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Managerial Strategies for Curriculum Development in Sports, Nursing, and History Education Programs Based on Outcome-Based Education (OBE) and Research Findings

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Abstract

This study investigates managerial strategies for curriculum development in sports science, nursing, and history education programs based on OBE and research findings. The research examines how program managers implement these strategies, the extent of research integration into curricula, and obstacles that affect curriculum effectiveness in producing professional graduates. This study employs qualitative data collected through in-depth interviews, participatory observation, and document analysis from three universities in Aceh, Indonesia. The participants included faculty deans, program heads, curriculum development team leaders, permanent faculty, and final-year students selected through purposive sampling. Data collection focused on managerial practices, stakeholder involvement, theory-practice integration, and research incorporation into curriculum development processes. The collected data was analyzed using interactive data analysis techniques involving data reduction, presentation, and conclusion drawing. The results show that three main managerial strategies are currently implemented: stakeholder-inclusive curriculum development involving both internal and external stakeholders, competency-based curriculum design structured around measurable learning outcomes, and theory-practice integration mechanisms through mandatory collaboration between theoretical and practical course instructors. However, three primary challenges emerged: research-curriculum misalignment reported by 78% of faculty, faculty workload imbalance identified by 85% of respondents, and industry-academia gaps noted by 67% of program administrators. Research integration showed varying implementation levels, with systematic approaches demonstrating higher effectiveness than ad-hoc methods. The findings suggest that effective OBE-based curriculum management requires systematic research-curriculum alignment mechanisms, flexible faculty role definitions supporting research-teaching integration, and ongoing industry partnerships informing both research directions and curricular content. Success depends on institutional commitment to developing coherent systems rather than implementing isolated practices.

Keywords: Curriculum Management; Higher Education; OBE Research-Based

1. Introduction

Higher education in Indonesia is changing rapidly. A new approach called Outcome-Based Education (OBE) is now becoming the main method for developing curricula. OBE focuses on what students should be able to do after they graduate. This includes thinking skills, attitudes, and practical abilities (Biggs & Tang, 2011). In OBE, success is not measured by what teachers teach. Instead, it is measured by what students can actually do after they finish their studies. This means curricula must be designed to give students the skills they need for work and future learning.

Sports science, nursing, and history education programs face special challenges. These fields need both theoretical knowledge and practical skills. Students must learn physical fitness, health management, and professional service delivery. The job market in these areas is very competitive. Professionals need to adapt to new technology and use evidence-based practices (Siedentop, 2009; Sari & Hidayat, 2022). OBE-based curricula can help meet these challenges.

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Curriculum development on higher education must also be based on research findings. Research by teachers, students, and external partners helps update course content. This keeps curricula current with new knowledge and social needs (Surya, 2021). Research findings can guide learning outcomes, create new teaching methods, and evaluate student competencies. This approach fits with Indonesia's Three Pillars of Higher Education (Tri Dharma Perguruan Tinggi). These pillars are education, research, and community service. They should work together to support each other.

However, implementing OBE and research-based curricula is not easy. It needs good management strategies. Curriculum management must involve many people. This includes teachers, students, graduates, industry partners, and other important groups (Mukhtar & Rohendi, 2020).

Good curriculum management includes several steps. First is planning based on program goals. Second is organizing resources. Third is training teachers. Fourth is monitoring and evaluating the curriculum regularly. Management also involves using technology, meeting accreditation standards, and improving quality through comparisons with other institutions.

The Indonesian government's Merdeka Belajar–Kampus Merdeka (MBKM) supports curriculum changes. MBKM encourages students to learn outside their campus. Students can do internships, research, community projects, and start businesses. Curricula must be flexible enough to include these activities (Kemendikbudristek, 2020). Program managers need strategies that balance government rules, job market needs, and research-based learning.

Many universities still struggle with curriculum development. They face several problems. These include limited staff, poor coordination between quality assurance and study programs, insufficient teacher training, and weak integration of research into curricula. These problems make curricula outdated and less useful for graduates in the real world.

This research aims to analyze management strategies for curriculum development in Sports Science, Nursing, and History Education programs. The study examines how program managers implement these strategies. It looks at how research is integrated into curricula, what obstacles exist, and what solutions can improve curriculum effectiveness. The goal is to produce excellent, professional graduates who can adapt to global challenges.

2. Literature Review

2.1. Outcome-Based Education in Higher Education

Outcome-Based Education (OBE) changes how we think about teaching and learning. Traditional education focuses on what teachers teach. OBE focuses on what students can do after they graduate (Babu & Roy, 2023). This approach started in the 1970s with competency-based education movements and has three main principles: clear learning outcomes, multiple learning opportunities, and high expectations for all students (Morcke et al., 2013).

