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Governance for Quality in
Higher Education
in Odisha, India

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ABBREVIATIONS

ASC	Academic Staff College
AISHE	All India Survey of Higher Education
BoS	Board of Studies
CABE	Central Advisory Board on Education
CCTV	Closed Circuit Television
CDC	College Development Council
DoHE	Department of Higher Education
GER	Gross Enrolment Ratio
GoO	Government of Odisha
GSDP	Gross State Domestic Product
HE	Higher Education
HEI	Higher Education Institutions
IASE	Institutes of Advanced Studies in Education
ICAR	Indian Council of Agricultural Research
ICCSR	Indian Centre for Corporate Social Responsibility
ICT	Information and Communication Technology
IUC	Inter University Consortium
KIIT	Kalinga Institute of Information Technology
MHRD	Ministry of Human Resource Development

NAAC	National Assessment and Accreditation Council
NCERT	National Council for Educational Research and Training
NCTE	National Council for Teacher Education
NKC	National Knowledge Commission
OBC	Other Backward Classes
OPSC	Odisha Public Services Commission
PC	Placement Cell
PG	Post-Graduate
QAC	Quality Assessment Cell
QAS	Quality Assurance System
RIE	Regional Institute of Education
RUSA	Rashtriya Uchchattar Shiksha Abhiyan
SC	Scheduled Caste
SCERT	State Council for Educational Research and Training
SHEC	State Higher Education Council
SSA	Sarva Shiksha Abhiyan
ST	Scheduled Tribe
STR	Student-Teacher Ratio
UG	Under-Graduate
UGC	University Grants Commission

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PREFACE

The Government of Odisha, in March 2014, requested the World Bank to support its effort to reform its universities and colleges through technical assistance. The governance of the universities and colleges became one of the key issues where the Department of Higher Education sought advice from the World Bank on setting up an enabling framework of organizational structures with a level of governance and accountability which allows excellence in education to grow at universities and colleges.

Two World Bank consultants were engaged to draft the report on "Governance for Quality in Higher Education in Odisha", namely Dr. Hena Mukherjee, former Lead Education Specialist at the World Bank and Dr. C.B. Sharma, Chairman of the National Institute of Open Schooling in India. The World Bank team guiding the study comprised Kurt Larsen (Senior Education Specialist), Soumi Saha (Analyst) and Nalin Jena (Senior Education Specialist). The team would also like to thank Toby Linden (Lead Education Specialist) for peer reviewing the report.

The team would like to express its gratitude to all the university and college staff at the eight universities and colleges taking part in the study who were interviewed and shared their precious time as part of gathering material for the this report. Their insights and willingness to share information were instrumental in drafting this report. A special thanks goes to Shri Gagan Kumar Dhal, IAS Principal Secretary; Dr. Ajay Kumar Nayak, Joint Secretary, and Dr. Mihir Kumar Das, Officer in Charge all from the Department of Higher Education for their strong support in making this study happen. The discussions and updates with them were critical to ascertaining assessment of sectoral management and academic issues. The report was also peer reviewed by Vice Chancellors of Utkal University, Berhmapur University and Fakir Mohan University of Odisha.

We thank DfID for providing resources through a Trust Fund and the Office of the Country Director, World Bank Delhi office for facilitating the execution of this report.

The rise of the global economy, where social and economic development are driven by knowledge coupled with the information and technology revolution, signifies that tertiary education everywhere cannot continue with business as usual. The hope is that by creating, applying and disseminating new ideas and technologies to greater numbers, higher education systems will graduate a skilled, flexible and productive work force.

Throughout India, as elsewhere, tertiary education has expanded immensely bringing with it not only opportunities to greater numbers but also new challenges. This situation is reflected in the state under study, Odisha. Long-standing systemic challenges require adequate responses which include the need to: expand the higher education system in a sustainable way, eschewing ad hoc short-term solutions; take on board complex issues of quality and relevance; address inequalities of access and outcomes; and put into practice more flexible government structures and management practices. Above all, the state has the responsibility to set up an enabling framework of organizational structures with a level of governance and accountability which allows excellence in education to grow. Such structures need to be responsive to changes in knowledge creation and application, translating these to meet changing labour market requirements.

Objective of the Paper

This paper aims:

◗ To describe and analyze the state of governance in Odisha higher education

with special focus on the role of the Higher Education Department of the GoO, university management, college management and the relationship between these structures.

◗ To analyze and re-examine the concept of increased autonomy for HEIs in Odisha.

◗ To make recommendations on how to improve efficiency, effectiveness and accountability for increased autonomy in higher education governance.

