education, and so on.

A person who has higher knowledge and / or skills will have a better life. In this regard, Viaene and Zilcha reported Glaeser's findings which revealed that children from families with educated parents have better education ^[2]. Hsu and Wang in their research found that *intellectual capital* has a positive effect on organizational performance ^[3]. Gogan, Artene, Sarca, and Draghici in their

research found a significant relationship between *intellectual capital* and organizational performance [4].

Based on these three studies, it is known that *intellectual capital* affects human quality and organizational performance. Accordingly, intellectual capital is an intangible asset other than licenses, patents, trademarks, etc., which must also be considered a valuable asset within the organization. These valuable assets are owned by people in the organization, but many organizations do not consider knowledge as an asset or a measure of organizational performance.

Both knowledge as an asset (*intellectual capital*) and human as an asset (*human capital*) are inseparable things. Zeleny defines human capital (*or human resources*) to mean sustainable human investment in the form of skills, knowledge, education, health and nutrition, abilities, motivation and effort [5]. More broadly, humans as an organizational asset are the *software and brainware* of a nation, more than any other investment because it has implications for nation building. The higher the value of humans is directly affected by the higher knowledge they have. In line with this, humans become a resource who will always strive to acquire and develop and utilize knowledge for their lives.

Humans can be viewed from an economic aspect. Lange, Topel, and Erich said that the accumulation of *human capital* generated by the accumulation of education is an engine of growth [6]. People who have higher *skills* will have higher productivity than those who have lower skills. The accumulation of human capital will add to the overall productivity factors in the economy. Humans always try to increase the productivity factors with various educational processes, and this process is compensated by money. The educational process in which the use of various educational instruments does not only build social values but also economic values.

Acquisition of knowledge in education will be more systematic and structured in formal and non-formal educational institutions. These educational institutions must be of high quality, and are the responsibility of the government and society. The quality of formal and non-formal educational institutions must be maintained and even always improved. In particular, the quality of formal education institutions is given a standard by the government which is stated as the National Education Standard (SNP), as a form of its intervention, so that it must always be developed. The achievement of these standards will guarantee the quality of the formal education provided.

The achievement of the SNP by each school is concluded from the results of the assessment using a school performance appraisal instrument which consists of eight standards, namely: standards for educators and education personnel, standards for facilities and infrastructure, financing standards, process standards, management standards, content standards, assessment standards, and graduate competence standard. In particular, the assessment of SMA performance achievement uses 129 points of assessment, which if analyzed still tends to be in process performance and *output*, and has not emphasized performance *outcomes*.

The performance assessment of outcomes in an organization is very important, including high school (SMA), because the main goal of each work process is its impact on customers, the organization and the environment. In line with this, by transforming the contents of the SNP instrument into the form of four BSC perspectives, the trend of performance assessment of these outcomes can be increased.

BSC is a management tool that is widely used in various for-profit and non-profit organizations such as educational organizations. BSC is a performance measurement system [7], as a management system strategy [8], Alani, Khan, and Manuel said that BSC-based assessment is an effective management tool in evaluating organizational performance [9]. Chen examined the use of BSC in higher education performance appraisal in all four perspectives and concluded its high effectiveness [10]. Based on the studies that have been disclosed, the assessment of educational *output* using SNP can be transformed into *outcomes* assessment using the BSC.

B. LITERATURE REVIEW

Mapping of SNP in BSC

Mapping of eight national education standards against the balanced scorecard can be analyzed, as follows: (1) the learning and growth perspective is the standard of educators and education personnel, standard of facilities and infrastructure; (2) internal process perspective includes process standards, management standards, content standards, educational assessment standards, (3) customer perspectives covering graduate competency standards, (4) financial perspectives covering financing standards. The mapping of the eight national education standards against the balanced scorecard can be analyzed as follows:

(1) Learning and growth perspective.

- a. Standard facilities and infrastructure. A copy of the Regulation of the Minister of National Education of the Republic of Indonesia Number 24 of 2007 concerning Standard of Facilities and Infrastructure for Elementary Schools / Madrasah Ibtidaiyah (SD / MI), states that Junior High School / Madrasah Tsanawiyah (SMP / MTs), and Senior High School / Madrasah Aliyah (SMA / MA) states that the standard of facilities and infrastructure for elementary schools / madrasah ibtidaiyah (SD / MI), junior high school / madrasah tsanawiyah (SMP / MTs), and high school / madrasah aliyah (SMA / MA) includes the minimum criteria for facilities and minimum criteria for infrastructure. Standard facilities and infrastructure include criteria for size and good condition with the appropriate number and types of infrastructure including classrooms, library rooms, biology laboratory rooms, physics laboratory rooms, chemistry laboratory rooms, computer laboratory rooms, language laboratory rooms, leadership rooms, teacher rooms, administration room, place of worship, counseling room, UKS room, student organization room, latrine, warehouse, circulation room, and a place to play / exercise.
- b. Educators and Education Personnel Standards. Regulation of the Head of the State Personnel Agency Number 1 of 2016 concerning the Implementation of the Transfer of District / City Civil Servants Holding Functional Positions of Teachers and Education Personnel to Become Provincial Regional Civil Servants it is stated that Civil Servants Holding the Position of Teacher and Education Personnel are Civil Servants who occupying functional positions of Teachers in secondary education units, Civil Servants who occupy positions of educational personnel in secondary education units, consisting of School Supervisors, School Principals, Laboratory / Workshop Managers, Educational Laboratory Administrators, Library Managers, Pushtakawan, and Supervisory and Implementing Officers. Government Regulation of the Republic of Indonesia Number 19 of 2017 concerning Amendments to Government Regulation Number 74 of 2008 concerning

Teachers states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education pathways. formal education, basic education, and secondary education.

