Work Readiness of Senior High School Students in the Technical-Vocational-Livelihood Track

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Abstract

Given the increasing need for skilled labor and persistent concerns regarding the employability of Technical-Vocational-Livelihood (TVL) students, this study examined the work readiness of Senior High School (SHS) TVL students in a School Division in Region 02, Philippines, and investigated how factors such as gender, academic strand, possession of NC II certification, and work immersion duration influence their preparedness for the workforce. Employing a descriptive-causal comparative design with a one-shot survey method, data were collected from 330 TVL students and 108 teachers using a validated 60-item questionnaire that assessed work attitude, technical skills, social skills, and organizational awareness. Student self-assessments were compared with teacher evaluations to identify discrepancies in perceived work readiness. Results revealed that both groups rated overall work readiness as low, with students' self-ratings consistently exceeding teacher evaluations; significant differences were observed across all dimensions. While gender and academic strand did not yield significant differences, students possessing an NC II certification reported significantly higher work readiness across all dimensions. Furthermore, although variations in work immersion duration did not significantly affect overall readiness, notable differences emerged in technical skills and organizational awareness. These findings offer vital insights for educational stakeholders and policymakers, emphasizing the need for targeted interventions to enhance TVL students' readiness for the workforce and ultimately improve their long-term employability.

INTRODUCTION

The transition from formal education to employment is widely recognized as a critical phase in the development of young individuals, particularly those enrolled in vocational education programs. In the Philippines, the implementation of the K–12 curriculum has led to the establishment of specialized educational tracks, including the Technical-Vocational-Livelihood (TVL) track in Senior High School (SHS). This track is intended to provide students with practical technical skills and the foundational soft skills necessary for successful workplace integration (Alarcon et al., 2024; DepEd, 2017). Despite these structured efforts, questions remain regarding

the extent to which TVL graduates are truly prepared to meet the evolving demands of the modern labor market.

Work readiness is a multidimensional construct that extends beyond technical proficiency. It generally encompasses several key dimensions: work attitude, technical skills, social skills, and organizational awareness (Peersia, Rappa, & Perry, 2024; Cabrera, 2020). Work attitude refers to attributes such as commitment, punctuality, and a willingness to engage in continuous learning. Technical skills involve the hands-on competencies specific to vocational fields, while social skills pertain to the ability to communicate effectively and collaborate within a team. Organizational awareness, on the other hand, involves understanding and adapting to workplace policies, norms, and cultural practices. Collectively, these dimensions form a comprehensive framework for evaluating a graduate's preparedness for employment (De Vera & De Vera, 2018; Ramos, 2021).

Notwithstanding the formal training provided by institutions such as the Department of Education (DepEd) and the Technical Education and Skills Development Authority (TESDA), research indicates that a gap may exist between the intended outcomes of TVL programs and the actual work readiness of graduates (Molele et al., 2024; Masong & Barillo, 2022). Several studies have noted that while vocational programs are generally effective at imparting technical knowledge, they do not always foster the full spectrum of skills needed for effective workplace performance. For example, although the issuance of the National Certificate (NC) II by TESDA serves as a formal validation of technical competence, evidence suggests that possessing this certification does not automatically guarantee that graduates have developed the necessary work attitude, social skills, or organizational awareness required by employers (Molele et al., 2024; Nawi et al., 2024; De Vera & De Vera, 2018; Ramos, 2021).

An integral component of the TVL curriculum is the work immersion program, which is designed to provide students with direct exposure to real-world work environments (Cabrera, 2020). The underlying premise of work immersion is that experiential learning bridges the gap between theoretical instruction and the practical demands of employment. Kolb's (1984) experiential learning theory posits that effective learning arises not only from active participation in work-related tasks but also through reflection, conceptualization, and subsequent experimentation. In this way, work immersion is expected to enhance both technical and non-technical aspects of work readiness. However, empirical studies on the impact of work immersion have yielded mixed results. Some research indicates that an increased number of immersion hours can correlate with improvements in certain dimensions, such as technical skills and organizational awareness, whereas other studies suggest that the quality of the immersion experience—characterized by adequate supervision and opportunities for reflective practice—is more critical than mere duration (Cabile, 2024; Chu, 2023; Fujio, 2023; De Vera & De Vera, 2018).