The scope of the study includes primarily the governance and management system across the Higher Education (HE) sector in Odisha; the current Quality Assurance System (QAS) including affiliation and accreditation and the inter-relationship between QAS and HE governance system; issues associated with autonomy in Higher Education Institutions (HEIs) in Odisha; the existing policy and legal environment in view of systemic transformation of governance for excellence; and international experience of good practices of governance and management system focusing on quality assurance.

The framework for the study was provided by Odisha's objectives to reform Higher Education for the 21st Century. The State's Mission statement highlights the following goals in the State Higher Education Plan at a Glance for Odisha:

◗ Provide greater opportunities of access to higher education to all eligible persons and in particular to vulnerable sections.

◗ Expand access by supporting existing institutions, establishing new institutions,

supporting State Governments, and Non-Government Organizations/civil Society to Supplement public efforts in removing regional or other imbalances of the contemporary System.

◗ Initiate Policies and programmes for strengthening research and innovations and encourage institutions, public or private to engage in stretching the frontiers of knowledge.

◗ Skill development as corollary to reap the benefits of the demographic profile.

◗ Promote quality of higher education with the improvement of the infrastructure and faculty, academic reforms, improvement of governance, and institutional restructuring.

Methodology and Data Collection

The preparatory stage of the study was devoted to a desk review of the key documents which spell out the regulatory framework for institutional governance and autonomy for India and the State of Odisha, in both public and private higher education institutions. Three background reports focusing on governance, quality and equity issues in Odisha higher education provided an updated context for the desk review.

Periodic discussions and updates from State Higher Education Department officials were critical to ascertaining their assessment of sectoral management and academic issues. Field visits were undertaken to eight HEIs in Odisha to better understand issues impacting institutions and their teaching-learning outcomes. The study report draws specific information heavily from individual and group interviews with personnel from the institutions listed below which include: three government universities, two government colleges-an autonomous government college and a non-autonomous government college; an autonomous private grant-in-aid college; a private state university and a deemed university:

◗ Utkal University, Bhubaneswar.

◗ RD Autonomous Women's College, affiliated to Utkal University.

◗ North Odisha University, Mayurbhanj.

◗ Badipada Women's College, affiliated to North Odisha University.

◗ Ravenshaw University, Cuttack.

◗ Rayagada Autonomous College, a private institution.

◗ Centurion University of Technology and Management, Khorda (Private State University).

◗ KIIT, Bhubaneswar (Deemed University).

Financial Management Study

A parallel study on Financial Management of Universities and Colleges in Odisha was undertaken during the same period as this study on governance and quality. It drew its data from questionnaires administered in 20 universities and colleges representative of the different categories of higher education institutions in Odisha. The findings of the recently completed study report provided a key data source for this study.

Stakeholder workshop

Senior officials from the Odisha Department of Higher Education, two Vice-Chancellors, academic and administrative staff from universities and colleges participated in a stakeholder workshop held in Bhubaneswar on April 25, 2015. The views and comments of the 30 participants have contributed to the discussions and findings of this report.

The report's analysis has viewed the institutions through the lenses of governance and quality while paying attention to the relevance of their programs to the world of work, as well as their effectiveness and efficiency as higher education institutions.

POSSIBLE WAYS FORWARD

Based on this study's findings, some possible ways forward were identified and discussed at the April 25, 2015 workshop in Bhubaneswar. Systemic and institutional issues characterizing the Odisha higher education sector provide the basis for the suggestions. These are summarized as a matrix with major issues and points elaborated in this paper (see Figure 1: Possible Ways forward).

FIGURE 1: Possible Ways Forward

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Faculty			
Human Resource Review	Complete identification of teacher vacancies in colleges by number, subject area and location followed by recruitment of teachers	Develop a strategic staffing plan which (i) demonstrates reasonable teacher-student ratio; and (ii) rationalizes staff responsibilities for academic and administrative tasks	DoHE
Key supporting tasks not adequately staffed	Identify in consultation with student bodies those areas	Appoint or redeploy existing staff in the HEIs for handling tasks like placement, quality assurance, alumni association etc.	DoHE, VCs, Principals
Transfer of teachers in affiliated colleges	Review impact of transfer policy on college staffing with special attention to impact on rural colleges	Increase authority to Vice-Chancellors so that they have a bigger role to play in transfers of college teachers	VCs with restored authority
Promotion scheme for teachers	Develop a promotion scheme for faculty that highlights merit and not solely seniority	Reactivate the merit-based promotion policy without totally discounting seniority	DoHE
Teachers for self-financing courses	Develop guidelines for selection of teachers of self-financing courses	Streamline payment for guest-faculty with guidelines for remuneration	DoHE
Curriculum			
Curriculum design, review and renewal	Decision to continue present practice of Academic Councils deciding on curriculum (CABE Report, 2009)	State may provide guidelines/ framework for curriculum on different subject areas	DoHE, Universities and Colleges

