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Socialization of Protection and Insurance Claim Processes for Drivers of Application-Based Companies in Palangka Raya, Indonesia

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Abstract

This research study examines the digital transformation in Indonesia's urban transportation, which has increased the number of online drivers. However, this growth is decoupled from adequate insurance literacy. Adequate comprehension of social security is a prerequisite for professional safety. Initial findings in Palangka Raya indicate a critical baseline literacy score of 15.0, particularly with regard to Jasa Raharja's claim mechanisms. The present study evaluates a participatory educational intervention model with the objective of addressing this knowledge gap. Utilizing a pre-experimental design, the program encompassed ten drivers (N=10) from diverse platforms, including local's "Parkur Delivery" drivers (n=3). The intervention's distinguishing characteristic is its participatory approach, integrating interactive discussions with hands-on claim form simulations. The effectiveness of the intervention was measured using instruments developed for the pre- and post-test, which were then analyzed through the Normalized Gain (N-Gain) test. The results indicated a substantial short-term improvement in participants' knowledge, with the overall average score increasing from 15.0 to 79.0 (N=10). Subsequent subgroup analysis for Parkur Delivery drivers (n = 3) demonstrated a consistent upward trend, aligning with the aggregate N-Gain value of 0.751 (high category). A singular finding emerged from the study: while procedural understanding exhibited an 80% improvement, legal-regulatory aspects remained the most challenging aspect for all participants. The simulation-based model appears promising for addressing procedural gaps, particularly within local delivery platforms. In the future, educational programs should prioritize the cultivation of legal literacy as a complement to practical skills. The study's limitations stem from its modest sample size (N=10), which necessitates additional replication to ascertain the study's generalizability across diverse demographics of platform users.

KEYWORDS

insurance literacy; jasa raharja; N-Gain; online drivers; participatory approach.

Introduction

The digital revolution has fundamentally transformed Indonesia's urban mobility landscape, positioning application-based transportation services such as Gojek, Grab, Maxim, ShopeeFood and local entities like Parkur Delivery as vital social infrastructure. Despite their strategic role in the e-commerce distribution chain, drivers operate within a precarious legal framework characterized by policy ambiguity and insufficient protection ([Media Trend, 2022](#)). Empirical research on Indonesian labor characteristics confirms that non-standard employment relationships significantly heighten income instability and job precarity among urban service workers. Furthermore, the socio-political dynamics of platform workers have

increasingly shifted from mere street mobility to broader public governance issues, underscoring the critical need for comprehensive labor - policy integration ([RMOL Jateng, 2025](#)). This emerging urban phenomenon highlights the multi-tiered vulnerabilities faced by gig workers operating across diverse application ecosystems, including major platforms like Gojek, Grab, Maxim, Indrive, and ShopeeFood ([Lemon8, 2025](#)). Raharja provides a statutory insurance scheme for such incidents, a critical disconnect persists. The fundamental issue lies in the inadequate procedural and legal literacy concerning Jasa Raharja claims among driver partners. This program evaluates a participatory education model based on simulation to address this deficit and assess its efficacy.

The novelty of this study is substantiated by three testable claims. First, the intervention prioritizes practical document simulation over traditional lecture-based methods to ensure functional competency. Secondly, the evaluation utilizes item-level analysis to specifically identify "content that remains difficult to understand," particularly concerning the complex legal aspects of insurance eligibility. Thirdly, the research provides a unique contextual contribution by analyzing the multi-platform ecosystem in Palangka Raya, specifically incorporating Parkur Delivery to capture the nuances of local platform dynamics that are often overlooked in broader national studies.

