



Improving the Practical Skills of Students in the Computerized Accounting Study Program using Industrial Teaching Learning Methods

Suwandi,^{a1} Mohammad Umar Fakhruddin,^a Willy Eka Septian,^a Turini^a

^a Universitas Catur Insan Cendekia Cirebon, Indonesia

Article Information:

Received 2024-03-31
Accepted 2024-06-15
Published 2024-06-30

Keywords: Improvement,
Skills, Learning, Teaching
Industry

Abstract

The importance of developing practical skills in higher education, especially in the Computerized Accounting Study Program, is becoming increasingly prominent along with rapid developments in technology and industry. Students in this program need practical skills relevant to work demands in the accounting industry, which continues to change and develop. This research aims to evaluate and improve students' practical skills in the Computerized Accounting Study Program (Universitas Catur Insan Cendekia Cirebon) by applying the Industrial Teaching Learning Model. The research method used is a research and development approach. The stages carried out in this research are as follows: (1) Problem identification and planning, (2) Literature study, (3) Learning model design, (4) Model implementation, and (5) Evaluation. It is hoped that the results of this research will provide insight into the impact of the Industrial Teaching Learning Model on improving students' practical skills. The implications of this research can be used as a basis for developing curriculum and teaching methods in the Computerized Accounting Study Program and providing constructive input for higher education institutions in improving the quality of practical learning. It is hoped that the conclusions of this research can significantly contribute to our understanding of the effectiveness of industrial learning models in improving students' skills in computerized accounting.

© 2024 The Authors, published by Yayasan Intelligensia Bhumi Putra Indonesia.
This is an open access article under the **CC BY SA** license.

INTRODUCTION

The current world of work increasingly demands graduates who have theoretical knowledge and practical skills that are ready to be used (Sari & Mariyanti, 2024). Companies are looking for individuals who can directly contribute to and overcome fundamental challenges in the workplace (Dzikrullah & Abdullah, 2024). In an academic environment, students often only gain theoretical knowledge through textbooks, lectures, and laboratory simulations (Yoto et al., 2024). This research aims to bridge the gap between theory and practice so that students are better prepared to enter the world of work with relevant skills (Wen & Sumettikoon, 2024). It is essential to carry out this research from an academic and practical perspective. From an academic perspective, this research wants to examine the effectiveness of the "Industrial Teaching" learning method (Marzano & Martinovs, 2020) in the context of higher education in the Computerized Accounting Study Program. Meanwhile, from

¹

suwandi@cic.ac.id

How to cite: Suwandi, S., Umar Fakhruddin, M., Eka Septian, W., & Turini, T., (2024). Improving the Practical Skills of Students in the Computerized Accounting Study Program using Industrial Teaching Learning Methods. *Journal of Student-Centered Learning*, 1(1), 19-26. Retrieved from <https://jscl.ibnusantara.com/index.php/jscl/article/view/18>

a practical perspective, this research is essential because it can help prepare students with the skills needed by industry.

The following is an analysis of the main trends or significant groups of previous research in the relevant field. The research entitled was conducted by (Permana et al., 2024). Results of this research This study concludes that, while recognizing the positive potential of technology-based learning media, it is essential to design and implement effective strategies to ensure that technology is used optimally in educational contexts. The aspect that has not been studied in this research is how technology-based learning media can be adapted for students with special needs or disabilities. The following research was conducted by (Mardiyah et al., 2018); based on the research results, students were asked to continue to deepen and increase their knowledge about administration and managerial matters. Knowledge of administrative and managerial concepts is necessary, considering both are fundamental parts of an organization/company. Mastery of competencies related to information and communication technology and the internet is important to prepare. According to (Wang, 2024), in his research, it was stated that the mechanism for integrating industry and education drives the transformation of education, several courses in schools, and also helps students to solve employment problems. Research conducted by (Norlund et al., 2024), the authors explored the special educational needs (SEN) industry about teachers' continuing professional development (CPD) by analyzing bills generated by CPD providers in Sweden. The results of this research provide evidence that the SEN industry operates in the interests of private economic growth and not for the needs of teachers or the teaching profession.

