

Implementation of Balanced Scorecard as an Integrated Performance Evaluation Tool in Vocational Educational Institutions

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ABSTRACT

In facing the challenges of globalization and the development of industry 4.0, vocational education institutions are required to be able to demonstrate institutional performance that is not only efficient but also responsive to the needs of the world of work. This study aims to evaluate the implementation of the Balanced Scorecard (BSC) as an integrated performance measurement tool at BLK SMK Negeri 1 Purwakarta. This study uses a descriptive qualitative approach with a case study method. Data were collected through in-depth interviews, direct observation, and institutional documentation. The analysis was carried out thematically based on the four BSC perspectives. The results of the study show that BSC can comprehensively identify the strengths and weaknesses of institutions in carrying out their functions as vocational training providers. The customer and internal process perspectives are the most dominant aspects influencing the success of training programs. This study also confirms that the Balanced Scorecard approach has great potential to be applied in various other vocational education institutions, especially in encouraging performance-based governance. The implications of these findings provide an important basis for policy making at the school and local government levels in developing a more adaptive institutional evaluation model. The adoption of BSC also supports a new paradigm of vocational education that is oriented towards results, stakeholder satisfaction, and continuous quality improvement. This study is expected to contribute to the literature on performance evaluation of educational institutions in Indonesia which has so far been limited to conventional administrative approaches

INTRODUCTION

Vocational education plays a strategic role in preparing skilled workers that meet industry needs. Amid the dynamics of globalization and the industrial revolution 4.0, vocational education institutions, including vocational schools and job training centers (BLK), are required to present adaptive, responsive, and high-performance learning and training systems. However, the biggest challenge still faced is how to measure institutional performance comprehensively and sustainably. Performance evaluations that have been carried out so far tend to be partial and administrative, without fully assessing various managerial, learning, and program success aspects (Hasibuan, 2020).

Vocational education institutions often emphasize aspects of learning outcomes alone, while dimensions of strategic management and stakeholder involvement tend to be ignored. This has the potential to weaken the effectiveness of training programs that should be based on the real needs of the world of work. As stated by Sudira (2016), vocational education requires not only input in the form of curriculum and facilities, but also an accountable and measurable management system to ensure relevant output. Therefore, an evaluation approach is needed that is able to holistically capture the performance of the institution in all relevant aspects.

One approach that is considered capable of answering these needs is the Balanced Scorecard (BSC), which was introduced by Kaplan and Norton in the early 1990s. BSC not only measures financial aspects, but also considers customer perspectives, internal processes, and learning and growth (Kaplan & Norton, 1996). In the context of vocational education, these four perspectives can be adjusted to assess the extent to which institutions are able to achieve strategic goals, serve the needs of students and industry, improve the quality of internal services, and develop human resource capacity sustainably.

The implementation of BSC in the world of education has shown positive results in various studies, both internationally and nationally. Research by Niven (2008) shows that BSC is able to increase accountability and transparency of performance in higher education institutions in the United States. Meanwhile, in the Indonesian context, research by Wibowo and Yuwono (2017) on private universities shows that the implementation of BSC encourages efficiency and significant improvements in the quality of academic services. However, to date, there are still few studies that examine the implementation of BSC in depth in vocational education institutions such as BLK.

BLK SMK Negeri 1 Purwakarta is a training institution that has a dual function, namely as an internal training center for vocational school students and also open to the general public. With the complexity of these functions, this BLK faces a major challenge in ensuring that every program implemented has effectiveness, efficiency, and real impact. According to the Head of BLK, one of the fundamental problems is the absence of an evaluation system that is able to summarize all strategic dimensions of the institution's performance in an integrated and sustainable manner.

Departing from these problems, this study aims to evaluate how the Balanced Scorecard can be applied as an integrated performance measurement tool at BLK SMK Negeri 1 Purwakarta. This study focuses on answering the questions: (1) How is the current performance of BLK if measured based on the four BSC perspectives? (2) What are the challenges and opportunities in implementing BSC in vocational training institutions at the vocational school level? and (3) To what extent is BSC able to assist managers in making strategic decisions based on data?

This study is expected to provide theoretical and practical contributions, especially in developing a more comprehensive and accountable vocational education institution performance evaluation model. In line with Arikunto's opinion (2013), a good evaluation must reflect the real conditions of the institution, direct continuous improvement, and be the basis for policy decision making. Therefore, the Balanced Scorecard approach is not only a measurement tool, but also a strategic thinking framework for vocational education managers in Indonesia.

