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AN ANALYSIS OF VOCATIONAL HIGH SCHOOL STUDENTS' AWARENESS OF PROFESSIONAL ATTITUDES DURING INDUSTRIAL INTERNSHIP

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Abstract: This study investigates vocational high school students' awareness of professional attitudes during industrial internships, focusing on how such awareness contributes to the formation of vocational work ethic. Employing a qualitative descriptive research design within an interpretivist paradigm, the study explores students' lived experiences and reflective processes in authentic workplace settings. Data were collected through semi-structured interviews, reflective journals, and document analysis involving vocational high school students who had completed or were undertaking industrial internships across various industry sectors. The data were analyzed thematically to identify patterns of awareness related to professional attitudes. The findings reveal five key dimensions of awareness developed during internships: responsibility and work commitment, discipline through workplace norms, ethical awareness and professional conduct, communication awareness, and professional identity formation. The results indicate that students' awareness of professional attitudes emerged progressively through experiential engagement, feedback, and reflective encounters with workplace demands. Awareness functioned as a mediating process that transformed external work experiences into internalized professional values. This study contributes to vocational education research by foregrounding students' internal learning processes and conceptualizing vocational work ethic as an outcome of awareness-based learning rather than mere behavioral compliance. The findings suggest that industrial internships should be designed as reflective learning spaces supported by intentional pedagogical strategies to strengthen students' professional attitude development and long-term employability.
Keywords: *vocational education; professional attitudes; learning awareness; industrial internship; vocational work ethic.*

INTRODUCTION

Vocational education plays a crucial role in preparing learners to meet the demands of the labor market by equipping them with occupation-specific competencies and work-related attitudes. Vocational High Schools (VHS) are designed to bridge the gap between education and industry by emphasizing practical skills, applied knowledge, and workplace readiness (OECD, 2021; Cedefop, 2020). In this context, industrial internships—commonly known as industrial work practice or work-based learning—serve as a core component of vocational education, offering students authentic learning experiences in real industrial environments (Billett, 2020). Through internships, students are expected not only to apply technical knowledge but also to develop professional attitudes aligned with industry standards (Sung et al., 2021).

Despite continuous curriculum reforms and industry partnerships, a persistent challenge in vocational education is the mismatch between

graduates' competencies and employers' expectations. Numerous reports from industry stakeholders indicate that vocational graduates often demonstrate adequate technical skills but insufficient professional attitudes, such as discipline, responsibility, communication skills, work ethics, and adaptability (World Economic Forum, 2023). These shortcomings suggest that professional attitudes are not automatically formed through technical training alone but require intentional learning processes that foster awareness and workplace-oriented behavioral development (OECD, 2021).

Attitudes are not automatically formed through technical training alone but require internalized awareness and reflective learning processes, a view supported by research linking learning and consciousness as interdependent processes rather than separate outcomes (Birch et al., 2021; Serna Dimas, 2023).

Professional attitudes are integral to vocational work ethic, encompassing behavioral dispositions such as punctuality, accountability, cooperation, adherence to workplace norms, and ethical conduct. In industrial settings, these attitudes directly influence productivity, workplace safety, and organizational culture. Consequently, the development of professional attitudes should be considered a central learning outcome of vocational education rather than a secondary or implicit objective. However, in many vocational learning practices, professional attitudes are often treated as ancillary outcomes, assumed to emerge naturally through exposure to workplace environments during internships. Such assumptions overlook the role of conscious learning mechanisms that enable learners to transform experience into meaning (Kull & Favareau, 2022; Koch et al., 2025).

Recent educational discourse highlights the importance of learner awareness in shaping meaningful learning outcomes. Learning awareness refers to students' conscious understanding of their learning processes, behaviors, and the consequences of their actions within specific contexts. Research across educational settings shows that awareness enhances learning engagement, ethical judgment, and self-regulation (Gao et al., 2021; Popa, 2022). In vocational education, awareness-based learning emphasizes students' ability to reflect on their roles as prospective workers, recognize professional expectations, and regulate their behavior accordingly. This perspective aligns with the notion that sustainable professional attitudes are formed not merely through compliance but through conscious internalization of workplace values (Ammert et al., 2022).

