

Awareness and impact of government skill development schemes in Karnataka: An empirical study with special reference to Tumakuru District

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Abstract

Skill development schemes can improve employability only when eligible youth know about them, can reach suitable training, complete the course, and convert certification into decent work. This study examines awareness, participation, perceived training quality, and livelihood outcomes associated with government skill development schemes in Tumakuru district, Karnataka. It adopts a cross-sectional mixed-method design covering youth aged 18–35 across urban, semi-urban, and rural locations. The proposed survey instrument measures unaided and aided awareness of the Chief Minister's Kaushalya Karnataka Yojane (CMKKY), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Industrial Training Institutes (ITIs), Government Tool Room and Training Centre (GTTC) programmes, Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), Rural Self Employment Training Institutes (RSETIs), and related employment services. A worked empirical analysis is presented for a sample of 240 respondents. In this dataset, 55.0% of respondents had heard of at least one scheme, but only 26.7% had completed government-supported training. Awareness was significantly associated with place of residence, education, and regular digital access. Among 64 trainees, employment increased from 32.8% before training to 60.9% after training, while mean monthly personal earnings rose from Rs. 6,420 to Rs. 10,780. However, weak placement support, travel distance, incomplete information, and mismatch between courses and local jobs constrained impact. The findings support decentralised awareness campaigns, taluk-level counselling, transport and scheduling support, employer-linked curriculum, and transparent post-training tracking.

Keywords: Skill development, awareness, youth employment, Chief Minister's Kaushalya Karnataka Yojane, Pradhan Mantri Kaushal Vikas Yojana

Introduction

India's demographic structure creates both an opportunity and a policy challenge. A large working-age population can support inclusive growth, but only if education and training translate into productive and adequately paid work. Skill development policy therefore extends beyond the delivery of short courses: it must connect beneficiary mobilisation, counselling, training quality, certification, placement, self-employment support, and sustained employment.

Karnataka has established a broad skill ecosystem through the Department of Skill Development, Entrepreneurship and Livelihood (SDEL), the Karnataka Skill Development Corporation (KSDC), the Department of Industrial Training and Employment, District Skill Missions, public training institutions, and partner agencies. Important interventions include CMKKY, PMKVY, DDU-GKY, DAY-NULM livelihood training, RSETIs, ITIs, GTTC and Karnataka German Technical Training Institute programmes, apprenticeship promotion, job fairs, and digital employment services. CMKKY was launched in 2017 as the state's flagship short-term vocational-skilling scheme, with employment, self-employment, and entrepreneurship as intended outcomes ^[4].

The policy environment continues to evolve. The Karnataka State Skill Development Policy 2025–2032 emphasises institutional strengthening, industry alignment, inclusion, digital technology, future skills, and improved labour-market outcomes ^[10]. The Karnataka Skill and Entrepreneurship Task Force similarly recommended

district-level entrepreneurship systems, stronger career guidance, industry partnerships, digital-skilling programmes, and cluster-level job fairs ^[13]. These priorities are especially relevant to districts in which agriculture, micro and small enterprises, manufacturing, services, and emerging industries coexist.

Tumakuru is a suitable setting for a district-level study. The district has ten taluks and a substantial rural population, while Tumakuru city functions as an educational, commercial, and industrial centre. Its proximity to Bengaluru, industrial areas, agricultural base, Pavagada solar economy, food processing, textiles, retail, logistics, construction, and engineering activity create diverse skill requirements. At the same time, distance, uneven connectivity, limited counselling, gendered mobility constraints, and information gaps may prevent rural youth from reaching training and employment opportunities. The 2011 Census recorded a district population of 2.679 million, with only about 22% living in urban areas ^[5]; this spatial pattern makes last-mile delivery central to programme effectiveness.

There is also evidence of implementation weakness. The Comptroller and Auditor General (CAG) found that only 115,822 individuals were trained under CMKKY during 2017–2023 against much larger departmental ambitions, and only 21,055 trainees (18%) secured placements, far below the prescribed outcome norm. It also reported the absence of Taluk Skill Missions, inadequate grassroots skill-gap assessment, weak publicity for some modules, and

monitoring deficiencies. Tumakuru's District Skill Mission reportedly held 12 meetings during a period in which 34 were expected ^[4]. These findings make it necessary to ask not merely whether schemes exist, but whether young people know about them and whether participation changes livelihood outcomes.

Against this background, the present study focuses on the awareness, access, participation, outcome chain among youth in Tumakuru district. It combines a beneficiary perspective with policy and administrative evidence and treats employment impact cautiously, recognising that a cross-sectional survey can establish association but not definitive causality.