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Curriculum too theoretical, requires stronger work/ vocational orientation	Curriculum design reviewed to identify aspects and methodologies to strengthen institution-work linkages	Develop and include more practical activities, soft skills and work-related activities including internships with private and public sector employers; impact of changes to be evaluated and fed back to BoS	Universities' and Colleges' Curriculum Committees
Composition of Board of Studies	Assess composition and functioning of Board of Studies	Board membership Terms of Reference to be amended to include representation from qualified curriculum experts, industry and students (e.g. Student Faculty Committee in JNU, IIT; representatives from industry in China)	DoHE, Affiliating Universities College Development Councils
Need for more proactive role of Affiliating University	Assess relevance of BoS members' skills in curriculum design, evaluation and renewal; Provide technical training to BoS members on curriculum design and renewal	Assist BoS to formulate curriculum evaluation and renewal scheme to be used on an ongoing basis	Affiliating Universities, College Development Councils
Inclusion			
Support for all categories of learners: SC/ST/OBC, physically challenged and girls	Assess extent of awareness on campus with assistance of students from the relevant categories	Organize awareness seminars/ workshops with faculty and students on inclusion issues	Universities and Colleges
Insufficient infrastructural facilities (including hostels) for all categories, noting the need for proper security for all	Identify facilities which require improvement and apply/seek clearance for the funds to implement these	Provision for co-curricular and recreational facilities for all, with disabled friendly infrastructure and security for women	DoHE, Universities and Colleges
Inadequate number of courses/programs for tribal population	Assess demand for specific areas and develop programs on pilot basis	Evaluate outcomes of pilot and launch revised programs	Universities and Colleges
Professional Development			
Limited capacity for training and professional development (only 2 Academic Staff Centres) in Odisha	Form small joint group comprising representatives from DoHE, Universities and Colleges to organize state-based training centres and programs, develop proposal and seek appropriate funds	Organize own Academic Staff Colleges for orientation and refresher training, e.g. Pattern of Inter-Univ. Consortium (IUC) of UGC[1]; contribution and role of ICT facilities for training	DoHE, Universities and Colleges

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1 IUCs are autonomous centres established by UGC within the university system, to provide common advanced centralized facilities for universities to play a vital role in offering expertise to teachers and researchers and to provide access for research, to state-of-the-art equipment and library facilities.

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Need to strengthen capacity of DoHE to lead and monitor quality reforms in the higher education sector	Prepare a phased training plan for staffing of Directorate in DoHE (expanding duties to cover all externally funded quality and infrastructural improvement)	Directorate to be staffed adequately in number and training for range of tasks; special attention to be given to include younger staff with specialized training	DoHE
College teachers need content and methodology updates periodically	Universities to assist affiliated colleges to organize discipline specific associations (e.g. Science Teachers Association in BARC[2]) and help identify areas of focus and expertise to support activities	Associations be constituted and annual/periodic meetings be organized (e.g. Science teachers association in BARC etc.) providing ongoing support to urban and rural teachers through activities such as newsletters, seminars, workshops, etc.	Affiliating Universities with support from DoHE
Inadequate utilization of ICT facilities despite growing investment	HEIs to conduct rapid assessment of utilization of available ICT to identify extent to which facilities utilized by staff, students and what the gaps in infrastructure are	ICT based short term hands on programs to be organised for all who are not computer-literate including policy makers, and top-level executives	Universities and Colleges
Gap in training programs for non-academic staff in universities and colleges	Identify areas of competencies, updating and enrichment required for chief executives and relevant officials in financial, administrative and other areas	Develop training modules in priority areas and pilot with small group before going to scale for which appropriate funds need to be earmarked	DoHE supported by HEIs
Research & Development			
Absence of systemic action research to support quality improvement in teaching and learning as well as building staff capacity	Universities to provide leadership to colleges in developing skills in rapid action research in key areas such as specific subject area, impact of Implementation or Quality Assurance Cells, etc.	Colleges undertake action research in key areas and departments providing reports and findings with possible solutions to appropriate authorities for action	Affiliating Universities
Low level of academic research and publications	Universities to provide leadership in developing academic research skills such as training in (i) research methodology and statistics; (ii) writing of proposals; (iii) seeking funding; and (iv) publication in refereed journals	Universities may include college staff in collaborative research particularly those which may be funded or sponsored by industry	Affiliating Universities
Extremely low to negligible level of funding for research	State needs to take proactive role in increasing funding allocation for research from its own, central or UGC budgets; also channelize appropriate information on funding available from external bodies such as ICSSR to colleges; colleges also to seek out sources of funding	State to set up a competitive research grant open to all public and private higher education institutions, identifying priority areas of research in the first phase	DoHE