Government Regulation of the Republic of Indonesia Number 74 of 2008 concerning Teachers states that teachers have competence, namely a set of knowledge, skills, and behaviors that must be possessed, lived, mastered, and actualized by teachers in carrying out professional duties. Teacher competencies include pedagogical competence, personal competence, social competence, and professional competence which is obtained through professional education and is holistic in nature. Regulation of the Minister of National Education Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies states that the Academic Qualifications of SMA / MA Teachers at SMA / MA, or other equivalent forms, must have a minimum educational academic qualification of diploma four (D-IV) or undergraduate (S1) study program in accordance with the subject being taught / taught, and obtained from an accredited study program. Furthermore, in a copy of the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 15 of 2018 concerning Fulfilling the Workload of Teachers, School Principals, and School Supervisors, it is explained that Teachers, School Principals, and School Supervisors carry out a workload of 40 (forty) hours in 1 (one) week at the base administration unit. The workload for 40 (forty) hours in 1 (one) week consists of 37.5 (thirty seven point five) effective working hours and 2.5 (two point five) hours of rest and school can increase rest hours which do not reduce effective working hours. (1) The implementation of the workload for 37.5 (thirty-seven point five) effective working hours for teachers includes main activities, namely planning learning or guidance, implementing learning or mentoring, assessing the results of learning or mentoring, guiding and training students, and carry out additional tasks attached to the implementation of main activities in accordance with the Teacher's Workload. Fulfillment of workloads is carried out in intracurricular, co-curricular and extracurricular activities. To fulfill the workload in carrying out learning or mentoring including homeroom teachers, supervisors of the Intra School Student Organization (OSIS), extracurricular coaches, coordinator of Continuous Professional Development (PKB) / Teacher Performance Assessment (PKG) or coordinator of the Special Job Exchange (BKK) at SMK, Picket teacher, chairman of the First Party Professional Certification Institute (LSP-P1), teacher performance appraisers carried out in the base administration unit (satmingkal). Other duties as administrators of teacher professional organizations / associations, and / or tor in distance education of basic education and secondary education, which can be counted as meeting hours of face to face. Meanwhile, the workload of the principal is fully to carry out managerial duties, entrepreneurship development, and supervision of teachers and education personnel. The workload of the principal is equivalent to the implementation of learning or guidance which is part of the fulfillment of the workload for 37.5 (thirty-seven point five) effective work hours. And the principal can carry out learning or guidance tasks if there are teachers who do not carry out learning or guidance tasks for certain reasons that are temporary or permanent or there are no teachers who teach in certain subjects or classes. While the workload of school supervisors is to carry out the task of supervising, guiding, and professional training for teachers which is equivalent to the implementation of learning or guidance. In addition to carrying out these tasks, school supervisors also plan, evaluate, and

report the results of the implementation of coaching, monitoring, assessment, and mentoring of teachers and school principals in their target schools in fulfilling the workload for 37.5 (thirty seven point five) effective working hours. . Teachers, Principals, and School Supervisors are required to carry out PKB activities for capacity building as Teachers, Principals, or School Supervisors. PKB activities are carried out to fulfill the workload for 37.5 (thirty seven point five) effective working hours. PKB activities can also be carried out at school or outside of school.

(2) Internal business process perspective.

The internal business process perspective is mapped on the standard of the process, management, content, and assessment (abbreviated as propengisilai).

- a. Process standard. In a copy of the Attachment to the Regulation of the Minister of Education and Culture Number 22 of 2016 concerning Basic and Secondary Education Process Standards, it is stated that the Process Standards are the criteria regarding the implementation of learning in educational units to achieve Graduate Competency Standards. Process Standards are developed referring to the Competency Standards for Graduates and Content Standards. The learning process in educational units is carried out in an interactive, inspirational, fun, challenging, motivating way to participate actively, and provides sufficient space for initiative, creativity, and independence according to the talents, interests, and physical and psychological development of students. For this reason, each education unit carries out lesson planning, implementation of the learning process and assessment of the learning process to increase the efficiency and effectiveness of the achievement of graduate competencies. In accordance with the Competency Standards for Graduates and Content Standards, the learning principles used from students are notified towards students finding out, from the teacher as the only learning source to learning based on various learning resources, from the textual approach to the process as strengthening the use of a scientific approach, from content-based learning to competency-based learning, from partial learning to integrated learning, from learning that emphasizes single answers to learning with multi-dimensional truthful answers, from learning verbalism to applied skills, improving and balancing between physical skills (hardskills) and mental skills (soft skills), learning that prioritizes the culture and empowerment of students as lifelong learners, learning that applies values by giving an example (ing ngarso sung tulodo), building will (ing madyo mangun). karso), and develop students' creativity in the learning process (tut wuri handayani).

