



## CURRICULUM IMPLEMENTATI ON DUAL TRACK IN PROGRESS STUDENT COMPETENCIES AT SMA NEGERI 1 SANGATTA SELATAN

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### Article Info

### ABSTRACT

#### Keywords:

Dual Track,  
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Improving the competency of students who do not continue their education after graduation is a crucial need to prepare them to enter the workforce or become entrepreneurs. School data shows that 34% of graduates of SMA Negeri 1 Sangatta Selatan do not continue their education. This study aims to describe the principal's management in planning, organizing, implementing, and supervising the dual-track curriculum. The study used a qualitative approach with a case study method. Data were collected through observation, interviews, and documentation, then analyzed using the Miles and Huberman interactive model. The results showed that program planning was carried out collaboratively and based on student needs with a flexible schedule, organization through a clear team structure according to competencies, implementation through theoretical and practical learning using the 3P method in the fields of fashion design, culinary design, make-up, and multimedia, as well as continuous supervision and monitoring. The implementation of the dual-track curriculum has proven effective in improving student competency as a provision for work and entrepreneurship, and has the potential to be developed in schools with similar characteristics.

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### 1. INTRODUCTION

School principals play a central role in managing educational institutions and directing all school resources toward achieving educational goals. Their responsibilities encompass planning, organizing, implementing, and supervising school programs effectively, as well as exercising leadership that motivates teachers, staff, and students to achieve optimal performance [1], [2].

In the context of rapid educational change and increasing societal demands, principals are required to demonstrate adaptive, innovative, and collaborative leadership. Visionary leadership is essential to ensure continuous improvement in learning quality, student competence development, and the creation of a conducive and responsive school environment aligned with 21st-century challenges [3], [4].

Senior high schools (SMA) in Indonesia traditionally emphasize academic preparation and provide limited vocational skills compared to vocational schools. Recent data indicate that a significant proportion of SMA graduates do not pursue higher education and face unemployment due to insufficient practical skills relevant to labor market needs [5], [6].

To address this issue, the Ministry of Education, Culture, Research, and Technology introduced the dual track curriculum for senior high schools. This policy offers students academic and vocational pathways, enabling them to develop competencies aligned with their interests, career aspirations, and future employment opportunities [7], [8].

Provincial education data from East Kalimantan reveal that a considerable number of SMA graduates neither continue their studies nor enter the workforce. This condition highlights the urgency of implementing the dual track program as a strategic solution to reduce unemployment by equipping students with applicable skills and entrepreneurial competencies [9].

SMA Negeri 1 Sangatta Selatan represents a public senior high school that has actively implemented the dual track curriculum. The principal plays a pivotal role as a driving force in integrating academic and vocational pathways through open, collaborative, and quality-oriented leadership [7], [10].

The dual track implementation is manifested through various vocational programs, including culinary arts, fashion design, beauty services, and multimedia. These programs encourage creativity and innovation while integrating local cultural values and providing students with practical experience in production, marketing, and basic business management [8], [9].

The effectiveness of the dual track curriculum is highly dependent on the principal's managerial capacity in planning, organizing, implementing, and supervising the program sustainably. Therefore, this study aims to examine the principal's role in enhancing student competencies through the implementation of the dual track curriculum at SMA Negeri 1 Sangatta Selatan, offering insights for schools facing similar educational challenges [1], [4].

Dual-track and dual-system education models have developed globally in response to the demand for a link between academic education and the needs of the workplace. Integrating academic and vocational curricula has been shown to not only increase the relevance of learning but also create a typology of educational programs that are more adaptive to industry needs. Studies in Germany show that dual-study programs vary in curriculum integration, ranging from academic dominance to a balance between theoretical learning and industry-based work practices [5].

In the context of national education policy, the implementation of a double-track system also has an impact on improving the quality of educational outcomes. Research in Ghana revealed that the Free Senior High School policy combined with a double-track system contributed to expanding educational access and efficient resource utilization, although still facing challenges in terms of learning quality [6]. A similar trend was found in the practice of dual learning in German universities, where collaboration between educational institutions and the business world was a key factor in the success of this learning model [7].