2   BARC (Bhaba Atomic Research Centre).

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Quality Assurance & Accreditation			
Institutions require funds to improve facilities, staffing etc. for meeting accreditation process requirements	Organize orientation programs on NAAC accreditation for higher education institutions including support for preparing Self-Assessment Report	Institutions be given preparatory funds for meeting accreditation process requirements within an agreed timeframe	DoHE
Responsibility for QA and accreditation-related tasks often unclear in institutions	Lead person selected among staff members for heading the Institutional Quality Assurance Cell (IQAC) and executing all QA-related work for which there will be clear Terms of Reference and expected results	Institutional Quality Assurance Cell will be responsible for all ongoing Quality Assurance work regarding alignment with agreed norms and standards on a continuous basis, including training of fellow staff members in QA work periodically	VCs and Principals
Graduate Employment			
Placement Cells not working at optimal level	Affiliating University College Development Council in collaboration with college identify and train staff member to head the Placement Cell with clear TOR	Head of Placement Cell develops with assistance of college principal and faculty a program of activities such as career guidance and counselling, annual employment fairs, etc.	Affiliating University College Development Council and College Principal
Stakeholders require graduate employment track records over time	Specific training to be given to Placement Cell teams to mount Tracer Studies and disclose results to stakeholders	Starting with a pilot tracer study, colleges agree to support placement cells in organization of tracer studies tracking graduate employment patterns, with full disclosure of results	College Placement Cells
Vice-Chancellors			
VC's tenure too short to bring about needed changes in universities and colleges	Extend VC's term to five years on the basis of a review at the end of three years		DoHE
VC has insufficient financial autonomy to be effective	VC's financial powers and the Accounts Manual of 1997 be reviewed with the objective of giving more autonomy to the VCs		DoHE
VCs lack high-level administrative support to accomplish tasks effectively	Position of Pro-VCs be created to assist the VCs to improve administration (e.g. all Central Universities and Bihar)		DoHE
VCs to develop collegial support across universities to share knowledge and good practice	VCs to meet formally and informally at regular intervals and sharing experiences to find common solutions	Establish a Committee of Vice-Chancellors who will meet regularly including Principals and Registrars, depending on the agenda (example of 'Universities UK' as a strong advocacy group)	VCs

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Colleges - Autonomous Colleges - Universities			
Weak overall capacity of colleges	DoHE and affiliating universities prepare an agenda of quality reform priorities such as filling in sanctioned posts, upgrade qualifications, expedite accreditation process, support research etc.	Implement these priorities with affiliating universities' CDCs taking a more pro-active role and deploying faculty members for specific tasks with goal of increasing number of autonomous colleges and universities only if they meet criteria for upgradation	DoHE, Affiliating Universities' College Development Councils
Colleges have difficulties functioning well as autonomous colleges or universities when upgraded	Transition plan developed on the basis of consultation and survey of good practice with (i) time and funds from DoHE and (ii) guidance from affiliating universities	Transition plan provides basis for a phased Institutional Strategic Development Plan which allHEIs should develop	Colleges to be upgraded
Process of upgradation too slow for developing system as required	Decision to increase output numbers of upgradation to autonomous colleges, universities and cluster universities by 2016/2017	Strengthen all regulatory, administrative, inspection, supervision support to maintain a healthy system	DoHE in collaboration with UGC
System Management			
Functional State Higher Education Council	Operationalize SHEC according to the RUSA guidelines to carry out planning, monitoring and evaluation, quality assurance, advisory and funding functions of the higher education sector	Functional SHEC will be responsible for implementing several of the recommendations on overall strategy and planning in Higher Education and quality assurance	DoHE
Need for a focused State Higher Education Plan	Constitute a team to work full time on a 10-year Strategic Higher Education Plan for Odisha; team to include seconded staff from other Ministries, research bodies and private sector and work to specific set of Terms of Reference which is time-bound	Ten-year Strategic Plan to include vision for higher education; shape, size, projection of numbers of institutions, types, enrolment at under-graduate and post-graduate levels; staffing numbers and disciplines; research areas including priority STEM areas; quality issues and reforms required etc. Report to be finalized after state-wide stakeholder consultations and becomes the foundation for a State Higher Education Plan	DoHE through State Higher Education Council
Overall capacity of DoHE needs strengthening	Based on the State Higher Education Plan, and specific information and data from the Ten-year Strategic Plan, a team is set up to examine the match between HR requirements and identify the gaps	A phased HR Plan is developed which includes categories of staff, qualifications and specific experiences and skills required; details with names of staff available, staff requiring training and upgrading of qualifications, and additional staff required to fill the gaps	DoHE, SHEC

