

# The Gamification of Indian Higher Education: Trends, Pitfalls and Ideas for Future

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**Abstract:** The Indian Higher Education (IHE) system has been critiqued consistently over quality concerns, resulting in several corrective measures being initiated by the policy makers, regulators, and the institutions. Consequently, progress has been observed in terms of improved outcomes on some parameters. One emergent trend in the IHE is increased focus on quantitative data by the accreditation and ranking agencies. This has spurred the sector into a competitive overdrive with institutions vying for rankings and awards. This has also resulted in malpractices, systemic erosion, and gamification of the system with long term repercussions. This paper argues against adopting purely quantitative measures for institutional assessment, suggesting measures which are holistic, broad-based, and better serve the needs of a country as diverse as India.

**Keywords:** Indian Higher Education; Research and Development; Gamification

## 1. Introduction

Criticism of the burgeoning India Higher Education (IHE) space has been constant and consistent. From lack of Indian institutions in global rankings to lack of basic confidence in the competence of institutions to produce employable graduates to wide-spread malpractices, the IHE has seen it all. According to new research [1] and reports from industry bodies [2], regulatory bodies [3] and special-purpose committees formed by the Government [4] over the years have only served to reinforce the challenges and negative perception of the broader sector [5]. Unsurprisingly, the sector has seen tremendous churn over the last decade. New age universities have emerged, big institutions have gotten bigger, and several smaller institutions have ceased to exist. A renaissance of sorts in the demand for liberal arts programs [6] and [7] has dented the demand for the traditional stronghold of engineering for the first time since independence. The IHE space has also seen the private sector gain rapidly on the traditionally dominant government universities and institutions [8]. The private sector grew rapidly due to its agility, ability to create value for the students and of course its intense branding and marketing. Another reason is that the Government of India has

had a tacit understanding that it cannot alone realize its ambitious target of 50% Gross Enrollment Ratio (GER) for the higher education sector. This has paved the way for the private sector to take the lead and scale quickly, resulting in several positives but causing widespread disruption as well.

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### 1.1 Consolidation and skewed growth in IHE

The evolution of the private sector in the IHE space can be categorized into three main phases – the expansion phase, the contraction phase, and the current consolidation phase. The expansion phase marked rapid proliferation of institutions across India, capacity explosion and record enrollments. At one time over 1.6 million seats were available for engineering courses across India. The rapid expansion came to a halt around 2012-13, due to a significant oversupply of mediocre engineering graduates without the ability of the market to absorb such enormous numbers. The degrowth phase started soon after, resulting in rapidly declining student enrolments across India. States with the most oversupply of engineering seats saw the worst impact including closure of institutions, low enrollments in traditional branches of engineering, job losses for faculty members and quality impact in most institutions due to lower revenues. The current consolidation phase started from 2017-18 onwards. In this phase while the overall capacity addition for the sector remained stagnant, private universities with good standing significantly enhanced their intake capacities and rapidly garnered market share from affiliated institutions. Thus, there has been a significant concentration of student enrollments in the top 50-100 private universities. To that extent the private affiliated institutions are facing even more critical existential concerns. Overall, the technical education sector is also contending with a renewed resurgence in student interest in liberal arts and a general decline in the number of students opting for mathematics as a subject at the higher secondary level. This phase is also characterized by new-age universities coming in with huge investments from either large industry houses or a group of successful entrepreneurs with lofty visions to transform the sector. However, it remains to be seen whether these new institutions can evolve into world-class universities in the future.

### 1.2 Advent of NIRF

Another characteristic of the current consolidation phase in the IHE space is a heightened sense of competition among the big players. Large marketing budgets, pervasive adoption of digital marketing, large admissions teams, claims, and counterclaims involving achievements, big numbers, endorsements, awards, and recognitions from various international and national bodies abound at admissions time. The

introduction of the National Institutional Ranking Framework (NIRF), a largely data-driven ranking framework, has added to the frenzy around generating increased scores and higher ranks annually. A top-100 NIRF rank bestows upon institutions special privileges and greater autonomy, besides bragging rights. While NIRF has had the desired effect of spurring institutions into an overdrive of activity including research and development, it has led to institutions and faculty members adopting all means to enhance their scores [9]. There is tremendous pressure on faculty members in these institutions to deliver the “numbers”. Several dubious organizations, consultants and groups have sprung up feeding on institutional needs to attain outsized performance measures in research publications, intellectual property, consultancy assignments and grants etc. As a result, malpractices are rife in the sector manifesting in serious concerns [10]. Sadly, this frenzy is also being exploited smartly by many credible international agencies including publishing houses and ranking agencies etc. These agencies are seeing a rapid revenue increase from the Indian market due to the prevailing game-like competitive scenario. Consequently, positive short-term trends are being observed in research and innovation, international rankings, international student enrolments etc.

However, it is dangerous to take these increasing numbers indicative of broad sectoral performance at face-value. To assume that the quality improvement in IHE has been successfully broad-based, that most of our institutions are suddenly producing world-class research in terms of papers and patents, incubating startups solving complex real-world problems and all our engineering graduates are industry-ready on day one would be a fallacy. This position paper therefore intends to highlight the rampant gamification prevalent in the Indian Higher Education space and its resultant pitfalls. It examines emerging trends, builds a case against using purely quantitative measures for quality assessment and suggests alternative mechanisms for quality assessment and rankings which might work better in the Indian context.