From an academic achievement perspective, dual vocational education has been shown to have a positive impact on student achievement and graduation rates. A study in Catalonia, Spain, showed that students who followed dual vocational pathways had more stable graduation rates than those who followed conventional vocational pathways [8]. A comparison of dual track systems and vocational education in Germany and China also confirmed that program success is strongly influenced by policy consistency, industry involvement, and curriculum flexibility [9].

In addition, innovations in dual training models continue to develop, including the implementation of parallel training patterns and permanent work placements that have proven effective in improving student job readiness [10]. However, challenges remain, such as student perceptions of the dual learning load and institutional readiness to support work-based learning [11]. Technological developments, including the use of artificial intelligence (AI), are also beginning to influence learning practices and teachers' innovative behavior, which has the potential to strengthen or burden the dual education system if not managed properly [12].

In other international contexts, dual credit programs such as the School Within a College (SWAC) in Canada and the dual vocational education system in Switzerland show that the success of dual education is largely determined by curriculum design, learning delivery models, and ongoing policy support [13], [14].

Most previous studies show variations in focus, ranging from strategy and program management to dual track, implementation evaluation, principal leadership, and academic-vocational curriculum integration. Several studies also examine the impact of national policies and foreign dual education systems on improving student competency.

The novelty of this research lies in the role of the principal of SMA Negeri 1 Sangatta Selatan as the main driver of curriculum implementation management dual track based on local wisdom. This study highlights the application of the POAC function (Planning, Organizing, Actuating, Controlling) using the 7M management components (Man, Money, Material, Machine, Method, Market, Minute) in an integrated manner to optimize school resources, including teachers, facilities, and partnerships with businesses and industry. This approach emphasizes not only program outcomes but also the development of student competency, creativity, and independence in line with regional potential. The values of mutual cooperation, hard work, and collaboration within the local community are the foundation for success. This management model is contextual and replicable in areas with similar social characteristics.

## 2. RESEARCH METHODS

This research uses an approach descriptive qualitative to gain an in-depth understanding of principal management in implementing the dual-track curriculum. A qualitative approach allows researchers to explore meaning, experience, and managerial dynamics based on empirical reality in the field through data in the form of words, both spoken and written in interview transcripts and field notes [15]. This approach was chosen because the research does not aim to test hypotheses, but rather to systematically describe the planning, organizing, implementing, and supervising (POAC) processes carried out by principals in the social context of the school [16].

The main data collection technique in this study is in-depth interview which was conducted face-to-face. The interviews were conducted between February and March 2025 with a duration of between 45–90 minutes for each informant, adjusting to the availability of time and the depth of information needed. Interviews were conducted in the school environment so that informants felt comfortable and were able to provide contextual explanations in accordance with the managerial practices that were being or had been implemented [17].

Research informants were selected using the technique purposive sampling, namely the deliberate selection of informants based on considerations of knowledge, experience, and direct involvement in the implementation of the dual track curriculum. The number of informants interviewed was 7 people, consists of 1 principal, 1 deputy principal for curriculum, 3 teachers managing/training the dual track program, and 2 students participating in the program. This composition is considered representative enough to describe the perspectives of policy makers, program implementers, and beneficiaries so that the data obtained is rich and in-depth [18].

The interviews in this study are of a semi-structured, namely using pre-prepared interview guidelines but still providing flexibility for informants to develop answers according to their experiences and views. A semi-structured approach was chosen because it allows researchers to dig deeper for information, capture new issues that arise during the interview process, and understand managerial dynamics that cannot always be revealed through closed questions [16], [19].

The entire interview process was recorded using a voice recorder with the informant's consent, then transcribed verbatim to ensure data accuracy. The interview transcripts were then analyzed thematically using the Miles and Huberman interactive model through the stages of data reduction, data presentation, and conclusion drawing. To ensure data validity, interview results were confirmed through source and technique triangulation, and member check to the main informant so that the researcher's interpretation is in accordance with the informant's intentions and experiences [15], [17].

## 3. RESULT AND ANALYSIS

### Planning

The dual-track program planning at SMA Negeri 1 Sangatta Selatan was developed in response to school data showing that approximately 35% of graduates do not continue their education and lack work-ready skills. The planning process was carried out in a participatory manner, involving the principal, the vice principal for curriculum as facilitators, and teachers as trainers through intensive meetings to identify student needs, formulate objectives, and assign roles. This practice reflects the application of school-based management (SBM) and distributive and collaborative leadership, which have been shown to increase the effectiveness of program implementation (Setiawan & Hermansyah, 2023; Sucipto, 2023).