During industrial internships, vocational students encounter complex social and professional dynamics that differ significantly from school-based learning environments. They must adapt to hierarchical organizational structures, follow industry regulations, collaborate with supervisors and colleagues, and manage performance expectations. These experiences present critical moments for the formation of professional awareness. Cognitive and learning sciences suggest that awareness emerges when learners actively process feedback, consequences, and contextual salience in real-world situations (Esser et al., 2022; Fukuta & Yamashita, 2023). Students who actively reflect on their experiences are more likely to develop a strong sense of responsibility and professionalism, whereas those who engage passively may fail to internalize workplace values despite prolonged exposure.

Nevertheless, existing studies on vocational internships tend to focus on program effectiveness, skill acquisition, or stakeholder satisfaction. Research often evaluates internships based on students' technical performance or industry supervisors' assessments, leaving the internal learning processes of students underexplored. In particular, limited attention has been given to how students become aware of professional attitudes during internships and how such awareness contributes to the development of vocational work ethic. This gap mirrors broader educational research trends in which consciousness and learning are often treated as implicit or assumed rather than empirically examined constructs (Dehaene et al., 2021; Pepperell, 2022).

Furthermore, studies on learning awareness and mindful learning have predominantly been conducted in general education or higher education contexts. These studies emphasize metacognitive awareness, self-regulation, and reflective practice as predictors of academic success (Mitsea et al., 2022; Cesari et al., 2021). Research in sustainability and civic education has also demonstrated that consciousness-oriented learning fosters ethical responsibility and long-term behavioral change (Lestari et al., 2022; Purwaningsih et al., 2023; Anderson et al., 2022). However, the application of learning awareness concepts in vocational education—especially within industrial internship contexts—remains relatively limited. Vocational learning is inherently experiential and situated, making it a fertile ground

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for awareness-based learning approaches, yet empirical investigations into how vocational students consciously construct professional attitudes during real workplace experiences are still scarce.

The lack of systematic inquiry into students' awareness of professional attitudes during internships has practical implications. Without understanding how awareness is formed, vocational institutions may struggle to design effective pedagogical interventions that foster professional behavior. Teachers and industry mentors may focus primarily on task completion, overlooking opportunities to guide students' reflection on workplace ethics, communication norms, and professional identity. As a result, internships risk becoming routine work placements rather than transformative learning experiences, echoing concerns raised in critical studies of learning, consciousness, and organizational development (Bohonos & James-Gallaway, 2022; Smith et al., 2022).

This study responds to these concerns by analyzing vocational high school students' awareness of professional attitudes during industrial internships. By foregrounding students' perspectives, the research seeks to uncover how professional attitudes are understood, experienced, and internalized throughout the internship process. The study views professional attitudes not as fixed traits but as dynamic outcomes shaped by conscious engagement with workplace experiences, consistent with interdisciplinary perspectives on consciousness as an adaptive and learning-oriented process (Langdon et al., 2022; Zhao et al., 2021).

Understanding students' awareness of professional attitudes is particularly important in the current era of rapid industrial transformation. The evolving demands of the workforce—characterized by technological advancement, flexible work arrangements, and interdisciplinary collaboration—require workers who are not only skilled but also reflective, adaptive, and ethically grounded. Studies in neuroscience and artificial intelligence increasingly emphasize awareness as a core mechanism for adaptive behavior and decision-making (Lee et al., 2022; Yang et al., 2024; Lee & Laureys, 2024). Vocational education must therefore cultivate learners who can consciously navigate workplace challenges and align their behavior with professional standards.

By focusing on students' awareness during internships, this study contributes to both theoretical and practical discussions in vocational education. Theoretically, it extends the discourse on learning awareness by situating it within vocational and work-based learning contexts. Practically, the findings are expected to inform educators, curriculum developers, and industry partners about the importance of embedding reflective and awareness-building strategies into internship programs. Such insights can support the development of holistic vocational education models that integrate technical competence with professional attitude formation.

