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RESEARCH ARTICLE

ALL INDIA SURVEY ON HIGHER EDUCATION: DOES THE DATA IMPACT POLICIES?

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Abstract

Higher education institutions have three core functions, namely teaching and learning, research and community engagement. In a country like India education surveys involving million of students enrolled in various Higher Education Institutions (HEIs) with low response rates can be a major concern. It is a big challenge for the country to achieve the target of gross enrolment ratio (GER) in HEIs to 50 percent by 2035 as set by the National Education Policy (NEP)-2020. The paper is focuses on the issues related to non-responses in submission of student enrolment data or non participation by HEIs in the All India Survey on Higher Education Survey (AISHE), which is annually conducted by the Ministry of Education, Government of India. The paper pinpoints the bottlenecks created in the higher education system with some pointers to the problems. The present study is an attempt to explore and highlight the response of uploading or providing the statistical information to AISHE to highlight the issue which may impact the purpose of the Survey itself. The study elucidates the growth and comparison of the response and non-response of the Universities and their participation in All India Survey on Higher Education (AISHE). It also aims to examine the types of the Universities responding and non-responding and their trends. The paper is expected to help the policy makers and researchers in understanding the moving trend of higher education and its direct and indirect impact on the higher education due to non-response of the Institutions.

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Introduction:-

The education statistics are needed by the policy makers, government bodies, and researchers. The education statistics “can be grouped into two broad categories namely (a) policy formulation and implementation by various Government agencies and (b) Educational Research” (Tilak et al, 2014). Data comes “in many different shapes and are used in a variety of ways. Understanding these differences is important for designing policies that balance opportunities and challenges” (El-Dardiry et al, 2021). A MIT study found that a data driven decision making approach helps to achieve 5 to 6 percent higher productivity (Brynjolfsson and Mcelheran, 2017). A “data-driven approach” is essentially means strategic decisions based on data analysis and interpretation. The “data-driven approach” helps the business organizations, policy makers and Government bodies to examine and organize their data to serve the target people or customer in a better way as compared to opinion building exercises.

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“The use of big data and data analytics are slowly emerging in public policy-making, and there are calls for systematic reviews and research agendas focusing on the impacts that big data and analytics have on policy processes. Big data and data analytics have been seen as augmenting knowledge, ultimately leading to better decision-making”. (Suominen and Hajikhani, 2021). Having access to massive amounts of data has enabled significant innovation in public policy as well as business purpose.

The OECD emphasized that “in order to produce internationally comparable education statistics and indicators, it is necessary to have a framework to collect and report data on education programmes with a similar level of educational content”. OECD strives for better policy and better lives.

While collecting and compiling the educational data from the HEIs, researchers and statisticians are always facing two prominent challenges with regard to its reliability and non-responsiveness. Many times, it creates bottlenecks in their timely processing and publication of data. There are big challenges with regard to collection, compilation and publication of educational statistics as observed by the Ministry of Statistics and Programme Implementation, Government of India. It was also observed by the Government agencies that large gaps in data and bottlenecks for timely processing and publication.

The collection of data of Higher Educational Institutions for planning and development of higher education system, strategic decision making and funding for development of education sector and preparation of Annual Reports. There are two main bodies that collected the data through offline mode and web-based online mode by University Grants Commission (UGC) and Ministry of Education (MoE) respectively. India is moving fast towards the digital transformation and the higher education is undergoing drastic changes especially post Covid-19. There is a greater emphasis on MOOCs based courses incorporated in every university programmes and the UGC also come with new Regulations allowing up to 40% of credits through SWAYAM Digital platforms. Online education is gaining popularity among digital native students groups in the universities.

Genesis of the AISHE

The University Grants Commission (UGC) being a regulatory body for the higher education had played a pivotal role in collecting and disseminating the higher educational statistics for long time till 2009-2010. There was bottleneck in getting data from the State Universities and other institutions controlled by the State Government.

