

TRANSFORMATION OF AI-BASED ACCOUNTING LEARNING FOR STRENGTHENING GRADUATE PROFILE DIMENSIONS AND DUDI- ORIENTED WORK READINESS

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ABSTRACT

This study aims to analyze the transformation of AI-based accounting learning in strengthening graduate profile dimensions and improving DUDI-oriented work readiness within vocational education. The study employed a qualitative approach with a case study design conducted at SMK Batik 1 Surakarta. Data were collected through observations, in-depth interviews, and documentation involving school leaders, accounting teachers, internship coordinators, and students. Data analysis was conducted using an interactive model consisting of data reduction, data display, and conclusion drawing. The findings indicate that accounting learning has transformed toward competency-based, contextual, and technology-supported instructional practices through the integration of computerized accounting, project-based learning, artificial intelligence literacy, and industrial internship programs. Graduate profile dimensions were strengthened through school culture, literacy reinforcement, religious habituation, discipline systems, and collaborative learning activities integrated into instructional processes. The study also reveals that AI integration in accounting learning remains in a developmental stage requiring continuous institutional support, teacher readiness, and technological adaptation. These findings demonstrate that holistic vocational learning contributes to strengthening technological competence, character formation, and adaptive work readiness aligned with industrial transformation and future workforce demands..

Keywords: *AI-based accounting learning, graduate profile dimensions, vocational education, DUDI-oriented work readiness, educational transformation*

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INTRODUCTION

Changes in the global educational landscape in the 21st century represent a shift in educational orientation as a result of the development of digital technology, globalization, and changes in the lifestyles of modern society (Berry, 2021; Reardon, 2018). Education is increasingly understood not merely as a mechanism for transmitting knowledge, but as a process of developing students' capacities to think critically, collaborate, communicate, and adapt to technological change. Within this context, the integration of Artificial Intelligence (AI) into educational systems has emerged as a significant paradigm shift, offering opportunities for more personalised, flexible, and data-informed approaches to teaching and learning (Sanjiwani et al., 2024; Zhou & Luo, 2025). Consequently, the quality of education is no longer measured solely by academic achievement but also by students' abilities to navigate the increasingly automated transformation of the workplace, particularly in vocational education oriented toward professional competencies such as accounting (OECD, 2021; UNESCO, 2023).

Vocational education plays a crucial role in preparing human resources aligned with industry needs and technological developments. Vocational education is designed to strengthen work competencies through applied, contextual, and practice-oriented learning. This link-and-match orientation serves as the basis for aligning the learning process with the needs of the Business and Industry World (DUDI). The modern workplace requires not only technical skills but also communication, collaboration, creativity, and adaptive problem-solving skills. Various studies have shown that vocational graduates still face a mismatch between their competencies and the rapidly evolving digital industry (Leithwood et al., 2020; Schleicher, 2018). This situation necessitates a transformation of vocational learning to be more relevant to evolving industrial practices, particularly in accounting learning, a strategic competency in vocational high schools.

Accounting learning has undergone a shift in orientation with the development of digital systems and the transformation of modern business practices. Accounting learning activities are no longer focused solely on manual transaction recording and mastery of procedural theory, but have evolved to encompass mastery of accounting applications, financial information systems, digital taxation, and computer-based technology (Khairunnisa et al., 2025). Ultimately, accounting learning is directed not only at developing administrative skills but also analytical skills, data interpretation, and decision-making based on financial information. These competencies are strengthened through authentic assignments, industrial practice simulations, and project-based learning related to real-world work needs. This shift in learning orientation has further developed with the introduction of artificial intelligence technology into the accounting learning process (Anderson & Krathwohl, 2001; Darling-Hammond et al., 2020).

Accounting education has undergone a significant shift in orientation, moving from manual transaction recording and procedural theory toward the integration of digital accounting systems, financial information technology, and AI-assisted data

processing (Blondeel et al., 2025; Karim et al., 2025). This situation encourages educational institutions to introduce coding, computational thinking, and AI literacy as part of strengthening students' future competencies. AI-based learning environments also provide opportunities for more personalized, flexible learning and encourage higher-order thinking skills. The use of AI in learning is ultimately understood not only as a utilization of technology but also as an educational strategy to produce graduates capable of adapting to the ever-evolving digital work ecosystem (Bozkurt et al., 2020; Karim et al., 2025). Strengthening technological competencies must be balanced with character development and graduate profile dimensions to ensure education does not lose its humanistic orientation.