Thus, the research objectives of this paper are:

- 1) Examine the recent trends in the Indian Higher Education space in terms of quality improvement and outcomes around research and innovation.
- 2) Use data to build a thesis around the inorganic growth observed in the Indian Higher Education

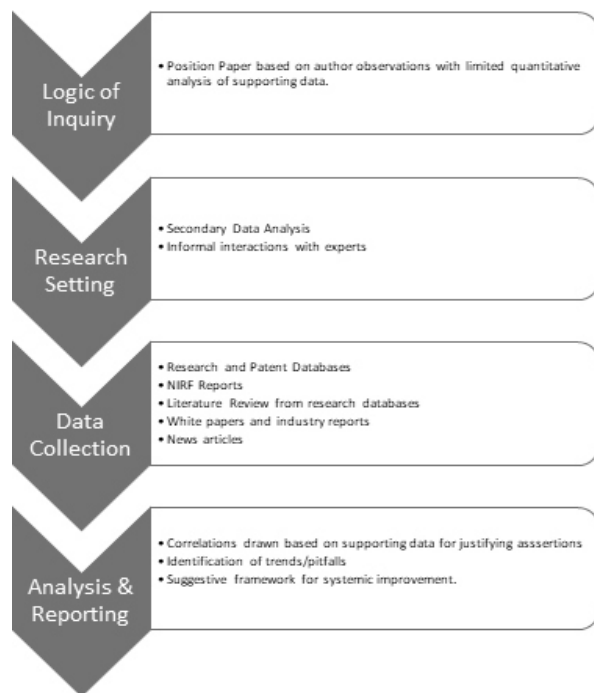
sector and identify major contributing factors.

- 3) Examine and outline the pitfalls of the “gamification” effect on the Indian Higher Education space.
- 4) Provide suggestions around broad-basing innovation, redefining outcomes, evaluation criteria to ensure organic and sustainable growth in the sector.

The broad methodology adopted by the study includes:

- 1) Data collection from international research databases and Indian patent databases.
- 2) Data collation from NIRF reports and publicly available literature.
- 3) Literature review of existing literature in the domain from all major research databases such as Scopus and Web-of-Science.
- 4) Secondary research examining articles, blogs, industry reports and whitepapers related to the domain.

The methodology is depicted in Figure 1 below:



**Fig. 1 : Broad research methodology followed for the position paper**

The rest of the paper is organized as follows: section II examines recent trends in the higher education space which have contributed to the gamification of the sector. Pitfalls resulting from this gamification are described in section III, while ideas which might reduce the extent of gamification, resulting in adoption of holistic measures to evaluate institutional quality are presented in section IV. Finally, section V concludes the paper.

## 2. Emerging Trends in Indian Higher Education

This section examines the recent and emerging trends in the Indian higher education space and how some of these trends are accelerating the gamification of the sector.

### 2.1 NEP, Policy Changes and the National Strategy

India's stated national policy is to improve international standings on a wide variety of rankings from basic standards of living to innovation and of course education. This serves our national interests and aspirations. The New Education Policy [11] too has been well-received by the stakeholders and appreciated for finally recommending the deregulation of the sector, giving autonomy to all institutions. It however remains to be seen how and in what form, the NEP gets implemented across the country owing to the federal structure of governing higher education. Still, some of the broader trends are:

- 1) **Promise of Autonomy:** NEP envisages greater flexibility and autonomy to institutions which attain higher accreditation grades and ranks. The greater autonomy would allow these institutions to survive and grow. Hence, attaining higher grades and ranks has become a prime objective of the institutions.
- 2) **Recognition to large private players:** The Government has also supported large private players with a promise to remove all obstacles for them, provide funding to grow and help India emerge on the global stage. These institutions have been bestowed with institutions of eminence tag.
- 3) **Emergence in global rankings:** Some of these trends have allowed Indian institutions to start appearing consistently in global rankings and improve their ranks on a year-over-year basis (Economic Times, 2020).

## 2.2 The Numbers Game

Claims from universities extolling their achievements in numbers are pervasive. Full front-page adverts, barrage of social media campaigns and automated WhatsApp messages scream numbers. These range from number of placements to international linkages, patents filed, papers published, conferences held, startups incubated and self-professed ranks in specific areas. Many of these claims are unverified and misleading [12] and used primarily for branding purposes. Numbers are also important for figuring in NIRF and a host of other rankings by media houses and publications. This has contributed to the frenzy in setting new records in different performance indicators indicative of institutional prowess and progress.

## 2.3 Imbalanced Growth

One of the prevalent trends in industries across India, which has become further strengthened during the pandemic, is the consolidation trend in the industry. Increasingly, industry verticals are being dominated by 2-3 big players. These trends are visible across sectors such as telecom, airlines, oil, and refineries etc. The same trend is now visible in IHE. Two or three large private State Universities dominate entire regions, their rapid growth coming at the cost of smaller institutions around them pushing them to the brink of irrelevance. At this rate, it is perceivable the IHE landscape shall be dominated by a few hundred large players which will garner a lion's share of the market, exacerbating the existential concerns for smaller players.