The planning aspect also includes financing, facilities and infrastructure, and technology integration. The program budget is sourced from the East Kalimantan Provincial Education Office and supported by industry partners, with transparent and accountable financial planning (Cholidah et al., 2024; Handoko, 2003). Detailed infrastructure planning is carried out through an inventory of practice spaces and equipment, including the development of DT Mart, and the use of application-based learning and marketing technology. These findings confirm that facility readiness and technology integration are prerequisites for the success of the dual-track program (Putri et al., 2025; Amelina & Tarasenko, 2024).

Learning planning is designed based on the needs of the workplace through a 3P approach (Training, Production, and Marketing), strategic partnerships with businesses and industry, particularly PT Kaltim Prima Coal, and flexible scheduling without disrupting intracurricular learning. This approach aligns with vocational curriculum development and experiential learning theories that emphasize the alignment of competencies with industry demands (Billett, 2011; Dewey; Spencer & Spencer). Overall, the research results show that the dual-track program planning is implemented systematically, data-driven, and sustainability-oriented, as confirmed by various national and international studies (Wahyudi, 2025; García & Granados, 2024).

### Organizing

The organization of the dual track program at SMA Negeri 1 Sangatta Selatan is carried out systematically and competency-based. The principal serves as the main responsible party, the vice principal in charge of the

curriculum acts as the facilitator, teachers serve as trainers according to their expertise and training, and assistant teachers act as assistant trainers in practical activities. Educational staff are involved as supporting elements for facilities and infrastructure. The establishment of structure and role distribution is carried out through school working meetings, so that coordination and clarity of responsibilities can run effectively. This pattern demonstrates the application of the principle of placing human resources according to their competencies, which is a key factor in the success of the dual track program (Setiawan & Hermansyah, 2023; Rohmawati et al., 2025).

Financial management and practice facilities are organized with clear and accountable function distribution. The principal acts as the strategic decision-maker and supervisor of fund usage, while the treasurer in each skill area, along with the program coordinator, is responsible for the technical implementation of finances. The trainer manages the use of tools and practice materials according to learning standards, while the facilitator and the principal conduct monitoring. The maintenance of facilities is carried out collaboratively by facilitators, trainers, students, and the vice principal in charge of facilities and infrastructure. These findings are in line with the research of Cholidah et al. (2024), Firman (2025), and Jannah (2024), which emphasizes the importance of organizing finances and facilities transparently, participatively, and sustainably.

Coordination with the business world and the industrial world, as well as schedule management, are important parts of program organization. The school establishes cooperation through intensive communication, industrial visits, and evaluation of practical results to align learning with the needs of the workforce (Wahyudi, 2025). The dual track learning schedule is arranged flexibly on Fridays and Saturdays with an allocation of six class hours per week to avoid disrupting regular learning. Overall, the research results indicate that the organization of the dual track program is carried out in a structured, collaborative, and adaptive manner, thereby supporting the improvement of students' competencies and work readiness, in line with the findings of Mora et al. (2024).

### **Actuating**

The implementation of the dual-track program at SMA Negeri 1 Sangatta Selatan is strongly supported by the leadership of the principal, who plays an active role in providing motivation, moral support, and appreciation to teachers, trainers, and students. The principal consistently emphasizes the importance of the program as a means of providing strategic additional skills for graduates, both for continuing education, entrepreneurship, and entering the workforce. Leadership support is not only motivational but also manifested through facilitation of activities needed to ensure the program runs optimally and sustainably. This finding aligns with Agyeman (2024), who asserted that supportive and participatory school leadership significantly influences the successful implementation of innovative programs.

In terms of resource management, program implementation is supported by primary funding from the Department of Education through ITS and complementary support from partner companies, particularly in the provision of facilities and practical materials. The utilization of funds, facilities, and materials is carried out in a planned, accountable, and needs-based manner, with reports on fund usage compiled periodically by trainers. Practical facilities are used selectively according to the needs list, while technology is utilized to support skills learning, product promotion, documentation, evaluation, and program reporting. These findings reinforce the research findings of Cholidah et al. (2024), Ridhwanah and Werdiningsih (2022), and Kong et al. (2025), which emphasize the importance of funding accountability, facility planning, and technology integration in dual-track learning.