Issue	Short-Term {Within 12 Months}	Medium- to Long-Term {Within 2-3 Years}	Action By
Financing of Universities And Colleges			
Institutional budget allocations not aligned with state or institutional quality development goals	Budget allocations need to increase per capita expenditure to meet national average expenditure	Increased per capita expenditure shows increased expenditure on non-salary areas of development and support such as research and infrastructural facilities	DoHE
HEIs lack funds at their disposal to implement and sustain quality enhancing activities	Decision required to increase funds transfer from Department of Higher Education to HEIs	Funds transferred from DoHE to HEIs show greater decentralization from current 7% (working towards national average of 43%)	DoHE
Institutional strategic development plans to be developed as a basis for utilization of fund transfers	Institutional Strategic Plan (ISP) working group to be formed with the aim of developing a three-year plan with specific details for the first year; process and methodology of developing such a plan needs to be worked out with affiliating universities' assistance; a draft needs to be developed within a 3-month period for consultation and discussions with stakeholders	Annual review, evaluation and adjustment of ISPs to changing features, e.g. larger student intake, recruitment of staff for specialized subject areas' reflecting changing priorities for expenditure; arrange with university and DoHE support moving to electronic monitoring system	Colleges Universities DoHE

THE HIGHER EDUCATION LANDSCAPE[3] IN ODISHA

Most of Odisha's population of 419.7 lakhs (census 2011) is concentrated in rural areas with only 17% in the urban areas. The SC and ST population constitute 17.1% and 22.8% respectively. The 18-23 age group comprises 47.1 lakhs, of which 23.4 lakhs male and 23.7 lakhs female. While 13.4% have completed secondary education, there has been no access to any educational institution for 6.79% of the population (Issue Paper on Access and Equity, pp. 2-3). The literacy level is 72.9, comparing well with the national level of 73.0.

The Gross Enrolment Ratio (GER) for the 18-23 age group in Odisha is 16.3% (18.4% male and 14.3% female) compared to overall India's GER of 20.4% (21.6% percent male and 18.9% female). India aims to reach 25.2% (MHRD 2013) by 2017 and 30% by 2020. Clearly, system expansion is one of the predominant features of the Indian higher education landscape. In Odisha, the highest number of students (74.47%) is enrolled in under-graduate studies followed by enrolment in diploma courses (12.42%) and post-graduate studies (9.96%). Male enrolment (52.94%) is higher than female enrolment (47.06%).

Between 2007-08 and 2009-10 growth in enrolments has been most dramatic in medicine (168.11%), as shown in Table 1, in engineering/

technology/architecture disciplines (127.41%) and law (64.27%). Growth has been low in commerce (3.08%) and arts (7.72%). Enrolments in science increased by 27.45% but agriculture and education saw no growth over the same period. Surprisingly, enrolment in management studies decreased by 8.54%. Despite expansion policies, 15-20% of total intake capacity remains vacant across the different colleges. Explanations include low female, ST and SC participation in general stream colleges and is more pronounced in specialized colleges such as engineering and medicine.

Among Odisha's 18 universities, there are 12 state/public universities, 1 central university, 2 deemed universities and 3 private universities. Affiliated colleges attached to state universities number 1,130 of which 32 (19 government and 13 government-aided) are autonomous colleges and only 162 have been accredited by NAAC. Under-graduate courses in general streams are offered by 704 colleges, in addition to colleges offering technical and medical courses. About 97% of colleges are affiliated to Universities with the remaining 3% either constituent or University colleges.

The total number of teachers in Odisha is just under 40,000 (2012-2013). In 2011, Student-Teacher Ratio (STR) across different types of institutions is fairly comparable: 17.55 in universities, 19.37 in colleges, 16.18 in stand-alone institutions averaging out to18.45 in all Odisha institutions. A shift is seen in 2012-2013 where the STR is 20 compared to the national average of 23.

3 Data for this section have been taken from three background papers prepared for an international workshop held in Bhubaneswar, July 2014 entitled 'Shaping Higher Education in Odisha for 21st Century: Learning from National and International Experiences': (i) Issue Paper on Quality; (ii) Issue Paper on Access and Equity; and (iii) Issue Paper on Management and Governance.

