

The Great Indian Education Crisis: Why College Degrees Are Losing Value in the AI Era

An evidence-based analysis of the value of a college degree in India: graduate unemployment, the persistent wage premium, and how AI may change the skill and signal components of a degree's worth.

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ABSTRACT

Is a college degree losing its value in India? This paper argues that the evidence supports a narrower and more useful claim: the value of a degree has become conditional and delayed. Higher-education enrolment has risen to a gross enrolment ratio of 28.4% (AISHE 2021–22), and graduates who find salaried work still earn roughly twice as much as workers with only secondary education. But the transition from degree to job has become long and uncertain. In 2023–24 India's overall unemployment rate was 3.2%, yet unemployment among graduates exceeded 15% after the pandemic and reached about 42% among graduates under 25 (State of Working India 2023), and young people with secondary or higher education made up 65.7% of the unemployed in 2022, up from 35.2% in 2000 (India Employment Report 2024). The paper proposes a simple decomposition of a degree's value into a probability of suitable employment, a wage premium conditional on employment, a time-to-employment penalty and direct and opportunity costs, and a separate distinction between a degree's skill value and its signal value. It then examines how generative AI is likely to act on each component: through exposure of the clerical and routine cognitive tasks that absorb many graduates, through the reduced informativeness of coursework and grades as signals, and through lower costs of acquiring some skills outside formal programmes. The paper concludes with six testable propositions, a set of indicators India could track annually from existing surveys, and reform principles focused on shortening and de-risking the transition from degree to work.

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Revision note. Version 2.0 replaces the November 2024 essay. The earlier version reported figures for which no source could be found, including a fall from 78% to 52% in the share of people rating college as “very important”, “68% of graduates lack skills”, a “41% collapse” in returns to education, a 14-month average time to employment, and percentage scores comparing “AI-enhanced” with traditional education. It described an employer survey that was not conducted and quoted individuals who could not be identified. All of these have been removed. It also misstated India’s higher-education enrolment ratio. This version rests only on official statistics and published reports, and its thesis has been revised to match that evidence.

1. Introduction

Few beliefs are as widely shared in India as the belief that a college degree is the path to a secure life. Over the past two decades, families have acted on it: enrolment in higher education reached about 4.33 crore students in 2021–22, and the gross enrolment ratio (GER) for the 18–23 age group rose to 28.4%, from 23.7% in 2014–15 (Ministry of Education, 2024). Yet many graduates now struggle to find work that uses their education, and generative AI is automating tasks in exactly the kinds of office jobs that have absorbed large numbers of graduates.

It has become common to say that degrees are “losing value”. This paper asks what the evidence actually shows, and argues for a more precise claim:

In India, the value of a degree has not collapsed. It has become conditional and delayed. Graduates who secure salaried jobs still earn substantially more than non-graduates, but the path to such jobs

has become long, uncertain and unequal, and AI is likely to change which parts of a degree's value survive.

The paper makes four contributions:

1. An evidence review based only on official and published data (Section 2).
 2. A decomposition of a degree's value into components that can be measured separately, and a distinction between skill value and signal value (Section 3).
 3. An analysis of how generative AI acts on each component (Section 4).
 4. Testable propositions, an indicator set and reform principles (Sections 5–7).
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2. What the Evidence Shows

2.1 Expansion

Higher-education enrolment has grown steadily. AISHE 2021–22 reports a GER of 28.4%, up from 27.3% in 2020–21 and 23.7% in 2014–15, and total enrolment of about 4.33 crore (Ministry of Education, 2024). The National Education Policy 2020 sets a target GER of 50% by 2035 (Ministry of Human Resource Development, 2020). India is therefore producing graduates at a scale, and on a trajectory, without precedent in its history.

2.2 Educated unemployment

The labour market has not absorbed this expansion smoothly:

- A graduate gap. India's overall unemployment rate in 2023–24 was 3.2% in usual status for people aged 15 and above (Ministry of Statistics and Programme Implementation, 2024). Unemployment among graduates is several times higher: *State of Working India 2023* reports that it remained above 15% after the pandemic and reached about 42% among graduates under the age of 25 (Azim Premji University, 2023).
- Educated youth dominate unemployment. The *India Employment Report 2024* finds that young people account for almost 83% of the unemployed, and that the share of youth with secondary or higher education among the unemployed nearly doubled, from 35.2% in 2000 to 65.7% in 2022 (ILO & IHD, 2024).