The learning process is designed to be practice-based through a 3P approach (Training, Production, and Marketing) that combines theory, hands-on practice, and continuous assessment. The program is implemented on Fridays and Saturdays to avoid disrupting regular learning and is strengthened through partnerships with the business and industrial world in the form of guest teachers, facility support, and practical activities such as bazaars. All program implementation is systematically monitored through attendance, logbooks, journals, and minutes as a form of activity control and accountability. Overall, the research results show that the implementation of the dual-track program is directed, consistent, and effective, in line with the findings of Wahyudi (2025), Yakin (2025), and Jannah (2024) who emphasized that practice-based implementation, industry partnerships, and continuous monitoring are key to improving student competency and work readiness.

### **Controlling**

Supervision of the dual-track program at SMA Negeri 1 Sangatta Selatan is carried out through direct monitoring of the practical learning process, classroom supervision, and evaluation of student products. The principal and the management team play an active role in observing, providing feedback, and periodically evaluating teacher performance to ensure that learning implementation aligns with established planning and quality standards. Supervision is also strengthened by the use of website-based online systems such as SIMDOS to systematically monitor attendance, activity progress, and learning outcomes. These findings align with Werdiningsih (2022) and Cholidah et al. (2024), who emphasized that the combination of direct supervision and digital monitoring is effective in maintaining the quality of the dual-track program implementation.

Supervision of resource management is carried out continuously, including the use of the budget, facilities, and infrastructure. Budget utilization is monitored through regular monitoring, discussions at weekly meetings, and financial recording and verification, complete with transaction evidence in the Accountability Letter (SPJ) document, to ensure transparency and accountability. Meanwhile, supervision of facilities and infrastructure is carried out through routine weekly and monthly checks on the availability, functional suitability, and inventory of practical equipment. These findings support the research findings of Sucipto (2023) and Jannah (2024), which emphasized that systematic financial and facility oversight is a prerequisite for the sustainability of the dual-track program.

In addition to internal supervision, program evaluation is conducted collaboratively through collaboration with ITS and industry partners. Evaluation includes the implementation of training modules, trainer reflections, student product assessments, and feedback from industry partners, guided by the Work Agreement Letter (SPK). Evaluations are conducted routinely, both weekly and monthly, and are adaptive according to program needs to improve the effectiveness and quality of activity implementation. Overall, the research results indicate that supervision of the dual-track program is carried out comprehensively, systematically, and sustainably, in line with the findings of Firman (2025), Dwomoh et al. (2022), and Suryaningrum (2025), which emphasize that an effective supervisory function is key to the successful implementation of the dual-track program in high schools

#### 4. CONCLUSION

The dual-track program at SMA Negeri 1 Sangatta Selatan is collaboratively designed and based on student needs, with flexible scheduling without disrupting regular academic learning. The principal's role as a strategic decision-maker directly impacts the optimization of skills learning opportunities for students. Through clear organization, the principal establishes a program management structure, with the vice principal for curriculum serving as a facilitator and teachers as trainers based on their respective competencies, ensuring a focused and relevant learning process that aligns with the needs of the workplace. The program, scheduled on Friday afternoons and Saturdays with 3 sessions per session or 6 sessions simultaneously, allows students sufficient practice time. The implementation of the 3P method (Training, Production, and Marketing) encourages students to master not only technical skills but also to understand real-world work processes, professional ethics, and entrepreneurial orientation. Furthermore, the principal's active role in building collaborations with businesses and industry, as well as ensuring the availability of infrastructure and funding, has a direct impact on improving students' work readiness, both in terms of vocational skills, discipline, and self-confidence. Comprehensive and continuous program oversight through learning monitoring, supervision, online system-based monitoring, and evaluation of budget utilization, facilities, and industrial partnerships ensures that program implementation is effective, accountable, and aligned with the goal of improving student competency as preparation for facing the world of work or entrepreneurship after graduation.

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