It is evident from the data provided by the Palangka Raya City Police that there were at least two fatal accidents involving online transportation drivers in 2025. A notable incident occurred on 20 June 2025 on Adonis Samad Street, where a driver died after being struck by a high-speed motorcyclist. Legally, this case was not classified as a regular traffic violation, but rather as gross negligence under Article 311 of Law Number 22 of 2009 concerning Road Traffic and Transportation. The implementation of this article carries a maximum penalty of 12 years' imprisonment, given the element of negligence that resulted in the victim's death ([Borneonews, 2025](#)). Six months after the initial incident, a similar tragedy occurred again. On 31 December 2025, an online transportation driver was reported to have died in a collision with an ambulance at the traffic light intersection on Jalan Seth Adji, Palangka Raya. CCTV footage has been used to establish the chronology of the incident, thereby enabling the determination of the time of death. This has been shown to be less than an hour after the evacuation of the victim to a health facility ([iNews Barito, 2025](#)). Empirical accident trends compiled by the regional police authorities highlight this ongoing occupational hazard, as evidenced by local traffic accident records in Palangka Raya City throughout the 2022–2023 period ([Ditlantas Polda Kalteng, 2023](#)). Furthermore, analysts specialising in public administration have posited that the occurrence of catastrophic traffic fatalities involving gig workers unveils profound systemic deficiencies within the governance of transport systems and the informal labour protection apparatus ([Kompas.com, 2025](#)).

The repetition of two fatal events within a span of six months indicates that the risk of accidents faced by online transportation drivers in Palangka Raya is not an anomaly or a random occurrence. Instead, this phenomenon points to a pattern of systemic vulnerability that requires serious attention from policymakers and the strengthening of occupational safety regulations. Traffic accidents involving online transportation drivers have implications not only in

terms of medical and legal matters, but also in terms of post-accident financial protection. The state, through PT Jasa Raharja (Persero), has implemented an accident insurance protection scheme based on Law Number 33 of 1964 in conjunction with Government Regulation No. 17 of 1965 concerning the Mandatory Passenger Accident Insurance Fund, and Law No. 34 of 1964 ([RepublikIndonesia, 1964](#)). These regulatory foundations are further operationalized under Law No. 22 of 2009 concerning Road Traffic and Transport, which governs safety standards and institutional responsibilities across national transport networks ([Undang-Undang, 2009](#)), concerning the Mandatory Road Traffic Accident Insurance Fund ([Tribatanews Polda Lampung, 2024](#)).

Through the Mandatory Road Traffic Accident Fund Contribution (SWDKLLJ) mechanism, which is integrated into the collection of Motor Vehicle Tax (PKB), every accident victim, including online transportation drivers, is entitled to compensation. The compensation amount is set at IDR 50,000,000 for fatalities and a maximum ceiling of IDR 20,000,000 for medical expenses (Antara News, 2025). The existence of this protection scheme does not automatically guarantee accessibility for beneficiaries. Empirical reality shows that there is a deficit of literacy among online transportation drivers regarding constitutional rights, claim procedures, and mandatory administrative requirements. As indicated by the data provided by Ditlantas Polda Kalteng (2023), there has been a consistent pattern of road traffic incidents within Palangka Raya, emphasising the heightened vulnerability experienced by gig workers. This systemic danger was recently illustrated by a fatal collision involving an online delivery driver and an ambulance, thereby serving to highlight the potential risks associated with the integration of such vehicles into the existing transport infrastructure. Despite such clear operational hazards, drivers frequently encounter administrative bottlenecks during insurance processing, particularly due to a lack of practical knowledge regarding required documentation and claim deadlines ([Widodo, 2021](#)). This knowledge gap is multidimensional, covering cultural and structural aspects: First, the majority of drivers come from the informal sector, which has limited interaction with formal insurance bureaucracy. Second, there is a lack of systematic information dissemination mechanisms, both from the application companies and relevant government agencies to their driver partners. Third, the complexity of the claim procedure, which requires formal documents such as police reports, medical records, and legal documents from heirs, is often perceived as a bureaucratic obstacle by the general public ([Tribata News, 2024](#)).

A more crucial aspect lies in the regulatory limitation that sets a maximum claim submission period of six months from the date of the accident. If this deadline is exceeded, the right to compensation is legally forfeited and cannot be realized. In the context of limited procedural literacy, this temporal limitation transforms into a normative obstacle that harms victims and heirs who do not immediately complete the administrative documentation. Ironically, compensation funds, which are projected as a financial protection instrument for the victims' families, are instead returned to the state treasury due to administrative obstacles, the substance of which can be mitigated through systematic information dissemination and education.