In higher education, OBE works well for professional programs where students need specific skills for their jobs (Saeedi, 2023). Successful OBE requires alignment between learning outcomes, teaching methods, and assessment (Crespo García et al., 2010). This alignment is especially important in fields like sports science, nursing, and education where students must use their knowledge in real work situations.

Despite widespread use, OBE implementation faces many obstacles. Faculty may resist change from traditional teaching methods. Institutions may not provide enough support for curriculum redesign. It can be difficult to assess complex learning outcomes (Sun & Lee, 2020). Professional education programs face additional challenges because they must balance theory with practical skills.

2.2. Curriculum Management and Research Integration

Managing curricula in professional programs is complex and involves many people, resources, and quality checks. Good curriculum management includes strategic planning, stakeholder involvement, and continuous improvement processes (Gouëdard et al, 2020). Research shows that curricula should use current research findings to keep programs up-to-date and help graduates compete in the job market (Mahardhani et al., 2023).

There are different ways to integrate research into curricula. Some faculty add their own research to their courses. Other institutions have systematic processes for using research in curricula (Morrison et al., 2020). Studies show that systematic approaches work better than individual efforts (Kreijkes & Greatorex, 2024). However, systematic integration requires significant institutional support, coordination systems, faculty training, and evaluation processes.

Adding research to curricula is not easy. Teachers face heavy workloads. Institutions have limited resources. It is also hard to turn research findings into teachable content (OECD, 2024). In professional programs, research must also be relevant to workplace needs, which adds another layer of complexity.

2.3. Stakeholder Engagement and Quality Assurance

Stakeholder involvement is essential for relevant curricula. Internal stakeholders include faculty, students, and administrators. External stakeholders include industry professionals, graduates, and community members. Effective stakeholder engagement needs good systems to collect opinions, analyze feedback, and use suggestions in curriculum changes (Haile & Mekonnen, 2024).

Research shows that ongoing engagement works better than occasional meetings. Continuous engagement helps programs respond quickly to industry changes and new professional standards. However, managing different stakeholder interests is challenging because different groups may want different things, and program managers must balance these competing demands with available resources (Fagrell e al., 2020).

Quality assurance ensures OBE effectiveness and maintains accreditation standards. Quality indicators include student achievement rates, graduate employment, stakeholder satisfaction, and program comparisons (Suleiman, 2023). Effective quality assurance needs systematic data collection, regular analysis, and improvement planning. Continuous improvement frameworks help programs identify problems, make changes, and evaluate results while balancing stability for accreditation with flexibility for industry relevance (Kayyali, 2023).

Modern curriculum management increasingly uses technology to track student progress, collect stakeholder feedback, and support data-driven curriculum changes (Chanda et al., 2024). The COVID-19 pandemic accelerated digital learning adoption and showed the importance of flexible curricula that can adapt quickly to changing situations while maintaining quality and professional standards (Lee et al., 2021).

3. Research Method and Materials

3.1. Research Approach

This study used a qualitative approach with descriptive exploratory research design. This approach was chosen to deeply explore the processes, meanings, and dynamics of managerial strategies in curriculum development for sports science, nursing, and history education programs based on Outcome-Based Education (OBE) and research findings.

According to Creswell and Poth (2018), qualitative approaches are suitable for understanding complex phenomena in context. This is especially true when researchers want to explore social and managerial processes that cannot be explained numerically. With this approach, researchers can understand how managerial strategies are applied by leaders and program managers. They can see how curricula are designed, implemented, and evaluated to adapt to scientific developments and community needs.

3.2. Research Setting and Timeline

The research was conducted at three universities in Aceh that have sports science, nursing, and history education programs. Location selection used purposive sampling technique. These institutions were chosen because they have implemented or are developing OBE-based curricula and integrate faculty research findings into academic activities.

The research took three months, from January to March 2025. This period included obtaining permits, initial observations, main data collection, and analysis and validation of results.

3.3. Research Participants

The participants were key informants who had deep and relevant information about managerial strategies in curriculum development. They included faculty deans, program heads, curriculum development team leaders, permanent faculty, and final-year students.

The selection of informants also used purposive sampling with these criteria: (1) direct experience in curriculum development, (2) active involvement in curriculum evaluation and revision processes, and (3) understanding of OBE

concepts and the relevance of research findings to learning processes. This approach ensured that the data reflected diverse perspectives from various stakeholders in higher education institutions.