Related to the above principles, process standards are developed that include planning the learning process, implementing the learning process, assessing learning outcomes, and monitoring the learning process. In accordance with the Graduate Competency Standards, learning objectives include the development of the domains of attitudes, knowledge and skills that are elaborated for each educational unit. The three domains of competence have different acquisition trajectories (psychological processes). Attitude is obtained through the activity of "accepting, running, appreciating, living, and practicing". Knowledge is obtained through the activity of "remembering, understanding, applying, analyzing, evaluating, creating". Skills are acquired through the activity of "observing, questioning, trying, reasoning, presenting, and creating". Competency characteristics along with

differences in acquisition trajectories also influence the characteristics of the process standard. To strengthen the scientific approach (scientific), integrated thematic (thematic between subjects), and thematic (within a subject) it is necessary to apply disclosure / research based learning (discovery / inquiry learning). To encourage the ability of students to produce contextual work, both individually and in groups, it is highly recommended to use a learning approach that produces problem-solving-based work (project based learning). In the implementation of learning, the time allocation for face-to-face learning hours for SD / MI ranges: 35 minutes, SMP / MTs: 40 minutes, SMA / MA: 45 minutes, SMK / MAK: 45 minutes. Supervision of the learning process is carried out through monitoring, supervision, evaluation, reporting, as well as regular and continuous follow-up activities. Supervision of the learning process is carried out by the head of the education unit and the supervisor. Supervision of the learning process is carried out at the planning, implementation, and assessment of learning outcomes through, among others, giving examples of classroom learning, discussions, consultations, or training. The results of monitoring, supervision, and evaluation of the learning process are compiled in the form of a report for the benefit of continuing follow-up for the professional development of educators. Follow-up on the results of supervision is carried out in the form of strengthening and rewarding teachers who show performance that meets or exceeds standards and providing opportunities for teachers to take part in continuous professional development programs.

- b. Management standards. Regulation of the Minister of National Education of the Republic of Indonesia Number 19 of 2007 concerning Education Management Standards by Primary and Secondary Education Units states that each education unit is obliged to meet the education management standards that apply nationally. In the Appendix to the Regulation of the Minister of National Education Number 19 of 2007 concerning Education Management Standards by Primary and Secondary Education Units implementing Program Planning, including the School / Madrasah Vision. School / Madrasah Goals, School / Madrasah Work Plans. Implementation of school work plans, including School / Madrasah Guidelines, School / Madrasah Organizational Structure, School / Madrasah Activities, Student Affairs, Curriculum and Learning Activities, Educators and Education Personnel, Facilities and Infrastructure, Finance and Financing, Culture and School / Madrasah Environment, and Community Participation and School / Madrasah Partnerships. Furthermore, other programs or activities in management standards are Supervision and Evaluation, Self-Evaluation, Evaluation and Development of KTSP, Evaluation of Educators and Education Personnel, School / Madrasah Accreditation, School / Madrasah Leadership, Management Information Systems, and Special Assessments.
- c. Content Standards. Regulation of the Minister of Education and Culture Number 21 of 2016 concerning Basic and Secondary Education Content Standards based on Government Regulation Number 19 of 2005 concerning National Education Standards as amended several times, most recently by Government Regulation Number 13 of 2015 concerning Second Amendment to Government Regulation Number 19 of 2005 Regarding the National Education Standards, it is stipulated that the Content Standards are criteria regarding the scope of material and the level of competence to achieve the competence of

graduates at certain levels and types of education. The implementation of Law Number 20 of 2003 concerning the National Education System has mandated that the function of national education is to develop capabilities and form a dignified national character and civilization in the context of educating the nation's life. And the aim of national education is to develop the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. Content standards are adjusted to the substance of the national education objectives in the domain of spiritual attitudes and social attitudes, knowledge and skills. Therefore, the Content Standards were developed to determine the criteria for the scope and level of competence in accordance with the competencies of graduates formulated in the Graduate Competency Standards, namely attitudes, knowledge, and skills. The characteristics, suitability, adequacy, breadth, and depth of the material are determined in accordance with the characteristics of the competence and the process for obtaining the competency. The three competencies have different acquisition processes. Attitudes are formed through activities: accepting, carrying out, appreciating, living, and practicing. Knowledge is possessed through activities: knowing, understanding, applying, analyzing, evaluating, and creating. Skills are acquired through activities: observing, questioning, experimenting, reasoning, presenting, and creating. Competency characteristics along with differences in the acquisition process affect the Content Standards. Furthermore, the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 24 of 2016 concerning Core Competencies and Basic Competencies of Lessons in the 2013 Curriculum. Core Competencies and Basic Competencies in the 2013 curriculum are the level of ability to achieve the graduate competency standards that a student must have at each grade level. . Basic competence is the ability and minimum learning material that students must achieve for a subject in each education unit which refers to the core competencies. Core competencies consist of core competences for spiritual, social, knowledge and skills attitudes.