This discrepancy between normative rights and real accessibility creates an urgency for intervention by higher education institutions through community service schemes. As entities with analytical and methodological capacity, as well as authority over knowledge sources, academics play

a strategic role as mediators connecting formal state regulations with the empirical reality of workers in the informal sector. The institutional execution and field outcomes of this university-led initiative were formally documented in regional media coverage and institutional research reports ([Antaraneews Kalteng, 2025](#)) validating the academic effort to bridge normative state protections with informal labor realities. Responding to this urgency, Muhammadiyah University Palangkaraya (UMPR), through its Faculty of Social and Political Sciences, initiated a Community Service (PkM) program entitled "Socialization of Protection and Insurance Claim Procedures for Jasa Raharja for Drivers of Delivery and Online Transportation Services in Palangka Raya City." The implementation of this program was carried out collaboratively; synergy with PT Jasa Raharja (Persero) was a fundamental strategy to ensure the accuracy of information and synchronization with the latest applicable regulations.

The strategic selection of driver partners from various platforms, including Gojek, Grab, ShopeeFood, Maxim, and local entities such as Parkur Delivery, reflects the understanding that the online transportation ecosystem is multi-platform and cannot be reduced to a single corporate entity. The participation of Parkur Delivery, as a representative of local companies in Palangka Raya City, emphasizes that the urgency of protecting drivers is a cross-platform issue that is not exclusive to national or multinational company partners. The participation of Parkur Delivery, as a representative of local companies in Palangka Raya City, emphasizes that the urgency of protecting drivers is a cross-platform issue that is not exclusive to national or multinational company partners, as previously observed in local platform labor patterns ([Mustikaningsih, 2024](#)). In addition, the involvement of Maxim as a new accelerator in the online transportation industry in Indonesia, which relies on a transparent tariff system and a competitive commission structure ([Sopasti.com, 2024](#)), enriches the spectrum of representation and diversity of digital worker profiles in this region.

The theoretical and practical foundations of this program are based on the premise that empowerment should not only focus on economic dimensions such as income optimization or bonus acquisition strategies ([Sopasti.com, 2024](#)) but must also include the dimension of protection for individuals and families. As emphasized by the PkM implementation team, the main orientation of this socialization is to equip driver partners so that they not only have the capacity to accumulate income, but also have a comprehensive understanding of self-protection mechanisms against the risk of accidents ([Antara News, 2025](#)). This paradigm represents a shift in approach, from one previously oriented solely toward increasing productivity to one focused on the sustainable capacity building of informal sector workers ([Meltzer, 2002](#)).

Previous community outreach efforts have frequently addressed platform workers' welfare in general terms. Empirical evidence measuring the direct effectiveness of insurance literacy interventions remains scarce. This paper aims to address this gap by evaluating a structured, simulation-based intervention designed specifically for application-based drivers in Palangka Raya. Departing from conventional, unidirectional socialization, this program introduces a novel approach by integrating a practical claim-form simulation with a rigorous, dual-layered evaluation framework. Specifically, this study utilizes normalized gain (N-gain) scores to quantify explicit

knowledge acquisition as a primary outcome, while secondary outcomes are analyzed using item diagnostics to identify localized, systemic barriers in the insurance claim process.

The paper proposes a replicable, data-driven framework for enhancing digital labor protection through collaboration among stakeholders, including state, corporate, and academic entities, by identifying these specific operational challenges. In the context of the dearth of educational mechanisms from application companies and the limited dissemination reach by the government, the presence of higher education institutions as knowledge facilitators is imperative. This program is a form of affirmation that the responsibility for protecting digital workers cannot be borne exclusively by individual drivers, but requires collective and synergistic contributions from various stakeholders: the state, corporations, and the academic community.