## 2.4 Increasing Fees and Cashing of Brand Value by Institutions

The last 3-5 years have seen the larger institutions enhance their fees significantly [13]. The FICCI Report on the “Higher Education in India: Vision 2040” states that the cost of general and higher education has increased significantly over the last 10 years making it difficult for middle class Indians to afford it. Institutions figuring in the top 100 in the NIRF ranks feel justified in charging a premium. While on one side financial resources are needed to compete at the global level, on the other rising fees impact the accessibility to higher education for students, which is one of the stated objectives of the national policy on education. Even the Government sector institutions have raised fees which are typically

funded entirely by public money. Premiumization of higher education is thus a trend which is here to stay as institutions believe that there will be many takers for world-class education delivered at home at one-third of the cost in foreign countries.

At the extreme end of the spectrum are affiliated colleges governed by stringent norms enforced by the State-level Fee Fixation Committees. These fees are restricted to such unrealistically low levels that these institutions are unable to enhance their value proposition to the students.

## 2.5 Accreditation Rush

Accreditation standards have consistently become stringent over the years. Higher education institutions in India are expected to do it all, produce high quality academic outcomes, student placements, research, and development, be environmentally sustainable, be innovative, impact the community and follow the highest governance standards. Getting accredited with a certain grade allows institutions to become eligible for Autonomous Status and gain more freedom from regulatory controls. Thus, there is sufficient incentive to prepare for and attain a high accreditation grade. Further, future approvals depend upon accreditation status, thereby creating a strong disincentive to not opt for accreditation. This has led to a rush for accreditation and use of all means and manners to attain high grades. This has accelerated the gamification of IHE and induced an obsession with numbers.

## 2.6 The Rise of the Consultants

The IHE is increasingly becoming consultant driven. As institutions seek to create a differentiation strategy in a highly competitive environment, consultants ranging from individual experts to global consulting companies are finding space in IHE. From international collaborations to strategic hiring, enhancing student experiences, curriculum design, introducing liberal arts programs, student amenities, faculty training, assimilating global best-practices, technology adoption, creation of learning environments, student housing and outsourcing of operational processes, nothing is off-limits. IHE is investing heavily on external consultants and strategic partnerships to create an X-factor for themselves. In that sense, the intense competition is enabling some institutions to innovate at scale.

## 2.7 Ihe Goes Digital

The digital acceleration in IHE, especially since the advent of COVID-19, has been significant. Some of the broad emergent themes are:

- 1) Social Media and Digital Spend: IHE has adopted digital marketing in a big manner. Stakeholder engagement through Facebook/Instagram campaigns, Google Ads and SEO, Lead Management and Funneling, CRM Suites are the norm. The digital advertising spends for large private Universities can run into a few Crores annually.
- 2) Technology Adoption: Institutions are also adopting technology at a furious pace to enable high quality delivery and improving operational efficiency. Hence, the pace of innovation and change has picked up significantly. From online learning to online assessment and evaluation using AI, to digital studios to virtual labs and AR/VR, institutions are increasingly investing in technology as a key differentiator from the competition [14]

## 2.8 Ed-Tech Startups

Startups in the ed-tech space catering to a plethora of issues from student CRM, lead and admissions management, ERPs, LMSs, financing student fees, in-campus security, digital payments, student placement preparation, coding and up-skilling, evaluation and assessment with AI-based proctoring, quality management systems, AR/VR for virtual labs and the like abound. These startups are bringing a fresh perspective to the challenges faced by institutions in IHE and there is significant innovation being unleashed to solve IHE's biggest issues [15].

## 3. Let the Games Begin – The Gamification of IHE

Wikipedia defined gamification as “Gamification is the strategic attempt to enhance systems, services, organizations and activities in order to create similar experiences to those experienced when playing games in order to motivate and engage users”. In the case of the Indian Higher Education, the NIRF, data-driven accreditation approaches adopted by NAAC and NBA, plethora of rankings and awards and intense competition for admissions has fueled an obsession for showcasing numbers. Hence, significant institutional effort is expended in meeting and

exceeding the ever-increasing numerical outcomes. This pressure has percolated down to the level of individual faculty, who are using all means possible to enhance their scores and shore up their professional profiles. While gamification has been found to have a positive impact on performance and attainment of outcomes in some settings, in the case of IHE, the inorganic spurt in the numbers makes it seem unnatural. Research shows that gamification does induce short-term successes and achievements, but critics argue that it inculcates a sense of fake or artificial achievements, which lose meaning after a while. Other negative impacts of badly designed gamified systems include declining effects, cheating the system, task quality and privacy [16]. Goodhart's law, put forth by the British economist in 1975, states:

Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes.

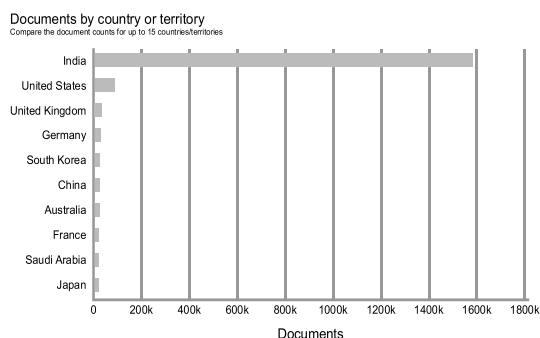
In 1997, anthropologist Marilyn Strathern generalized Goodhart's law beyond statistics and control to evaluation, more broadly:

When a measure becomes a target, it ceases to be a good measure.