- d. Educational assessment standards. A copy of the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 4 of 2018 concerning Assessment of Learning Outcomes by the Education Unit and Assessment of Learning Outcomes by the Government explains that the assessment of learning outcomes by the Education Unit is carried out through USBN and US and the assessment of learning outcomes by the Government is carried out through the UN. Assessment of learning outcomes by the Government is for students at SMK / MAK including skills competency examinations. Assessment of learning outcomes is carried out in accordance with the applicable curriculum. Further provisions regarding the subjects tested in the USBN are regulated in the POS set by the BSNP and further provisions regarding the implementation of the expertise competency test for SMK / MAK are regulated in the technical guidelines stipulated by the related director general. School exams are followed by students at the SD / MI / SDTK levels and the Package A / Ula Program. USBN is attended by students at the SD / MI / SDTK levels, Package A / Ula Program, SDLB, SMP / MTs / SMPTK, Package B / Wushta Program, SMPLB, SMA / MA / SMAK / SMTK, SMK / MAK, Package C Program / Ulya, and SMALB. The National Examination is followed by students at the SMP / MTs / SMPTK levels, Package B / Wustha Program, SMA / MA / SMAK / SMTK, SMK / MAK and

the Package C / Ulya Program. Assessment of learning outcomes through USBN at the SMP / MTs / SMP TK / SMPLB levels, the Package B / Wustha Program, SMA / MA / SMAK / SMTK / SMALB, SMK / MAK and the C / Uya Package Program is held by an accredited educational unit / program. Requirements for students to follow US, USBN AND UN. Students at the SMP / MTs / SMP TK, SMPLB, SMA / MA / SMTK / SMAK, SMALB, SMK / MAK levels who take the USBN and UN must meet the requirements, be registered in the last semester in the Education Unit and have a complete assessment report on learning outcomes starting from the semester 1 to 5 semesters, or have completed the entire SKS load required for students in the Education Unit based on the Semester Credit System (SKS) which is equivalent to semester 5. Students in the B / Wustha Package Program and the C / Ulya Package Program who participate in USBN and the National Examination must have a complete report on the assessment of learning outcomes on Equality Education.

(3) The customer perspective.

Graduate competence standard. A copy of the Appendix to the Regulation of the Minister of Education and Culture Number 20 of 2016 concerning Competency Standards for Primary and Secondary Education Graduates states that the Competency Standards for Graduates are criteria regarding the qualifications of graduate abilities which include attitudes, knowledge, and skills. Competency Standards for Graduates are used as the main reference for developing content standards, process standards, educational assessment standards, standards for educators and education personnel, standards for facilities and infrastructure, management standards, and financing standards to develop the potential of students to become human beings who believe and obey God. The One and Only, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. In the explanation of Article 35 of Law Number 20 of 2003, it is stated that the standard of graduate competence is a qualification of graduate abilities which includes the attitudes, knowledge and skills of students that must be fulfilled or achieved from an educational unit at the primary and secondary education levels.

(4) Financial perspective.

Financing standards. Government Regulation of the Republic of Indonesia Number 48 of 2008 concerning Education Funding states that education funding is the joint responsibility of the Government, local government, and the community, including education providers or units established by the community, students, parents or guardians of students, and other parties. who have attention and a role in the field of education. The cost of education includes the cost of the education unit, the cost of administering and / or managing education, and the personal costs of students. Furthermore, it is explained that education unit education funds organized by local governments can come from local government assistance, government assistance, levies from students or their parents / guardians which are implemented in accordance with statutory regulations, assistance from educational unit stakeholders outside of students. or parents / guardians, foreign assistance that is not binding, and / or other legal sources. The responsibility of students, parents, and / or guardians of students in funding is aimed at covering the lack of funding for educational units in meeting the National Education Standards and funding programs for improving the quality of educational units above the National Education Standards. Levies by educational units in order to fulfill the responsibilities of students, parents, and / or their guardians

must meet the requirements, including based on clear investment and / or operational planning and set forth in strategic plans, annual work plans, and annual budgets that refer to National Education Standards, investment planning and / or operations are announced transparently to educational unit stakeholders, the funds obtained are stored in an account in the name of the education unit, the funds obtained are specifically recorded by the education unit apart from the funds received from the educational unit organizer, no collected from students or their parents / guardians who are economically incapable, apply a cross-subsidized system which is regulated by the education unit, used in accordance with the plan, not linked to academic requirements for student admission, assessment of student learning outcomes, and / or o the graduation of students from the education unit, at least 20% (twenty percent) of the total levies of students or their parents / guardians are used to improve the quality of education, not allocated either directly or indirectly for the welfare of school / madrasah committee members or a representative institution of educational unit stakeholders, the collection, storage and use of funds is audited by a public accountant and reported to the Minister, if the amount is more than a certain amount stipulated by the Minister.

Assessment Process and Output Performance and Outcomes

Assessment of process and output performance is based on SNP which consists of 8 standards ^[11], namely: (1) standard content contains 9 statements, (2) process standard contains 21 statements, (3) graduate competency standard contains 7 statements, (4) standard educators and education personnel contain 19 statements, (5) standard facilities and infrastructure contain 28 statements, (6) management standards contain 16 statements, (7) financing standards contain 16 statements, and (8) assessment standards contain 13 statements.

The nine statements on content standards are that the teacher develops learning tools on the competence of spiritual attitudes, social attitudes, knowledge, skills, development is carried out for each grade level, the principal develops the curriculum, arranges and implements the curriculum based on the correct elements and steps.

The twenty-one statements on the standard process are developing a syllabus, developing a learning process plan (RPP), allocating time, carrying out the learning process with a maximum number of students per study group of 36 people, using textbooks, managing classes, starting and closing learning, using models, methods, media, learning resources, approaches, use of authentic assessment, the principal supervises the learning process in various ways, supervises the process, follows up and reports.