LITERATURE REVIEW

Balanced Scorecard (BSC) is a strategic management framework first developed by Robert Kaplan and David Norton in 1992 in response to the limitations of financial-based performance measurement commonly used in business organizations. According to Kaplan and Norton (1996), a purely financial approach is unable to capture all the determinants of long-term organizational success, especially in the context of learning, innovation, and customer service. Therefore, BSC introduces four integrated perspectives: financial, customer, internal business processes, and learning and growth. Each perspective provides a comprehensive view of the organization's performance in order to achieve its strategic vision and mission.

In the context of education, the BSC approach has been adapted to meet the needs of educational institutions that differ from the corporate sector. Educational institutions, including vocational institutions, do not only pursue profit, but are also oriented towards service quality, student competency development, and stakeholder satisfaction. According to Niven (2003), BSC in the world of education must be modified to reflect the institution's social mission and dedication to the community. The financial perspective remains relevant, but is more focused on budget efficiency, financing sustainability, and the effectiveness of resource use.

The customer perspective in the BSC education focuses on the satisfaction of students, parents, industry partners, and the community. This is very important for vocational education which aims to produce graduates who are ready to work and able to compete in the labor market. According to Sudira (2016), vocational education should ideally be based on the needs of graduate users (demand-driven), not just on the internal curriculum alone. Thus, performance evaluation from the customer side will be an important indicator of the success of a BLK or SMK.

The internal business process perspective emphasizes the effectiveness and efficiency of all operational activities of the institution. In vocational education, this includes the process of practical learning, job training, competency assessment, and certification. The effectiveness of this process greatly influences the quality of graduate output. According to research by Wibowo and Yuwono (2017), vocational education institutions that successfully manage their internal processes efficiently tend to produce graduates who are more competitive and absorbed by the industrial world.

Furthermore, the learning and growth perspective is the foundation of the other three perspectives. This perspective relates to improving the competence of educators and trainers, innovation in institutional management, and the development of technology and educational information systems. Quality vocational education requires professional trainers, innovative management, and adaptation to technological developments. According to Hasibuan (2020), digital transformation in education will only succeed if human resources have adaptive capacity and continuous learning.

Several studies have proven the success of BSC implementation in education. In Turkey, for example, research by Kocakulah and Austill (2007) showed that BSC helps higher education institutions in formulating data-based policies and improving academic service processes. Meanwhile, in Indonesia, the implementation of BSC is still limited and uneven, especially at the vocational secondary education level. According to Supriyanto and Asbari (2021), the main obstacles in implementing BSC in vocational education institutions are the lack of understanding of strategic management and limited resources.

Within the framework of this research, the Balanced Scorecard concept will be used as an instrument to comprehensively assess the performance of BLK SMK Negeri 1 Purwakarta. The four BSC perspectives will be used as an evaluation framework for ongoing training policies and practices. This model not only helps in identifying the strengths and weaknesses of institutional performance but can also be a strategic tool in long-term development planning. Thus, BSC is not just a performance measurement tool, but is a managerial approach that is oriented towards system transformation. In the world of vocational education that is full of dynamics and complexity, this approach is very relevant to build an adaptive, accountable, and visionary evaluation system.

METHODOLOGY

This study uses a descriptive qualitative approach with a case study design. This approach was chosen because it is able to describe in depth the context of the implementation of the Balanced Scorecard (BSC) in a vocational education institution, namely BLK SMK Negeri 1 Purwakarta. As stated by Yin (2018), case studies are suitable for use when researchers want to understand phenomena in real-life contexts and when the boundaries between phenomena and contexts are not so clear. Case studies also allow for a thorough exploration of the internal dynamics of the organization, including interactions between actors and strategic factors that influence the implementation of performance evaluations.

The subjects in this study were BLK management, training instructors, and training participants at BLK SMK Negeri 1 Purwakarta. The selection of subjects was carried out purposively, with the criteria of direct involvement in the planning, implementation, and evaluation of training programs. According to Sugiyono (2019), the purposive sampling technique is suitable for use in qualitative research when researchers want to obtain in-depth information from sources who are considered to best understand the problems being studied.