The focus of this research is to investigate how the manufacturing industry influences the effectiveness of the teaching industry learning method in improving students' practical skills (Chou et al., 2018). In this context, the research will explore how the unique characteristics and conditions of the manufacturing industry contribute to the outcomes of the learning approaches adopted in academic environments, particularly in study programs related to computerized accounting (Olena et al., 2022). In this case, researchers will analyze particular factors in the manufacturing industry, such as intensive production processes, structured work environments, and the types of practical skills often needed by students in this context (Zheng et al., 2024). Using the Industrial Teaching learning method significantly increases students' practical skills in computerized accounting (Sánchez et al., 2019). Students show a higher acceptance of the Industrial Teaching learning method than traditional methods (Ghani & Muhammad, 2019). Students who follow the Industrial Teaching learning method are more practically prepared to enter the workforce compared to those who do not follow this method (Wahjusaputri & Bunyamin, 2022). Besides that, the Industrial Teaching learning method facilitates more direct engagement with industrial practice, increasing students' understanding of applying theory in real work contexts (Huang et al., 2013).

This research aligns with previous findings, which show that industry-based learning methods positively impact student skills development (Naicker & Singh, 2022; Ngonda et al., 2019). However, this research also found that industrial visits improve technical skills and motivate students to study and pursue careers in their field (Lebria et al., 2024), which has yet to be widely explained in previous literature. Other studies found that student involvement in industry activities increased their awareness of industry demands and helped them adjust their career expectations to reality. This research supports these findings and adds evidence that direct experience can also increase students' self-confidence in facing the world of work (Aithal & Kumar, 2016).

METHOD

The qualitative research method used in the study 'Improving Practical Skills of Computerized Accounting Study Program Students Using Industrial Teaching Learning Methods' at Catur Insan Scholar University (UCIC) Cirebon is case study research. This research, which aims to explore the experiences and perceptions of students and lecturers regarding implementing the Industrial Teaching learning method in improving students' practical skills, has direct implications for the field of Computerized Accounting. A case study approach was chosen to gain an in-depth and contextual

understanding of the impact of this learning method from the perspective of direct participants. Data was collected through in-depth interviews with students and lecturers involved in implementing learning, direct observation of learning interactions, and analysis of documents related to the curriculum and learning materials.

The validity of research data is maintained by using data triangulation, namely comparing results from various data sources (such as interviews, observations, and documents) to ensure the consistency and accuracy of the findings. Data sources used include interview transcripts, observation notes, curriculum documents, learning materials, and reflective notes from researchers during the research process. With this approach, this qualitative research can provide an in-depth picture of how the Industrial Teaching learning method influences the learning experience and development of student's practical skills in the context of the Computerized Accounting study program at UCIC Cirebon.

RESULTS AND DISCUSSION

Increased Learning Motivation

Based on the results of interviews conducted after an industrial visit to PT. Primarindo Asia Infrastructure Tbk, Bandung, found a significant increase in students' practical knowledge and skills. All students who take part in industrial visits to PT. Primarindo Asia Infrastructure Tbk, Bandung, felt that this visit provided helpful insight into what they needed to get from classroom learning. The second finding was that students felt that direct experience in an industrial environment was very helpful in understanding the practical application of the theory they had learned. Students also stated that they were more confident in facing the world of work after the visit. The following finding is increased student learning motivation after the industrial visit.

Table 1: Increase in Student Learning Motivation

Criteria	Before Visit	After Visit
Motivation to learn	70%	90%
Desire to work in Industry	60%	80%

Source: Data processed

Table 1 presents data regarding the increase in student learning motivation before and after visits carried out in the context of research or learning activities. Motivation to study: shows the percentage of students who are motivated to study before and after the visit. Before the visit, 70% of students had motivation to study, which increased to 90% after the visit. This suggests that the visit positively impacted students' motivation to study. Desire to work in industry: This shows the percentage of students who expressed willingness to work in industry before and after the visit. Before the visit, 60% of students desired to work in industry, which increased to 80% after the visit. This indicates that the visit might help improve students' interest in pursuing a career in industry after they complete their studies. PT. Primarindo Asia Infrastructure Tbk provided positive feedback on this visit. They stated that students from UCIC Cirebon had an excellent knowledge base and showed a high interest in learning.