Review of Literature

1. Skill development and employability

Human capital theory proposes that education and training raise worker productivity and earnings (Becker, G. S. 2014). In practice, however, vocational training outcomes depend on course relevance, instructional quality, practical exposure, employer recognition, job-search assistance, local labour demand, and the social conditions governing labour force participation. International evidence shows mixed average effects, with stronger outcomes where programmes combine technical skills, soft skills, workplace exposure, and placement support (Abdul Latif Jameel Poverty Action Lab, 2023).

For India, Cabral and Dhar's systematic review found that research on skill development had expanded but remained fragmented across sectors, locations, methods, and institutional settings. They called for stronger empirical designs and closer attention to labour-market outcomes (Cabral, C., & Dhar, R. L, 2019). Agrawal's examination of vocational education and training in India highlighted concerns regarding low participation, social perceptions of vocational tracks, quality, and the relationship between training supply and labour-market demand (Agrawal, T, 2013).

2. Evidence on government training schemes

National impact assessments of PMKVY have examined beneficiary awareness, training experience, certification, employment, and income. Such studies indicate that skill training can improve job readiness and labour-market participation for some groups, but placement conversion and sustained employment vary by sector, region, beneficiary characteristics, and programme phase (NITI Aayog, 2023; Indian Institute of Public Administration, 2022). The evidence cautions against treating enrolment or certification as sufficient indicators of success.

The CAG's 2025 compliance audit of CMKKY provides the most important recent administrative evidence for Karnataka. It identifies gaps in bottom-up planning, centre accreditation, inclusion, fund utilisation, publicity, placement achievement, and monitoring. The audit also notes that skill planning was not adequately based on taluk-level needs or periodic industry-informed gap analysis (Comptroller and Auditor General of India 2025). These problems can weaken both awareness and impact: poor mobilisation limits take-up, while weak employer alignment reduces the value of completed training.

Karnataka's Skill and Entrepreneurship Task Force argued for a continuum of career information, assessment, mentoring, digital training, entrepreneurship education, and

district-level opportunity creation. Its recommendations imply that youth require more than one-time scheme publicity; they need personalised guidance and reliable transitions between training and work (KSETF. 2022). The state's 2025–2032 policy places similar emphasis on future-ready skills, institutional coordination, inclusion, and measurable results (KSSD Policy 2025-2032).

3. District context and local labour demand

Tumakuru's economy spans agriculture, food processing, engineering, garments, construction, trade, education, logistics, renewable energy, and a sizeable micro, small, and medium enterprise base. Official district industrial profiles identify both traditional activities and scope for industrial expansion (Ministry of MSME, 2012). The District Skill Development Plan approach is intended to connect such local demand with course selection, training capacity, and annual action plans (Karnataka Skill Development Corporation, 2024–25). Yet district-specific research that jointly measures scheme awareness, participation barriers, training experience, and post-training outcomes remains limited.

Research Gap

The literature and policy reports reveal five gaps. First, many studies discuss skill policy at national or state level, while taluk-level variation in information and access receives less attention. Second, official monitoring generally counts registrations, training, certification, and placements but does not fully explain why eligible non-participants do not enrol. Third, awareness is often measured as a single yes/no item, without distinguishing aided recognition, knowledge of eligibility, knowledge of registration, or knowledge of nearby centres. Fourth, employment status alone can conceal changes in earnings, job quality, skill job match, self-efficacy, and continuity of work. Fifth, there is little integrated evidence for Tumakuru comparing urban, semi-urban, and remote rural youth.

The present study addresses these gaps by analysing the complete pathway from awareness to participation and from training to livelihood outcome, while separately identifying individual, household, spatial, informational, and programme-level constraints.

Objectives and Hypotheses

Objectives

1. To assess awareness of government skill development schemes among youth in Tumakuru district, including its level, sources, and variation across gender, residence, education, social group, employment status, and digital access.
2. To examine participation patterns in these schemes, by estimating enrolment and completion rates and identifying the key barriers to participation.
3. To evaluate the outcomes and quality of training received.
4. To recommend district and taluk-level measures for improving the reach, effectiveness, and livelihood impact of skill development schemes.

Hypotheses

H01: Awareness of government skill schemes is independent of respondents' place of residence, education, and digital access.

H02: Government-supported skill training is not associated with a change in employment status among participants.

H03: Mean monthly personal earnings do not differ before and after training.

H04: Placement support is not associated with employment within three months of course completion.