Data collection was conducted through three main techniques: in-depth interviews, participant observation, and documentation. Interviews were conducted with the Head of BLK, the Training Program Coordinator, five instructors, and six training participants. Questions were structured based on four BSC perspectives, namely financial, customer, internal process, and learning-growth perspectives. Observation techniques were used to observe the implementation of training, participant-instructor interactions, and the use of training facilities. Meanwhile, documentation was conducted on program planning documents, performance reports, and evaluation data owned by BLK.

To ensure the validity of the data, this study used source and method triangulation techniques. Triangulation is an important technique in qualitative research to increase the validity of findings (Patton, 2002). Data from interviews were compared with observation and documentation results, in order to find patterns of consistency or significant differences. In addition, researchers also conducted member checking with key informants to ensure that the interpretation of the data was in accordance with the reality experienced by the respondents.

Data analysis was conducted thematically using interactive analysis techniques from Miles and Huberman (1994), which included three stages: data reduction, data presentation, and drawing conclusions. Data reduction is done by grouping information based on four BSC perspectives. Furthermore, the data is presented in the form of a matrix and thematic narrative. Conclusions are drawn inductively, by looking for relationships between findings and linking them to the theoretical framework that has been studied previously.

This study also pays attention to ethical aspects of research, including maintaining the confidentiality of respondents' identities and ensuring that their participation is voluntary. Each participant is given information about the purpose of the study and their right to withdraw at any time without consequence. Ethical principles in qualitative research are important to maintain the integrity of the research process and results (Creswell & Poth, 2018).

With this approach, it is hoped that the study can provide a comprehensive and authentic picture of the implementation of the Balanced Scorecard in the context of vocational education institutions. The case study of BLK SMK Negeri 1 Purwakarta can be a representation of the challenges and potential of implementing a performance-based evaluation system in secondary vocational training institutions.

RESULTS

In this study, the findings are compiled based on four main perspectives in the Balanced Scorecard (BSC): (1) Financial Perspective, (2) Customer Perspective, (3) Internal Business Process Perspective, and (4) Learning and Growth Perspective. The presentation of the results refers to interview data, observations, and documentation from BLK SMK Negeri 1 Purwakarta.

Financial Perspective

In the financial dimension, BLK SMK Negeri 1 Purwakarta still relies on funding from government funding sources, especially the Special Allocation Fund (DAK), School Operational Assistance (BOS), and grants from the Provincial Education Office. Budget data shows that around 70% of the funds are used for operational needs such as procurement of practical materials, equipment maintenance, and instructor training. However, the availability of funds is not sufficient for the development of new sustainable programs.

BLK management stated that the financial planning system has been carried out based on programs, but financial reporting is still conventional and manual. This has an impact on the limitations in conducting real-time budget efficiency analysis. As emphasized by Niven (2003), the financial perspective in BSC does not only look at profitability, but also the efficiency of managing available resources.

Even so, in the last two years, BLK has succeeded in obtaining additional funding from industrial cooperation in the form of assistance with tools and sponsorship of training activities. This contribution has begun to be directed at developing training programs based on industry needs. According to Sudira (2016), financial collaboration with the industrial world is important to strengthen the sustainability of vocational programs.

The main obstacle still lies in the lack of a digital-based financial accountability system. Without the support of information technology, tracking and evaluation of financial efficiency are hampered. This is in line with the opinion of Kaplan and Norton (2004) that competitive advantage in a financial perspective can be achieved through the integration of management information systems.

Overall, the financial perspective at BLK SMK Negeri 1 Purwakarta shows a tendency towards fairly good management, but is not yet optimal in terms of system-based reporting and transparency. Strategic steps are needed to encourage financial digitalization and data utilization in budget decision making.

Customer Perspective

In the context of vocational education, "customers" do not only refer to training participants, but also the industrial world as users of graduates. The results of interviews with participants showed that they were satisfied with the training facilities and services, especially in terms of interaction with friendly instructors and practical learning methods. As emphasized by Kotler and Keller (2016), customer perceptions of service quality are the main determinants of loyalty and success of institutions.

However, several participants said that not all training programs provide sufficient access to competency certification, even though this is an important need in facing the world of work. This limitation was acknowledged by the management, who stated that not all training schemes are supported by the relevant Professional Certification Institution (LSP).

On the other hand, the industry that is a partner of BLK stated that graduates have adequate basic skills, but still need strengthening in soft skills, such as communication and teamwork. This is in line with the results of research by Wibowo and Yuwono (2017), which emphasizes that customer satisfaction in vocational education must include dimensions of technical and non-technical skills.

