

Institutional Repository Adoption in Indian Higher Education: Policy Awareness, Deposit Behaviour, and Research Visibility

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Abstract— India established institutional repositories early and enthusiastically. Research institutes deployed open-source repository software in the first years after the Budapest declaration, national mandates for electronic theses followed, and the country now hosts a large number of registered repositories. Deposit rates for journal articles nonetheless remain low, and the gap between infrastructure and use has proved durable rather than transitional. This review examines why. It argues that the Indian literature has diagnosed the problem largely as one of awareness — faculty do not know what a repository is for, or do not know that self-archiving is permitted — and has consequently recommended advocacy and training, an approach that decades of implementation suggest is insufficient. Three alternative accounts are developed and assessed against the available evidence: that deposit fails because it is an unrewarded task competing against rewarded ones; that copyright uncertainty operates not as ignorance but as rational risk-aversion in the absence of institutional indemnity; and that thesis mandates have shaped repository content toward material with low citation potential, weakening the visibility argument used to recruit depositors. The review further notes that the Indian evidence base consists predominantly of single-institution surveys with small samples and no common instrument, which limits what can be concluded about any of these accounts. It proposes a research agenda centred on deposit-rate measurement against verifiable publication output, evaluation of mediated deposit against advocacy, and direct study of the visibility claim in the Indian context.

Keywords— Institutional Repositories; Open Access; Self-Archiving; Scholarly Communication; Indian Higher Education; Research Visibility

I. INTRODUCTION

The institutional repository was proposed as essential infrastructure for scholarship in the digital age: a set of services by which a university makes available the digital outputs of its community, combining stewardship with access (Lynch, 2003). Two decades on, the infrastructure exists at considerable scale worldwide, with sustained growth in the number of repositories and in the diversity of their content and functions (Pinfield et al., 2014).

India engaged early. Research institutes and technology institutes deployed open-source repository platforms — predominantly DSpace and EPrints — in the first half of the 2000s, and the descriptive literature documenting this expansion appeared alongside it (Ghosh & Das, 2007; Roy et al., 2012). The Indian case was, and is, one of relatively strong supply-side commitment: repository software is free, technical capacity in

the institute sector was adequate, and library leadership was engaged.

The persistent finding is that deposit has not matched deployment. Repositories fill with theses, technical reports and conference material while journal articles — the output whose open availability the movement was principally concerned with — accumulate slowly. This is not unique to India. The global self-archiving rate for journal articles remained low well after repositories became widespread, and the response of the international literature was to argue that voluntary deposit plateaus at a modest level and that mandates are required to move it (Gargouri et al., 2010). What distinguishes the Indian case is the size of the gap between infrastructure and use, and the persistence of an explanatory frame that attributes it primarily to awareness.

This paper examines that frame. Section 2 sets out scope. Section 3 reviews the Indian repository landscape and the policy environment. Section 4 examines the awareness account and its evidential basis. Section 5 develops three alternative accounts. Section 6 addresses the visibility argument directly, and Section 7 the broader purposes a repository serves. Sections 8 and 9 offer a critical appraisal of the evidence base and a research agenda.

II. SCOPE AND METHOD OF REVIEW

This is a critical narrative review of literature on institutional repository adoption, deposit behaviour and research visibility, with primary attention to Indian higher education and research institutions and secondary attention to the international literature that supplies the comparative and theoretical framing.

Studies were included where they report on repository implementation, faculty deposit behaviour or attitudes, open access policy, or the relationship between repository deposit and research visibility. The Indian literature in this area is published substantially in library and information science journals and in the disciplinary grey literature, and both are drawn upon, with the limitations of the latter noted where relevant.

Repository software comparison, metadata standards and preservation architecture are outside scope except where they bear on deposit behaviour. Article processing charge-funded publishing is treated only in contrast to the repository route.

III. THE INDIAN LANDSCAPE AND ITS POLICY ENVIRONMENT

Three features of the Indian environment condition everything that follows.

The institutional structure is heterogeneous to an unusual degree. Elite research institutes with substantial output and professional library services sit alongside a very large number of affiliated colleges with limited research activity and minimal library infrastructure. Findings from the former, which is where most published studies are conducted, do not describe the latter, which is where most of the higher education system is.

Thesis deposit has been mandated nationally, and electronic theses and dissertations are consequently the dominant content type in many repositories. This is a genuine achievement in preservation and access terms. It has a side effect examined in Section 6: it fills repositories with material that generates little citation traffic, which weakens the visibility case made to prospective article depositors.

Journal article deposit, by contrast, has generally been encouraged rather than required. Where institutional policies exist they are frequently statements of principle without compliance monitoring, and the international evidence is unambiguous that this configuration produces low deposit rates (Gargouri et al., 2010).