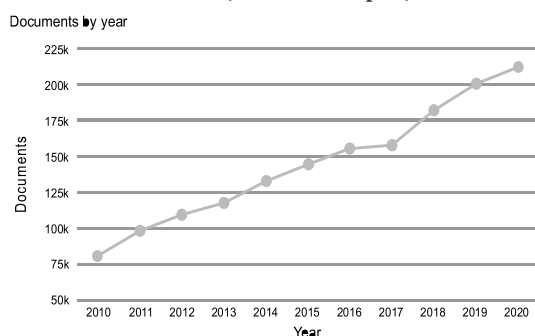
This adage strongly resonates with the scenario playing out in IHE currently, with unintended consequences. Individuals and institutions have started gaming the system and institutions with deeper pockets are able to excel at the game. This artificial performance gap between the big institutions and the smaller ones is leading to a rapid cartelization around admissions. In each state in India, 2-3 big institutions are monopolizing the sector.

In the short-term the obsession with numbers and outcomes is showing positive results for the IHE. Indian institutions have started to improve their international rankings, research papers are rapidly increasing in international indexing databases such as Scopus (Figures 2(a) and 2(b)).

It can be observed that India has nearly tripled its count of Scopus-indexed documents in the ten-year period from 2010-2020 outgrowing every other country in the world. This increase seems unnatural compared to the more organic growth observed across the world in the major countries which have mature research ecosystems. Despite this quantitative growth in research papers published, none of the Indian



**Fig. 2(a) : India leads the world in Scopus-indexed documents over the ten-year period from 2010-2020 (Source: Scopus)**



**Fig. 2(b) : India has shown exponential growth in scopus-indexed documents over the ten-year period from 2010-2020 (Source: Scopus)**

universities rank among the best in the world in terms of research and development. After 2020, the rate of research publications has accelerated even further. Till mid-May 2022 India has contributed over 550,000 documents in Scopus compared to a lowly 30,000 documents compared to second placed USA. It is counter-intuitive to observe that with low levels of institutional spending on R&D, Indian institutions have been able to produce outsized outcomes in terms of papers published. Thus, the gamification of research in India is evident and the entire ecosystem is primed to attain quantitative outcomes.

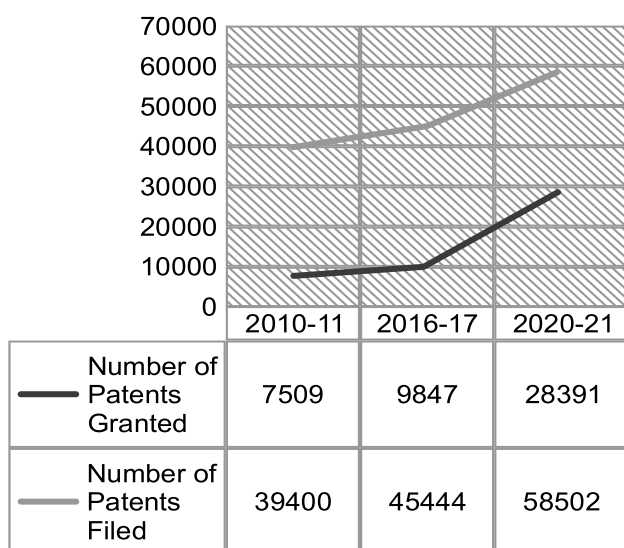
Further, the concentration of research papers published by the top 100 institutions/universities in the NIRF 2021 rankings indicates a lop-sided growth in the quantum of research publications. As per the NIRF India Rankings 2021 report, the top 100 institutions across India account for nearly 70% of the published papers for the sector [17]. Further, these institutions have nearly doubled the number of papers published in the last 5-year period with some domains such as management showing a 320% increase in papers published. Finally, the citations to the papers published by the top 100 institutions increased exponentially over the last five years, ranging from a

minimum increase of 190% to a stupendous 670% for different domains. Thus, the inorganic growth in the research quality and outcomes for Indian institutions is way ahead of the growth numbers observed for much higher-ranking institutions from other nations in the world rankings. Further, these outcomes are not congruent with the R&D spending in India. India spends only 0.66% of its GDP on research compared to 2.44% by China, 2.74% by USA, 3.26% by Japan, 4.81% by Korea or 5.44% by Israel [18]. The world average for R&D spending during 2022 is 2.63% of GDP, which has gone up over the last 3 years, while Indian spending has remained stagnant. Considering that much of the research numbers in India are coming from new private universities, with little track record of investment in research capabilities, it makes the growth rate even more suspect.