3.4. Data Collection

The main data collection techniques included in-depth interviews, participatory observation, and document study. Interviews were conducted semi-structurally so informants could explain their experiences and views openly while staying within predetermined topics.

The interview questions were tailored to each participant group. Faculty leaders were asked about main strategies in curriculum development, faculty roles in ensuring curriculum alignment with workplace needs, and major challenges in OBE implementation. Program heads were questioned about OBE-based curriculum development processes, the extent of research integration into curricula, and obstacles in implementing OBE standards. Students were interviewed about their perceptions of the current curriculum, its preparation for professional work, and suggestions for curriculum improvement. These questions aimed to capture comprehensive perspectives on managerial strategies, practical implementation challenges, and stakeholder experiences with OBE-based curriculum development.

Observations were made of curriculum development meetings, faculty discussions, and learning activities that reflected OBE application and research integration. Document studies examined various materials such as latest curriculum documents, Course Learning Plans (RPS), faculty research reports, accreditation documents, and curriculum development meeting minutes. These three methods were used triangularly to ensure data validity and consistency (Patton, 2015).

The main instrument in this research was the researcher, who served as data collector, analyzer, and interpreter. The researcher acted as a human instrument with flexibility to respond to field dynamics while maintaining objectivity and openness to emerging data.

To support data collection, the researcher also prepared interview guides, observation sheets, and document analysis formats. These were adapted to managerial strategy indicators, OBE principles, and research integration in curricula.

3.5. Data Analysis

The collected data was analyzed using the interactive data analysis model from Miles, Huberman, and Saldaña (2014). This includes three main stages: data reduction, data presentation, and conclusion drawing or verification.

In data reduction, researchers selected data relevant to the research focus and simplified raw data into meaningful information. In data presentation, information was arranged in narratives, thematic tables, and direct quotes from informants to show empirical evidence supporting interpretation. The final stage was conclusion drawing done iteratively and continuously until valid patterns and themes were obtained that answered the research questions.

3.6. Data Trustworthiness

To maintain data trustworthiness, this research followed four criteria from Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability.

Credibility was maintained through source and method triangulation techniques and member checking with informants. Transferability was achieved by providing rich contextual descriptions so readers could apply research findings to similar contexts. Dependability was ensured by systematically recording the entire research process through audit trails. Confirmability was maintained by researcher reflection and comparing data from various sources to ensure objectivity and neutrality of findings.

4. Results and Discussion

4.1. Results

The study identified three main managerial strategies currently implemented across the three universities. First, stakeholder-inclusive curriculum development was practiced by all programs. Faculty leaders, program heads, and

curriculum development teams systematically involved internal stakeholders (faculty and students) and external stakeholders (practitioners, alumni, and community members) in curriculum planning processes.

Competency-based curriculum design was evident in all three programs. The curricula were structured around clear, measurable learning outcomes that aligned with professional competency standards. Each program had documented learning outcome matrices that connected course objectives to broader program competencies.

Theory-practice integration mechanisms were established through mandatory collaboration between theoretical and practical course instructors. All programs required joint planning sessions between theory and practicum faculty, with documented coordination protocols for ensuring curricular alignment.

Three primary challenges emerged from the data. Research-curriculum misalignment was reported by 78% of faculty respondents, who indicated that their research findings did not always align with existing curriculum structures. Faculty workload imbalance was identified by 85% of respondents, who struggled to balance research activities with teaching responsibilities. Industry-academia gap was noted by 67% of program administrators, who found difficulty in ensuring research relevance to workplace needs.

Table 1. Research Integration Practices in Curriculum Development

University	Sports Science	Nursing	History Education	Integration Level
A	Faculty research on sports psychology integrated into 3 courses	Clinical research findings updated in 5 core courses	Local history research incorporated in 2 specialized courses	Moderate
B	Biomechanics research applied in 4 practical courses	Evidence-based practice research in 6 courses	Educational research integrated in teaching methods	High
C	Exercise physiology research in 2 courses	Community health research in 3 courses	Historical methodology research in 4 courses	Moderate

The research integration showed varying levels of implementation. University B demonstrated the highest level of research-curriculum integration, with systematic processes for incorporating faculty research findings into course content. Universities A and C showed moderate integration, with research findings incorporated on an ad-hoc basis rather than through systematic mechanisms.

4.2. Discussion

4.2.1. Effectiveness of Current Managerial Strategies

The stakeholder-inclusive approach aligns with best practices identified by Haile & Mekonnen (2024), who emphasized that OBE implementation requires broad stakeholder engagement to ensure outcome relevance. Our findings extend this understanding by demonstrating how systematic stakeholder involvement can enhance curriculum responsiveness to professional field requirements, supporting recent work by Fagrell et al. (2020) on managing diverse stakeholder interests in curriculum development.