Methods

The community service activity, focusing on the socialization of protection and the Jasa Raharja insurance claim process for online transportation driver partners, was conducted on Thursday, November 27, 2025, at Campus 1 of Universitas Muhammadiyah Palangka Raya. This location was selected due to its regional accessibility and the availability of supporting infrastructure, including meeting rooms, audio-visual equipment, and stable internet connectivity. The session commenced at 8:00 a.m. to align with the drivers' professional schedules, as they typically initiate services from the afternoon until late evening. Scheduling the event in the morning optimized participation while minimizing disruptions to their daily revenue. The intervention involved ten (N = 10) active drivers from various digital platforms, including Gojek, Grab, ShopeeFood, Parkur Delivery, and Maxim. This multi-platform representation was imperative to avert corporate policy biases and to evaluate potential variations in baseline knowledge across different digital frameworks.

This program employed an educational participatory framework ([Chambers, 1994](#)), positioning participants as active subjects in knowledge construction rather than passive recipients of information ([Freire, 1970](#)). The present educational design is congruent with contemporary adult learning frameworks, which emphasise that adult learners require self-directed, problem-centred instruction that directly links theoretical concepts to practical, real-world applications ([Likos, 2023](#); [McGrath, 2009](#); [Saylor Academy, 2012](#)). In contradistinction to conventional pedagogical approaches, andragogical interventions emphasise active participation and immediate problem-solving to surmount cognitive barriers among mature cohorts.

Grounded in adult learning principles (andragogy) and experiential learning theory ([Kolb, 1984](#)), the approach combined interactive lectures, group discussions, and hands-on simulations to accommodate diverse learning modalities. The intervention was systematically structured across five sequential phases: Phase 1 (Pre-test Evaluation): Administered prior to information dissemination to establish an impartial baseline of participants' entry-level knowledge ([Kirkpatrick & Kirkpatrick, 2016](#)). Phase 2 (Collaborative Lecture): Co-presented by a practitioner from PT Jasa Raharja Central Kalimantan Branch and an academic lecturer in Political Science. The practitioner expounded on the operational mandates of Law No. 33 of 1964, Government Regulation No. 17 of 1965, and Law No. 34 of 1964, delineating verification protocols, digital

platforms, and compensation structures. Concurrently, the academic co-speaker analyzed the position of platform drivers as informal workers, framing insurance literacy as a tool for socio-economic empowerment.

Phase 3 (Practical Simulation): Participants were provided with a sample Jasa Raharja claim form and guided through a step-by-step completion simulation covering victim identity, accident chronologies, witness testimonies, and legal heirs. Participants also analyzed a process flowchart illustrating the workflow: (a) police report submission, (b) medical certification, (c) document compilation, (d) office submission, (e) administrative verification, and (f) fund disbursement. Phase 4 (Interactive Discussion): Question-and-answer sessions enabled drivers to troubleshoot operational hurdles, such as single-vehicle accidents or missing police reports. Phase 5 (Post-test Evaluation): Implemented immediately after the sessions to measure cognitive gains and evaluate program efficacy. The methodological structure was formulated in accordance with the established principles of educational and social sciences research ([Arikunto, 2010](#); [Boru, 2018](#); [Sugiyono, 2017](#)). In addition, in order to evaluate the magnitude of cognitive gain while controlling for pre-intervention baseline variance, the formula for normalised gain scores was applied in accordance with established educational testing frameworks ([Hake, 1998](#)). Threat-to-validity considerations, including testing effects and sample boundaries, were interpreted in accordance with classical experimental evaluation criteria ([Dunst & Trivette, 2012](#); [Fraenkel et al., 2012](#)).

To evaluate cognitive impacts, this study utilized a pre-experimental one-group pretest–posttest design. Given the absence of a randomized control group, causal assertions regarding knowledge gains are interpreted with caution. The evaluation instrument consisted of 10 multiple-choice questions (4 response options each) covering five indicator domains: legal bases, victims' rights, submission paths, mandatory documentation, and statutory deadlines. Identical items were used in both tests to ensure direct comparability, which introduces a potential testing effect limitation due to question familiarity. Correct answers were scored 1 and incorrect ones 0, with raw scores linearly converted to a 0–100 scale. To establish content validity, the instrument was reviewed and approved by an academic expert in public administration and a senior practitioner from PT Jasa Raharja (Persero). Due to the small sample size ($N = 10$), formal internal consistency indexing ([Kuder & Richardson, 1937](#)) was not calculated and is acknowledged as a limitation; however, item relevance was strictly controlled via expert validation.