Table 2: Feedback from PT. Primarindo Asia Infrastructure Tbk

Rated aspect	Mark
Basic Student Knowledge	Good
Interest to learn	Tall
Practical Skills	Good

Based on the data from Table 2 above contains the results of feedback or assessment from PT. Primarindo Asia Infrastructure Tbk for students involved in a particular program or activity. PT assessment. Primarindo Asia Infrastructure Tbk for students of the Computerized Accounting Study

Program at UCIC Cirebon covers several important aspects, namely basic knowledge, interest in learning, and practical skills. The following is an explanation for each element assessed:

Basic Student Knowledge (Good)

PT. Primarindo Asia Infrastructure Tbk assesses that students in the Computerized Accounting Study Program at UCIC Cirebon have a good basic knowledge. Students have adequate understanding (company perspective) regarding theories or concepts relevant to the industry or expected work field. PT. Primarindo Asia Infrastructure Tbk assesses that students have a good knowledge base in their field of study. This shows that they have a solid understanding of relevant theories and concepts. The theory relevant to this aspect is the theory of cognitivism, which emphasizes the importance of cognitive structures in understanding the information and concepts being taught. According to this theory, a deep understanding of basic concepts is essential for effective learning and application in practical situations ([Hajian, 2019](#); [Fantinelli et al., 2024](#)).

Interest in Learning (High)

PT. Primarindo Asia Infrastructure Tbk assesses that students from the Computerized Accounting Study Program at UCIC Cirebon show a high interest in learning. This reflects that students not only have good basic knowledge but are also active in seeking additional knowledge and developing a strong interest in their field of study. Students also show a high interest in learning, which means they actively seek additional knowledge and have a strong interest in their field of study. This can be explained through learning motivation theories, such as Self-Determination Theory, which states that interest and intrinsic motivation are the keys to deep and sustainable learning. Intrinsically motivated students tend to be more proactive in pursuing new knowledge and skills ([Fantinelli et al., 2024](#)).

Practical Skills (Good)

PT. Primarindo Asia Infrastructure Tbk assesses students in the Computerized Accounting Study Program at UCIC Cirebon have good practical skills. This means students can apply their theoretical knowledge in a practical context, essential in their preparation for the world of work. Students' practical skills are considered good, showing that they can apply theoretical knowledge in a practical context. This aligns with Kolb's experiential learning theory, which emphasizes the importance of direct experience in the learning process. This theory outlines that effective learning occurs when students are directly involved in activities that allow them to test and apply theoretical concepts in real situations. ([Wrenn & Bruce, 2009](#); [Hajian, 2019](#)).

Integrating theoretical knowledge and practical skills is very important in higher education, especially in preparing students for the dynamic world of work. Several studies show that programs that combine classroom learning with practical experience, such as internships or School-Work Alternation (SWA) programs, can effectively facilitate the transfer of knowledge and skills from an academic to a professional environment ([Fantinelli et al., 2024](#)).

The Impact of Industrial Teaching Learning Methods on the Practical Skills of Students in the Computerized Accounting Study Program

The research results show that industrial visits positively impact increasing students' knowledge and practical skills. Industrial visits provide students with hands-on experience in a natural work environment, allowing them to see and participate in practical applications of the theory they have learned in class. This enriches their understanding of the material and strengthens the practical skills needed in the world of work. There are several positive impacts for students, namely:

Increasing experience for students

Experiential learning is learning that directly involves students at PT. Primarindo Asia Infrastructure Tbk to strengthen understanding and skills. In the context of industrial visits, students learn through textbooks and lectures and through observation and active participation in real situations at PT. Primarindo Asia Infrastructure Tbk. This experience allows them to connect theory with practice, deepen understanding, and develop relevant skills ([Priatmoko & Dzakiyyah, 2020](#)).