Another significant area of investigation in the vocational education literature is the discrepancy between students' self-assessments of their work readiness and the evaluations provided by their teachers. Several studies have found that students often rate their competencies higher than external observers do, a phenomenon that may be attributable to self-enhancement biases or a lack of critical self-awareness (Sedikides, 2021; Deb et al., 2023). Such discrepancies are important because accurate self-assessment is vital for identifying areas where further development is needed (Dahlberg & Gustavsson, 2024). If students overestimate their work readiness, they may not seek the additional training or feedback necessary to address their weaknesses (Yusop et al., 2024). Conversely, teacher evaluations—often grounded in professional expectations and real-world performance standards—may offer a more balanced and objective assessment of a student's capabilities (Ramos, 2021).

In addition to individual self-perceptions, various external factors have been examined for their influence on work readiness outcomes. Variables such as gender, academic strand, NC II certification status, and the duration of work immersion experiences have all been identified as potential contributors to differences in work readiness among TVL graduates. Some studies

suggest that gender differences may not significantly impact work readiness (Ramos, 2021), while others propose that differences in the curricular focus of various academic strands—such as Home Economics, Industrial Arts, Agri-Fishery Arts, and Information and Communication Technology (ICT)—might result in variations in both technical and non-technical training. Furthermore, although the possession of an NC II certification is often seen as an indicator of technical competence, its relationship with overall work readiness appears to be complex (Masong & Barillo, 2022). Certification may enhance a student's perceived preparedness by formally recognizing technical skills, yet it might not fully encompass other essential dimensions, such as work attitude or social skills, that are critical for successful employment (De Vera & De Vera, 2018).

Objectives of the Study

Given the growing concerns about work readiness among TVL students, this study seeks to:
1. Assess the work readiness of TVL students particularly in terms of work attitude, technical skills, social skills, and organizational awareness.
2. Examine the impact of various factors, such as gender, academic strand, possession of national certificate (NC) II, and length of immersion experience, on work readiness.

METHODS

The present study employed a descriptive-causal comparative research design using a one-shot survey method to examine the work readiness of Senior High School (SHS) students in the Technical-Vocational-Livelihood (TVL) track within a School Division in Region 02, Philippines. In a descriptive-causal comparative design, the researcher seeks not only to describe the characteristics of a phenomenon but also to explore possible cause-and-effect relationships among pre-existing groups (Kerlinger & Lee, 2000; Cohen, Manion, & Morrison, 2018). Although the independent variables in this study—such as gender, academic strand, NC II certification status, and the duration of work immersion—were not manipulated, the design allows for the comparison of groups to identify differences in the dependent variables of work readiness, technical skills, social skills, work attitude, and organizational awareness. This approach facilitates an understanding of how these factors may be related to variations in students' preparedness for the workforce, thereby providing insights that could inform targeted interventions.

Participants

Participants in the study consisted of two distinct groups. The primary group comprised 330 SHS TVL students who were actively engaged in work immersion programs. These participants were selected through probability sampling, a method that ensures every individual within the target population has an equal chance of being chosen, thereby enhancing the representativeness and generalizability of the findings (Cohen, Manion, & Morrison, 2018). The secondary group involved 108 teachers responsible for evaluating the students' work readiness. These teachers, who taught subjects related to communication, work immersion, and specialization, provided complementary perspectives by assessing the same constructs that students self-reported, thus allowing for a direct comparison between self-perception and external evaluation (Neuman, 2014).

Instruments

The primary instrument for data collection was a structured questionnaire adapted from Cabrera's (2021) "Development and Validation of Work Readiness Assessment Scale for Technical Vocational and Livelihood Track Graduates." This instrument, refined through the application of the Rasch modeling method (Andersen, 1997; Andrich, 1978), measures work readiness across four dimensions: work attitude, technical skills, social skills, and organizational awareness. The questionnaire comprised 60 items, with 15 items allocated to each dimension. To

ensure balanced responses and reduce response bias, the items included a mix of positively and negatively worded statements. The instrument's validity was supported by high Content Validity Index (CVI) scores—0.94 for work attitude, 0.96 for technical skills, 1.00 for social skills, and 0.98 for organizational awareness—demonstrating that the items adequately covered the constructs of interest (Polit & Beck, 2012). Furthermore, the instrument exhibited strong internal consistency, with a Cronbach's alpha exceeding 0.80, thus confirming its reliability for the study's purposes. In addition to the student self-assessment, a modified version of this instrument was administered to teachers. In the teacher version, statements were rephrased to reflect observational evaluations (e.g., "My student is competent" instead of "I am competent"), thereby facilitating a comparative analysis between student self-perceptions and teacher assessments.