In terms of research ethics, explicit verbal and written informed consent was obtained from all participants. Participation was entirely voluntary, with definitive assurances that performance would not affect their platform account status. Data were fully anonymized using initials and kept strictly confidential. Beyond individual normalized gain (N-gain) scores, data analysis utilized descriptive statistics, reporting the median and range to accommodate the non-normal distribution of small samples. Finally, a non-parametric Wilcoxon signed-rank test was performed to evaluate the statistical significance of knowledge improvements from pretest to posttest.

Result and Discussion

The preliminary baseline evaluation indicated a significant cognitive deficit among application-based drivers in Palangka Raya concerning institutional

insurance safety nets. Prior to the implementation of the participatory intervention, an evaluation of entry-level literacy revealed that 90% of the assessment items were classified as "Very Difficult" according to the diagnostic criteria. A subsequent evaluation of the multi-stakeholder socialization program revealed a significant upward shift across all individual knowledge parameters.

In order to evaluate the statistical significance of this developmental trajectory while accounting for the small, non-normally distributed field cohort ($N = 10$), a non-parametric Wilcoxon signed-rank test was executed. The pre-test data demonstrated an average baseline score of 15.0 (Scale 0–100), with a median score of 10.0 and a narrow distribution range between 10.0 and 30.0. Post-intervention diagnostics demonstrated an increased average score of 79.0, with the median rising to 80.0 and the distribution expanding toward a range of 70.0 to 90.0. The Wilcoxon signed-rank test confirmed that this observed knowledge gain was statistically significant ($Z = -2.814$, $p = 0.0049$, with 10 positive ranks, 0 negative ranks, and 0 ties). This finding suggests that the observed structural improvement cannot be attributed to random variation, despite the limited sample size. (See [table 1](#)).

An analytical cross-examination of the baseline data in relation to occupational duration indicates that longer tenure within the gig economy does not correlate with superior insurance literacy. For instance, participant NRD, who possessed the most extensive platform experience (5.0 years), exhibited a low baseline pre-test score of 20, which is identical to the entry score of participant AA, who had only 2.5 years of experience. In contrast, participant WD, with a service duration of only 1.0 year, exhibited the highest baseline score of 30. The structural relationship between occupational tenure and baseline literacy was not subjected to separate inferential modeling due to cohort size constraints; thus, initial variations are descriptive and attributed to individual idiosyncratic exposure rather than occupational duration.

To evaluate the operational efficiency of the educational intervention, independent of initial scoring variances, normalized gain analysis was applied. The application-based drivers demonstrated an average individualized gain index of 0.751, thereby positioning the overarching program efficiency within the "High" range. The distribution of individualized gain trajectories across varying pre-test baselines is delineated in [Table 2](#).

The categorical distribution indicates a highly consistent upward trend. Eighty percent (80%) of the participants demonstrated growth within the "High" classification index (0.70), while the remaining 20% fell within the "Moderate" boundaries (0.30 - 0.70). The absence of drivers exhibiting stagnant or "Low" growth profiles (< 0.30) indicates an equitable distribution of knowledge absorption across disparate application ecosystems.

Item-level diagnostic patterns demonstrate significant variability in knowledge acquisition across different procedural domains. The comparative frequency of correct answers before and after the socialization process highlights specific functional target areas.

The diagnostic findings indicate that components pertaining to operational execution, such as the identification of the State Guarantee Institution (Item 1) and the comprehension of Single-Vehicle Accident Clauses (Item 10), have transitioned from initial obscurity to complete clarity (100% post-test success). In a similar vein, core operational domains such as Medical Care Allowances (Item 4) and Non-Mandatory Documentation Differentiation (Item 6) demonstrated an 80% enhancement. Conversely, Item 2, which evaluated the Statutory Legal Foundations of insurance mandates, exhibited no cognitive movement (0%

success). Furthermore, comprehension of the repercussions of delays (Item 8) continued to present a challenge, with a mere 60% of drivers attaining post-test accuracy. (See [table 3](#)).