High unemployment among the educated is partly a sign of *queuing*. Educated young people from families that can support them may wait for suitable, often salaried or public-sector, jobs rather than accept casual work. That is why graduate unemployment is highest among the youngest graduates and falls with age (Azim Premji University, 2023). Queuing is not costless: years spent waiting are years of lost earnings and experience.

2.3 The wage premium persists

The same data show that education still pays for those who find suitable work. Analyses of the Periodic Labour Force Survey find that graduate workers earn more than non-graduates across types of employment, with the largest premium in salaried work. Salaried workers with higher education earn about twice as much as those with secondary education and three times as much as those with primary education (Data For India, n.d.; see also ILO & IHD, 2024).

2.4 Employability measures

Test-based employability surveys give a mixed picture. The *India Skills Report 2025*, based on an employability test taken by over six lakh candidates, estimated that 54.81% of graduates were employable, up from 51.25% the previous year and about a third a decade earlier (Wheebox, 2024). These figures come from an industry test with a self-selected sample and should be treated with caution, but they do not suggest a collapse in graduates' skills.

2.5 Summary

The evidence does not show that degrees have lost their value. It shows a conditional premium: large for those who reach salaried work, much smaller for those in casual or informal work. It also shows a delayed premium: reached only after a long and uncertain transition that many young graduates have not completed. The popular sense of crisis is best understood as a crisis of *transition*, not of value in general.

3. A Decomposition of Degree Value

3.1 Four components

For a student deciding whether to pursue a degree, the expected value can be decomposed as:

$$V = p \times W - D - C$$

where:

- p is the probability of obtaining employment that uses the degree (the *access* component);
- W is the present value of the wage premium *conditional* on such employment (the *premium* component);
- D is the present value of earnings lost while waiting for suitable work after graduation (the *delay* component); and
- C is direct costs (fees, coaching, living costs) plus earnings forgone during study (the *cost* component).

Sections 2.2–2.3 suggest that in India W remains large, while p is lower and D larger than families assume, especially for young graduates from institutions and fields with weak links to employers. “Losing value” is therefore mostly about p and D , not W .

3.2 Skill value and signal value

Economists distinguish two reasons a degree raises earnings. It builds productive skills (human capital; Becker, 1964), and it *signals* characteristics such as ability, persistence and conscientiousness that employers value but cannot observe directly (Spence, 1973). Caplan (2018) argues that signalling accounts for a large share of the return to education. The distinction matters for AI, because AI can affect the two channels in opposite directions.

4. How Generative AI Acts on Each Component

4.1 Access (p): exposure of graduate-absorbing tasks

The International Labour Organization’s global analysis of occupational exposure to generative AI found that clerical work is the most exposed occupational group, with 24% of clerical tasks highly exposed and a further 58% moderately exposed, while other groups have far lower shares of highly exposed tasks (Gmyrek et al., 2023). The same study concluded that the main effect is likely to be *augmentation* rather than automation for most occupations. Clerical, data-processing and routine back-office work, including much of India’s IT and business-services entry-level employment, has historically absorbed many graduates. If entry-level tasks in these jobs are automated or compressed, p may fall for graduates whose main advantage is the ability to perform routine cognitive work.

At the same time, employers surveyed by the World Economic Forum expect AI and big-data skills to be among the fastest-growing in demand to 2030 (World Economic Forum, 2025), which may raise p for graduates who can work with these technologies.

4.2 Signal value: when coursework stops being informative

If students can complete assignments with generative AI, grades and written coursework become less informative about the student’s own ability. Evidence from a field experiment suggests the concern is real. High-school students with unrestricted GPT-4 access during practice solved more problems but performed worse on a subsequent unassisted exam than students who practised without it (Bastani et al., 2025). Where credentials are earned partly through AI-assisted work, their signal value falls, and employers can be expected to rely more on direct skill tests, work samples and internships. This shifts value from the credential to verified performance.

4.3 Premium (W): augmentation for the skilled

Where AI augments rather than replaces graduate work, as Gmyrek et al. (2023) expect for most occupations, graduates who use it well may become more productive, supporting or raising *W* for them. The effect is likely to widen the gap *within* the graduate population, between those who acquire strong foundational and AI-complementary skills and those who do not.