The seven statements on the competency standards of graduates are that students have attitudes and behavior of faith and piety, social attitudes with good character, true learner attitudes, physically and mentally healthy attitudes, have knowledge, thinking skills, and acting skills according to the demands of the 21st era.

The nineteen statements on the standards of educators and education personnel are having minimum academic qualifications and certification, suitability of the field of study being taught with an educational background, pedagogical competence, professional, personal, social, counseling guidance teacher competence, the competence of the principal in carrying out managerial tasks,

supervision, and entrepreneurship, qualifications and certification of administrative staff, libraries, laboratory assistants, and special service officers.

The twenty-eight statements on the standard of facilities and infrastructure are the area and condition of the school land that meets the standards, the school building which is in detail described and meets the standards, maintenance, classrooms, libraries, physics chemical biology laboratories, language and computers, leadership rooms, teachers' rooms and administrative staff, a counseling room, a prayer room, a student health unit (UKS) room, a sports room, latrines, warehouses, circulation, canteen, and parking. Overall must comply with standards.

The sixteen statements on management standards are having a Medium-term, annual and school finance work plan, organizational structure and main tasks (tupoksi), having guidelines for managerial management, supervision, and entrepreneurship, cooperation with the community, management information systems, and principal leadership

The sixteen statements on the standard of financing are the Work Plan and School Budget (RKAS) document and minimum income for three years, investment documents, expenditure documents, budgeting with fair principles for all process components, flexible, transparent and accountable.

The thirteen statements in the assessment standard are planning, implementing, reporting, and utilizing the results of the assessment of knowledge, attitudes, skills, process assessment, and determination of graduation with the correct steps.

SNP based assessment is an assessment of processes and outputs, even some of the outcomes. Outcomes assessment is shown on the competency standards of graduates, but has not seen customer satisfaction and sustainability for the school. The assessment of the performance of the outcomes of junior high schools uses the Balanced Scorecard with four perspectives, namely the customer perspective, internal business processes, learning and development, and finance, starting with the formulation of assessment objectives, setting indicators, compiling instrumentation, testing the quality of instrumentation, and implementing the assessment.

The purpose of the performance outcomes assessment is to see the impact of an educational process on students, school organizations, and the environment as customers. The educational process must have a positive impact on students, in the form of intellectual development, positive attitudes and characteristics, and skills. Wittram, Guth, and Porter said that the measurement of outcomes must include changes in value in all conditions [12]. Bhatti, Cloud, and Razaq found key performance indicators used by effective organizations, namely: cost, financial, quality, time, flexibility, delivery reliability, safety, customer satisfaction, employee satisfaction, social, learning and growth [13]. Kaplan and Norton provide performance assessment indicators as shown in Figure 1 below.

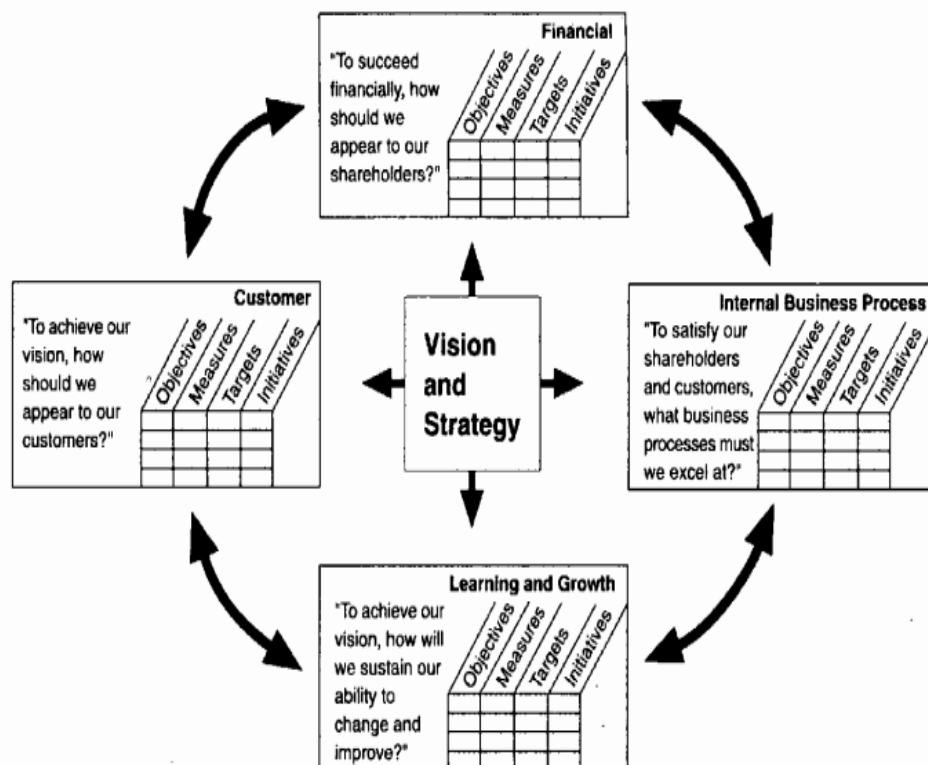


Figure 1. Framework for Translating Strategy into Operational Terminology Based on the Balanced Scorecard

(Source: Robert S. Kaplan and David P. Norton. 1996 [14])

C. Transformation of SNP Instruments into BSC Instruments

Table 1 below shows the transformation of the standards of educators and education personnel (tendik), standard of facilities and infrastructure (sarpras) to a learning and growth perspective (jartum). Table 2 shows the transformation of graduate competencies into a customer perspective. Table 3 shows the transformation of process standards, management standards, content standards, and assessment standards (propengisilai) to an internal business process perspective. Table 4 shows the transformation of financing standards to a financial perspective.