Data Collection

Data collection was executed in strict adherence to ethical research protocols. Initially, a formal request letter outlining the study's objectives and methodologies was submitted to the Schools Division Superintendent of Region 02. Following approval from the division, the request was communicated to school principals and teachers to secure their cooperation. The researcher then personally administered the questionnaires to the student participants during their scheduled work immersion classes, ensuring that respondents understood the instructions and could seek clarification on any ambiguous items. Simultaneously, the teacher evaluation forms were distributed and completed independently by the respective subject instructors. The entire data collection process was designed to maintain consistency, reliability, and confidentiality, as recommended by established research standards (Marshall & Rossman, 2016).

Data Analysis

Data analysis was conducted using SPSS (Statistical Package for the Social Sciences) Version 26 (Field, 2013). Prior to formal analysis, all responses were carefully screened for accuracy and completeness. Descriptive statistics—including frequency counts, percentages, and mean scores—were first computed to provide a comprehensive profile of the respondents and to summarize their levels of work readiness. Work readiness mean scores were interpreted based on the administered five-point Likert scales as follows: very low if within 1.00 to 1.49, low if within 1.50 to 2.49, moderate if within 2.50 to 3.49, high if within 3.50 to 4.49, and very high if within 4.50 to 5.00. Furthermore, given that the study involved comparisons between groups (e.g., students versus teachers, male versus female, and differences based on NC II certification status and duration of work immersion), inferential statistical techniques were employed. Specifically, independent samples t-tests were used to compare the work readiness scores between student self-assessments and teacher evaluations, as well as to assess differences based on NC II certification status. Additionally, a one-way Analysis of Variance (ANOVA) was conducted to examine differences in work readiness across the various academic strands and lengths of work immersion experience.

Ethical Considerations

Ethical considerations were paramount throughout the research process. The study was conducted in full compliance with the ethical guidelines and received approval from institutional evaluation committee. Informed consent was obtained from all participants prior to their involvement in the study, ensuring that they were fully aware of the research objectives, procedures, and their right to withdraw from the study at any time without any adverse consequences. To protect the confidentiality of the participants, all collected data were anonymized and stored in secure, password-protected files accessible only to the research team.

FINDINGS

The demographic and educational profile of the students are shown in Table 1. The sample consists of 330 individuals, with a slightly higher proportion of females (53.3%) than males

(46.7%). Among the different academic strands, Home Economics (33.9%) has the highest enrollment, followed by Industrial Arts (28.5%), while Agri-Fishery Arts and Information and Communication Technology have equal representation (18.8% each). A majority (72.1%) possess an NC II certification. Regarding work immersion experience, most respondents completed 80 hours (63.0%), while fewer underwent extended training, with 120 hours (10.9%), 160 hours (8.5%), 240 hours (11.5%), and 320 hours (6.1%).

Table 1. Students' Profiles

Profile	n	%
Sex		
Male	154	46.7
Female	176	53.3
Strand		
Home Economics (HE)	112	33.9
Industrial Arts (IA)	94	28.5
Agri-Fishery Arts (AFA)	62	18.8
Info. Com. & Tech. (ICT)	62	18.8
NC II Possession		
Yes	238	72.1
No	92	27.9
Work Immersion Experience		
80 hours	208	63.0
120 hours	36	10.9
160 hours	28	8.5
240 hours	38	11.5
320 hours	20	6.1

Table 2 compares students' and teachers' perceptions of students' work readiness across four dimensions: work attitude, technical skills, social skills, and organizational awareness. Both groups rated students' readiness as generally low, with students consistently rating themselves higher than their teachers did. Work attitude (M = 1.71) and technical skills (M = 1.70) received the highest ratings from students, while teachers rated these lower at 1.45 and 1.54, respectively. Organizational awareness showed the largest discrepancy, with students rating it as low (M = 1.68) while teachers considered it very low (M = 1.44). The total mean score indicates that students perceive their overall work readiness as low (M = 1.69), whereas teachers assess it as very low (M = 1.48). Significant differences (p < .05) were found in all areas, suggesting a gap between students' self-assessment and teachers' evaluation of their preparedness for work.