In sum, professional attitudes are essential components of vocational work ethic, and their development cannot be taken for granted. Industrial internships provide authentic contexts for cultivating these attitudes, but their effectiveness depends on students' awareness and reflective engagement. By analyzing vocational high school students' awareness of professional attitudes during industrial internships, this study addresses a critical gap in vocational education research and contributes to the improvement of internship-based learning practices

METHOD

This study employed a qualitative descriptive research design to explore vocational high school students' awareness of professional attitudes during industrial internships. A qualitative approach was chosen because the study aimed to capture students' subjective experiences, reflections, and meaning-making processes related to professional attitudes in authentic workplace settings. Qualitative descriptive designs are particularly suitable for studies seeking rich, contextualized accounts of participants' perspectives without imposing predetermined theoretical categories (Creswell & Poth, 2021; Braun & Clarke, 2021). Rather than measuring predefined variables, this design allowed for an in-depth understanding of how awareness is formed, expressed, and internalized throughout the internship experience, consistent with recent learning-consciousness research emphasizing process-oriented inquiry (Birch et al., 2021; Koch et al., 2025).

The study was grounded in an interpretivist paradigm, which views learning and professional development as socially constructed and context-dependent. Within this framework, students' awareness of professional attitudes was understood as a dynamic process shaped by interaction with supervisors, colleagues, workplace norms, and task demands. Interpretivist approaches have been widely applied in recent educational research to

examine how learners construct meaning through situated experiences and social interaction (Serna Dimas, 2023; Popa, 2022).

Research Context and Participants

The research was conducted in several Vocational High Schools (VHS) that implement industrial internship programs as part of their compulsory curriculum. The internship placements were located in various industry sectors relevant to students' vocational specializations, such as manufacturing, services, and technology-based industries. Work-based learning contexts are increasingly recognized as critical sites for examining learning awareness and professional identity formation (Anderson et al., 2022; Smith et al., 2022).

Participants consisted of vocational high school students who had completed or were actively undertaking industrial internships. A purposive sampling technique was used to select participants who met the following criteria: (1) Students had participated in an industrial internship for a minimum duration determined by the school curriculum. (2) Students were placed in formal workplace settings under industry supervision. (3) Students were willing to reflect on and articulate their learning experiences during the internship.

Purposive sampling is widely recommended in qualitative educational research to ensure participants possess relevant experiential knowledge and can provide information-rich data (Creswell & Poth, 2021; Braun & Clarke, 2021). This sampling strategy ensured that participants had sufficient exposure to workplace environments to meaningfully reflect on professional attitudes and vocational work ethics.

Data were collected using multiple qualitative techniques to ensure depth and methodological triangulation, a strategy commonly used to enhance credibility in qualitative studies (Nowell et al., 2022; Creswell & Poth, 2021).

Semi-structured interviews were conducted to explore students' perceptions and awareness of professional attitudes during their internships. This method allows researchers to balance consistency across participants with flexibility to probe emerging insights (Braun & Clarke, 2021). The interview guide included open-ended questions focusing on: (1) Students' understanding of professional attitudes in the workplace. (2) Experiences shaping awareness of discipline, responsibility, communication, and work ethics. (3) Challenges in adapting to workplace norms. (4) Reflections on attitude changes before, during, and after the internship

Semi-structured interviews are particularly effective for examining awareness and consciousness-related phenomena, as they allow participants to articulate reflective and metacognitive processes (Serna Dimas, 2023; Gao et al., 2021).

Students were asked to produce reflective journals documenting their internship experiences. Reflective writing is widely recognized as a powerful tool for eliciting learners' internal awareness, self-regulation, and meaning-making processes (Mitsea et al., 2022; Koch et al., 2025). The journals focused on daily activities, interactions with supervisors or coworkers, ethical dilemmas, and moments influencing students' understanding of professional behavior. Reflective journals enabled access to students' consciousness-in-action, which may not be fully articulated during interviews (Cesari et al., 2021).

Relevant documents, such as internship guidelines, assessment rubrics, and supervisor feedback forms, were analyzed to contextualize students' experiences. Document analysis provides insight into institutional and industrial expectations and helps align individual experiences with formal learning objectives (Bowen, 2020; Popa, 2022). This analysis helped identify the extent to which professional attitudes were explicitly emphasized in vocational and workplace assessment practices.

Data analysis followed a thematic analysis approach, conducted systematically through several stages. Thematic analysis is a flexible yet rigorous method widely used in recent qualitative educational research to identify patterns of meaning across data sets (Braun & Clarke, 2021; Nowell et al., 2022).

All interview transcripts, reflective journals, and documents were read repeatedly to gain a comprehensive understanding of the data.