The strategy to increase customer satisfaction that has been carried out by BLK includes regular curriculum updates with input from industry, as well as job orientation training for participants approaching graduation. This approach shows an effort to align customer expectations with graduate competencies as recommended by the Director General of Vocational Education (2020). Thus, the customer perspective at BLK SMK Negeri 1 Purwakarta shows a fairly good level of satisfaction from the participant side, but it is necessary to strengthen the involvement of industry as the main user of graduates and expand access to competency certification.

Internal Business Process Perspective

BLK SMK Negeri 1 Purwakarta has standard procedures in carrying out the training process, from planning, implementation, to final evaluation. This process is documented through the syllabus, training modules, and technical guides. Field observations show that all training activities are carried out according to established procedures, including consistent schedules and the use of standard practice tools.

However, there are still obstacles in the internal evaluation system. Currently, evaluation of training results is only carried out at the end of the program and is not yet based on quantitative performance indicators. According to Kaplan and Norton (1996), the internal process perspective in the BSC must include strict measurements of the efficiency and quality of the service process.

BLK also faces challenges in terms of coordination between units. There is no integrated system that can integrate training information, attendance, evaluation results, and participant feedback in one information management system. This condition hinders the process of making decisions quickly and based on data. However, there are small innovations developed by instructors in the form of project-based learning modules and rubric-based daily assessment systems. These innovations indicate local initiatives to improve the quality of training, although they have not been systematically documented. This supports the opinion of Supriyanto and Asbari (2021) who emphasize the importance of adaptive internal processes in vocational education institutions.

Therefore, from an internal process perspective, BLK SMK Negeri 1 Purwakarta has shown a strong structure, but needs to be improved through a digitalization system and data-based performance indicator monitoring.

Learning and Growth Perspective

This perspective focuses on the development of human resources, information systems, and organizational culture that supports innovation and continuous learning. At BLK SMK Negeri 1 Purwakarta, human resource development is still a major challenge. Three out of five instructors interviewed admitted that they had not attended competency improvement training in the last two years. This hinders the continuous improvement of learning quality.

Kaplan and Norton (2004) emphasized that the learning and growth perspective is the foundation of the other three perspectives. Without sufficient investment in instructor competency and its supporting systems, the long-term success of the organization will be hampered. In the context of BLK, the weak incentive system also causes instructor motivation to innovate to be low.

However, several development efforts have been made, such as monthly instructor discussion forums and internal training based on sharing experiences. However, these programs have not been formally facilitated by management. According to Sudira (2016), collective learning in the vocational environment needs to be developed in the form of a sustainable community of practice.

In terms of information technology, BLK still relies on manual reporting, and has not utilized the Learning Management System (LMS) or an integrated training database system. In fact, the use of information technology is an important part of institutional growth as emphasized by Niven (2003).

Thus, the learning and growth perspective at BLK SMK Negeri 1 Purwakarta still needs strengthening, both in terms of human resource development, information systems, and a culture of innovation that encourages continuous performance improvement.

DISCUSSION

The results of this study indicate that the implementation of the Balanced Scorecard (BSC) at BLK SMK Negeri 1 Purwakarta is still in its early stages and has not been fully integrated into the institution's strategic management system. The use of performance indicators has begun to be implemented, but has not been framed in a comprehensive strategic framework that systematically covers the four BSC perspectives. This is in line with the opinion of Kaplan and Norton (2004) who stated that BSC is not only a measurement tool, but a strategic management system that must connect the organization's vision and strategy with operational performance.

From a financial perspective, BLK has implemented budget reporting with basic transparency and accountability. However, the financial management system has not yet utilized information technology optimally. Evaluation of training cost efficiency, for example, has not been measured with specific indicators. In fact, according to Niven (2003), the efficiency of public budget use is a crucial element in measuring public sector performance. The absence of a digital financial dashboard also causes slow decision-making processes based on accurate and real-time financial data.

From a customer perspective, participant satisfaction is quite high, as seen from the results of positive surveys and testimonials. However, the involvement of the industrial world is still not systematic in planning training programs.

Collaboration is only limited to donations of practical tools or provision of internships, not to the stage of formulating a joint curriculum or co-assessment. In fact, according to Sudira (2016), synergy between vocational institutions and industry is the main foundation for ensuring graduates who are competent and relevant to the needs of the world of work.