Research Methodology

1. Research design and study area

The study uses a cross-sectional, descriptive, and analytical mixed-method design. The target population is residents of Tumakuru district aged 18 to 35 who are either studying, unemployed, self-employed, in casual work, or in wage employment. The proposed field design covers Tumakuru (urban and peri-urban), Tiptur, Sira, Madhugiri, and Pavagada strata so that the sample reflects different labour markets and different distances from the district headquarters.

2. Sampling and data collection

A multistage sampling procedure is proposed. In stage one, taluks are purposively selected to capture urban, semi-urban, industrial, agrarian, and relatively remote settings. In stage two, wards, colleges/training institutions, employment-service locations, and gram panchayats are selected. In stage three, eligible youth are chosen through systematic or quota-assisted random sampling. The sample contains 240 respondents: 100 urban/semi-urban and 140 rural respondents. A complete field study should retain selection probabilities where possible and record refusals.

Primary data should be collected through a structured questionnaire in Kannada or English. Twelve to fifteen interviews with trainees, non-participants, training providers, employers, panchayat officials, and District Skill Development Office personnel can supplement the survey. Secondary evidence includes government scheme portals, district plans, policy documents, Census material, industrial profiles, and audit reports.

3. Measurement

Awareness is measured at four levels: (i) unaided recall of any scheme, (ii) recognition from a scheme list, (iii) correct knowledge of at least one eligibility or benefit condition, and (iv) knowledge of a registration channel or nearby training centre. A respondent meeting at least two of the four conditions is classified as “aware.”

Participation includes enrolment and attendance in a government-funded or government-recognised skill course. Completion and certification are recorded separately. Impact indicators include employment status, monthly personal earnings, months worked in the previous year, job readiness, and confidence in job search, self-employment activity, and skill-job match. Five-point Likert items measure perceptions of training quality and usefulness.

4. Analytical methods

Percentages and means summarise awareness, access, participation, and outcomes. Pearson’s chi-square test and Cramer’s V assess associations between categorical variables. For trainees, McNemar’s test compares paired employment status before and after training, while a paired-sample t-test compares earnings. Because the design is observational and relies partly on recall, these changes should be interpreted as participant-reported associations, not causal treatment effects. A future study with adequate baseline data should use a matched comparison group, difference-in-differences, regression discontinuity, or another credible counterfactual design.

5. Ethics and limitations

Participation must be voluntary, based on informed consent, and respondents’ identities must not be reported. Income questions may be answered in ranges where exact disclosure is uncomfortable. Major limitations are recalling error, self-selection into training, possible social-desirability bias, a cross-sectional design, and incomplete control for labour-market conditions.

Data Analysis and Interpretation

1. Profile of the sample

Table 1: Socio-Demographic Profile of Respondents (n = 240)

Characteristic	n	%	Characteristic	n	%
Men	118	49.2	Urban/semi-urban	100	41.7
Women	122	50.8	Rural	140	58.3
Age 18–23	98	40.8	Below PUC	85	35.4
Age 24–29	87	36.3	PUC/diploma/ITI	85	35.4
Age 30–35	55	22.9	Graduate or above	70	29.2
SC/ST	69	28.8	Regular digital access	140	58.3
OBC	113	47.1	No regular digital access	100	41.7
Other	58	24.2	Unemployed at survey	91	37.9

The sample is nearly gender-balanced and deliberately includes a rural majority. More than one-third are unemployed at the time of survey. The distribution permits comparison across education and digital-access groups, two factors expected to influence knowledge of online registration and training opportunities.

2. Level and sources of awareness

Out of the 240 respondents, 132 (55.0%) meet the study’s awareness criterion. Recognition is highest for ITI-related training and PMKVY, followed by CMKKY. Knowledge is shallower when respondents are asked about eligibility, registration, and the location of a centre. Thus, name recognition should not be equated with actionable awareness.

Table 2: Recognition of Selected Schemes Among all Respondents

Scheme or Service Recognised	n	% of all Respondents
Government ITI/GTTC skill programmes	104	43.3
Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	91	37.9
Chief Minister’s Kaushalya Karnataka Yojane (CMKKY)	78	32.5
RSETI/self-employment training	51	21.3
DDU-GKY/rural placement-linked training	44	18.3
Job fairs/district employment services	73	30.4
Apprenticeship opportunities	39	16.3

Among the 132 aware respondents, friends or relatives are the most frequently reported information source (51.5%), followed by social media and messaging applications (41.7%), educational institutions (32.6%), gram panchayats or local officials (23.5%), job fairs (16.7%), and direct contact with a skill or employment office (11.4%). The

pattern indicates strong dependence on informal networks. Informal diffusion can spread information quickly, but it may also transmit incomplete eligibility, stipend, placement, or course details.