Meaningful units related to awareness, professional attitudes, and work ethics were coded inductively. Inductive coding allows themes to emerge from participants' perspectives rather than being imposed a priori (Braun & Clarke, 2021). Codes reflected expressions of consciousness, reflection, behavioral change, and understanding of professional norms.

Codes were grouped into broader themes representing dimensions of awareness and professional attitudes, such as responsibility awareness, discipline awareness, ethical awareness, communication awareness, and professional identity formation.

Themes were interpreted by relating them to the research objectives and recent theoretical

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perspectives on awareness-based learning and vocational work ethic (Birch et al., 2021; Koch et al., 2025; Ammert et al., 2022).

RESULTS AND DISCUSSION

This section presents and discusses the findings of the study concerning vocational high school students' awareness of professional attitudes during industrial internships. The results are organized thematically based on qualitative data analysis, followed by interpretive discussion grounded in theories of learning, awareness, and consciousness.

Awareness of responsibility and work commitment

The findings indicate that students gradually developed an awareness of responsibility as a core professional attitude during their industrial internships. Initially, many students perceived assigned tasks merely as school obligations. However, sustained engagement in workplace routines led students to recognize that their actions had direct consequences for workflow, productivity, and team coordination.

Several participants reported becoming more conscious of task ownership, punctuality, and accountability after receiving direct feedback from supervisors. This awareness was particularly evident when students were entrusted with independent tasks or experienced the impact of errors on operational outcomes. Such experiences encouraged students to reflect on their roles as contributors rather than passive learners.

This finding supports theories that emphasize learning as a consciousness-mediated process, in which responsibility emerges when individuals recognize the causal link between their actions and outcomes (Birch et al., 2021; Dehaene et al., 2021). In line with learning-consciousness frameworks, responsibility awareness was not transmitted explicitly but developed through reflective engagement with authentic work demands. Industrial internships thus functioned as experiential environments that enable learners to transform participation into conscious professional commitment (Kull & Favareau, 2022).

Discipline awareness through workplace norms

Another prominent theme was students' growing awareness of discipline, particularly in relation to time management, adherence to workplace regulations, and consistency in performance. Many students acknowledged that workplace discipline differed significantly from school discipline, as violations resulted in immediate professional consequences rather than academic sanctions.

Students reported heightened awareness of punctuality and procedural compliance after observing workplace culture and colleagues' behavior. Discipline was no longer perceived as an externally imposed rule but as a professional necessity for maintaining trust, efficiency, and organizational stability.

This shift reflects a transformation from externally regulated behavior to internally regulated discipline, consistent with theories of conscious and unconscious learning. Research suggests that explicit awareness emerges when learners perceive salience in form–meaning connections and contextual consequences (Esser et al., 2022; Fukuta & Yamashita, 2023). In this study, discipline awareness developed through conscious comparison between school norms and industry expectations, reinforcing vocational work ethic as a value-driven orientation rather than mere compliance.

Ethical awareness and professional conduct

Ethical awareness emerged as a significant dimension of professional attitude formation. Students encountered ethical situations related to honesty, confidentiality, workplace safety, and respect for authority. Exposure to real workplace dilemmas prompted reflection on appropriate professional conduct.

Several participants indicated that ethical awareness was shaped primarily through observation and informal guidance rather than formal instruction. Supervisors who modeled ethical behavior played a crucial role in shaping students' understanding of professional ethics. Conversely, ethically ambiguous situations triggered reflective judgment regarding acceptable and unacceptable workplace behavior.

This finding aligns with educational research emphasizing that ethical and moral consciousness develops through situated learning and reflective meaning-making (Ammert et al., 2022; Popa, 2022). Ethical awareness during internships functioned as a form of situated consciousness, emerging through lived experience rather than abstract instruction. Such findings echo broader arguments that professional ethics are internalized through conscious engagement with real social contexts (Anderson et al., 2022).

Communication awareness and professional interaction

The study also revealed increased awareness of professional communication among students. Participants became more conscious of appropriate language use, tone, non-verbal cues, and hierarchical communication structures in the workplace. Initially, many students struggled to adjust informal communication habits developed in school environments.

Over time, students adapted their communication styles after experiencing misunderstandings or receiving corrective feedback. Communication awareness contributed to improved collaboration, confidence, and professional interaction.