The transformation of technology-based learning is closely linked to strengthening the graduate profile dimension as a national education orientation. The graduate profile emphasizes not only mastery of academic competencies but also character development, social skills, and readiness for professional life (Rohmah et al., 2025). The national education framework places the dimensions of faith and piety, citizenship, critical reasoning, creativity, communication, collaboration, independence, and health as indicators of holistic graduate quality (Handayani et al., 2026). Strengthening these dimensions requires a comprehensive educational process through learning, value instillation, and social activities within the school environment. Education thus not only shapes academically competent individuals but also builds students' character and social responsibility in the face of changing times (Nucci et al., 2024). This character strengthening cannot be separated from the school culture that develops within the educational environment.

School culture serves as a value system and habituation mechanism that shapes students' behavior and character in everyday life. A conducive school environment can strengthen students' religiosity, discipline, responsibility, literacy, and social interaction skills. Activities such as congregational prayer, a culture of smiling and greeting, literacy reinforcement, discipline monitoring, and restrictions on cell phone use are part of the process of internalizing values in school life. These habits demonstrate that character education takes place not only in the classroom but also through social experiences structured within the school culture. The link between the learning process and school culture ultimately becomes a crucial part in shaping graduates who are socially and professionally prepared to enter the workforce (Hallinger et al., 2025; Sallis, 2002). This work readiness is then strengthened through contextual learning experiences directly connected to the industrial world and the development of additional student skills.

Job readiness in vocational education is not only built through classroom learning, but also through direct experience in industrial environments. Field Work Practice (PKL) or Internship programs, competency certification, and industry-based training serve as means of strengthening contextual and applicable learning experiences. Vocational education has also begun developing additional life skills programs to expand students' competencies beyond their primary areas of

expertise. The development of these additional competencies provides space for students to have flexible skills according to the dynamics of modern work needs. The integration of learning, school culture, and industry experience demonstrates that vocational education requires a holistic and adaptive approach to social and technological change. This approach is beginning to be seen in the implementation of education at SMK Batik 1 Surakarta, which is developing AI-based accounting learning by strengthening graduate profiles and job readiness based on DUDI.

The implementation of education at SMK Batik 1 Surakarta demonstrates an integration effort between AI-based accounting learning, strengthening graduate profile dimensions, and DUDI-oriented work readiness. The school develops vocational learning through PKL (Workplace Experience) or internship programs according to expertise competencies, competency certification, tax training, and additional life skills programs as a form of strengthening students' adaptive competencies. The education system at the school has unique characteristics because students not only follow the main expertise competencies according to their majors, but are also required to choose one additional life skills program consisting of culinary arts, beauty treatments, music arts, and motorcycle business techniques. The program is strengthened through the implementation of two stages of Field Work Practice (PKL) or internship programs. PKL according to the main major and PKL based on the life skills of the student's choice, each carried out for three months. This pattern shows that the development of student competencies is directed not only at academic specialization, but also at the diversification of skills that support work flexibility and adaptability. Religious activities, a culture of literacy, a fingerprint-based discipline system, restrictions on cell phone use, and technology-based learning indicate a strengthening of the balance between technical competencies, character, and work readiness. This implementation shows that vocational education is starting to be directed towards producing graduates who are able to adapt to developments in the digital industry while also possessing strong character and social responsibility.

Previous research has generally addressed the integration of AI, accounting learning, school culture, graduate profiles, and job readiness separately, resulting in limited research examining the interconnectedness of all these aspects in an integrated manner within the context of vocational education in Indonesia. Some studies have focused on the use of learning technology without linking it to character building of student, school culture, and industrial sector-based job readiness. This situation indicates a research gap regarding the implementation of vocational education models that can simultaneously integrate technological transformation, accounting learning, school culture, and strengthening graduate profile dimensions. This study aims to analyze the transformation of AI-based accounting learning in strengthening graduate profile dimensions and industrial sector-oriented job readiness. The research results are expected to contribute to the development of vocational education models that are adaptive, integrative, and relevant to future industry needs.