Table 1. Teachers and Facilities and infrastructure Transformation Table to Jartum

National Education Standards (NES)		Performance			Learning and Growth Perspective (BSC)		
Standart Type	No	Description	Process	Output	No	Description	Outcomes Indicator
1		2	3	4		5	6
Teacher	1	Teachers have a minimum undergraduate academic qualification	X	V	1	Professional teachers have educator certificate competencies with 4 competencies including professional, pedagogical, personality, and social competences. Professional teachers master the novelty of subject matter and are able to carry out creative and innovative learning, using a variety of learning methods, approaches, models and techniques	1. Teachers master science and are skilled at using the latest technology, according to their field of work 2. Teachers behave and act in accordance with the teacher's code of ethics 3. Teachers are able and skilled to carry out creative, innovative, interactive, and interesting learning. 4. Teachers have learning tools that are always updated according to science and technology developments. 5. Professional counselling teacher 6. Principals who demonstrate quality leadership, performance and organizational governance. 7. Quality administrative staff who always work effectively, efficiently and on time.
	2						
	3		X	V			
	4	Teachers have educator certificates	X	V			
	5						
	6	Teachers teach subjects according to their educational background	X	V	2		
	7		X	V			
	8	Teachers have pedagogic competences with 10 abilities and actions.	X	V	3	Professional guidance and counseling teachers who always follow a code of ethics, provide guidance and counseling for problem students, career guidance, etc.	
	9	The teacher has professional competence with 5 abilities and actions	X	V	4	Professional school principals who are able and competent to carry out their duties and responsibilities as managers, supervisors, and entrepreneurs, so that they have an impact on improving, improving school governance and performance.	
	10	The teacher has a personality competency with 5 abilities and actions	X	V			
		Teachers have social competences with					

	11	5 abilities and actions					
		Counseling guidance teachers have professional competences with	X	V			
		7 abilities and actions, with a ratio of the number of teachers to students 1: 1-150	X	V			
	12						
			X	V			
	13	The principal meets 7 requirements. The principal has managerial competence with 16 abilities and actions	X	V			
	14	The principal has entrepreneurial competence with 5 abilities and actions	X	V			
	15	The principal has the competence to supervise the learning process with 4 abilities and actions					
	16		X	V			
		The school has an administrative head who meets 2 requirements, and has administrative staff at least a high school education / equivalent	X	V			
			X	V			

		The school has a librarian with 2 requirements, and has a library staff of at least a high school education / equivalent. The school has laboratory staff according to laboratory staff standards. The school has officers carrying out special services with 4 tasks and actions.					
Facilities and infrastructure	1	Schools have land area and characteristics according to 4 provisions	X	V	1	The school has a large area so that it meets the adequacy of standard building space with a good and orderly layout, beautiful, beautiful, decorated with arranged and beautiful green plants, comfortable, and safe.	1. Land and buildings that are well ordered and maintained, beautiful, comfortable and safe.
	2		X	V			
	3	The school has a building area and meets 5 safety requirements and 5 health requirements.	V	X			2.School space is adequate, used effectively and efficiently, and efficient.
	4		X	V	2		3. Adequate, safe, and infrastructure
	5	Schools always carry out the maintenance of sarpras.	X	V			4.Laboratories that support adequate, effective, and efficient practical learning and are always maintained and updated
	6	The school has 18 good infrastructure.	X	V	3		5. The work space of each work unit is adequate, safe, comfortable, and well maintained, so that work is not boring and causes work stress.
	7	The school has complete and well-equipped classrooms, chemistry laboratories, physics biology, language, and information technology.	X	V	4		6.The school is beautiful, green, safe, comfortable, attractive, beautiful, and has a healthy canteen,
		The school has a principal's room, a teacher's room, an					

		administrative staff room, a prayer room, a counseling room, an UKS room, a student council room, latrines, and warehouses that meet standards. The school has a playground, canteen, circulation space and parking.					ample and safe parking.
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Table 2. Competency Transformation of Graduates to Customers

National Education Standards (NES)			Performance		Learning and Growth Perspective (BSC)		
Standart Type	No	Description	Proce ss	Outp ut	No	Description	Outcomes Indicator
1		2	3	4		5	6
Compete nce of graduate s	1	Students have behaviors that reflect an attitude of faith and devotion to God Almighty in accordance with the development of students obtained from the learning experience through 10 habituations.	V	V	1	Students who can answer future challenges are students who have behavior that reflects an attitude of faith and piety, a good social attitude, a true learner's attitude, a healthy attitude physically and spiritually, has knowledge in Higher order thinking skills (HOTS) and Science Technological Engineering and Mathematics. (STEM). Students have creative, innovative, and productive thinking skills as well as independent and	1. Students and parents' satisfaction with the acquisition of HOTS and STEM knowledge by students. 2. Satisfaction of graduate users on HOTS and STEM thinking skills. 3. Customer satisfaction with the true learner character that is built in students. 4. Customer satisfaction with the students' ability to solve problems. 5. Customer satisfaction with students' ability to act independently
	2						
	3	Students have behaviors that reflect social attitudes with 6 characters obtained by learning and habituation.					
	4	Students have behaviors that reflect true lifelong learner attitudes according to children's development, which is obtained from learning experiences and literacy habituation with 7 components.	V	V			
	5	Students have behavior that reflects a healthy attitude physically and spiritually through involvement in 6 student activities.	V	V			
	6						
	7	Students have factual, conceptual, procedural, and metacognitive knowledge at the technical, specific, detailed, and complex levels obtained from activities and learning. Students have creative, productive, and critical thinking skills through 7 laboratory-oriented activities and	V	V	2		