The frenzy around attaining numeric outcomes has not been lost on international publishing houses. In the last 2-3 years the number of new open-access journals by these top publishing houses has exploded. The propensity for Indian authors to band together and share the publication charges (ranging from 1000 to 2500 USD) get quick publications in these journals has been exploited well by these journals and publishing houses. International collaborators are being brought in to bear the article processing charges and ghost authors offer to write papers on behalf of others. The number of conferences being organized by institutions and supported by international publishing houses has also grown abnormally, with every technical institution in India measured on the number of such conferences organized. These conferences provide an easy route for getting papers indexed in indexing databases such as Scopus. India has emerged as a major revenue spinner for these publishing houses. Many of these top open-access journals are not immune to gamification. Accepted papers are often required to cite prior papers published in the same journal, boosting their citations. It must however be explicitly stated that such practices are global in nature and not limited to India [19][20]. India in fact has been a late entrant to the club but has emerged as a major player due to the sheer number of institutions in the higher education space.

Similar trends are observed across patent filing in India (Figure 3).

A study of patenting activity in Indian universities till 2017-18 by [21] painted a rather dismal picture. Across the Indian Higher Education landscape, the



**Fig. 3 : Patent filing and grant trends in India**  
(Source: Mint News Report, 2022)

study reported that only 393 patents had been granted across all domains to 180 odd institutions and less than 10% of the institutions across India were involved in active patent/IPR activity. Since then, private universities which did not figure in the most active institution list have started contributing an inordinately large number of patents filed. In the last 5 years, the number of patents filed/granted more than tripled across India, as shown in Figure 3 [22] and private universities across India have been a major contributor to this. Some of the top patent filing private universities have started filing more patents than IT majors TCS, Infosys and Wipro at the Indian Patents and Trademarks Office. For instance, the top patent filing private university in 2020-21 filed 336 patents alone compared to 557 patents filed by all the 27 IITs combined. Due to the rise in IPR activity in India, it is now ranked 46th in the world in the Global Innovation Index compared to 81st in 2015-16. Indian universities have also exploited loopholes in international IPR laws across Australia and Europe which grant some categories of patents within a month. Many legal firms currently provide options to add inventor names to already prepared patent applications and guarantee patent grants in a few months.

The gamification trend is also visible in the plethora of rankings and awards, many of them completely paid [23]. Incidentally, NAAC awards marks for the number of faculty awards received. The top world ranking agencies are also drawn to India and are readily creating new categories and subcategories

of awards. The spectrum of parameters on which rankings and awards are available is immense. Campuses across India are vying for such accolades. Of course, even participating in such categories of awards requires data to be submitted and then subject to audit by the agencies for which a fee is payable. Apart from serving as marketing collateral for the institution, the real impact of such ratings and rankings on student experience and attainment of graduate outcomes is not established.

The flawed accreditation process was exposed recently in a news article, when it was discovered that seven institutions had received a higher NAAC grade/score than India's top ranked university, the Indian Institute of Science, Bengaluru [24]. Clearly, awarding marks for specific outcomes allowed these private universities to gain scores above the research focused IISc, which has been India's leading institution for years. The widespread criticism of the purely numeric approach adopted by the accreditation

**Table 1: Cause and Effect of the “Gamification” trend in Indian Higher Education space.**

Cause	Effect (Pitfalls)
<ul style="list-style-type: none"> <li>Focus on rankings and ratings</li> <li>Unnatural spurt in research publications/patents</li> <li>Same performance benchmarks for all institutions irrespective of institutional context.</li> <li>Concentration of student enrollment in large private universities</li> </ul>	<ul style="list-style-type: none"> <li>Rankings get skewed</li> <li>Genuine researchers are demotivated</li> <li>Research grants get concentrated</li> <li>Artificial performance gap created among individual researchers and institutions.</li> <li>No real research impact in economic terms.</li> <li>Institutional resources are diverted from areas which directly impact stakeholder benefit.</li> <li>A whole industry of dubious operators' flourishes.</li> <li>Short-term numeric outcomes trump long-term capacity building and performance culture creation.</li> <li>Unsustainable pressure on faculty members leading to high attrition.</li> <li>Closure of standalone affiliated colleges and declining enrolments.</li> <li>Rapidly rising fee structures in higher ranked universities.</li> </ul>

bodies is natural. Table 1 below summarizes the effects of gamification in the higher education space:

One major side-effect of the gamification process is that the increasing revenues and surpluses for the bigger players are not resulting in higher salaries for faculty members, arguably the key drivers of the sector and these institutions [25]. This is especially true at the entry level. Not many private universities can claim to offer the Government recommended pay scales. Many institutions have developed parallel training and placement cells wherein external experts and training agencies deliver the real value to the students, while faculty members are expected to deliver the base curriculum without any frills. Thus, despite the rapid expansion in IHE, even for the large private universities, faculty quality and development are not strategic areas. Higher salaries are being offered only to key personnel at leadership positions. Some newer universities which are aiming to disrupt the space are investing heavily on recruiting top faculty, however such instances are few for a country as large as India.

Clearly not all progress in IHE is dubious. The top universities have invested heavily in infrastructure, faculty development, research, and development. The IHE after all fuels the tremendous growth in the Indian IT sector by providing high quality and trainable talent. However, the IHE is too large to view it as a singular entity or apply a standardized benchmark to all institutions. Further, qualitative outcomes must also accompany quantitative measures wherever possible. Some select Indian institutions with the requisite capacities should be encouraged to aim for higher ranks in international rankings, but the vast majority of institutions should be shielded from the gamification phenomenon, so that they can focus on delivering realistic outcomes.