RESEARCH METHOD

This study employed a qualitative approach with a case study design to develop a deep and contextual understanding of the transformation of AI-based accounting learning in strengthening graduate profile dimensions and DUDI-oriented work readiness. A qualitative approach was selected for its capacity to illuminate educational phenomena holistically through the meaning, experience, actions, and social interactions occurring within the natural research context (Creswell & Creswell, 2017). A case study design was used because the research focused on a vocational education unit with unique characteristics in integrating accounting learning, school culture, life skills programs, and strengthening student work readiness. This approach allows for in-depth exploration of the relationship between learning transformation, character building, and the needs of the workplace in the context of vocational education. The use of a case study design also provides space for understanding educational practices contextually according to the realities developing in the school environment.

The research was conducted at SMK Batik 1 Surakarta because the school develops technology-based learning, strengthening vocational competencies, character-based school culture, and a PKL program integrated with the needs of the DUDI (industrial industry). The school also has an additional life skills program that requires students to choose competencies outside their main majors, namely culinary arts, beauty treatments, music arts, and motorcycle business techniques. The research participants consisted of the principal, vice principal for curriculum, accounting teachers, productive teachers, PKL coordinators, students, and related parties involved in the implementation of learning and the development of student work competencies. The determination of participants was carried out using a purposive sampling technique based on direct involvement in the learning process, curriculum management, and implementation of the work readiness program. The diversity of participants was intended to obtain comprehensive data regarding the implementation of AI-based accounting learning transformation in the context of vocational education. The selection of participants allowed for the acquisition of in-depth and relevant information according to the research focus.

The research data consists of primary and secondary data related to the transformation of accounting learning, AI integration, school culture, strengthening graduate profile dimensions, and DUDI-oriented work readiness. Primary data were obtained through observations and in-depth interviews with research participants directly involved in the educational process at the school. Secondary data were obtained through curriculum documents, learning modules, teaching materials, PKL reports, competency certification documents, school regulations, literacy programs, and documentation of other school activities. The use of various data sources is intended to provide a comprehensive picture of the implementation of technology- and character-based vocational learning. The combination of these data sources also supports the triangulation process, thus strengthening the validity of the research

findings. The integrated use of primary and secondary data allows for a more contextual analysis of the educational phenomena studied.

Data collection was conducted through observation, in-depth interviews, and documentation. Observations were conducted to observe the accounting learning process, the use of technology and AI in learning, the implementation of school culture, strengthening literacy, student discipline, and the implementation of the PKL (internship programs) and life skills programs. In-depth interviews were conducted to obtain information on participants' experiences, perceptions, and views on the transformation of accounting learning and strengthening student work readiness. Documentation techniques were used to supplement and verify the data from observations and interviews through institutional documents and educational activity archives. Data validity was strengthened through source triangulation and method triangulation by comparing various pieces of information obtained from observations, interviews, and documentation (Denzin, 2017). The use of these various techniques enabled the acquisition of detailed, contextual data that aligned with the research focus.

Data analysis was conducted using an interactive analysis model that encompasses data reduction, data presentation, and conclusion drawing. Data reduction was achieved through the process of selecting, grouping, simplifying, and focusing data relevant to the research objectives. Data presentation was conducted in descriptive narrative form to facilitate the interpretation and identification of patterns of relationships among research findings. Conclusions were drawn continuously throughout the research process by identifying the interconnectedness of meaning, patterns, and themes emerging from the data. The analysis process was conducted simultaneously with data collection, allowing for adjustments to the research focus based on field findings. This analytical approach provided researchers with the opportunity to develop comprehensive interpretations of the transformation of AI-based accounting learning and its contribution to strengthening graduate profiles and student job readiness or work rediness (Miles et al., 2014). The results of the analysis were then systematically compiled to fully and in-depth explain the research phenomenon.