From an internal business process perspective, operational procedures already have written work standards. However, the monitoring and evaluation (monev) process has not been running optimally. Assessments tend to focus on output, such as the number of graduates and certificates issued, without analyzing process factors such as the effectiveness of training methods or the efficiency of training time use. Wibowo and Yuwono (2017) suggest that performance evaluations of educational institutions should include process dimensions to encourage continuous improvement.

The learning and growth perspective at BLK shows serious challenges, especially in human resource development. Instructors rarely receive advanced training and there is no reward system that encourages innovation in learning. This contradicts the findings of Supriyanto and Asbari (2021) who stated that the ability of an organization to learn and innovate consistently is the main key to competitive advantage in vocational education.

The main obstacle in the comprehensive implementation of the BSC is the absence of a strategy map that defines the cause-and-effect relationships between BSC perspectives. Without a strategy map, it is difficult to see how improvements in instructor training (learning and growth) will affect participant satisfaction (customers) and ultimately improve the financial efficiency of the institution. Kaplan and Norton (1996) emphasize the importance of a strategy map to avoid fragmentation in the implementation of the institution's strategy.

In addition, the organizational structure and work culture at BLK do not fully support performance-based management. The work culture is still administrative and oriented towards meeting activity targets, not achieving strategic indicators. This creates a gap between operational implementation and the institution's long-term goals. According to Osborne and Gaebler (1992), the transformation of public organizations requires a shift from bureaucratic management to results-based management.

In terms of information technology, the absence of an integrated performance management information system is an obstacle to the effective implementation of the BSC. In fact, technology can be a facilitator in data collection, indicator monitoring, and visualization of strategy achievement. As stated by Raharjo et al. (2022), the use of adaptive information technology greatly helps educational institutions in simplifying the evaluation process and data-based decision making.

Implementation of BSC also requires the involvement of all stakeholders, including school leaders, teachers, administrative staff, students, parents, and partner industries. Lack of training or socialization about the importance of BSC causes resistance or lack of awareness of its benefits. According to Idrus (2011), the success of implementing a strategy in education is highly dependent on the

level of understanding and collective commitment of all components of the organization.

Overall, these findings indicate that BLK SMK Negeri 1 Purwakarta has great potential to implement BSC as an integrated evaluation tool, but it requires strengthening in the aspects of information systems, strategy mapping, HR development, and synergy with external partners. Implementation of BSC must be understood not as an administrative obligation, but as a way to build a strategic culture that directs institutions towards continuous performance improvement and achieving a vision of vocational education that is relevant to future needs.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study on the implementation of the Balanced Scorecard (BSC) at BLK SMK Negeri 1 Purwakarta, it can be concluded that BSC has enormous potential as an integrated performance evaluation tool in vocational education institutions. However, its application is still limited to the measurement aspect and has not become a comprehensive strategic management system. The integration between the four BSC perspectives – finance, customer, internal business processes, and learning and growth – still needs to be strengthened to create alignment between the institution's vision and daily operational activities. This finding strengthens the opinion of Kaplan and Norton (2004) that the success of BSC lies in holistic and strategic implementation.

Furthermore, from a financial perspective, transparency and accountability in fund management are already running, but the information system and financial data analysis need to be improved so that decision making becomes more effective and efficient. The customer perspective shows the need for increased partnerships with the industrial world that are more structured, in line with Sudira's (2016) perspective that collaboration between industry and vocational institutions is the key to the relevance of graduate competencies.

Internal business processes that already have operational standards still require the development of monitoring and evaluation systems that are oriented towards continuous improvement. Meanwhile, the learning and growth perspective requires more attention to human resource development and the formation of a sustainable innovation culture, as recommended by Supriyanto and Asbari (2021).

Overall, optimal BSC implementation must be supported by management commitment, an adaptive work culture, and adequate information technology readiness. Without this holistic support, BSC will only be a formal evaluation tool without having a significant impact on improving the quality and performance of the institution. This conclusion strengthens the theory of public strategic management which emphasizes integration and synergy between aspects of the organization (Niven, 2003).

Recommendations

First, BLK SMK Negeri 1 Purwakarta needs to prepare a strategy map that connects the four Balanced Scorecard perspectives in an integrated manner. This strategy map is the basis for compiling measurable key performance indicators (KPIs) that are relevant to the institution's vision and mission. In accordance with

Kaplan and Norton (1996), a strategy map is an essential tool for aligning all elements of the organization in achieving strategic goals.