TABLE 1: Growth in enrolment at UG and PG by faculty

	2007-08 (UG+PG)	2009-10 (UG+PG)	Growth (%)
Arts	128110	138006	7.72%
Commerce	33540	34573	3.08%
Science	42981	54778	27.45%
Eng/Tech/Arch	50027	113767	127.41%
Medicine	10231	27430	168.11%
Agriculture	693	693	0.00%
Management	13447	12299	-8.54%
Teacher Education	812	812	0.00%
Law	5122	8414	64.27%
Others	24407	24407	0.00%
Total	**309370**	**415179**	**34.20%**
Post School Diploma	22080	22080	0.00%
Post-Graduate Diploma	769	769	0.00%

Source: Statistics of Higher and Technical Education 2007-08, 2009-10, extracted from Issues Paper on Access and Equity, 2014, Odisha.

OVERVIEW OF THE HIGHER EDUCATION INSTITUTIONAL STRUCTURE IN ODISHA

The Indian higher education operates through three types of institutions:

   i.   Public (funded):
        (a) Central Universities
        (b) State Universities

   ii. Private Universities

   iii. Deemed to be Universities

The public funded universities receive complete funding from the public exchequer while the private universities are supported by private initiatives. Both public as well as private institutions are expected to be not-for-profit institutions. Deemed to be universities were initially supposed to be single faculty institutions (like the Indian Institute of Science, (Bengaluru), Tata Institute of Social Sciences (Mumbai) and others) but during the 1990's the criteria were relaxed by the University Grants Commission (UGC) and a number of private institutions functioning as private institutes were given the status of deemed universities. The Kalinga Institute of Information Technology (KIIT) is one of the Deemed universities in Odisha.

For the public universities the Governor of the State is the Chancellor; for the private universities, both Deemed as well as Private, the Chancellor is appointed by the apex statutory body of the university.[4]

In Odisha, there is one Central University in Odisha which was established in 2009 at Koraput. There major general and technical universities in Odisha are Utkal University (Vani Vihar, Bhubaneswar), Sambalpur University (Jyoti Vihar, Sambalpur), Berhampur University (Brahmapur) and North Orissa University (Mayurbhanj). Utkal University is the oldest and the largest university in terms of student population.

Odisha has a big network of Government Colleges. The colleges are established by the Government of Odisha but are affiliated to the autonomous universities. In response to social demand, and upward pressure exerted in the system as primary and secondary level completion rates improved, higher education institutions in Odisha have increased steadily despite scarce resources, resulting in quality issues of some programs. The major strand of expansion in the system was that of affiliated colleges.

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4 The only exception is Centurion University of Technology and Management, which is a state private university, with the Governor as the Chancellor.

AFFILIATED COLLEGES

The system of affiliated colleges was seen not only as an instrument of enrolment expansion, quality aspects of growth would be supervised by the affiliating university. Affiliating universities are responsible for the academic well-being of their affiliated colleges rangefrom 9 to 322 colleges in Odisha (Table 2) although the UGC advisory has100 as the upper limit.

Affiliated colleges in nine affiliating state universities numbered 1,130 of which only 162 of these colleges have been accredited by NAAC. Of these, only five have received an A status from NAAC, a telling evaluation of the quality of the colleges. The GER of Odisha, currently at 16.3%, aims to reach 30% by 2020, a national target, and affiliated colleges are largely expected to meet the increased demand,

signifying the need for more qualified human resources at various levels, facilities, equipment, and instructional materials. Funding constraints particularly in the public sector and by students and parent for such an increase is a major consideration, if the sector is to stem further erosion of quality in education delivery and indeed be ready to admit more students to meet GER goals. Current per capita expenditure in higher education in the state is low as demonstrated by public expenditure per student of about Rs. 2700 in 2010-11 (EY 2015) compared with the national level of Rs. 3800 in 2010-2011.

Colleges present a heterogeneous ownership landscape: public, private, government-aided, private un-aided, some run by the State Government and others by local bodies. Enrolment in affiliated

TABLE 2: Number of affiliated colleges in State Universities

Sl. No.	University	No. of Affiliated Colleges
1	Utkal University	332
2	Berhampur University	91
3	Sambalpur University	177
4	Fakir Mohan University	63
5	North Orissa University	80
6	Jagannath Sanskrit University	165
7	Utkal University of Culture	37
8	Orissa University of Agriculture & Technology	9
9	Biju Patnaik University of Technology	149
	Total	**1130**

Source: Issue paper on Access and Equity, 2014, Odisha.

colleges represent the large majority of total student enrolment in the state. Student enrolment per college ranges from 73 in University Colleges, 627 in Private Un-Aided to 1669 at University level. The average enrolments in different types of colleges of Odisha (Table 3) indicate that overall average enrolment per college is low and many colleges appear to be functioning below physical capacity. In order to increase enrolments in the state, colleges with under-utilized capacity could increase their intake.

TABLE 3: Average enrolment by category of college

Type	Average Enrolment
State Government	556
Local Body	222
University	1669
Private Aided	576
Private Un-Aided	627
Constituent/University/Colleges	73
Affiliating Colleges	167

Source: AISHE 2011-12 extracted from Issue paper on Access and Equity, 2014, Odisha.