Research data guarded through implementation credibility, transferability, dependability, and confirmability criteria. Credibility is strengthened through triangulation sources, triangulation method, extension participation researchers in the field, and member checking to participant's research. Transferability is achieved through the presentation of a detailed description of the research so that the research results can be understood and applied to vocational education contexts with similar characteristics. Dependability is maintained through systematic documentation of the research process and data analysis so that all stages of the research can be clearly traced. Confirmability is achieved by ensuring that all research findings are based on empirical data from observations, interviews, and documentation, not on the researcher's subjective assumptions. The implementation of these procedures is carried out to ensure that the research

results have an adequate level of scientific trustworthiness and accountability (Lincoln & Guba, 1985).

RESULTS AND DISCUSSION

RESULTS

Transformation learning accountancy Artificial Intelligence (AI) based identified as an educational strategy directed vocation for strengthen dimensions profile graduates and readiness work or job readiness DUDI -based learning (Sanjiwani et al., 2024). Observations indicate a shift in learning orientation from a teacher-centered knowledge transfer pattern to competency-based learning, technology, and contextual work experience. Interviews with accounting teachers revealed that the learning process has begun to integrate digital applications, computerized accounting practices, tax projects, and the completion of case studies tailored to industry practices. School documentation also demonstrates the implementation of competency certification, technology-based learning, and industrial internship programs as part of strengthening students' vocational competencies. These findings indicate that the transformation of accounting learning is directed at producing graduates who are adaptive to technological changes and the dynamics of the modern work industry.

The implementation of the Independent Curriculum in Indonesia demonstrates the strengthening of accounting learning, oriented toward competency achievement and authentic learning experiences (Khairunnisa et al., 2025). Observations indicate that students are given contextual assignments such as preparing financial reports, analyzing transactions, practicing taxation, and using digital accounting applications (MYOB, Accurate, Zahir, etc.). Interviews with teachers indicate that learning activities are designed to develop analytical thinking skills, collaborative work, and independence in solving accounting problems. Teaching module and assessment documents demonstrate alignment between learning outcomes and project-based activities and industry practices. This situation indicates that accounting learning is beginning to be directed toward learning experiences relevant to the needs of the workplace.

The integration of artificial intelligence and digital literacy in accounting learning demonstrates efforts to adapt vocational education to technology-based industrial transformation (Blondeel et al., 2025). Observations show that students are beginning to be introduced to coding, the use of AI, and the use of technology-based accounting applications in the learning process. Interviews with teachers indicate that AI integration is aimed at strengthening computational thinking, digital analysis skills, and student readiness for technology-based professions. Learning documentation shows that AI-based programs are beginning to be incorporated into learning planning and student competency development. These findings demonstrate that AI is not only utilized as a technological tool but also as a medium for strengthening future competencies in vocational education.

Strengthening the graduate profile dimension is implemented through the integration of learning, school culture, and character building of students (Rohmah et al., 2025). Observations in SMK Batik 1 Surakarta show the implementation of religious culture in the form of smiles, greetings, salutations, congregational prayers, morning recitation of the Koran, and the consistent strengthening of discipline within the school environment. Interviews with students indicate that these habits shape responsibility, social communication, and discipline in daily activities. School documentation also shows the existence of a structured literacy program and character building that are implemented continuously. These findings indicate that strengthening the graduate profile is implemented through the integration of academic and non-academic activities within the school environment.

Critical reasoning skills develop through accounting learning in Indonesia that emphasizes analysis, problem-solving, and contextual project completion (Fatimah et al., 2025). Observations in SMK Batik 1 Surakarta demonstrate students' active involvement in analyzing financial transactions, preparing financial reports, and solving group-based tax cases. Interviews with accounting teachers indicate that learning strategies are geared toward encouraging reflective and analytical skills rather than simply memorizing procedures. Documentation of student project results demonstrates the development of higher-order thinking skills in accounting learning activities. These conditions demonstrate that the learning transformation contributes to strengthening critical thinking skills relevant to the needs of modern industry.

Strengthening creativity and communication develops through project presentations, collaborative learning, and extracurricular activities that support student self-expression (Berry, 2021). Observations in accounting class indicate that students engage in presentations, organizational activities, and practical learning that require communication and teamwork skills. Interviews with teachers revealed that learning activities are intentionally designed to provide space for the exploration of ideas, discussion, and collaboration among students. School documentation also demonstrates the student on SMK Batik 1 Surakarta involvement in entrepreneurship programs (Kewirausahaan), such as B-One, literacy programs, and other creative activities. These findings demonstrate that the transformation of accounting learning contributes to strengthening social and communication competencies as part of the holistic development of graduates.