“Higher education is of vital importance for the country, as it is a powerful tool to build knowledge-based society of the 21st Century. With the growing size and diversity of the higher education sector particularly in terms of courses, management and geographical coverage, it has become necessary to develop a sound database on higher education” (AISHE Pilot Study Report, 2011). As per the AISHE Pilot study report, the data base was inadequate and out-of-date and incomplete. The data was suffered with inordinate time lag and due to which GER does not reflect the true picture of the country’s development in the higher education sector. Realizing the importance of higher educational statistics, the Government of India has taken control of the collection and compilation and publication of these data through specialized officers from the field. The first All India Survey on Higher Education (AISHE) was started in the year 2010-11, as an annual survey, under the direct control of the Department of Higher Education, Ministry of Education. The aims and objectives of the AISHE Survey were to build a robust database and to assess the correct picture of higher Education in the country involving the national level regulatory bodies such as UGC, All India Council for Technical Education (AICTE), National Medical Commission (erstwhile Medical Council of India) etc.

“The higher education segment in India is evolving and continues to need reliable and comprehensive state and union territory-level data that higher education departments can work with” (Deloitte, 2021). Data plays an important role in Indian economy and our digital lives are increasingly intertwined. The AISHE survey inputs become more important in the context of the New Education Policy, 2020. The recently concluded a 3-day Education Summit of Vice Chancellors of Central Universities, Directors of Technical Institutions organized by the UGC under the banner of ‘Akhil Bharatiya Shiksha Samagam’ on the Implementation of National Education Policy, 2020 at Varanasi (Uttar Pradesh) in July 2022. The Summit was aimed to devise strategic implementation of NEP-2020 and the address by the Prime Minister of India shows the commitment of Government of India towards implementation of the NEP-2020.

At present, the data collection is made through web-based electronic mode under digital transformation. The major focus areas of survey are student enrolment, academic programmes with indicators like institution density, GER,

gender parity etc. The target institutions include Central/State Universities, Deemed to be Universities, Technical institutions, colleges, professional institutions (medical, para-medical, Design schools such as National Institute of Design, National Institute of Fashion Technology, Hotel management etc.) under three broad categories viz. universities, colleges and stand-alone institutions. After more than one decade of its first survey, AISHE became the baseline data which is used for conducting special and longitudinal surveys and generating additional data from HEIs to be then used as inputs for micro-level higher education planning at the Central, State levels and its regulatory agencies.

Growth of Higher Education in India

The time series data on Institutions, Enrolment of students in Higher Education in India were compiled from various Reports published by University Grants Commission (1950-51 to 2009-10) and AISHE reports (2010-11 to 2019-20), Ministry of Education, Government of India. The number of institutions of Higher Education right after independence is presented in Table-1. It is grouped in Universities/Universities level Institutions, College. Enrolment of student in higher education is also depicted from 1950 to 2019-2020. The data has been presented with trend analysis.

Table 1:- Growth of Institutions, Enrolment in Higher Education in India.

Data collection mode	Year	University		Colleges		Student Enrolment	
		Nos.	Trend %	Nos.	Trend %	Nos.	Trend %
UGC (Offline mode)	1950-51	32	100	695	100	173696	100
	1960-61	56	175.00	1542	221.87	556559	320.42
	1970-71	102	318.75	3604	518.56	1953700	1124.78
	1980-81	133	415.63	4722	679.42	2752437	1584.63
	1990-91	190	593.75	7346	1056.98	4924868	2835.34
	2000-01	256	800.00	12806	1842.59	8399443	4835.71
	2009-10	533	1665.63	31660	4555.40	17243352	9927.32
AISHE (Online Mode)	2010-11	621	1940.63	32974	4744.46	24185295	13923.92
	2018-19	993	3103.13	39931	5745.47	33427320	19244.73
	2019-20	1043	3259.38	42343	6092.52	34249437	19718.03

Note: Trend Percentage= (New Value/Start Value)*100 Growth Rate= (New Value -Old Value/Old Value)*100

There are two type of data collection platform one offline mode (traditional) by UGC and other web-based online mode (electronic), from the above table, it depicts that there are more information received regarding functioning of number of universities, number of colleges and increase of number of enrolments. From the period 2009-10 to 2010-11 the number of Universities (17%) increased from 533 to 621 and number of colleges (4%) increased from 31660 to 32974. There is a tremendous increase in the student enrolment (40%) from 172.4 lakh to 241.8 lakh. It appears that more responses are received on the AISHE portal than UGC.

Method of data collection for AISHE Surveys

The Ministry of Education has nominated State Nodal Officers in each States/Union Territories to coordinate the collection, compilation and supply of data (offline/online). The nodal officer also perform the role of the Statistical Investigator and primarily responsible for data capturing also. Most of the nodal officers in the institution level who have been charged with additional duties as investigators are not trained properly and hard pressed.