The descriptive literature on Indian repositories is substantial and useful for establishing what exists (Ghosh & Das, 2007; Roy et al., 2012; Kumar, 2012). It is largely inventory work — counting repositories, categorising content types, recording software — and does not address behaviour.

IV. THE AWARENESS ACCOUNT

The dominant explanation in the Indian literature, and in the wider literature on repositories in developing-country contexts, is that faculty do not deposit because they are insufficiently aware: of the repository's existence, of the permission most publishers grant for some form of self-archiving, or of the benefits of open availability. Low awareness has been identified as a major obstacle to repository growth in several national contexts (Kodua-Ntim & Fombad, 2020; Asadi et al., 2019), and the recommendation that follows is consistently advocacy, orientation and training.

The account is not wrong. Awareness deficits are real, and surveys measuring them find them.

It is nonetheless inadequate as a complete explanation, for two reasons.

The first is that the surveys measuring awareness typically measure it by self-report at a single point, and the correlation between reported awareness and actual deposit is weak wherever it has been examined. Researchers who report understanding open access and endorsing its principles do not, in general, deposit at appreciably higher rates. This pattern — endorsement without behaviour — is familiar across the international literature and is the central finding that an awareness account cannot accommodate.

The second is that awareness-based recommendations have been made continuously for approximately two decades and implemented widely, and deposit rates have not responded proportionately. A diagnosis whose prescribed treatment has been applied at length without the predicted effect warrants reconsideration.

V. THREE ALTERNATIVE ACCOUNTS

Deposit as unrewarded labour. Self-archiving costs the author time — locating the permitted version, checking policy, completing metadata — and returns nothing that the reward system recognises. Indian academic evaluation, whether for promotion, accreditation or funding, counts publications in indexed journals; repository deposit appears in no such calculation. Where a task is costly and unrewarded, and competes for time against tasks that are rewarded, low compliance is the expected outcome rather than a puzzle requiring explanation by ignorance. This account predicts what the awareness account cannot: that endorsement and behaviour will diverge. It also predicts the effectiveness of mediated deposit, in which library staff perform the work on the author's behalf, since that removes the cost without requiring any change in motivation.

Copyright caution as rational risk-aversion. A substantial majority of journals permit self-archiving of some version, and disciplinary and institutional guidance on version permissions is available. The Indian literature generally interprets author hesitancy here as a knowledge gap. An alternative reading is that the risk is asymmetric and the author bears it: correctly depositing an accepted manuscript yields negligible personal benefit, while depositing the wrong version invites a publisher complaint directed at the author. Faced with an asymmetric payoff and complex per-journal rules, declining to deposit is a reasonable response. This account predicts that clarifying rules will help less than institutional assumption of the risk — an indemnity, a library-operated version check — which is a different intervention from training.

Competition from academic social networks. Researchers who wish to share work have accessible alternatives that provide immediate feedback in the form of view and download counts and reader contact. Repositories offer superior preservation and standards compliance and inferior immediate gratification, and the evidence internationally is that participation in commercial networks substantially exceeds repository compliance (Lovett et al., 2017). Where the perceived need to make work available is already satisfied, the marginal value of repository deposit to the author is small.

These accounts are complementary rather than competing, and each implies a different intervention. None is well tested in the Indian context.

VI. THE VISIBILITY ARGUMENT

Recruitment of depositors rests heavily on the claim that deposit increases visibility and citation. The claim requires examination.

The evidence that open availability is associated with higher citation is substantial, and the mechanism is plausible. Large-scale analysis found open access articles receiving materially more citations than closed ones (Piwowar et al., 2018), and work addressing the self-selection objection has argued that the advantage persists under mandate conditions where authors cannot choose which papers to make open (Gargouri et al., 2010).

Three qualifications matter for its use in repository advocacy in India.

The advantage attaches to open availability, not to repository deposit specifically. An article that is open on the publisher's site, on a disciplinary preprint server or on an academic social network receives the same benefit. Repository deposit is one route among several to the same outcome, and for the individual author usually the most laborious.

The advantage varies by discipline and by the baseline accessibility of the work. Where an author's community already has institutional subscription access to the relevant journals, the marginal visibility gain from an additional open copy is small.

The composition of Indian repository content weakens the argument in practice. Where the bulk of holdings is theses and reports, aggregate repository usage statistics are dominated by material that would not be expected to generate citations in any case. Advocacy that presents repository visibility statistics to article authors is therefore offering evidence of the wrong kind, and sophisticated authors will discount it.

None of this argues against the visibility case. It argues that the case as usually made is imprecise, and that imprecision is costly with an audience trained to evaluate evidence.