The implementation of Field Work Practice (PKL) or internship programs provides a significant contribution to strengthening students' work readiness and adaptive competencies (Suranto et al., 2024). Observations in SMK Batik 1 Surakarta indicate that students participate in two forms of PKL. PKL based on their expertise and PKL based on additional life skills chosen by the students (life skills in this school: Culinary Arts, Cosmetology / Beauty Therapy, Musical Arts, Motorcycle Engineering, and Business). Interviews with PKL coordinators and Vice Principal of Curriculum indicate that the program is designed to provide real-world work experience while expanding students' skills beyond their primary fields. School

documentation demonstrates collaboration between the school and the Industrial and Industrial Industries (DUDI) in supporting the development of students' professional competencies. These findings demonstrate that the PKL program serves as a bridge between school learning experiences and the needs of the workplace.

The additional life skills program demonstrates the development of adaptive competencies beyond students' core expertise. Observations in SMK Batik 1 Surakarta indicate that students are required to choose one of the additional programs, including culinary arts, beauty, music, or motorcycle business techniques. Interviews with XI AKL's students indicate that the program supports the development of creativity, entrepreneurial awareness, and career flexibility. School documentation demonstrates the implementation of the life skills program, integrated with learning activities and additional internships for three months. These findings demonstrate that vocational education is directed not only at competency specialization but also at skill diversification that supports students' career sustainability.

Strengthening student discipline and responsibility is carried out through a structured school culture system and supervision (Muh Habibulloh et al., 2024). Observation of students' morning routine in SMK Batik 1 Surakarta indicate the implementation of fingerprint attendance, checking school attributes, restrictions on cell phone use, and mandatory literacy measures such as reading and writing book summaries. Interviews with teachers revealed that these policies are aimed at building student focus on learning, discipline, and responsibility. School documentation indicates that the discipline program is integrated with strengthening character education. These findings demonstrate that school culture serves as an instrument for building professional character in vocational education.

The use of technology in accounting learning has shown positive developments, although its implementation is still in the initial strengthening stage (Jefriyanto et al., 2025). Observations indicate that digital accounting applications (MYOB, Accurate, and Spreadsheet) and technology-based learning media are beginning to be used in learning activities. Interviews with teachers revealed challenges in the form of limited technological mastery, pedagogical readiness, and digital learning support facilities. School documentation indicates that the implementation of digital learning still varies across educators and learning activities. These findings suggest that the transformation towards AI-based accounting learning requires continuous development and more optimal institutional support.

The synergy between accounting learning, school culture, life skills program and industry-based programs demonstrates a holistic educational approach oriented toward graduate readiness. Observations indicate that academic learning, character building, literacy culture, and industry experience are interconnected in school educational activities. Interviews with school management and Vice Principal of Curriculum revealed that educational policies are directed at aligning learning outcomes with the needs of the industrial and industrial sectors and strengthening

graduate profile dimensions. School documentation also demonstrates integration between curriculum implementation, competency certification, and internship implementation. These findings demonstrate that the transformation of vocational education at SMK Batik 1 Surakarta is being implemented systematically to produce graduates who are adaptive to industrial and societal developments.

Overall, the research results indicate that AI-based accounting learning transformation contributes to strengthening graduate profile dimensions and Indonesian industry-oriented work readiness. Observations, interviews, and documentation in SMK Batik 1 Surakarta demonstrate a connection between learning transformation, technology integration, school culture, and industry programs in shaping student competencies. The implementation of this education demonstrates a balance between strengthening technological competencies, character building, and developing employability skills in vocational education. These findings demonstrate that an adaptive and holistic vocational learning model is essential in preparing graduates to face industrial changes and future societal challenges.