Table 2. Students' Work Readiness as Perceived by Themselves and Their Teachers

Work Readiness	Students	Teachers	t	p
	M (Level)	M (Level)		
Work Attitude	1.71 (L)	1.45 (L)	5.34	<.01
Technical Skills	1.70 (L)	1.54 (L)	3.42	<.01
Social Skills	1.63 (L)	1.50 (L)	2.80	<.02
Organizational Awareness	1.68 (L)	1.44 (VL)	4.78	<.01
Total	1.69 (L)	1.48 (VL)	3.51	<.03

Note. L means Low, VL means Very Low

Table 3 examines differences in students' work readiness by gender across four dimensions: work attitude, technical skills, social skills, and organizational awareness. Both male and female students rated their work readiness as low in all areas, with mean scores ranging from 1.61 to 1.74. The t-values and p-values indicate no significant differences (p > .05) between male and female students in any category, suggesting that gender does not play a substantial role in perceived work readiness. The total mean scores for males (M = 1.69) and females (M = 1.67) further confirm this negligible difference.

Table 3. Student Work Readiness Differences by Gender

Work Readiness	Male	Female		
	M (Level)	M (Level)	t	p
Work Attitude	1.74 (L)	1.69 (L)	.990	0.32
Technical Skills	1.70 (L)	1.69 (L)	.275	0.78
Social Skills	1.65 (L)	1.61 (L)	.939	0.35
Organizational Awareness	1.68 (L)	1.69 (L)	-.180	0.86
Total	1.69 (L)	1.67 (L)	.173	.086

Note. L means low

Table 4 compares students' work readiness across four academic strands: Home Economics (HE), Industrial Arts (IA), Agri-Fishery Arts (AFA), and Information and Communication Technology (ICT). All groups rated their work readiness as low across the four dimensions, with ICT students consistently reporting slightly higher mean scores than others. However, the differences among strands were not statistically significant ($p > .05$) for work attitude, technical skills, social skills, or organizational awareness. The total mean scores also show minimal variation, indicating that students across different strands perceive their work readiness similarly low.

Table 4. Student Work Readiness Differences by Strand

Work Readiness	Strand				F	p
	HE	IA	AFA	ICT		
	M (Level)	M (Level)	M (Level)	M (Level)		
Work Attitude	1.68 (L)	1.71 (L)	1.70 (L)	1.79 (L)	1.06	.360
Technical Skills	1.66 (L)	1.71 (L)	1.64 (L)	1.78 (L)	1.68	.172
Social Skills	1.59 (L)	1.63 (L)	1.62 (L)	1.72 (L)	1.60	.189
Organizational Awareness	1.67 (L)	1.63 (L)	1.65 (L)	1.79 (L)	2.05	.106
Total	1.65 (L)	1.67 (L)	1.65 (L)	1.77 (L)	1.66	.180

Note. L means Low

Table 5 compares students' work readiness based on their possession of an NC II certificate. Those with an NC II certification consistently rated their work readiness higher across all dimensions—work attitude, technical skills, social skills, and organizational awareness—compared to those without certification. The total mean score for students with NC II (M = 1.79) is higher than for those without it (M = 1.63). The differences are statistically significant ($p < .01$) across all categories, suggesting that holding an NC II certificate is associated with a higher perception of work readiness.

Table 5. Student Work Readiness Differences by NC II Possession

Work Readiness	With Certificate	Without Certificate		
	M (Level)	M (Level)	t	P
Work Attitude	1.81 (L)	1.67 (L)	2.96[**]	<.01
Technical Skills	1.82 (L)	1.65 (L)	3.59[**]	<.01
Social Skills	1.72 (L)	1.59 (L)	2.57[**]	<.01
Organizational Awareness	1.81 (L)	1.62 (L)	3.77[**]	<.01
Total	1.79 (L)	1.63 (L)	3.44[**]	<.01

Note. [**] means significant at .01 level

Table 6 examines differences in students' work readiness based on the length of their work immersion experience (ranging from 80 to 320 hours). Across all immersion durations, students rated their work readiness as low in all dimensions. While no significant differences were found for work attitude ($p = .21$) and social skills ($p = .39$), technical skills ($p = .04$) and organizational awareness ($p = .04$) showed significant variations, suggesting that immersion length may

influence these aspects. However, the total mean scores do not indicate a clear trend, implying that extended immersion does not necessarily lead to a higher perception of overall work readiness.