Get to know firsthand the situation in the world of work

Situational learning occurs effectively when students are involved in communities of practice and observe and participate in daily activities at HEIs. PT. Primarindo Asia Infrastructure Tbk. Industrial visit PT. Primarindo Asia Infrastructure Tbk provides opportunities for students to become part of a community of practice in companies, see firsthand how theory is applied, and interact with professionals in their fields. It provides a rich context for learning and helps students understand the relevance and practical application of the knowledge they gain in the classroom (Down, 2001).

The Growth of Student Intrinsic Motivation

Increasing students' intrinsic motivation through direct visits to PT. Primarindo Asia Infrastructure Tbk is an essential aspect of education. Visits to companies such as PT. Primarindo Asia Infrastructure Tbk can be a solid catalyst for strengthening this motivation. By providing accurate and relevant experiences, educational institutions can help students develop a deep interest and commitment to their learning, ultimately improving their academic achievement and readiness to enter the world of work (Gottfried, 2019).

Industrial visit to PT. Primarindo Asia Infrastructure Tbk provides opportunities for students to apply the theory they have learned in real situations. This experience not only enriches their understanding of theoretical concepts but also enhances their practical skills. Being directly involved in a natural work environment helps students see the relevance of their studies, increasing their intrinsic motivation. These experiences align with principles from experiential learning theory, situated learning theory, and intrinsic motivation theory, all of which emphasize the importance of hands-on experience, participation in communities of practice, and practical relevance in motivating and reinforcing learning.

CONCLUSION

This research concludes that industrial teaching-learning methods are used through industrial PT visits. PT. Primarindo Asia Infrastructure Tbk in Bandung significantly improved students' practical skills in the Computerized Accounting Study Program. These visits not only enrich students' practical knowledge and skills but also strengthen their learning motivation and provide insight into the latest technologies used in industry. Direct experience in an industrial environment also increases students' confidence in facing the world of work. These findings emphasize the importance of integrating academic learning with practical experience to prepare job-ready and competitive graduates, which aligns with the research objective of finding effective methods for developing students' practical skills.

This research provides a theoretical contribution by testing the effectiveness of the Industrial Teaching learning method in improving students' practical skills. These findings strengthen theories that support using an active learning approach integrated with industry to improve the quality of higher education. Practically, the results of this research support the development of a curriculum that is more responsive to industry needs. Implementing the Industrial Teaching method can help prepare students with skills that suit the demands of the job market, increasing their competitiveness in a competitive labor market.

This research has several limitations, which underscore the need for further investigation. First, the sample is limited to students of the Computerized Accounting Study Program at UCIC Cirebon who took part in an industrial visit to PT. Primarindo Asia Infrastructure Tbk, so the results may not be generalizable to other study programs or institutions. Secondly, the questionnaire and interview methods used depend on the respondents' subjective perceptions, which can be influenced by personal bias. Third, this research only measures short-term impacts without considering long-term effects on students' careers. For further research, it is recommended to use a wider sample from various study programs and educational institutions, as well as mixed methods to obtain more comprehensive data. Long-term research that tracks college students' career development after graduation is also needed to evaluate the ongoing impact of experiential learning on job readiness and career success. Further

research can provide deeper insight into the effectiveness of Industrial Teaching learning methods in higher education.

THANK-YOU NOTE

We want to express our sincere thanks for the hospitality and opportunity given to us, lecturers and students from UCIC Cirebon, during our industrial visit to PT. Primarindo Asia Infrastructure Tbk - Bandung. Our experiences during the visit have provided valuable insights and enriched our understanding of infrastructure sector industrial practices.

AUTHOR CONTRIBUTION STATEMENT

As Head of the Computerized Accounting Study Program, SW is responsible for planning and organizing industrial visits well. This includes determining the purpose of the visit, scheduling, arranging transportation, and coordinating with related parties at the shoe factory to ensure all preparations are fulfilled.