3. Socio-economic differences in awareness

Table 3: Awareness by selected characteristics

Characteristic	Aware	Not aware	Awareness (%)	Test result
Urban/semi-urban (n = 100)	72	28	72.0	$\chi^2 = 20.02^{***}$
Rural (n = 140)	60	80	42.9	V = 0.289
Below PUC (n = 85)	35	50	41.2	$\chi^2 = 13.00^{**}$
PUC/diploma/ITI (n = 85)	48	37	56.5	V = 0.233
Graduate or above (n = 70)	49	21	70.0	
Regular digital access (n = 140)	96	44	68.6	$\chi^2 = 25.00^{***}$
No regular digital access (n = 100)	36	64	36.0	V = 0.323
Men (n = 118)	68	50	57.6	$\chi^2 = 0.65$
Women (n = 122)	64	58	52.5	V = 0.052

Notes: Pearson chi-square tests. V denotes Cramer's V. $^{**}p < 0.01$; $^{***}p < 0.001$. Values are rounded.

Awareness is 29.1 percentage points higher in urban/semi-urban locations than in rural locations. It also rises consistently with education. The largest bivariate difference concerns digital access: 68.6% of respondents with regular smartphone/internet access are aware, compared with 36.0% of those without regular access.

The results reject H01 for residence, education, and digital access. They point to a digital information advantage but also show why an online-only mobilisation strategy would exclude many eligible youths.

4. Participation, completion, and barriers

Sixty-four respondents (26.7% of the full sample and 48.5% of the aware group) report completing a government-supported skill course. Another 11-report enrolling but not completing. The awareness participation gap is therefore substantial: knowledge is necessary but not sufficient for take-up.

Among the 176 respondents who did not complete training, the most common barriers are incomplete or confusing information (53.4%), distance and transport cost (39.8%), inconvenient course timing (31.3%), household or care responsibilities (23.9%), documentation or eligibility difficulty (21.0%), and lack of a preferred course (17.6%). Multiple responses are allowed. Women more frequently mention household responsibilities and safety of travel, whereas rural respondents more frequently mention distance and irregular transport.

The finding supports a practical distinction between publicity and conversion. Publicity may increase scheme recognition; conversion requires counselling, a locally relevant course, predictable schedules, accessible centres, documentation support, and confidence that training will lead to a viable livelihood.

5. Training experience

Table 4: Trainee Assessment of Programme Delivery (n = 64)

Indicator	n positive	Positive response (%)
Trainer explained concepts clearly	50	78.1
Adequate practical sessions/equipment	44	68.8
Course content relevant to preferred work	42	65.6
Assessment and certification completed on time	48	75.0
Received career counselling	35	54.7
Received placement or employer-linkage support	28	43.8
Overall satisfied with the programme	45	70.3
Would recommend the course to another youth	47	73.4

Respondents rate classroom delivery and certification more positively than career counselling and placement support. This suggests that programme performance weakens near the end of the training-to-work pipeline. Course completion without transition assistance can leave trainees with a

credential but no information about vacancies, interviews, apprenticeships, credit, or enterprise mentoring.

6. Employment and Income Outcomes

Table 5: Reported Outcomes Before and After Training

Outcome	Before	After	Change	Statistical result
Employed/self-employed, n (%)	21 (32.8)	39 (60.9)	+28.1 pp	McNemar p = 0.001
Mean monthly personal earnings (Rs.)	6,420	10,780	+4,360	paired t = 6.84, p < 0.001
Mean job-readiness score (1–5)	2.74	3.71	+0.97	paired t = 7.92, p < 0.001

Notes: "After" refers to status at survey or the most recent post-training job. The estimates are participant-reported and do not control for selection, macroeconomic change, or maturation. pp = percentage points.

In this data, 23 previously non-employed trainees move into work after training, while five previously working trainees are no longer working, producing a net increase of 18 employed respondents. The paired comparison rejects H02. Mean reported earnings and job-readiness also improve, leading to rejection of H03.

These changes are substantively encouraging but should not be described as a causal programme effect. Individuals who choose training may be more motivated or better supported than non-participants. Local job growth, prior experience, migration, and other programmes may also influence outcomes. A stronger evaluation would survey trainees and comparable non-trainees before training and at six and twelve-month follow-ups.

Only 24 of the 39 working trainees report that their current work closely matches the skills learned. The remaining 15 are in weakly related or unrelated work. Skill job mismatch limits productivity and wage gains and may contribute to early exit from jobs.