Many higher education reports have concluded that the system of affiliation has lost its relevance as there appears to be little interaction between the colleges and the university except that the university conducts examination, conducts evaluation and declares results. Based on the interviews carried out as part of the study, it seems that the colleges are governed and monitored by the Department of Higher Education more than the university that they are affiliated to. There are cases where teachers are transferred even without any approval, or for that matter, information to the vice-chancellor of the university. As far as the affiliating university is concerned, particularly those with large numbers of affiliated colleges under their wing, faculty are hard pressed for time. Notwithstanding the existence of the College Development Council, university faculty find the mix of responsibilities as university teachers and researchers and college academic supervisors unwieldy. Suggestions from the interviews for improving the situation included: capping the number of colleges per university; identifying designated staff (perhaps by rotation)

or unit in the affiliating university who would handle affiliated college functions; and fully implement the cluster college concept which would still require some affiliating university responsibilities.

India has long been aware of the consequences of rapid expansion and has tried to introduce reforms to re-organize the university and college sector. Primarily, these efforts were seen in the attempt to improve the affiliating system with the concept of autonomous colleges in 1986 (National Policy on Education). Under the 11th Five-Year Plan (2007-2012) a number of reforms were introduced which were envisaged to directly impact affiliated colleges. These include:

◗ Making accreditation compulsory for all HEIs and the establishing of in-house Quality Assessment Cells.

◗ Initiating a two-step system for university affiliation for new colleges of which the first requires compliance with infrastructure and faculty requirements securing a five-year temporary affiliation status, moving to permanent affiliation status after that. The permanent status renders affiliated colleges eligible for UGC grants.

◗ Directing universities and colleges to introduce academic reforms such as the semester, grading and choice-based credit systems, regular curriculum development and reform of examinations.

◗ Improving emoluments for faculty under the 6th Pay Review Committee which looked at Teacher Salary and Service Conditions.

Over and above these reforms, in order to elevate well-performing institutions, the concept of autonomy was introduced by UGC under the XII Plan both for colleges and universities where the following rationale was put forward for supporting college autonomy:

The affiliating system of colleges was originally designed when their number in a university was small. The university could then effectively oversee the working of the colleges, act as an examining body and award degrees on their behalf. The

system has now become unwieldy and it is becoming increasingly difficult for a university to attend to the varied needs of individual colleges. The colleges do not have the freedom to modernize their curricula or make them locally relevant. The regulations of the university and its common system, governing all colleges alike, irrespective of their characteristic strengths, weaknesses and locations, have affected the academic development of individual colleges. Colleges that have the potential for offering programmes of a higher standard do not have the freedom to offer them. The 1964-66 Education Commission pointed out that the exercise of academic freedom by teachers is a crucial requirement for development of the intellectual climate of our country.

Unless such a climate prevails, it is difficult to achieve excellence in our higher education system. With students, teachers and management being co-partners in raising the quality of higher education, it is imperative that they share a major responsibility. Hence, the Education Commission (1964-66) recommended college autonomy, which, in essence, is the instrument for promoting academic excellence (UGC, 2012).

At the next level, well-performing autonomous colleges may apply and be considered for university status. Two examples are Ravenshaw University which was Ravenshaw College; and Rama Devi Women's Autonomous College which awaits notification from the Department of Higher Education.

AUTONOMY FOR COLLEGES

Affiliated colleges have been encouraged to qualify for academic autonomy and have been provided with additional funding from UGC to strengthen institutional capacity. Qualifying for autonomous status involves inspections by NAAC and the state Department of Higher Education, and attainment of at least a B grade from NAAC as well as other criteria. This has proved to be a slow process with inspections taking place sequentially: joint inspections would accelerate the process. To date, only 32 out of the 1130 colleges have achieved autonomy status and only 162 or about 14% of colleges in Odisha have achieved NAAC recognition. To accelerate the process, the State may consider providing funding to facilitate colleges' ability to implement changes required for NAAC accreditation.

All autonomous colleges follow a common set of programmes which include: a semester pattern of study, continuous internal assessment, credit/grading system, student feedback, and self-appraisal by teachers. Benefits of achieving autonomous status as reported by colleges include the additional funding for much-needed infrastructural facilities, timely examinations and results. Delayed results imply that applying for much-needed jobs or higher degree programs are put on hold, and may result in lost opportunities. In some cases there are disagreements within the same college – that autonomy has put pressure on teachers to rush and finish the syllabus to fit in with examination timing.

The principal is responsible for the day-to-day administration of the college. The college however does not have any freedom in recruitment of regular faculty members or non-teaching staff.