		learning, workshops, and performances.				collaborative acting skills scientifically.	and collaboratively.
		Students have the skills to act independently, collaboratively, and communicatively through a scientific approach.	V	V			6. The advantage is in terms of profit because customers have the courage to pay dearly for the increasing trust in the quality of the school.
			V	V			

Table 3. The Transformation of Value to Internal Business Process

National Education Standards (NES)			Performance		Learning and Growth Perspective (BSC)		
Standart Type	No	Description	Proce ss	Outp ut	No	Description	Outcomes Indicator
1		2	3	4		5	6
Process	1	The school develops a syllabus containing 9 components.	V	V	1	Schools develop curriculum, syllabus, learning tools based on basic competencies, core competencies and implement them in the form of programs and learning activities, student affairs, talent and interest development	1. Availability of curriculum documents, syllabus, and learning tools that are always being developed.
	2	Schools develop a complete and systematic learning process plan (RPP).	V	V			
	3	Schools allocate time and duration of study with 4 conditions.	V	V			
	4	The school sets a maximum number of students for 36 people per study group.	V	X			
	5	The teacher manages a class with 12 good activities.	V	X			
	6	The teacher starts the lesson with 5 introductory steps, and ends the lesson with 4 closing steps.	V	X	2	Teachers carry out learning with preliminary steps, core learning activities, and end learning according to good terms.	2. Increasing the effectiveness and efficiency of the use of human resources and sarpras in the learning process.
	7	The teacher uses textbooks as a learning resource.	V	V			
	8	Teachers use models, methods, approaches, media, learning resources, which are in accordance with the characteristics of students and subjects.	V	V	3	Teachers have pedagogical competences that must be applied in the	3. The implementation of each activity occurs in a directed, standardized and effective process.
	9	The teacher uses an authentic assessment approach and uses it to improve the learning process.	V	V			
	10		V	V	4		4. The use of models, methods, approaches, media, learning resources in

	11	The school principal monitors and supervises the learning process objectively and transparently through 6 activities. The school principal supervises, reports and follows up.	V	V	5	learning process. Teachers plan, carry out authentic assessments and use them to improve the learning process. The school principal monitors the learning process and follows up on it to improve it towards a more perfect direction.	learning is appropriate and good so that it makes it easier to catch and increase student mastery. 5. The learning process is always evaluated so that it is in accordance with the plan.
Manage ment	1	The school formulates, determines the RKJM which contains the vision, mission and goals of the school as well as program and activity milestones, RKT, and RKAS and implements them according to the current year.	V	V	1	The principal carries out managerial duties with 4 management functions which include planning, organizing, directing, and controlling.	1. The head of the school carries out managerial duties by implementing the functions of planning, organizing, directing and controlling so that it is well documented.
	2	The school has guidelines for school management and funding.	X	V	2	The school has guidelines for managing curriculum, learning, administration, student activities, public relations, which are formulated in the form of manuals and standard operating procedures and technical guidelines, as well as determining the	2. Management of school programs and activities is carried out with high accountability.
	3	The Schools have an organizational structure	X	V			
	4	The school manages the field of curriculum, student-related talents and interests, and manages the teaching and education staff.	V	V			
	5	The school carries out an assessment of the performance of educators and education personnel.	V	V			
	6	The Schools carry out self-evaluation activities.	V	V			
	7	The principal manages the school by applying learning leadership with 6 principles.	V	X			
	8		V	V			3. The main tasks of the school components are carried out properly and effectively.

		The school has a management information system (SIM) which includes 4 activities and actions.			3	organizational structure and main tasks. The principal conducts an assessment of school performance and all school components, self-evaluation, with good planning. The principal has good leadership which is applied in the management of the education he provides.	4. Management of curriculum and student activities related to the development of talents and interests that have a high impact on students. 5. The performance of educators and teaching staff is high. 6. Schools always carry out self-reflection for the development of a better direction. 7. Schools become favorite schools. 8. Schools have an effective and efficient management information system.
Curriculum	1	The teacher develops learning tools on the competence of spiritual attitudes, social attitudes, knowledge competencies, skills competencies, according to the level of competence and the scope of material at each class level.	V	V	1	Principals and teachers develop curricula in accordance with the standard of the formulation of KTSP, and make learning tools to guide the implementation of learning that refers to the curriculum.	1. High-quality learning process. 2. The formulated curriculum is relevant to the demands of the stakeholders' needs.
	2	Principals and teachers develop curriculum in accordance with the guidelines and operational procedures for developing KTSP by involving 5 elements as resource persons.	V	V			
	3	The school implements a curriculum with 5 provisions.	V	X			