The empirical results demonstrate that a structured, multi-stakeholder socialization program using an educational participatory framework can improve the short-term insurance literacy of informal digital platform workers. The transition from a low pre-test baseline to a high post-test median indicates a substantial change in the drivers' cognitive capacity concerning state-sponsored protection frameworks. The high average normalized gain score ($N\text{-gain} = 0.751$) suggests that the integration of interactive lectures, co-presented by academic and industry experts, exhibited potential in mitigating the participants' historical lack of formal training. The program's integration of technical information and socio-legal analysis enabled drivers to transform their understanding of insurance from abstract legal guidelines into a mechanism for achieving socio-economic stability within a precarious employment context.

However, an examination of item-level diagnostic patterns reveals that knowledge transfer exhibits disparities across various domains. The complete success (100%) achieved in identifying the State Guarantee Institution (Item 1) and navigating Single-Vehicle Accident Clauses (Item 10) indicates that drivers readily absorb information that directly impacts their daily work. In the context of urban driving in Palangka Raya, where single-vehicle road accidents are prevalent, it is imperative to understand that single-vehicle incidents are covered under specific parameters. This understanding is crucial for ensuring the safety and well-being of individuals involved in such incidents. A parallel improvement of 80% in understanding medical care limits and required documentation was observed, underscoring the efficacy of the hands-on claim-form simulation. Through the act of completing mock applications and examining procedural flowcharts, drivers have been able to demystify complex institutional administrative tasks, thereby transforming bureaucratic hurdles into clear, actionable steps.

Conversely, the persistent absence of progress (0% success) on the Statutory Legal Foundations (Item 2) underscores an operational boundary in information processing. Adult learning theory (andragogy) posits that adult learners differ from traditional students in that they are self-directed and seek immediate relevance in their learning ([Knowles et al., 2015](#)). They have a tendency to exhibit resistance when confronted with the acquisition of information that is perceived as purely theoretical or not directly aligned with their immediate needs (Knowles, 1980). In this particular intervention, the presentation of abstract statutory mandates, such as Law No. 33 of 1964 or Government Regulation No. 17 of 1965, offered minimal practical value to drivers encountering daily financial risks while operating a vehicle. The employment of highly normative legal language resulted in the establishment of a cognitive barrier, as informal workers placed a higher priority on operational rules than on the historical development of the legal profession.

This dynamic also elucidates the lower retention rate (60%) concerning the consequences of late filings (Item 8), where abstract statutory penalties were more challenging to comprehend than step-by-step submission workflows. Consequently, to enhance the efficacy of retention strategies among adult learners, it is imperative to reframe legal protections into operational, action-oriented directives. These directives should prioritize the legal parameters, administrative deadlines, and explicit enforcement consequences, illustrated through real-world

case examples. To systematically resolve this programmatic bottleneck, the future intervention curriculum must undergo a targeted structural redesign rather than relying on conventional textual revisions. First, abstract statutory explanations will be replaced with a visual summary framework and an operational legal "cheat sheet." This "cheat sheet" will map complex laws into simplified, color-coded tabular matrices that highlight daily driving protections. Secondly, subsequent iterations will incorporate scenario-based legal case simulations, wherein drivers will analyze real-world traffic accident disputes to deduce legal responsibilities organically, as opposed to memorizing normative clauses.

The elevated learning outcomes observed in this study are consistent with the broader body of literature on informal labor interventions and public literacy modeling. The elevated educational efficacy that emerges from integrating interactive lectures with practical simulations aligns with the findings of [Winarti, \(2023\)](#), who demonstrated that experiential literacy interventions significantly enhance the administrative competence of informal agricultural and urban workers. This study corroborates the conclusions of Suryanto and Pramono (2021), who posited that conventional, unidirectional lectures administered by state agencies frequently fall short in achieving profound cognitive retention due to an absence of participatory components. The modification of the learning dynamic from a passive reception model to an active simulation approach was associated with positive shifts, thereby highlighting the efficacy of hands-on engagement in addressing the literacy gap among non-academic demographics.