The competency-based design approach reflects successful implementation of OBE principles as outlined by Babu & Roy (2023). However, our study reveals that having documented learning outcomes alone is insufficient. The critical factor is the systematic alignment between outcomes, teaching methods, and assessment practices, which showed variability across the three institutions. This finding is consistent with Saeedi (2023) who highlighted the importance of alignment in professional education programs.

The theory-practice integration mechanisms address a fundamental challenge in professional education identified by recent studies (Crespo García et al., 2010; Sun & Lee, 2020). Our findings suggest that mandatory collaboration protocols between theoretical and practical instructors can effectively bridge the traditional theory-practice divide, particularly in applied fields like sports science and nursing.

4.2.2. Research Integration: Potential and Limitations

The varying levels of research integration across institutions highlight both the potential and limitations of research-informed curricula. University B's systematic approach demonstrates that high-level integration is achievable when

institutions develop specific mechanisms for research-curriculum connection, supporting findings by Morrison et al. (2020) and Kreijkes & Greatorex (2024) on systematic approaches to research integration.

However, the research-curriculum misalignment reported by most faculty reflects deeper structural issues. Unlike previous studies that focused on individual faculty motivation (Sari & Hidayat, 2022), our findings suggest that misalignment stems from institutional design problems rather than individual capacity issues. The challenge lies in creating research programs that are simultaneously academically rigorous and curriculally relevant, as noted by OECD (2024) in their analysis of research integration barriers.

4.2.3. Implications for Managerial Practice

The faculty workload imbalance identified in this study requires institutional response beyond individual time management. Contrary to traditional approaches that treat research and teaching as separate activities (Mukhtar & Rohendi, 2020), our findings suggest that successful OBE implementation requires reconceptualizing these as integrated functions. Mahardhani et al. (2023) suggests that successful OBE implementation requires reconceptualizing research and teaching as integrated functions rather than treating them as separate activities.

The industry-academia gap reveals limitations in current stakeholder engagement practices. While all programs involve industry representatives in curriculum planning, this involvement appears insufficient for ensuring research relevance to workplace needs. This finding recent work by Gouëdard et al. (2020) by suggesting that industry engagement must extend beyond curriculum review to include research agenda setting and continuous feedback mechanisms.

4.2.4. Toward Enhanced Implementation Models

Our findings suggest that effective OBE-based curriculum management requires three integrated components: systematic research-curriculum alignment mechanisms, flexible faculty role definitions that support research-teaching integration, and ongoing industry partnerships that inform both research directions and curricular content. This aligns with recent frameworks proposed by Suleiman (2023) and Kayyali (2023) for quality assurance in outcome-based programs.

The variation in implementation effectiveness across institutions indicates that success depends on institutional commitment to developing coherent systems rather than implementing isolated practices. This systemic requirement, supported by recent studies on technology integration in curriculum management (Chanda et al., 2024) and post-pandemic educational adaptations (Lee et al., 2021), has implications for how institutions approach OBE adoption and research integration in professional education programs.

5. Conclusion

This study examined managerial strategies for developing OBE-based curricula in sports science, nursing, and history education programs across three universities in Aceh. The findings reveal that while institutions have implemented key managerial strategies—stakeholder-inclusive curriculum development, competency-based design, and theory-practice integration—significant challenges remain in achieving optimal implementation.

The research identifies three primary obstacles: research-curriculum misalignment, faculty workload imbalance, and industry-academia gaps. These challenges suggest that effective OBE implementation requires more than adopting individual practices; it demands systematic institutional transformation that integrates research, teaching, and industry partnerships as interconnected functions rather than separate activities.

The variation in research integration across institutions demonstrates that systematic approaches yield better outcomes than ad-hoc implementations. University B's success in systematic research-curriculum integration provides a model for other institutions seeking to enhance their OBE-based programs.

For practice, this study recommends that institutions develop integrated systems that include: (1) systematic mechanisms for aligning research findings with curriculum content, (2) flexible faculty role definitions that support research-teaching integration, and (3) ongoing industry partnerships that inform both research directions and curricular development. These components must work together as a coherent system to achieve effective OBE implementation.

Future research should explore specific mechanisms for implementing these integrated systems and examine their long-term effectiveness in producing graduates who meet professional field requirements. Additionally, studies

comparing implementation approaches across different institutional contexts could provide valuable insights for broader application of these findings.

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