The results published in the AISHE Surveys are based on number of participating HEIs and sharing of student data through Data Capture Formats (DCFs) introduced by the AISHE survey team. Thus, there is possibility that some Institutions of Higher Education may not have registered and not provided (non-responded) the data on the portal. Non-response occurs when some respondents' institution is included in the list of institutions but do not respond. The non-response of the Institution for not uploading the information on the AISHE portal may be due to neglecting the additional duties as nodal officer or due to transfer or leaving the service or non seriousness about providing information by the field units to the nodal officer.

Research Methodology:-

The present study is based on secondary data and covers all types of Higher Education Institutions (HEIs) in India. Secondary data from the All India Survey on Higher Education (AISHE) from 2010-11 to 2019-20 of HEIs, undertaken and published by the Government of India, Ministry of Education (Department of Education Higher Education), New Delhi. The results published in the reports are based on number of institutions who have registered and uploaded their information on the portal. The responded means uploaded the data and non-responded means not uploaded the data on the portal.

The following methodology has been used for the analysis of the data:

1. Growth Rate represents in percentage (%): The growth rate is also called as Percentage of Increase and while calculating growth rate annually it is called as Annual Growth Rate (AGR)

$$\text{Annual Growth Rate} = (\text{New Value} - \text{Old Value} / \text{Old value}) * 100 \quad i$$
2. Decade consists of a period of 10 years, thus decadal growth rate (total growth rate) gives an overview of the student growth in a particular decade (2010-11 to 2019-20)
 - i. Decadal Growth Rate = $(\text{New Value} - \text{Start Value} / \text{Start Value}) * 100$
3. Trend Percentage = $(\text{New Value} / \text{Start Value}) * 100$
4. Compound Annual Growth Rate (CAGR): specific term for the geometric progression ratio that provides a constant rate of growth over the time period

$$CAGR = \left(\frac{V_{final}}{V_{begin}} \right)^{1/t} - 1 \quad \text{where}$$

$$V_{begin} = \text{Beginning value} \quad V_{final} = \text{Final value} \quad t = \text{Time in years}$$

Results and Interpretations:-

Growth in Number of Higher Educational Institutions and their Responses

The number of universities and similar institutions listed on AISHE portal has increased from 621 in 2010-11 to 1043 in 2019-20 and the overall growth is 68% as shown in the table-2. Whereas the number of colleges have increased from 32974 in 2010-11 to 42343 in 2019-20 by 28% and the stand alone institutions have increased by 6% only.

Table 2:- Growth of Universities, Colleges and Stand Alone Institutions and their responses.

Year	University				Colleges				Stand Alone			
	Total	Regis-tered	Data Uploaded (%)		Total	Regis-tered	Data Uploaded (%)		Total	Regis-tered	Data Uploaded (%)	
2010-11	621	594	554	89.21	32974	20479	17023	51.63	11095	6725	5713	51.49
2011-12	642	621	611	95.17	34852	23203	20765	59.58	11126	6676	5542	49.81
2012-13	667	660	656	98.35	35525	27345	25138	70.76	11565	6880	5749	49.71
2013-14	723	702	676	93.5	36634	29330	27916	76.2	11664	6860	5897	50.56
2014-15	760	740	724	95.26	38498	34452	33187	86.2	12276	7627	7056	57.48
2015-16	799	774	754	94.37	39071	35667	33903	86.77	11923	7915	7154	60.00
2016-17	864	835	795	92.01	40026	36852	34193	85.43	11669	8453	7496	64.24
2017-18	903	882	828	91.69	39050	38061	34628	88.68	10011	9090	7854	78.45
2018-19	993	962	944	95.07	39931	38179	36308	90.93	10725	9190	8354	77.89
2019-20	1043	1019	993	95.21	42343	39955	38102	89.98	11779	9599	8631	73.27
CAGR %	5.3	5.5	6.0		2.5	6.9	8.4		0.6	3.6	4.2	

Source: AISHE portal

CAGR (%): Compound Annual Growth Rate

The percentage of increase the universities and registration on the portal is almost equal whereas the response of the university is increasing. In comparison to increase in the number of universities and registration on the portal, the response of the universities for uploading the information on the portal is increasing (CAGR by 6%) during 2010-11 to 2019-20.