However, the persistent low rate of retention with regard to statutory origins (Item 2) aligns with the challenges identified by Rahmawati, (2022) during social security outreach for informal workers in Java. Rahmawati's observations indicated that while informal logistics workers demonstrated rapid proficiency in mobile digital claim interfaces, their comprehension of underlying regulatory frameworks remained unaltered. This consistent pattern across studies suggests a broader structural challenge in public administration outreach: public agencies frequently prioritize regulatory compliance over practical usability. This study addresses this gap by showing how academic institutions can act as intermediaries, translating complex state regulations into accessible, practical knowledge for vulnerable worker populations.

The practical implications of this study apply directly to public administration practitioners, corporate platform managers, and higher education institutions. For State Public Sector Agencies (PT Jasa Raharja): Public agencies must re-evaluate their communication strategies. It is imperative for outreach programs to transition from the utilization of voluminous regulatory citations to visual, process-oriented methodologies. Such methodologies should encompass digital flowcharts and interactive form simulations. Public agencies have the capacity to harness the instructional expertise of local universities to devise evaluation instruments that extend beyond rudimentary attendance monitoring, thereby ensuring the provision of meaningful public education. A study of Digital Platform Corporations (Gojek, Grab, Shopee, Maxim) is warranted. It is imperative that these companies incorporate structured insurance literacy into their onboarding processes. Rather than perceiving insurance as a covert legal disclaimer, platforms should integrate clear, step-by-step guides directly into driver interfaces. These guides should utilize the item-level insights generated by this study to highlight common points of confusion. For institutions of higher education: This initiative offers a pragmatic exemplar for effective community service within the Tri Dharma

Perguruan Tinggi framework. It is incumbent upon academic departments to devise community-based interventions that yield quantifiable data, thereby illustrating how scholarly engagement can systematically empower marginalized communities.

The primary limitation of this study is its restricted, single-city sample size ($N = 10$) and the pre-experimental design, which lacked a randomized control group. While the elevated normalized gain scores suggest evident short-term learning success within this particular group, it is imperative to exercise caution when extending these findings to the broader platform worker population across Indonesia.

Furthermore, the utilization of identical questions in both assessments introduces a potential testing effect, wherein post-test enhancements may be partially influenced by test-retest familiarity with the items rather than a protracted period of enhanced understanding. The

evaluation's immediate occurrence after the session precluded the study from assessing long-term memory retention and determining whether the participants could successfully apply these skills during a real-world insurance crisis.

Future research should address these limitations by expanding the study to larger, multi-regional sample sizes and using randomized control methodologies to better isolate the impacts of the intervention. To this end, longitudinal research designs are required to assess the duration of knowledge retention over periods ranging from six to twelve months. Furthermore, the integration of advanced evaluation models, such as item response theory (IRT) or structural equation modeling (SEM), would facilitate a more detailed analysis of the interaction between driver demographics, platform types, and past accident experiences with long-term digital social security literacy.

Table 1. Descriptive Statistics of Individual Pre-test and Post-test Knowledge Metrics

No	Participant Initials	Platform	Length of Service	Pre-test Score	Post-test Score	Gain	Description
1	JJMN	GRAB	3 Years	20	70	50	Increasing
2	ATP	GOJEK	4 years	10	70	60	Increased
3	SLM	Shopee Food	1.5 years	10	70	60	Increased
4	AH	GRAB	2 years	10	90	80	Increasing
5	AA	GOJEK	2.5 years	20	80	60	Increased
6	MR	GOJEK	2 years	10	90	80	Increased
7	NRD	Parkur Delivery	5 Years	20	80	60	Increasing
8	HDR	Parkur Delivery	3 years	10	80	70	Increasing
9	STA	Parkur Delivery	3 years	10	80	70	Increasing
10	WD	Shopee Food	1 Year	30	80	50	Increased
Number				150	790	640	
Average				15.0	79.0	64	