VII. WHAT REPOSITORIES ARE FOR, BEYOND ACCESS

An assumption running through most of the deposit literature is that the repository's purpose is open access, and that low deposit therefore represents failure. The assumption is worth examining, because repositories were conceived to do several things at once and the balance among them has shifted.

Lynch's (2003) formulation placed stewardship alongside access: the repository was to be the institution's means of organising, preserving and managing its digital scholarly output, of which making it publicly readable was one function. Subsequent analysis of repository development internationally has described a widening of purpose, with repositories serving research information management, reporting and showcasing functions alongside dissemination (Pinfield et al., 2014). Novak and Day (2018) put the tension directly, arguing that repositories serve two distinct constituencies — the outside reader and the institution itself — and that positioning them for success requires acknowledging both rather than treating the second as subordinate.

This reframing has particular force in India. Institutional accreditation and ranking processes require institutions to compile and report their research output, and that reporting is currently done through parallel administrative systems that duplicate what a repository already holds. A repository integrated with that reporting requirement acquires an institutional reason to exist that does not depend on faculty enthusiasm for open access, and it acquires a deposit mechanism — the author submits once, for a purpose they already have — that removes the unrewarded-labour problem identified in Section 5 rather than exhorting authors to overcome it.

Two cautions attach. Integration of this kind converts the repository into a compliance instrument, and compliance instruments attract the resentment that compliance attracts; the access function may be damaged by association. And a repository optimised for institutional reporting will hold

metadata comprehensively and full text selectively, which is the opposite of what the access mission requires. The two purposes are compatible but not automatically so, and the design choices that reconcile them have not been much studied.

The broader point is that the literature's framing of low article deposit as straightforward failure may be too narrow. It is a failure against the access mission. Whether it is a failure against the stewardship and management missions depends on what the repository is actually being asked to do, and Indian studies rarely establish that before evaluating success.

VIII. CRITICAL APPRAISAL OF THE EVIDENCE BASE

Four limitations characterise the Indian literature specifically.

Single-institution surveys with small samples. The typical study surveys faculty at one institution, frequently with fewer than two hundred respondents and a response rate that is unreported or low. Generalisation from such studies to a system as heterogeneous as Indian higher education is not supportable, and the concentration of studies in elite institutes compounds the problem.

No common instrument. Awareness, attitude and intention are measured differently in each study, so results cannot be pooled or compared. Two decades of accumulation has produced a large number of studies and very little cumulative knowledge.

Attitude measured, behaviour inferred. Most studies measure what faculty say. Deposit is a recorded event, and repository logs make actual behaviour directly observable, yet studies linking stated attitude to individual deposit records are rare.

Deposit rate rarely computed. The informative statistic is deposited articles as a proportion of articles published by the institution in the same period, obtainable by matching repository holdings against a bibliographic database. It is seldom reported, which means the size of the problem is not actually established in most of the literature that discusses it.

Descriptive inventory dominates. Much of the published work counts repositories and content types. This was valuable in the first decade and has reached diminishing returns.

IX. RESEARCH AGENDA

Measure deposit rates properly. Repository holdings should be matched against institutional publication output from a bibliographic database to produce comparable deposit rates across institutions and over time. Without this the field cannot tell whether anything is improving.

Test interventions rather than surveying attitudes. Mediated deposit, institutional indemnity for version compliance, and integration of deposit into existing administrative reporting are all testable against advocacy and against one another. Staggered institutional rollouts permit reasonable evaluation designs.

Link attitude to behaviour at individual level. Survey responses matched to that respondent's deposit record would resolve the endorsement-behaviour question directly, subject to ethical approval and consent.

Study the affiliated college sector. The institutions holding most of the system's students and staff are almost absent from this literature.

Examine the visibility claim locally. Whether repository deposit measurably improves visibility for Indian-authored research, and for which disciplines, is an empirical question that has been asserted more often than tested.

X. CONCLUSION

India built repository infrastructure early and well, and mandated thesis deposit successfully. The unresolved problem is journal article deposit, and it has proved resistant to the remedy most consistently prescribed for it.

The awareness account survives partly because it is easy to measure and partly because the intervention it implies — advocacy and training — is within the library's power to deliver. But the pattern the literature repeatedly documents, of faculty who endorse open access and do not deposit, is not what an awareness deficit looks like. It is what an unrewarded task looks like when it competes against rewarded ones, and what rational caution looks like when the author bears an asymmetric risk.

The interventions those accounts imply are different, and more institutional: performing the deposit on the author's behalf, assuming the compliance risk institutionally, and connecting deposit to reporting the institution already requires. Whether they work is testable. Establishing that would require the field to measure deposit rates against publication output, to evaluate interventions rather than survey attitudes, and to study the large part of the higher education system that its literature has so far passed over.

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