The Compound Annual Growth Rate (CAGR) of the total colleges is 2.5 and the registered on the AISHE portal is 6.9 and the form uploaded (responded colleges) is 8.4 during the 10 years. The percentage of increase the colleges are low whereas the registration on the portal and the response of the colleges are significantly rising. It means the registration and the response of the colleges are increasing. In comparison to increase in the number of colleges and registration on the portal, the response of the colleges for uploading the information on the portal is increasing (CAGR by 8.4%) during 2010-11 to 2019-20. The Compound Annual Growth Rate (CAGR) of the total stand alone institutions is 0.6 and the registered on the AISHE portal is 3.6 and the response of the stand alone institutions for uploading the information on the portal is increasing (CAGR by 4.2%) during 2010-11 to 2019-20.

Table 3:- Annual Growth of Universities/Colleges/Stand Alone Institutions and their responses and Non-responses

Year	University			Colleges			Stand Alone		
	University Annual Growth Rate (%)	Responses Annual Growth Rate (%)	Non-Responses Annual Growth Rate (%)	Colleges Annual Growth Rate (%)	Responses Annual Growth Rate (%)	Non-Responses Annual Growth Rate (%)	Stand Alone Annual Growth Rate (%)	Responses Annual Growth Rate (%)	Non-Responses Annual Growth Rate (%)
2010-11									
2011-12	3.38	10.29	-53.73	5.70	21.98	-11.69	0.28	-2.99	3.75
2012-13	3.89	7.36	-64.52	1.93	21.06	-26.27	3.95	3.74	4.15
2013-14	8.40	3.05	327.27	3.12	11.05	-16.07	0.86	2.57	-0.84
2014-15	5.12	7.10	-23.40	5.09	18.88	-39.08	5.25	19.65	-9.49
2015-16	5.13	4.14	25.00	1.49	2.16	-2.69	-2.88	1.39	-8.64
2016-17	8.14	5.44	53.33	2.44	0.86	12.87	-2.13	4.78	-12.50
2017-18	4.51	4.15	8.70	-2.44	1.27	-24.19	-14.21	4.78	-48.31
2018-19	9.97	14.01	-34.67	2.26	4.85	-18.07	7.13	6.37	9.92
2019-20	5.04	5.19	2.04	6.04	4.94	17.06	9.83	3.32	32.77
AAGR %	5.95	6.75	26.67	2.85	9.67	-12.01	0.90	4.84	-3.24
DGR %	67.95	79.24	-25.37	28.41	123.83	-73.41	6.16	51.08	-41.51

Source: AISHE portal AAGR (%): Average Annual Growth Rate, DGR (%): Decadal Growth Rate (total growth rate)

Non-Responding Universities

The universities of India are broadly classified in 11 types of the universities from 2010-11 to 2019-20 as given in the table-4. In total 480 universities are not uploaded the requisite data for the survey. The majority of number of non-responding universities are (State Private University 45%, State Public University 28% and Institution of National Importance 9%) and 18% of remaining universities.

Table 4:- Types of Non-responding Universities.

S.No	Types of Univ.	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
1	Central University	1	0	0	2	3	4	4	3	2	3	22
2	Central Open University	0	0	0	0	0	0	0	0	0	0	0
3	Institution of National Importance	5	1	0	1	3	4	9	8	8	3	42
4	State Public University	21	8	10	17	7	5	18	18	12	16	132
5	Institution Under State Legislature Act	3	3	1	1	1	2	2	2	1	0	16
6	State Open	0	0	0	0	1	2	0	1	0	0	4

	University											
7	State Private University	26	18	0	25	21	22	28	33	22	22	217
8	State Private Open University	0	0	0	0	0	1	1	1	1	0	4
9	Deemed University-Government	2	0	0	0	0	0	5	2	1	5	15
10	Deemed University-Government Aided	0	0	0	0	0	0	0	1	1	1	3
11	Deemed University-Private	8	1	0	1	0	2	2	6	1	0	21
12	Others	1	0	0	0	0	3	0	0	0	0	4
	All India (total)	67	31	11	47	36	45	69	75	49	50	480