Table 2. Individualized Normalized Gain (N-gain) Diagnostics and Distribution

No	Participant Initials	Platform	Pre-test Score	Post-test Score	Post-Pre	Max Score – Pre	N-Gain	Category
1	JJMN	GRAB	20	70	50	80	0.625	Moderate
2	ATP	GOJEK	10	70	60	90	0.667	Moderate
3	SLM	Shopee Food	10	70	60	90	0.667	Moderate
4	AH	GRAB	10	90	80	90	0.889	High
5	AA	GOJEK	20	80	60	80	0.750	High
6	MR	GOJEK	10	90	80	90	0.889	High
7	NRD	Parkur Delivery	20	80	60	80	0.750	High
8	HDR	Parkur Delivery	10	80	70	90	0.778	High
9	STA	Parkur Delivery	10	80	70	90	0.778	High
10	WD	Shopee Food	30	80	50	70	0.714	High

Table 3. Item-Level Diagnostic Metrics and Difficulty Classifications

Pre-test				Post-test			
No. of Questions	Number of Correct Answers (n=10)	Percentage Correct	Difficulty Category	No. of Questions	Number of Correct Answers (n=10)	Percentage Correct	Difficulty Category
1	4	40%	Difficult	1	10	100%	Easy
2	0	0%	Very Difficult	2	0	0%	Very Difficult
3	1	10%	Very Difficult	3	8	80%	Moderate
4	1	10%	Very Difficult	4	9	90%	Easy
5	2	20%	Very Difficult	5	9	90%	Easy
6	1	10%	Very Difficult	6	9	90%	Easy
7	2	20%	Very Difficult	7	8	80%	Moderate
8	1	10%	Very Difficult	8	6	60%	Difficult
9	0	0%	Very Difficult	9	8	80%	Moderate
10	2	20%	Very Difficult	10	10	100%	Easy

Conclusion

This study makes a significant contribution to the existing body of literature on digital labor protection by offering empirical, data-driven evidence on the subject of social security literacy among platform workers. The rapid expansion of the gig economy has increased the vulnerability of informal transport drivers. However, this growth remains decoupled from systematic insurance literacy. This research addresses this critical knowledge gap by evaluating a participatory educational intervention model tailored for application-based drivers in Palangka Raya.

The primary scientific contribution of this study lies in its dual-layered evaluation framework, which moves beyond descriptive reporting to offer precise methodological insights. The intervention demonstrated an initial capacity to enhance short-term literacy, as evidenced by a substantial increase in average knowledge scores from 15.0 to 79.0, corresponding to an aggregate high-category Normalized Gain (N-gain) value of 0.751. These immediate gains were achieved through the integration of practical claim-form simulations with interactive lectures, thereby highlighting the potential of participatory learning models for platform workers.

Moreover, item-level diagnostic patterns revealed a singular academic finding regarding adult learning modalities (andragogy) in public outreach. While hands-on simulations demonstrated a 80% improvement in operational and procedural literacy, structural cognitive resistance was observed in the legal-regulatory domain, resulting in a 0% improvement in statutory comprehension. This phenomenon underscores an operational boundary, wherein the application of normative legal language serves as an impediment for pragmatic informal workers. Consequently, this study demonstrates that to optimize digital labor safety nets, public administration outreach must reframe abstract statutory frameworks into action-oriented, process-mapped directives. It is recommended that subsequent research endeavor to replicate this model using larger, randomized control cohorts with the objective of establishing broader generalizability.

Author contributions

This community service activity was the result of structured collaboration between a team of lecturers from the Faculty of Social and Political Sciences, Muhammadiyah University Palangka Raya, and PT Jasa Raharja Central Kalimantan Branch. The head of the community service team was responsible for planning, coordinating, and preparing the activity proposal. The faculty team members played a role in designing the pre-test and post-test instruments, developing socialization materials, facilitating interactive sessions, and conducting data analysis and report writing. PT Jasa Raharja contributed as the main resource person who delivered technical material on the claim mechanism and provided educational materials. The students involved acted as field facilitators during the simulation and discussion sessions. The participating drivers contributed actively by attending the entire series of activities from pre-test to post-test and sharing their empirical experiences. The writing team was responsible for preparing the publication manuscript, and all authors approved the final version of the manuscript and are responsible for the accuracy of the data

presented.

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Conflict of interest

The writing team declares that this community service activity was carried out without any conflicts of interest that could affect the objectivity, integrity, and results of the program. The entire series of activities, from planning,

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