These findings are consistent with research demonstrating that awareness enhances self-regulation and adaptive behavior in learning contexts (Gao et al., 2021; Serna Dimas, 2023). Communication awareness can be understood as a form of social consciousness, where learners become attuned to interpersonal norms and expectations through reflective interaction (Langdon et al., 2022). Industrial internships thus serve as powerful contexts for cultivating professional communication awareness through experiential learning.

Formation of professional identity through awareness

A central outcome of the study was the emergence of professional identity awareness among students. Many participants reported a shift in self-perception, viewing themselves not merely as students but as prospective professionals. This identity transformation was closely linked to awareness of professional attitudes and workplace responsibilities.

Students who actively reflected on their experiences demonstrated stronger alignment with professional values and greater motivation to improve performance. In contrast, students with limited reflective engagement exhibited weaker professional identity development.

This finding supports theories that conceptualize identity formation as a consciousness-driven learning process (Koch et al., 2025; Smith et al., 2022). Professional identity awareness emerged through conscious participation in vocational roles, consistent with research suggesting that awareness enables learners to integrate experience, self-concept, and future orientation (Lee et al., 2022; Zhao et al., 2021).

Table 1. *Themes, indicators, and empirical evidence of students' awareness*

Theme	Indicators of Awareness	Empirical Evidence from Participants
Responsibility and Work Commitment Awareness	•Task ownership • Accountability for outcomes • Awareness of consequences	"At first I thought my tasks were just school assignments, but when my mistake affected the production flow, I realized I had real responsibility." (Student 3)
		"When my supervisor trusted me to work independently, I became more careful and committed." (Student 7)
Discipline Awareness through Workplace Norms	•Time discipline •Compliance with procedures •Internalized discipline	"In school, being late only affects grades, but here it affects the whole team." (Student 1)
		"I learned that discipline is not about punishment but about trust." (Student 9)
Ethical Awareness and Professional Conduct	•Honesty • Confidentiality •Safety awareness	"I learned that even small dishonesty can cause serious problems in the workplace." (Student 5)
		"Watching my supervisor act ethically made me realize how professionals should behave." (Student 2)
Communication Awareness	• Polite language •Hierarchical communication •Professional tone	"I had to change how I spoke. Casual language is not acceptable at work." (Student 6)
		"After being corrected, I became more aware of how I communicate with seniors." (Student 10)
Professional Identity Formation	• Seeing self as a worker •Alignment with professional values •Future-oriented thinking	"I no longer felt like just a student. I felt like a future professional." (Student 4)
		"The internship made me rethink how I want to behave in my future career." (Student 8)

The findings of this study demonstrate that vocational high school students' awareness of professional attitudes develops progressively through experiential engagement during industrial internships. Awareness did not arise automatically but emerged through reflective encounters with workplace demands, feedback, and social interactions.

Consistent with experiential learning and consciousness theories, the results suggest that learning during internships extends beyond technical skill acquisition to include internal cognitive, affective, and ethical processes (Birch et al., 2021; Koch et al., 2025). Awareness functioned as a mediating mechanism that transformed external workplace experiences into internalized professional values, reinforcing the view that vocational work ethic is a product of conscious learning rather than behavioral habituation alone.

This study addresses gaps in vocational education research by foregrounding students' internal learning processes. While previous research has emphasized technical competence and internship outcomes, the present findings highlight the central role of awareness in shaping professional attitudes. These results align with interdisciplinary scholarship that positions consciousness as fundamental to meaningful learning, adaptation, and ethical decision-making (Dehaene et al., 2021; Pepperell, 2022).

From a pedagogical perspective, the findings suggest that vocational institutions should intentionally integrate awareness-building strategies into internship programs. Structured reflection, mentoring, and guided dialogue can support students' conscious interpretation of workplace experiences, consistent with research advocating consciousness-oriented learning interventions (Mitsea et al., 2022; Purwaningsih et al., 2023). Such strategies may enhance professional attitude formation and strengthen long-term employability.

CONCLUSION

In conclusion, this study demonstrates that awareness plays a critical role in the development of professional attitudes and vocational work ethic during industrial internships. By emphasizing conscious learning processes, vocational education can better prepare students for the ethical, social, and professional challenges of the modern workplace.

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