Evaluati on	1	Teachers carry out assessment of learning outcomes in accordance with the principles of validity, objective, fairness, openness, holistic, and accountability.	V	V	1	Teachers must make assessment instruments that are valid and reliable, and carry out assessments objectively, fairly, openly, holistically and accountably, in the form of daily, end-of-year and year-end assessments, as well as school exams, and are guided by the minimum completeness criteria. Teachers carry out process assessments, graduate competencies holistically, using standard and accountable instruments, and determine graduation.	1. Conduct the assessment according to standards and produce clear feedback. 2. Always hold continuous quality improvement.
	2	Schools determine the minimum completeness criteria (KKM) based on 4 basic considerations.	V	V			
	3	The teacher carries out the assessment of learning outcomes in 4 forms.	V	V			
	4	The teacher assesses the competence of knowledge, attitudes, and skills, through relevant activities and actions, such as tests, questionnaires, observations, observations, etc.	V	V			
	5	Schools determine student graduation with 4 basic considerations.	V	V	2		
	6	The teacher assesses the process and learning outcomes in 8 steps.	V	X			

Table 4. Transformation of Financing Standards to a Financial Perspective

National Education Standards (NES)			Performance		Learning and Growth Perspective (BSC)		
Standart Type	No	Description	Proce ss	Outp ut	No	Description	Outcomes Indicator
1	2		3	4		5	6
Financin g	1	The Schools have a balanced income and expenditure plan.	V	V	1	Education financing is guided by Government Regulation no. 48 of 2008, concerning education financing. In line with this, the school will have	1. Compliance with laws and regulations in managing school budgets.
	2	The school has a budget for investment, working capital, operations which includes 9 components of activities that are stated in the document for the last 3 years, as well as making them happen.	V	V			2. The budget for school income and expenditure is balanced,
	3		V	V			

	4	The school has a budget for the development and maintenance of facilities and infrastructure.	V	V	2	an adequate budget for operational costs, investment, development, and other activities. Financing must cover all activities, and adhere to the principles of transparency, fairness, flexibility, priority scale, and accountability. All financing must be contained in the RKT and RKAS, and the RKT and RKAS must be contained in the RKJM. Schools must be accountable for the use of budgets sourced from the government, society, and tuition fees from students.	adequate, and sustainable.
	5	The school has a budget for the development of educators and educational staff, as well as student development.	V	V			3. Budget management is transparent, fair and accountable.
	6	The school owns and realizes the budget for the provision of stationery, consumables, power supply, water and services	V	V			4. Increase in school income every year so that the type and volume of activities increase.
	7	The Schools have good bookkeeping and standards.	V	V			5. Increasing the trust and satisfaction of the community to contribute funds so that schools are of higher quality.
		The Schools always carry out transparent and accountable financial accountability.					

D. Instrument for Performance Assessment of Outcomes Based on the Balanced Score Card

The number of items for the performance assessment of high school education outcomes in North Sumatra is 65 items and is shown in the appendix, distributed to each indicator in four perspectives, and is shown in Table 5. as follows

Table 5. Indicators and Distribution of Instruments in 4 Perspectives

No.	Balanced Scorecard Perspective	Number of Indicators	Number of Item Instruments
1	Learning and Growth	13 indicators	20 items
2	Customer	6 indicators	9 Items
3	Internal Business Process	17 indicators	28 Item
4	Financial	5 indicators	8 items
	Total	41 indicators	65 Items

The validity test of the instrument items used biserial correlation with the number of test subjects as many as $n = 32$, with a significance level of 0.05, the correlation coefficient $r_{table} = \alpha = 0.349$. All instrument items displayed are valid with a coefficient $\alpha > 0.349$. The results of the validity of each instrument item are shown in table 6 below.

Table 6. Value of instrument item validity

No. Butir	Koef. α	No. Butir	Koef. α	No. Butir	Koef. α
1	0,435	23	0,612	45	0,443
2	0,458	24	0,522	46	0,412
3	0,442	25	0,601	47	0,555
4	0,453	26	0,455	48	0,444
5	0,464	27	0,465	49	0,422
6	0,569	28	0,437	50	0,411
7	0,467	29	0,421	51	0,423
8	0,651	30	0,433	52	0,435
9	0,644	31	0,563	53	0,412
10	0,476	32	0,552	54	0,562
11	0,501	33	0,632	55	0,554
12	0,411	34	0,619	56	0,605
13	0,493	35	0,423	57	0,562
14	0,467	36	0,477	58	0,459
15	0,526	37	0,567	59	0,485
16	0,495	38	0,421	60	0,554
17	0,444	39	0,673	61	0,566
18	0,465	40	0,560	62	0,398
19	0,602	41	0,451	63	0,417
20	0,538	42	0,546	64	0,489
21	0,411	43	0,567	65	0,523
22	0,622	44	0,533		

Testing the reliability of the instrument using the Cronbach formula and the coefficient $\alpha = 0.893$; thus the instrument is reliable and classified as high.

E. Conclusion

As for the conclusions in this study are:

1. Instrumentation model for outcomes performance assessment based on transformation of national education standards to the perspective of the Balanced Score Card produces a valid and reliable outcome performance measurement instrument.
2. Item validity and instrument reliability have met and are classified as high.
3. Outcomes performance assessment instruments can be used for SMA performance appraisal in North Sumatra Province.

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