DISCUSSION

The transformation of AI-based accounting education demonstrates that vocational learning is shifting toward adaptive systems capable of keeping pace with industry changes and digital advancements. Strengthening student competencies is no longer focused on mastering administrative accounting procedures, but has evolved to include analytical skills, digital literacy, and technology-based work readiness (Sanjiwani et al., 2024). The findings of this study demonstrate the integration of technical competencies, employability skills, and strengthening graduate profile dimensions within a single vocational learning ecosystem. Previous research tended to position accounting learning and work readiness as standalone aspects, whereas this study demonstrates a direct link between learning transformation, school culture, and the needs of the industrial and industrial sectors. This situation indicates that vocational accounting learning is beginning to shift its orientation toward developing more holistic future competencies.

The implementation of the Independent Curriculum (Kurikulum Merdeka) demonstrates that contextual and project-based learning provides learning experiences more relevant to the needs of the workplace. Learning activities, such as financial reporting practices, tax projects, and case study completion, encourage students to understand accounting issues through real-world experiences (Fadhila & Asmawan, 2024; Khairunnisa et al., 2025). Previous research has focused more on curriculum implementation from a pedagogical perspective, while this study demonstrates a direct relationship between project-based learning and strengthening students' work competencies and industry readiness. These findings demonstrate that the effectiveness of a vocational curriculum is strongly influenced by the connection between learning activities and the realities of the workplace.

The integration of Artificial Intelligence in accounting learning demonstrates the adaptation of vocational education to the needs of technology-based professions. The use of AI, coding, and digital applications for accounting (MYOB, Zahir, Acurate, Spreadsheets) in accounting learning provides opportunities for students to develop computational thinking and data-driven problem-solving skills (Blondeel et al., 2025). Previous research has focused more on AI in the context of general education, while this study demonstrates the specific implementation of AI in vocational accounting learning, linking it to the needs of the industrial and business sectors (Feriana & Ulfatun, 2024; Zhou & Luo, 2025). This situation suggests that the integration of AI in vocational education in Indonesia requires a more contextual approach relevant to industry practices.

Strengthening the graduate profile dimension through school culture demonstrates that character building remains a fundamental part of the transformation of vocational education. Religious activities, literacy strengthening, a culture of discipline, and social interactions built within the school environment contribute to the development of students' sense of responsibility, communication, and ethics (Handayani et al., 2026; Rohmah et al., 2025). Previous research generally discussed character education separately from vocational learning, whereas this study demonstrates the integration of the learning process, religious activities, school culture, and strengthening the graduate profile. These findings suggest that students' work readiness is influenced not only by technical competence but also by the inculcation of professional values and culture within the school environment.

The development of critical reasoning in accounting learning in SMK Batik 1 Surakarta demonstrates the importance of learning strategies based on analysis and contextual problem-solving. Transaction analysis, tax projects, and financial statement preparation provide reflective thinking experiences directly related to real-world work situations (Fatimah et al., 2025; Nurhadi et al., 2017). Previous research has focused more on higher-order thinking skills in the context of general education, while this study demonstrates the implementation of higher-order thinking skills specifically in technology-based accounting learning (MYOB, Accurate, Spreadsheet). This situation demonstrates the strategic role of vocational education in shaping students' adaptive abilities to the complexities of the modern industrial world.

Strengthening creativity and communication in SMK Batik 1 Surakarta demonstrates that vocational education is not solely oriented toward technical skills but also toward developing students' social competencies. Project presentations, group work, school organizations, and extracurricular activities provide opportunities for students to develop collaboration and self-expression skills (Berry, 2021; Wahyudi et al., 2025). While previous research has emphasized technical competency achievement as an indicator of vocational education success, this study demonstrates that work readiness is also influenced by communication and creativity skills. These findings demonstrate that vocational education requires a balance between professional competency and interpersonal skills.

The implementation of internships program (PKL) and additional life skills programs in SMK Batik 1 Surakarta demonstrates the broadening of vocational education's orientation toward developing multidimensional, adaptive competencies. Internship experiences tailored to majors and life skills-based internships provide students with opportunities to understand the world of work more broadly and flexibly (Suranto et al., 2024). Previous research generally emphasized internships tailored to core competencies, while this study demonstrates the strengthening of employability skills through the diversification of students' additional skills. These findings indicate that vocational education is beginning to focus on developing graduates with career flexibility and the ability to adapt to changing job market needs.