In the next section we provide suggestions on moving away from gamification to evolving frameworks for institutions to self-evaluate and meet meaningful and contextual quality outcomes which are relevant for a country as diverse as India.

#### 4. Changing the rules of the game

Gamification might have been a necessary evil in spurring institutions into action, but the end needs to justify the means. This section puts forth suggested interventions which may help in reducing the impact

of gamification on IHE and allow institutions to focus on building core competencies needed to remain relevant going forward:

##### 4.1 Keep it simple

A good starting point is to simplify the process of evaluating institutions. A simple process makes it easier for a vast majority of the institutions to assimilate the process and implement it. Raising the rigor of the accreditation standards does not imply that institutions would automatically start performing at higher standards. A country as diverse as India may need multiple levels of accreditations and rankings. This is so because we follow a federal structure of managing higher education. States which have been liberal with starting private universities have more institutions in the top 100 in NIRF, while states which have been heavily regulated have less.

It might also be better to let institutional accreditation be a planned process, allowing institutions time to prepare well for accreditation. By pushing institutions into accreditation, a culture of gamification is created wherein institutions are pressured to show outcomes in areas where they may not have adequate capabilities or competencies. In some cases, institutions may lack the opportunities of attaining the outcomes set by accreditation agencies.

##### 4.2 Normalize data

The data acquired by accreditation and ranking agencies needs to be normalized. There is little merit in asking for annual budgets, money spent on salaries, infrastructure, and books in absolute numbers. Small institutions would never stand a chance to compete this way. Hence, absolute measures for determining ranks are not a good strategy. Data for an institution may be normalized by using comparative statistical measures and removing the outlier data measurements. For instance, determining the national and regional mean and median scores for different performance criteria could be used to determine whether institutional performance is significantly higher, thus indicating relative outperformance.

##### 4.3 Contextual benchmarking

Benchmarking needs to be applied to similar institutions. This will ensure that apples are compared with apples and not oranges. Parameters such as the type of institution, age of the institution, location of



the institutions, annual fees, number of students, student demographics, faculty demographics, levels of programs offered (UG, PG, PhD) should be considered and separate rankings for different categories should be computed. Further, rather than absolute ranks, percentile ranks should be computed as institutional rankings are complex and no process is foolproof. For large institutions the quality of the programs within the institution can vary significantly, but a singular rank overlooks that variance.

#### 4.4 India-specific measures

India needs to rephrase the question, “What is world-class education?” to “What is world-class education from an Indian perspective?”. In many ways, Indian students are already world-class, making up a significant percentage in the top Ivy-League Universities. Indian managerial talent is widely sought by global corporations, indicated by the growing number of Indian-origin CEOs. Global corporations invest in India due to their confidence in meeting their talent needs from India. Our top 10-15% students are truly world-class. We need to be patient with the process of “institution building” and realistic expectations should be set for institutions. The normal distribution in natural processes and performance must be respected and not tinkered with. It is fine for certain institutions to be “local-class”, effectively meeting the needs of the immediate community and equipping their students to lead successful lives as responsible citizens. They need not generate revenue from consultancy or incubate startups or publish papers in SCIE/Scopus-indexed journals. Creating an India-specific discourse on local needs and required quality standards is imperative and much needed.

#### 4.5 Devising holistic measures and using technology for benchmarking

Can we design measures to evaluate institutional value creation or stakeholder delight and satisfaction? Can we measure institutions on a maturity scale with respect to various parameters? Why cannot institutions be provided tools to self-assess and improve? Why cannot a quality analytics framework for institutions be deployed to track performance measures and automatically compute percentile scores for them within their region, state and across the country? Why can't we compare institutions offering similar programs, fee structures and student enrolments? Large problems require innovative solutions and out-of-the-box thinking. Performance

Insight 360 [26] is one such technology framework allowing institutions to measure, track and benchmark their performance internally and externally leading to systemic improvements. Such frameworks can be scaled to perform automated benchmarking of institutions across the country on diverse parameters and for different peer groups of institutions without direct comparisons. The use of AI to distinguish between organic and inorganic institutional outcomes can be explored. It can also be used to analyze the large volumes of data for institutions, check for its correctness and perform basic grading to help aid the human accreditors. Automation of the accreditation process will be critical to ensure timely completion of accreditation cycles for the large number of institutions in India.

#### 4.6 An India-specific research policy

India needs to prioritize its own research by creating appropriate platforms for its publication and dissemination. For instance, global management journals are not too keen to publish a strategic management case study in a small organization in a tier-II town in India. Indian journals should be promoted, and they must be tasked with adopting a nurturing approach to help improve the quality of research. Journals should also be evaluated on their diversity score, which would preclude the acceptance of papers from a handful of institutions or authors. It can be observed that papers written by authors belonging to lesser-known institutions do not receive the same level of consideration as those belonging to well-known institutions. India should perhaps mandate a double-blind review policy for all journals. All papers should be submitted without author information to remove this anomaly in the publication process. All published papers should mandatorily be made open access after a certain time to level the playing field. Finally, India should have its own indexing database, its own citation calculation, and its own conference publishing database for promoting research which is local, regional and which does not find a credible platform today.

