



Strategic Map Balanced Scorecard Construction to Improve Graduate Employability: A Study on Curriculum Link and Match with Industrial Needs at SMKN 1 Sukatani Purwakarta

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ABSTRACT

This study aims to develop and validate a comprehensive Balanced Scorecard (BSC) Strategic Map to improve graduate employability through a curriculum link and match approach with industry needs at SMKN 1 Sukatani Purwakarta. This strategic map integrates four BSC perspectives: (1) Learning & Growth which focuses on strengthening teacher competencies, management system-based infrastructure, and industrial work culture; (2) Internal Processes that emphasize the alignment of responsive curriculum, optimization of Prakerin, and Teaching Factory based on real projects; (3) Customers who aim to increase industry satisfaction, graduate absorption, and strengthening alumni networks; and (4) Finance/Stakeholders who support the sustainability of partnerships and budget efficiency. The logic of cause-and-effect relationships is strengthened by feedback loops from industry and alumni as well as a parallel path of digital literacy towards industry 4.0. Five priority strategic initiatives are determined based on consensus voting: (1) Teacher Internship Program in Industry, (2) Regular Industry-School Curriculum Forum, (3) Synchronization & Strengthening Prakerin, (4) Development of Teaching Factory Based on Real Projects, and (5) Joint Industry Competency Certification. Implementation will be carried out in three phases throughout 2026, supported by a digital dashboard-based monitoring system, collaboration platform, and concrete commitments from schools, industry, and alumni. The research conclusion shows that the developed BSC Strategic Map is not only a planning document, but has become a living document and social contract that reflects real needs and shared commitments. The implementation of this strategic map is believed to systematically increase the relevance of graduate competencies, strengthen strategic partnerships with industry, and ultimately improve graduate employability and school competitiveness in the era of technological disruption..

Keywords: *Strategic Map, Balanced Scorecard, Graduate Employability, Link and Match, Vocational School, Vocational Education, Teaching Factory*

INTRODUCTION

Vocational schools (SMK) play a crucial role in preparing skilled workers to meet industry needs. However, many vocational school graduates are unemployed or working in unrelated fields. This indicates a competency gap between what is taught in schools and what the workplace demands.

SMKN 1 Sukatani Purwakarta is one vocational school facing this challenge. The school aims to quickly employ its graduates, but its efforts remain fragmented and poorly measured. Schools often evaluate only exam scores and graduation rates, without considering how the learning process in school impacts students' future job readiness. To address this, a clear strategic map is needed. This research proposes the use of the Balanced Scorecard (BSC), a management tool that looks not only at final results but also at the processes that support them. The BSC uses four perspectives:

1. Learning & Growth: For example, improving teacher skills and equipping workshop facilities with industry standards.
2. Internal Processes: For example, aligning the curriculum with industry needs and strengthening the Industrial Internship (Prakerin) program.
3. Customers: In this case, the customers are the industrial world (as the user of graduates) and the students themselves. Their satisfaction is measured by how quickly and appropriately graduates find work.
4. Finance/Stakeholders: For example, ensuring program sustainability through strong partnerships and funding.

These four perspectives are interconnected. The BSC Strategic Map illustrates the causal relationship: investment in teachers and facilities (Point 1) improves the quality of the learning process (Point 2), which produces competent graduates (Point 3), and ultimately attracts greater support from industry (Point 4). With this strategic map, SMKN 1 Sukatani is expected to have a measurable and integrated guide to systematically increase the employability of its graduates, thus better preparing them for the world of work.

METHODOLOGY

Research Approach and Design

1. Mixed-methods sequential explanatory design (Creswell & Plano Clark, 2018).
2. Qualitative phase (exploration) → quantitative phase (confirmation) → integration.

Participants and Data Sources

Table 1: Key Informant Profiles

Category	Amount	Roles
School Internal	15	Principal, field deputy, teacher, program head
Partner Industries	3	HRD, supervisor, director
Alumni	4	Graduates in the last 2–3 years

School Committee	1	Representative
Total	23	

Data Collection Techniques

1. Focus Group Discussions (FGDs) with a structured guide.
2. Semi-structured in-depth interviews.
3. Document analysis (curriculum, MoU, RKS, tracer study).
4. Participatory observation in workshops and teaching factories.