A culture of discipline and strengthening literacy demonstrate that school culture plays a significant role in shaping students' professional character. The fingerprint attendance system, restrictions on cell phone use, and mandatory literacy demonstrate efforts to foster responsibility, focus on learning, and work ethics within the school environment (Marpaung & Lumbantu, 2025; Muh Habibulloh et al., 2024). While previous research has often viewed school discipline as a form of administrative control, this study demonstrates that a culture of discipline plays a crucial role in shaping students' work readiness. These findings demonstrate that school culture plays a strategic role in shaping professional character relevant to industry needs.

The use of technology in accounting learning (MYOB, Accurate, Spreadheet) has shown positive progress, although its implementation still requires ongoing strengthening. Differences in technological readiness among educators, limited resources, and pedagogical adaptation remain challenges in implementing digital learning (Jefriyanto et al., 2025; Marwah et al., 2025). Previous research has focused more on the technical aspects of technology adoption, while this study demonstrates the importance of integrating technological innovation, school culture, and strengthening student character. These conditions indicate that the success of vocational education transformation is determined not only by the availability of technology, but also by institutional readiness and ongoing learning innovation.

Overall, this study demonstrates that AI-based accounting learning transformation contributes to the integration of technological competencies, strengthening graduate profiles, and DUDI-based job readiness in vocational education. Previous research tends to discuss accounting learning, school culture, AI, and job readiness in isolation, while this study demonstrates the interconnectedness of all these components within a holistic educational framework. This integrative approach provides a conceptual contribution to the development of a vocational education model that is more adaptive to industrial changes and the development of the digital society. The findings of this study indicate that future vocational education requires a balance between technological mastery, character building, and the continuous strengthening of job competencies.

CONCLUSION

The transformation of AI-based accounting learning has shown a significant contribution to strengthening the graduate profile dimension and increasing DUDI-oriented work readiness in vocational education. Research findings show that the accounting learning process has shifted from a procedural knowledge transmission pattern to contextual, adaptive, and competency-based learning that aligns with the development of the digital industry. The integration of tax projects, computerized accounting applications, artificial intelligence literacy, and problem-solving-based learning practices demonstrates that accounting learning is no longer positioned solely as mastery of financial concepts, but rather as a medium for strengthening 21st-century competencies. This orientation demonstrates that vocational education is beginning to be directed towards developing graduates who are able to adapt to technological changes, industry needs, and the dynamics of the future world of work. This condition also confirms that the transformation of accounting learning is directly related to the development of professional competencies and student work readiness.

The strengthening of the identified graduate profile dimensions occurs through the integration of school culture, learning activities, character building, and systematically designed fieldwork experiences. Religious building, literacy strengthening, discipline control, and collaborative activities create an educational environment that supports the development of students' responsibility, communication, creativity, independence, and critical reasoning. The two Field Work Practice Programs (PKL) or internship program in SMK Batik 1 Surakarta, one based on expertise competency and the other based on life skills, demonstrate the expansion of vocational education's orientation toward developing multidimensional competencies. The selection of additional programs such as culinary arts, beauty treatments, music arts, and motorcycle business techniques demonstrates the school's efforts to strengthen students' career flexibility and adaptive abilities beyond the core competency of accounting. The integration of academic learning, character building, and industry experience demonstrates that graduate profile development is carried out holistically and continuously.

The implementation of AI-based accounting learning is still in the strengthening stage and therefore requires institutional support, technological readiness, and continuous pedagogical innovation. Variations in educators' digital capabilities, limited infrastructure, and differing levels of technology integration in learning indicate that the transformation of vocational education has not yet been fully implemented evenly. This situation indicates the importance of strengthening teacher competencies, developing a digital learning ecosystem, and increasing collaboration with the business and industrial worlds to support the implementation of technology-based learning. The findings of this study demonstrate that the success of vocational education transformation is not only determined by technology integration but also influenced by the synergy between the curriculum, school culture, contextual learning, and industry partnerships.

Therefore, a vocational learning model that is integrative, adaptive, and responsive to technological developments is a strategic necessity in preparing competitive graduates amidst the changing global workplace.

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