Table 6. Student Work Readiness Differences by Length of Immersion Experience

Work Readiness	80 hours M (Level)	120 hours M (Level)	160 hours M (Level)	240 hours M (Level)	320 hours M (Level)	F	P
Work Attitude	1.73 (L)	1.70 (L)	1.74 (L)	1.57 (L)	1.69 (L)	1.42	.21
Technical Skills	1.72 (L)	1.70 (L)	1.74 (L)	1.56 (L)	1.61 (L)	2.24*	.04
Social Skills	1.64 (L)	1.64 (L)	1.68 (L)	1.54 (L)	1.59 (L)	1.05	.39
Organizational Awareness	1.70 (L)	1.60 (L)	1.80 (L)	1.59 (L)	1.61 (L)	2.22*	.04
Total	1.69 (L)	1.66 (L)	1.74 (L)	1.56 (L)	1.62 (L)	1.67	.17

Note. L means Low

DISCUSSION

The current study's findings offer valuable insights that both support and challenge existing theoretical frameworks in vocational education and work readiness. In particular, the observed discrepancies between student self-assessments and teacher evaluations, the limited impact of extended immersion hours on overall readiness, and the positive association between NC II certification and perceived preparedness invite a closer examination through established theories such as self-efficacy theory, experiential learning theory, and social cognitive theory. A review of the literature reveals areas of convergence as well as points of contention, thereby providing a richer understanding of the processes underpinning work readiness development.

Bandura's (1986, 1997) self-efficacy theory posits that individuals' beliefs in their capabilities significantly influence their actions and performance. In the context of this study, students' higher self-ratings compared to teacher evaluations can be interpreted as a manifestation of high self-efficacy. Supporting this view, previous research has demonstrated that individuals with strong self-efficacy beliefs tend to overestimate their capabilities, particularly when external feedback is limited or inconsistent (Kruger & Dunning, 1999). Such findings align with the current results, suggesting that the optimistic self-assessments of vocational students may stem from an inherent bias where self-confidence overshadows objective appraisal.

However, not all literature supports a straightforward relationship between self-efficacy and accurate self-assessment. Some studies have found that with structured and continuous feedback, individuals can recalibrate their self-efficacy beliefs to more accurately reflect their actual competencies (Schunk, 1991; Zimmerman, 2000; Sunarti et al., 2023). For instance, research by Dunning, Heath, and Suls (2004) argues that although individuals often exhibit self-enhancement biases, these can be mitigated through regular, performance-based feedback. Thus, while self-efficacy theory supports the finding that students may overestimate their work readiness, it also suggests that improved feedback mechanisms could help narrow the gap between self-perception and external evaluations—a point that is supported by studies emphasizing the importance of calibrated self-assessment in educational settings.

Kolb's (1984) experiential learning theory provides a framework for understanding how practical experiences, such as work immersion programs, contribute to learning and skill development. According to Kolb, effective learning is cyclical, requiring not just exposure to experiences but also reflective observation, abstract conceptualization, and active experimentation. The current study's finding that extended immersion hours did not uniformly enhance overall work readiness lends support to Kolb's contention that mere duration of exposure is insufficient. Instead, it is the quality and structure of the experiential learning process that determine the extent of learning outcomes.

Supporting this notion, Boud, Keogh, and Walker (1985) emphasize that reflective practices are crucial for transforming concrete experiences into meaningful learning. When immersion programs lack structured opportunities for reflection and integration, students may not develop the critical soft skills—such as organizational awareness and adaptability—that are essential for workplace success. Conversely, there is literature that refutes a purely qualitative perspective by demonstrating a positive correlation between immersion duration and certain

technical competencies (Tynjälä, 2008; Husin et al., 2023). Such studies suggest that longer exposure can indeed enhance specific aspects of work readiness, provided that the experiences are sufficiently challenging and well-supervised. This mixed evidence highlights the need for immersion programs to not only extend in duration but also incorporate deliberate reflective and integrative components to optimize learning outcomes.