The collaboration coordinator, W Arnold, plays a significant role in organizing collaboration between the institution or its team and related parties at PT. Primarindo Asia Infrastructure Tbk. Their responsibilities include aligning the visit schedule, determining the purpose and scope of the visit, negotiating other details related to the collaboration, and preparing essential documents such as the MoU and SPK. WE's efforts are crucial to the success of the visit.

MU and TU, as members, are responsible for publishing and reporting the results of industrial visits. The author's contribution has a key role in ensuring that the results of the visit are properly documented and disseminated to interested parties. Another role is to document all industrial visit activities, including details such as date of visit, activity agenda, places visited, and other relevant information, as well as reports on the results of industrial visits.

REFERENCES

- Aithal, P. S., & Kumar, P. M. (2016). Teaching-Learning process in higher education institutions. *International Journal of Multidisciplinary Research and Modern Education (IJMRME)*, 2, 662–676. Available at SSRN: <https://ssrn.com/abstract=2800585>
- Bordel Sánchez, B., Alcarria Garrido, R. P., & Robles Valladares, T. E. (2019). Industry 4.0 paradigm on teaching and learning engineering. *International Journal of Engineering Education*, 35(4), 1018–1036. <https://oa.upm.es/63549/>
- Chou, C.-M., Shen, C.-H., Hsiao, H.-C., & Shen, T.-C. (2018). Industry 4.0 manpower and its teaching connotation in technical and vocational education: Adjust 107 curriculum reform. *International Journal of Psychology and Educational Studies*, 5(1), 9–14. DOI: <https://doi.org/10.17220/ijpes.2018.01.002>
- Down, C. (2001). *Learning for Transfer--A Theory of Situational Learning*. <https://eric.ed.gov/?id=ED456271>
- Dzikrullah, I., & Abdullah, M. N. A. (2024). Tantangan Dan Peluang Angkatan Kerja Terdidik Di Dunia Kerja Untuk Mengatasi Permasalahan Pengangguran Di Indonesia. *SABANA: Jurnal Sosiologi, Antropologi, Dan Budaya Nusantara*, 3(1), 20–24. DOI: <https://doi.org/10.55123/sabana.v3i1.3302>
- Fantinelli, S., Cortini, M., Di Fiore, T., Iervese, S., & Galanti, T. (2024). Bridging the Gap between Theoretical Learning and Practical Application: A Qualitative Study in the Italian Educational Context. *Education Sciences*. 14(2):198. DOI: <https://doi.org/10.3390/educsci14020198>