It may be argued that such an approach may adversely impact the internationalization of the IHE. India, therefore, needs to carefully balance its intrinsic interests while competing internationally. In any case, not all Indian institutions need to vie for international rankings. That can be left to the top IITs, Older, larger Universities, recently announced Institutes-of-Eminence (IoEs) and few select private universities.

These institutions are already showing improved outcomes in terms of international rankings and helping raise the image of IHE globally. The rest can focus on meeting qualitative academic outcomes and needs of the local industry and society without any external pressures of producing outcomes which they are not primed to produce at this stage.

#### 4.7 Creating a level playing field

The regulatory bodies should ensure that the playing field is leveled, and that autonomy cannot be used to create arbitrarily large intake capacities by institutions. For instance, one of the top Universities in India expanded its annual intake in the computer science program from 200 to 1000 overnight, severely impacting several institutions around them in the region. The opportunistic cashing in on brand value by a big player impacted the sustainability of several institutions in the region in this case. That fifteen-year-old universities are boasting of student enrolment numbers in the range of 20,000 to 25,000 demonstrates the lopsided and concentrated growth within IHE. This coincides with a sharp contraction in other institutions which did not have the autonomy to initiate course corrections or respond with agility to changing trends.

#### 4.8 Implement NEP in Spirit

Finally, the time has come to deregulate the sector completely and let market forces regulate the sector in response to the natural supply and demand dynamics. The current regulatory dispensation has exerted unequal control over the sector resulting in an imbalanced growth and undue advantage to certain players. This needs to be corrected on priority to help the sector find its natural equilibrium and correct the excesses of the last decade. Graded autonomy, as envisioned by the NEP, to all institutions must be made a reality giving them more control over their strategy and consequently their destiny. The current consolidation phase will then lead to a new phase of growth marked by new capacities, increased professionalism and above all true value-creation for the millions of youths in India. The Indian culture, philosophy and history is rich. The country championed the Guru-Shishya model based on deep engagement, personalized tutelage, and a deep bond between the guru and the shishya. It is time to revisit the roots of our ancient wisdom, seek inspiration and move towards more holistic and meaningful expectations/outcomes from the IHE.

### 5. Conclusion

Quantitative measures, statistics and analytics are great tools for uncovering trends, as indicators of progress and determinants of productivity and outcomes. However, when they become absolute measures of quality and strong incentives are linked to them, the system connives and collaborates to game them. Gamification does have its advantages, but it might not be suitable for a sector such as the Indian Higher Education. Large private institutions have been able to use quantitative outcomes to consolidate their brand value, admit a disproportionately large number of students and charge premium fees. This has impacted access to education for students who aspire to get admitted to such institutions. Thus, it is time to review the present dispensation of ranking and assessing institutions based on purely quantitative outcomes. It is therefore recommended that the mechanism for institutional assessment, evaluation and ranking be modified as follows:

- A. Institutional performance data must be normalized against regional and national average scores.
- B. New ranking categories depending upon size, revenue, location, age of institution etc. should be introduced to make the rankings more inclusive and holistic.
- C. Percentile ranges instead of absolute ranks be declared for individual institutions for overall assessment and along different parameters.
- D. More qualitative measures should be adopted to determine institutional impact and reputation in the local/regional context.

We are already seeing the fallout of the “gamification” process and its recognition by the regulatory agencies. Two recent developments include:

- a. Removing the mandatory condition to publish papers by PhD scholars as part of their PhD program [27]
- b. Revision of the accreditation process by NAAC including award of non-letter grades to institutions [28].

The use of more qualitative, holistic, and balanced measures shall help mitigate the extent of

gamification in IHE. This will further reduce the motivation for individuals and institutions to subvert the system. We can hope that it will lead to a more organic growth in IHE's qualitative and quantitative outcomes. That in turn will positively impact broad-based societal and national outcomes going forward.