Social cognitive theory (Bandura, 1986) emphasizes the significant role of social interactions and observational learning in shaping behavior and self-perceptions. In vocational education, the interplay between student self-assessments and teacher evaluations is critical. The current study's observation that teachers rate student work readiness lower than students rate themselves suggests that the feedback environment may be less conducive to accurate self-appraisal. According to Kluger and DeNisi (1996), effective feedback is pivotal for performance improvement and for aligning self-perceptions with actual abilities. Their work supports the idea that when feedback is systematic and constructive, it can correct self-enhancement biases and promote more realistic self-assessments.

On the other hand, Hattie and Timperley (2007) caution that negative or overly critical feedback, if not balanced with supportive guidance, may undermine students' self-efficacy and motivation. This dual perspective suggests that while feedback is essential, its nature and delivery are equally important. The current findings imply that teacher feedback might be either too stringent or insufficiently contextualized, contributing to a gap between student and teacher evaluations (Dagdag & Cardona, 2018; Dagdag, 2020; Dagdag & Dagdag, 2020). Thus, social cognitive theory not only supports the idea that enhanced feedback mechanisms are necessary but also underscores the delicate balance required to maintain students' confidence while ensuring accurate self-assessment (Dagdag, Palapuz, & Calimag, 2021; Anoling et al., 2018; Dagdag et al., 2020).

The positive association between NC II certification and higher self-perceived work readiness offers an interesting point of convergence between theory and practice. From the perspective of social cognitive career theory (Lent, Brown, & Hackett, 1994; Handrianto et al., 2021), formal credentials such as certifications serve as both a signal of competence and a source of enhanced self-efficacy. The literature supports the idea that formal certification can validate skills and provide students with a tangible measure of their capabilities, thereby reinforcing their professional identity and readiness (Jackson, 2016; Arwin et al., 2022). However, some scholars argue that over-reliance on certification may narrow the focus of vocational training, potentially neglecting the broader spectrum of soft skills and adaptive competencies required in today's dynamic work environments (Brown & Hesketh, 2005; Ibrahim et al., 2021). This suggests that while certifications like NC II are valuable, they should be integrated within a holistic educational framework that also prioritizes comprehensive skill development.

CONCLUSION

The findings of this study underscore significant gaps in work readiness, communication skills, and competence among Senior High School (SHS) students in the Technical-Vocational-Livelihood (TVL) track in the Division of Isabela. While students perceive themselves as more competent, teachers and industry-stakeholders express concerns about their preparedness for real-world employment. Technical skills, social skills, and organizational awareness remain areas for improvement, particularly in aligning academic training with employer expectations. The study also highlights the strong positive relationship between communication skills, competence, and work readiness, suggesting that enhancing communication training could substantially improve students' transition into the workforce. Additionally, students with NC II demonstrated significantly higher competence, indicating the value of certification programs in strengthening employability skills. However, despite work immersion programs being implemented, students with longer immersion hours did not consistently exhibit higher competence levels, pointing to the need for quality, rather than just duration, in work immersion experiences.

It is recommended that schools integrate structured soft skills training into the TVL curriculum to address deficiencies in communication, teamwork, and adaptability. Work immersion programs should be redesigned to focus on practical applications, industry partnerships, and mentorship opportunities rather than just fulfilling hour requirements. Schools should also encourage more students to pursue NC II certification by offering preparatory courses and financial incentives. Lastly, collaborative efforts between educational institutions, government agencies, and industry stakeholders should be strengthened to ensure that TVL graduates meet the evolving demands of the labor market, thereby enhancing their employability and long-term career success.

However, the study relied on self-reported data, which may have introduced response bias, particularly as students may have overestimated their skills. Teacher evaluations, while valuable, are also subjective and may not fully capture students' abilities in real-world scenarios. The study focused only on students undergoing work immersion and did not include feedback from employers or TVL graduates already in the workforce, which could provide a more comprehensive view of work readiness. Future research should incorporate longitudinal studies to track graduates' employment outcomes, integrate employer perspectives, and explore the effectiveness of targeted interventions such as soft skills training programs. Additionally, more in-depth qualitative research involving interviews or focus group discussions with students, teachers, and employers could provide richer insights into the challenges and potential solutions for improving TVL education.

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