- Ghani, E. K., & Muhammad, K. (2019). Industry 4.0: Employers' Expectations of Accounting Graduates and Its Implications on Teaching and Learning Practices. *International Journal of Education and Practice*, 7(1), 19–29. DOI: <https://doi.org/10.18488/journal.61.2019.71.19.29>
- Gottfried, A. E. (2019). Academic intrinsic motivation: Theory, assessment, and longitudinal research. In *Advances in motivation science* (Vol. 6, pp. 71–109). Elsevier. DOI: <https://doi.org/10.1016/bs.adms.2018.11.001>
- Hajian, S. (2019). Transfer of Learning and Teaching: A Review of Transfer Theories and Effective Instructional Practices. *IAFOR Journal of Education*, 7(1). DOI: <https://doi.org/10.22492/ije.7.1.06>
- Huang, S., Huang, Y., Chang, W., Chang, L., & Kao, P. (2013). Exploring the effects of teacher job satisfaction on teaching effectiveness. *International Journal of Modern Education Forum*, 2(1), 17–30.
- Mardiyah, S. U. K., Kumoro, J., Kusuma, C. S. D., & Rusdiyanto, W. (2018). Analisis kompetensi mahasiswa program studi sekretari dalam praktik kerja lapangan. *Efisiensi: Kajian Ilmu Administrasi*, 15(2), 9–14. DOI: <https://doi.org/10.21831/efisiensi.v15i2.24489>
- Marzano, G., & Martinovs, A. (2020). Teaching Industry 4.0. *Society. Integration. EDUCATION. Proceedings of the International Scientific Conference*, 2, 69–76. DOI: <https://doi.org/10.17770/sie2020vol2.4833>
- Naicker, A., & Singh, E. (2022). Embedding Undergraduate Research through Industry-Based Projects: Student Experiences. *African Journal of Inter/Multidisciplinary Studies*, 4(1), 68–83. <https://doi.org/10.51415/ajims.v4i1.1017>
- Ngonda, T., Shaw, C., & Kloot, B. (2019). The role of mentors in navigating the paradoxes of industry-based learning. In B. Kloot (Ed.), *Proceedings of the 8th Research in Engineering Education Symposium*, REES 2019 - Making Connections (pp. 103– 112). Research in Engineering Education Network.
- Norlund, A., Levinsson, M., & Beach, D. (2024). The SEN industry and teachers' CPD: ideal elements of teaching and enabling arrangements. *Education Inquiry*, 1–20. DOI: <https://doi.org/10.1080/20004508.2024.2360244>
- Olena, P., Dariia, P., Hrechanyk, N., Kateryna, Y., & Serhii, N. (2022). ICT-oriented training of future HEI teachers: a forecast of educational trends 2022-2024. *International Journal of Computer Science & Network Security*, 22(4), 387–393.
- Permana, B. S., Hazizah, L. A., & Herlambang, Y. T. (2024). Teknologi pendidikan: efektivitas penggunaan media pembelajaran berbasis teknologi di era digitalisasi. *Khatulistiwa: Jurnal Pendidikan Dan Sosial Humaniora*, 4(1), 19–28. DOI: <https://doi.org/10.55606/khatulistiwa.v4i1.2702>
- Priatmoko, S., & Dzakiyyah, N. I. (2020). Relevansi kampus merdeka terhadap kompetensi guru era 4.0 dalam perspektif experiential learning theory. *At-Thullab: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 4(1), 1–15. DOI: <https://doi.org/10.30736/atl.v4i1.120>

- Sari, Y. P., & Mariyanti, E. (2024). Pengaruh Praktek Kerja Industri (Prakerin), Informasi Dunia Kerja Dan Motivasi Memasuki Dunia Kerja Terhadap Kesiapan Kerja Siswa SMK. *Jurnal Ekonomika Dan Bisnis*, 4(1), 141–149. DOI: <https://doi.org/10.47233/jebbs.v4i1.1577>
- Wahjusaputri, S., & Bunyamin, B. (2022). Development of Teaching Factory Competency-Based for Vocational Secondary Education in Central Java, Indonesia. *International Journal of Evaluation and Research in Education*, 11(1), 353–360. DOI: <http://doi.org/10.11591/ijere.v11i1.21709>
- Wang, L. (2024). Innovative Development Strategies for the Integration of Industry and Education in Colleges and Universities in the Internet Era. *Applied Mathematics and Nonlinear Sciences*, 9(1). DOI: <https://doi.org/10.2478/amns.2023.2.00338>
- Wen, J., & Sumettikoon, P. (2024). Assessing the Impact of Tourism Industry Transformation on Problem-Based Learning in Chinese Vocational Undergraduate Education. *Eurasian Journal of Educational Research*, 110(110), 183–201. <https://ejer.com.tr/manuscript/index.php/journal/article/view/1665>
- Wrenn, J., & Wrenn, B. (2009). Enhancing Learning by Integrating Theory and Practice, *International Journal of Teaching and Learning in Higher Education*, 21(2), 258-265. <https://eric.ed.gov/?id=EJ899313>
- Yoto, Marsono, Suyetno, A., Mawangi, P. A. N., Romadin, A., & Paryono. (2024). The role of industry to unlock the potential of the Merdeka curriculum for vocational school. *Cogent Education*, 11(1), 2335820. DOI: <https://doi.org/10.1080/2331186X.2024.2335820>
- Zheng, W., Zheng, X., & Zhu, X. (2024). Promoting integration of industry and vocational education: Exploring stakeholder intentions of hydrogen energy industry. *International Journal of Hydrogen Energy*, 52, 454–464. DOI: <https://doi.org/10.1016/j.ijhydene.2023.06.072>