## References

- [1] Gupta, V., Malik, N., Kelkar, M., & Rai, A. (2022, April 15). Optimizing learning outcomes in the Indian higher education sector. Deloitte Insights. <https://www2.deloitte.com/us/en/insights/focus/reimagining-higher-education/indian-higher-education.html>
- [2] NASSCOM Talent Demand and Supply Report – AI and Big Data, 2019. NASSCOM. <https://nasscom.in/knowledge-center/publications/talent-demand-supply-report-ai-big-data-analytics>
- [3] India Skills Report (2019). All India Council for Technical Education (AICTE). <https://www.aicte-india.org/sites/default/files/India%20Skill%20Report-2019.pdf>
- [4] Committee to Advise on Renovation and Rejuvenation of Higher Education (2009). Yashpal Committee Report. <https://www.aicte-india.org/downloads/Yashpal-committee-report.pdf>
- [5] Chhapia, H. (2020, February 12). 50% seats vacant, no new engineering colleges for 2 yrs: AICTE. The Times of India. <https://timesofindia.indiatimes.com/home/education/50-seats-vacant-no-new-engineering-colleges-for-2-yrs-aicte/articleshow/74108434.cms>
- [6] Pant, S. (2019, September 20). Why India should look beyond Engineering and diversify liberal arts education? India Today. <https://www.indiatoday.in/education-today/featurephilosophy/story/why-india-should-look-beyond-engineering-and-diversify-liberal-arts-education-1601127-2019-09-20>
- [7] Matta, A., & Kaushik, M. (2021, April 22). The state of liberal arts education in India. Forbes India. <https://www.forbesindia.com/article/edtech-special/the-state-of-liberal-arts-education-in-india/67547/1>
- [8] Nayar, A. (2018, July 31). AISHE Report 2017-18 Confirms the Rapid Privatisation of Higher Education Since 2013-14. NewsClick. <https://www.newsclick.in/aishe-report-2017-18-confirms-rapid-privatisation-higher-education-2013-14>
- [9] Oravec, J.A. (2019). The “Dark Side” of Academics? Emerging Issues in Gaming and Manipulation of Metrics in Higher Education. The Review of Higher Education 42(3), 859-877. doi:10.1353/rhe.2019.0022
- [10] Improving the Quality of Research by Faculty and Creation of New Knowledge and Strategies for Improving Research Culture in Colleges/Universities. (2019). UGC. [https://www.ugc.ac.in/pdfnews/5816125\\_Promoting-and-Improving.pdf](https://www.ugc.ac.in/pdfnews/5816125_Promoting-and-Improving.pdf)
- [11] New Education Policy 2020. (n.d.). Ministry of Human Resource Development. Retrieved November 2, 2022, from [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
- [12] Iftikhar, F. (2021, September 23). Central government warns colleges against fake ads to mislead students. Hindustan Times. <https://www.hindustantimes.com/india-news/central-goverment-warns-colleges-against-fake-ads-to-mislead-students-101632425107038.html>
- [13] The Indian Higher Education: Vision 2040 (2021, February), FICCI Report. <https://www.ficci-hes.com/pdf/2021/eyreport.pdf>
- [14] The Hindu Business Line. (2021, March 17). How digitization and technology are shaping education in India. <https://www.thehindubusinessline.com/opinion/how-digitisation-and-technology-are-shaping-education-in-india/article34090642.ece>
- [15] Indian edtech startups see investment of \$2.22 bn

- in 2020, shows data (2018, July). Business Standard. [https://www.business-standard.com/article/education/indian-edtech-startups-see-investment-of-2-22-bn-in-2020-shows-data-120121700501\\_1.html](https://www.business-standard.com/article/education/indian-edtech-startups-see-investment-of-2-22-bn-in-2020-shows-data-120121700501_1.html)
- [16] Thiebes, S., Lins, S., Basten, D. (2014). Gamifying information systems A synthesis of gamification mechanics and dynamics. Twenty Second Eur. Conf. Inf. Syst. 1–17.
- [17] NIRF – Report on India Rankings 2021 (2021, September) [https://www.nirfindia.org/nirfpdfcdn/2021/pdf/Report/IR2021\\_Report.pdf](https://www.nirfindia.org/nirfpdfcdn/2021/pdf/Report/IR2021_Report.pdf)
- [18] World Bank Data – Research spending as a percentage of GDP. (2022). <https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS>
- [19] Chapman, D. W., & Lindner, S. (2016). Degrees of integrity: The threat of corruption in higher education. *Studies in Higher Education*, 41(2), 247–268
- [20] Oravec, J. A. (2017). The manipulation of scholarly rating and measurement systems: Constructing excellence in an era of academic stardom. *Teaching in Higher Education*, 22(4), 423–436.
- [21] Selvamani, L., & Arul, P. G. (2019). Indian universities and their involvement in patenting activity. *Indian Journal of Science and Technology*, 12.
- [22] Patents granted in India tripled in last 5 years; still a fraction of China, US (2022, January) <https://www.livemint.com/companies/start-ups/patents-granted-in-india-tripled-in-last-5-years-still-a-fraction-of-china-us-11643630387938.html>
- [23] The Award Sellers, (2019), The Hindu. <https://www.thehindu.com/education/the-award-sellers/article26036108.ece>
- [24] NAAC to junk disputed grades, will just award accreditation. (2022). Times of India. <https://timesofindia.indiatimes.com/india/naac-to-junk-disputed-grades-will-just-award-accreditation/articleshow/95461172.cms>
- [25] Why faculty salaries need to be a priority? (2022). Times of India. <https://timesofindia.indiatimes.com/education/news/why-faculty-salaries-need-to-be-a-priority/articleshow/92601422.cms>
- [26] Gupta, A. (2013). Performance insight 360: a cloud-based quality management framework for educational institutions in india. 15th IEEE Conference on Business Informatics. IEEE, United States of America
- [27] Publishing research papers in journals no longer mandatory to get PhD: UGC. (2022). News 18. <https://www.news18.com/news/education-career/publishing-research-papers-in-journals-no-longer-mandatory-to-get-phd-ugc-6347185.html>
- [28] NAAC to junk disputed grades, will just award accreditation. Times of India. <https://timesofindia.indiatimes.com/city/mumbai/naac-to-junk-disputed-grades-will-just-award-accreditation/articleshow/95462803.cms>