Source: AISHE portal

State-Wise Non-Responding Universities

As there are total 1043 universities and 993 universities were responded and 50 were non-responding universities. The actual response was 95.21% and non-response was 4.79%. The majority of number of non-responding universities is located in the northern part of India. One north-eastern state namely Meghalaya is also figured in the list. In terms of percentage of non-responding universities are from the state of Rajasthan (20%), Uttar Pradesh (17%), Madhya Pradesh (11%), Meghalaya (6%), Haryana (6%), Delhi (6%) and remaining in other states. Further, it is observed that 12 universities (9 State Private University and one each Central University, Institute of National Importance, State Public University) were listed on the AISHE portal but never responded on the portal, hence the data is not available and could not possible to pooled the student enrolment. The data so collected are pooled for estimating by including previous year's data of University that did not upload data in 2019-20 survey. After pooling of 38 universities from previous information available on the portal the total responding university arrives 1031 (993+38) the percentage of data uploaded is arrived at 98.8% and still information from at least 12 universities are not available. Hence the percentage of non-response institutions stands at 1.2%. Among 1043 Universities, 408 Universities are privately managed, 307 Affiliating Universities and 420 Universities are located in rural area.

Regulatory measures adopted by the Government and other Regulatory bodies to facilitate the AISHE Survey

The UGC under its Act, 1956 has framed Regulations (Returns of Information by Universities) Rules 2004, it is mandatory for the Universities to furnish the information by the specified date. Any University failing to comply with this may result in withholding of grants from the UGC. It has been made mandatory for every university which has been recognized for receiving grants from UGC to furnish necessary statistics to enable the UGC to bring out annual statistics. Subsequently, the Govt. of India under section 25 of the UGC Act, 1956 has issued direction to all the Universities to upload complete and correct data as required by the AISHE through online through a Gazette notification dated 22.6.2015 According to the said notification "the ultimate responsibility of correct, complete and timely uploading on the data annually on AISHE portal in respect of university, college shall be of the Registrar or Principal of the University or college respectively". Besides, non supply of data attracts reduction of grants up to 25% and other punitive action by the Central Government and UGC. As per the Government directives, if any HEIs furnish wrong or inaccurate information the same will attract punitive action.

Discussions and Recommendations:-

The unavailability of Statistics at a regular interval from the institutions is a serious problem due to non-responses of higher educational institutions. The data not only helps policymakers take informed decisions and is a key factor in evaluating the success of policy interventions but it also leads to bringing about transparency in the system.

A significant number of higher educational institutions have not uploaded the information on the AISHE portal, this will lead to the problems for the policy makers and researchers to conclude the appropriate policies/making effective planning etc. The introduction of online/web based information collection introduced by the Ministry of Education helps the AISHE survey for tracking the progress of HEIs to carry out the various analysis, leading to improved performance of the higher education sector.

As the statistical data is uploaded on an annual basis on the portal, instead of assigning the additional responsibility as a Nodal officer, it is suggested that in all Institutions should assign the responsibility of data collection to the planning and development office. The planning and development office should have at least two officials with statistics and IT background to collect the authenticated information and need for generating reliable data on regular basis and to provide the accurate information to AISHE as well as other nodal agencies.

Nevertheless, there is a good sign that the non-response of educational institutions is decreasing every year Universities (from 11% to 5%), Colleges (from 48% to 10%) and Stand Alone Institutions (from 49% to 27%). Still the target to reduce the non-response of higher educational institutions is to be achieved. Non-response is almost impossible to eliminate completely, but there are ways to ensure that it is avoided as much as possible.

Although the Government of India has issued strict directions to all HEIs in exercise of its powers vested under the UGC Act, 1956, still about 5% of universities, 10% of colleges and 27% of stand-alone institutions (B.Ed colleges, polytechnics, pharmacy colleges, hotel management institution) are not providing the necessary data. Most of these non-responding institutions are privately funded and not receiving any grants from the UGC. The Ministry of Education and the State Government concerned had to take alternative measures to pressurize these institutions including de-recognition. Some of the State Governments have come with Private Universities Act under which private players are allowed to establish universities and campuses but there is no provisions made in the Act to provide data to AISHE Survey each year.

The potential application for AISHE data is expected to be used for improved delivery of instructions, matching student enrolment to available programmes in HEIs, Student placement, realizing the target under NEP-2020 and bringing efficient data management system in higher education sector. A stronger coordination between regulatory bodies is needed to ensure effective oversight in the data economy to be used for strategic decisions by the Ministry of Education and State Government in the higher education sector.

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