4.4 Cost (C): cheaper skills outside the degree

AI-assisted learning tools can lower the cost of acquiring some skills outside formal programmes, while the evidence in Section 4.2 shows that unguided use can also undermine learning. The net effect on the relative value of degrees and alternative pathways depends on whether employers can verify skills acquired outside formal education.

4.5 Summary

Component	Likely AI effect	Direction for typical graduate
Access (<i>p</i>)	Automation of entry-level clerical and routine cognitive tasks; new demand for AI-complementary skills	Down for routine-task graduates; up for AI-skilled
Premium (<i>W</i>)	Augmentation raises productivity of skilled users	Wider dispersion
Delay (<i>D</i>)	Employers shift to direct skill verification	Longer for those without verifiable skills
Signal	Coursework and grades less informative	Down
Cost (<i>C</i>)	Cheaper skill acquisition outside degrees, if verifiable	Pressure on low-value programmes

5. Testable Propositions

- P1. Graduate unemployment will remain concentrated among graduates aged under 25 and will fall with age, consistent with queuing rather than permanent exclusion.
- P2. Growth in entry-level hiring for routine cognitive roles in IT and business services will slow relative to overall graduate supply as generative AI adoption spreads.
- P3. The wage premium for graduates in salaried work will become more dispersed, rising for workers in AI-complementary roles and falling for those in routine clerical roles.
- P4. Employers will increasingly use direct skill assessments and internships relative to grades in graduate hiring.
- P5. Programmes with structured industry internships will show shorter time to employment than comparable programmes without them.
- P6. The relative return to degrees from institutions with weak employer links will fall faster than the return to degrees from institutions with strong links.

6. Indicators India Could Track

Most of the components in Section 3 can be tracked annually from existing data:

Indicator	Component Source	
Graduate unemployment rate by age (under 25, 25–29, 30+)	p, D	PLFS
Share of employed graduates in salaried work	p	PLFS
Graduate / secondary earnings ratio, salaried and casual	W	PLFS
Time from graduation to first salaried job	D	Requires a graduate tracer survey (not yet available nationally)
Fees and coaching expenditure by field and institution type	C	NSS education surveys; AISHE
Entry-level hiring in AI-exposed occupations	p	Industry and job-portal data

A national graduate tracer survey, following cohorts for three to five years after graduation, would fill the most important gap. India has no regular measure of how long the transition to work actually takes.

7. Reform Principles

1. Shorten and de-risk the transition. Make structured internships and apprenticeships a standard part of degree programmes, so that graduates leave with verified work experience.
 2. Make skills verifiable. Develop assessment formats that are robust to AI assistance (supervised demonstrations, work samples, oral examinations) so that credentials regain signal value.
 3. Teach with AI, not around it. Integrate AI tools in ways that require students to do the underlying thinking, following the evidence that guarded AI tutoring avoids the learning losses of unrestricted use (Bastani et al., 2025).
 4. Publish outcomes. Require institutions to report graduate employment and earnings outcomes, so that students can see p , W and D before choosing a programme.
 5. Measure the transition. Establish the graduate tracer survey described in Section 6.
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8. Limitations

- Secondary data only. The paper does not analyse microdata directly; figures are taken from official releases and published reports, whose definitions and periods differ.

- Survey and definition differences. Unemployment rates depend on the reference period and on how graduates are defined; figures from different sources are not strictly comparable.
 - Industry sources. Employability estimates come from a test-based industry report with a self-selected sample.
 - Forward-looking AI analysis. Section 4 is based on exposure estimates and early evidence, not on observed effects on Indian graduate employment, which are not yet measurable in national data.
 - Aggregate view. The analysis does not disaggregate by field, institution type, gender or social group, all of which strongly shape graduate outcomes.
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9. Conclusion

The claim that college degrees are losing their value in India is too strong and too vague. Graduates who reach salaried work still earn about twice as much as those with secondary education. What has deteriorated is the reliability and speed of reaching that work. Unemployment among young graduates is very high, and educated youth now make up most of the unemployed. Generative AI is likely to sharpen these patterns: it threatens the routine entry-level tasks that absorb many graduates and weakens coursework as a signal of ability, while rewarding graduates whose skills complement it. The response that follows from the evidence is not to abandon degrees but to make them lead more reliably and more quickly to verified skills and work, and to measure whether they do.

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