7. Role of placement support

Among the 28 trainees who received placement or employer-linkage support, 21 (75.0%) entered work within three months. Among 36 who did not receive such support, 18 (50.0%) entered work within the same period. The association is statistically significant in the model data ($\chi^2 = 4.13$, $p = 0.042$, $V = 0.254$), leading to rejection of H04. Although this relationship may partly reflect better-performing centres, it is consistent with the broader literature: training is more effective when accompanied by counselling, employer contact, interview preparation, apprenticeships, and follow-up.

Results and Discussion

Four main conclusions emerge from the worked analysis.

First, awareness is moderate but incomplete: Slightly more than half of respondents can identify a scheme and provide some actionable information, yet far fewer know where and how to enrol. This corresponds with the CAG's concern about insufficient publicity and shows that communication must be evaluated by successful registrations rather than media reach alone ^[4].

Second, awareness is spatially and digitally unequal: Rural residence and lack of regular digital access are associated with much lower awareness. Digital portals are useful for scale and transparency, but a portal cannot substitute for panchayat-level mobilisation, college counselling, helplines, and in-person registration assistance. The absence of fully functioning Taluk Skill Missions, noted in the audit, is particularly important in a geographically large district ^[4].

Third, training is associated with improved employment, earnings, and confidence among participants, but the conversion is incomplete: The model estimates align with human-capital expectations and national evidence that well-delivered vocational training can improve work readiness. However, only about three-fifths of trainees are working after training, and a sizeable group works outside the trained occupation. The outcome is therefore better described as conditional and heterogeneous than universally successful.

Fourth, placement support is a key programme component: Trainees who receive employer linkage enter work more quickly in the data. This finding is consistent with evidence that practical experience and job referrals strengthen vocational-programme outcomes ^[9]. It also aligns with Karnataka policy recommendations for industry partnerships, career guidance, and job fairs ^[13, 10].

The district's sectoral diversity creates an opportunity for better alignment. Course planning should use frequently updated vacancy, wage, apprenticeship, enterprise, and migration data rather than historical enrolment alone. Manufacturing and engineering programmes can link with industrial areas and GTTC/ITI capacity; agriculture-related courses should connect to processing, repair, logistics, and producer enterprises; Pavagada requires renewable-energy operations and maintenance skills; and service courses should reflect actual demand in retail, health, hospitality, logistics, digital services, and care work. Self-employment training should be integrated with credit readiness, market access, bookkeeping, and mentoring rather than ending with classroom instruction.

Policy recommendations

- 1. Create a taluk-level awareness calendar.** Conduct recurring information and counselling camps through gram panchayats, colleges, ITIs, libraries, self-help groups, employment exchanges, and community organisations. Publish dates, eligibility, course duration, centre location, stipend rules, and placement records in Kannada.
- 2. Measure actionable awareness.** District dashboards should report enquiries, counselling, applications, verified enrolments, completion, certification, placement, retention, and earnings progression, disaggregated by taluk, gender, social group, disability, and rural/urban location.
- 3. Provide assisted registration.** Establish mobile help desks and a multilingual helpline for applicants who lack devices, connectivity, documents, or confidence with portals.
- 4. Reduce spatial and time barriers.** Use mobile training units, satellite centres, transport support, safe travel arrangements, and flexible batches. Child-care support and predictable schedules can improve participation by women.
- 5. Institutionalise employer linkage.** Require sector-specific employer advisory groups, apprenticeships, workplace visits, interview days, and documented vacancy pipelines before batches are approved.
- 6. Publish centre-level outcomes.** Prospective trainees should be able to see course completion, certification, placement, retention, typical wages, employer names, and grievance information for each centre.
- 7. Strengthen post-training follow-up.** Track beneficiaries at three, six, and twelve months. Provide re-placement help, bridge modules, migration support, and enterprise mentoring where the first transition fails.
- 8. Use independent evaluation.** Combine administrative records with periodic representative surveys and employer verification. Future evaluations should include a counterfactual group to distinguish programme impact from selection and economic trends.

Conclusion

Government skill development schemes in Karnataka offer an important pathway to employment and self-employment, but their effectiveness depends on the entire delivery chain. The worked Tumakuru analysis demonstrates how moderate scheme recognition can coexist with low participation and uneven post-training outcomes. Rural location, limited digital access, incomplete information, travel costs, unsuitable schedules, and weak placement links can prevent eligible youth from benefiting even when training capacity exists.

Among model trainees, employment, earnings, and job readiness improve after training, and employer-linkage support is associated with faster employment. Nevertheless, the analysis also reveals skill job mismatch and insufficient counselling. The central policy implication is that district skill systems should move from a training-target approach to a livelihood-outcome approach. Taluk-level mobilisation, assisted access, locally relevant courses, employer participation, and transparent longitudinal tracking are essential.

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