Data Analysis Techniques

1. Thematic analysis (Braun & Clarke, 2006) for qualitative data.
2. Descriptive statistical analysis for quantitative data.
3. Triangulation of sources and methods.
4. Expert validation using a 1–5 Likert scale

RESULT AND DISCUSSION

Contextual Profile of SMKN 1 Sukatani

1. School vision and mission, expertise programs, and infrastructure.
2. Industry collaboration network and graduate employability (2023–2025 tracer study data).

Table 2: Graduate Employability Data (2023–2025)

Year	Absorption Rate (%)	Field Compliance (%)	Waiting Period (months)
2023	72	74	3,5
2024	75	78	3,0
2025	70,7	76	3,2

BSC Strategic Map Construction

Figure 2: SMKN 1 Sukatani BSC Strategic Map

(Visualization of four perspectives with cause-and-effect relationships)

Table 3: Cause-and-Effect Relationship Matrix

Strategic Objectives	P&P	PI	C	F
Teacher Competency Improvement	–	✓	✓	✓
Curriculum Alignment	FB	–	✓	✓
Industry Satisfaction	FB	FB	–	✓
Industry Investment	✓	✓	✓	–

Key Findings Based on the BSC Perspective

Learning & Growth

1. Teacher Competence: 70% requires industry experience, HR budget allocation is only 13.8%.
2. Infrastructure: 75–85% readiness, requires integration with an industry management system.
3. Work Culture: 5R/5S implementation is not yet consistent.

Internal Processes

1. Curriculum review: Once a year, slow process (6–8 months).
2. Teaching Factory: 30% implementation, requires real-world projects and a management system.
3. Soft Skills: Not yet explicitly integrated into the curriculum.

Customers

1. Industry Satisfaction: Measured informally, requires a structured survey system.
2. Alumni Network: Great potential as mentors and industry liaisons.

Finance/Stakeholders

1. Budget allocation: Unbalanced (infrastructure 48.3%, HR 13.8%). • Partnerships: 95% transactional (Prakerin), requiring transformation to a strategic model.

Strategic Map Validation

Table 4: Expert Validation Results

Validation Aspects	Average Score (1–5)	Category
Goal Alignment with Vision	4,8	Highly Appropriate
KPI Relevance	4,3	Appropriate
Causal Logic	4,7	Highly Appropriate
Initiative Feasibility	4,2	Appropriate
Average	4,5	Highly Appropriate

Strategic Initiative Priorities (FGD Voting Results)

1. Teacher Internship Program in Industry
2. Regular Industry-School Curriculum Forum
3. Synchronization & Strengthening of Industrial Internships
4. Development of a Real Project-Based Teaching Factory
5. Joint Competency Certification with Industry

Discussion

Strategic Map as a Living Document

1. The strategic map is not only a planning document, but also a social contract that reflects shared commitments.
2. Integration of circular feedback ensures the curriculum remains responsive to industry changes.

Theoretical Implications

1. Enrichment of the BSC literature in the context of vocational education with an emphasis on feedback loops and parallel paths of digital technology.
2. Integration of three main theories: BSC, Employability, and Stakeholder Theory.

Practical Implications

1. For schools: operational guidelines and a balanced performance measurement system.
2. For industry: improving the quality of workforce input and sustainable partnership models.
3. For the government: This provides material for policy considerations supporting vocational school-industry collaboration.

Research Limitations

1. The study is limited to one vocational school with two expertise programs.
2. The long-term impact of strategic map implementation has not been measured.
3. The role of parents has not been deeply integrated.

Suggestions for Further Research

1. Longitudinal studies to measure the impact of strategies on alumni career development.
2. Comparative research across vocational schools with different characteristics.
3. Exploration of a school-industry partnership model based on shared value creation.

CONCLUSION

This research successfully constructed and validated a comprehensive and contextual Balanced Scorecard (BSC) Strategic Map to improve graduate employability at SMKN 1 Sukatani Purwakarta. The resulting strategic map integrates four BSC perspectives with a clear cause-and-effect relationship logic, supported by five priority initiatives and a structured monitoring system. This document serves not only as a strategic planning tool but also as a living document and social contract that reflects a shared commitment between the school, industry, and alumni. Consistent implementation is expected to increase the relevance of graduate competencies, strengthen strategic partnerships, and ultimately improve the absorption and competitiveness of graduates in the era of technological disruption.

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