Second, the development of a digital-based performance management information system is highly recommended to support accurate and real-time monitoring and reporting. This system will assist management in making strategic and operational decisions based on valid data (Raharjo et al., 2022). In addition, intensive training and socialization on the concept and benefits of the Balanced Scorecard must be carried out for all staff and stakeholders to improve understanding and shared commitment.

Third, it is necessary to strengthen partnerships with the business world and industry more systematically, especially in formulating the curriculum, implementing training based on industry needs, and developing graduate competencies. This synergy is important so that vocational institutions are able to produce graduates who are ready to work and in accordance with the demands of the job market (Sudira, 2016).

Fourth, HR management must prioritize continuous instructor and staff competency development programs, including providing awards and incentives for innovation and high performance. This is in line with the recommendations of Supriyanto and Asbari (2021) who emphasize the role of learning and growth in maintaining organizational competitiveness.

Fifth, the formation of a work culture based on performance and results management needs to be encouraged by implementing the principles of good governance and accountability in all work processes. According to Osborne and Gaebler (1992), organizational culture transformation is the key to successful management change in the public sector, including vocational education.

Finally, this recommendation is expected to be a practical reference for BLK SMK Negeri 1 Purwakarta and other vocational education institutions in implementing the Balanced Scorecard effectively. Planned and measurable implementation will encourage an increase in the institution's performance as a whole and sustainably.

FURTHER STUDY

This study opens up wide opportunities for further studies in the development and implementation of the Balanced Scorecard (BSC) in vocational education institutions, especially those with similar characteristics and contexts to BLK SMK Negeri 1 Purwakarta. One aspect that needs to be studied further is the integration of BSC with existing quality management systems, such as ISO 9001 or vocational education accreditation standards. Comparative studies between institutions that have integrated BSC with quality systems and those that have not can provide a more holistic picture of the effectiveness of BSC implementation (Indriani & Suryanto, 2020).

In addition, further research can explore the development of performance indicators that are more adaptive and responsive to the dynamics of rapidly changing work world needs. For example, by involving big data technology and predictive analysis to monitor trends in competency and skill needs in the labor market. According to Putra and Hartono (2021), the use of data analytics in

vocational education can increase the precision of strategic and operational decision making.

Further studies are also recommended to explore the long-term impact of BSC implementation on the quality of graduates and the competitiveness of institutions. This can be done with a longitudinal approach involving continuous measurement and correlation testing between BSC implementation and educational outcome indicators such as graduate absorption rates in industry, partner satisfaction, and innovation levels in the learning process (Sari & Nugroho, 2019).

Furthermore, future research can examine the role of transformational leadership in accelerating and strengthening BSC implementation in vocational education institutions. A study by Wicaksono and Munandar (2022) emphasized that a visionary and empowering leadership style greatly influences the success of implementing a BSC-based performance management system.

In addition to internal aspects, further research also needs to examine how multi-party collaboration, such as government, business, and society, can strengthen the sustainability of BSC implementation. The involvement of various stakeholders is important to build synergies that support the vision of relevant and competitive vocational education (Rahmawati et al., 2023).

Further studies can also investigate organizational culture barriers and effective change strategies in the context of vocational education. This study can explore change management and communication strategies that successfully minimize resistance to BSC implementation (Firmansyah & Kurniawan, 2018).

Information technology is also a potential research field, especially the development of an integrated digital platform that can support the implementation of BSC in real-time and interactively. Studies on technological innovation in vocational education performance evaluation can make a significant contribution to increasing data efficiency and accuracy (Widodo & Hidayat, 2020).

In addition, further studies are recommended to adopt mixed methods to gain a richer and deeper understanding of BSC implementation, both quantitatively and qualitatively. This approach can reveal subjective and objective factors that influence the success of BSC (Nugraha et al., 2021).

Finally, it is important for subsequent studies to involve a wider and more diverse sample from various vocational education institutions in Indonesia. This will strengthen the generalizability of the findings and provide a comprehensive database for the formulation of national policies related to vocational education performance management (Sutrisno & Anwar, 2019).

With these various research agendas, it is hoped that the development of Balanced Scorecard science and practice in vocational education can be more mature and provide a real impact on improving the quality of education and the relevance of graduates to the needs of the world of work.

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