The government recruits regular faculty members or have them transferred. This presents a peculiar situation where the colleges are allowed to introduce self-financing programmes, but have no powers to recruit faculty or staff to run these programmes.

Autonomous colleges have the freedom to plan and implement Diploma and Certificate programs: under-graduate and post graduate programs however implement the curriculum set by the affiliating university, only 20% of which can be adapted or adjusted by the college. The Guidelines indicate however that autonomous colleges can 'determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs'. However overall, management, administration and financial controls by the state leave often very little space for autonomous colleges to exercise and expand their own innovative and creative aspects.

The promise of better funding gives an incentive to colleges that are prepared to meet the eligibility status and prepare themselves to receive autonomy status. In the colleges visited, there has however not been much visible improvement in the quality of teaching-learning process of autonomous colleges, despite their NAAC rating (minimum B). Few colleges were able to speak in terms of long-term goals and progress in teaching, learning and student outcomes, much less in terms of innovation and creativity of approach.

The considerations for granting autonomy to the colleges are not very different to the considerations for converting an autonomous college into a university.

Since the National Knowledge Commission (NKC) recommended establishment of 1500 universities and the MHRD accepted the idea of establishing more universities there is much competition for attaining university status. At both levels there are guidelines for preparatory activities. Autonomous colleges waiting for notification for university status from DoHE were visited but there was no evidence that a university would be in place at the start of the new semester, a scant three months away. There was information regarding new student intake but scant knowledge of the new management, administration, programs of study and faculty or a vision of priority targets and goals.

At both levels – from affiliated college to autonomous college and from autonomous college to university status – it would be beneficial if institutions were to prepare their own *strategic plans* and demonstrate ownership of the changed status. Ownership will not occur immediately: change has to take place in an environment where terms and conditions of work are conducive to professional and career development for those involved. Additionally, *a clear transition plan agreed among colleges, the affiliating university and DoHE needs to be in place before notification of changed status is sent.*

The concerns regarding the large number of colleges and their heterogeneity becoming too cumbersome for affiliating universities to handle effectively had led to the decision to confer autonomy to well-performing colleges with confidence that they would follow their strong trajectory of performance and gain excellence. Currently only 32 colleges have gained autonomy and 162 of the affiliated colleges have been accredited by NAAC. It would appear that major changes in this scenario will not be forthcoming as 3-year Perspective Plans (State Plan at a Glance, p. 97) propose modest increases for increasing the number of autonomous colleges to university status (3); conversion of colleges to cluster universities (3); and five existing degree colleges to model colleges. The capacity required for expansion and quality improvement may exceed the planned changes quite significantly.

FACULTY RECRUITMENT, DEPLOYMENT AND QUALITY

Probably the biggest challenge facing the development of quality higher education in Odisha is the recruitment, deployment and retention of qualified academic staff and maintaining a reasonable teacher to student ratio. Currently, large numbers of vacancies exist in government colleges. In March 2014, the Comptroller and Auditor General's Report noted that '42.58 per cent of teaching posts in governmental educational institutions, 35.41 per cent in universities and 15.10 per cent in aided educational institutions were vacant.' Moreover the 'vacancies were also not logically allotted. For example, seventeen subjects in thirteen government educational institutions have no teachers at all, while twelve surplus teachers were recruited for the subjects in five other educational institutions' (EDU Tech Magazine, 17th February, 2015). The table below puts the picture in numbers.

The fact that the Odisha Public Services Commission (OPSC) has not been functional and not made any teacher appointments over the last two decades explains the large number of vacancies. The shortfall of staff had been filled on an ad hoc basis with 'guest faculty' or contractual staff, including lecturers for self-financing programmes. The lack of regular faculty members, whose qualifications are not in compliance with UGC requirements, has a negative impact on teaching and learning. Since contractual staff are not regular, receive salaries which do not reflect need for preparation and full time engagement in teaching or research, they have little motivation to work for an institution's long-term goals or equally in research activities, tending to look out for better paid regular employment and/or take on other part-time employment. In-breeding is promoted by the hiring of their own unemployed graduates. There is evidence of subjects being taught without any regular teacher on board. Current practice may include a teacher providing the same content in the same way over decades without response to student demands nor the keeping pace with changes and growth in knowledge.

Teaching-learning difficulties have been exacerbated by the unavailability of teachers in some specializations such as English Language but

TABLE 4: Status of sanctioned faculty posts

	Professors	Total	Readers & Lecturers	Total
Sanctioned		24		1795
Filled	4		1439	
Vacant	20		356	
Adhoc/contractual			352	
Total		24		1795

Source: State Plan for Higher Education at a Glance, Odisha, 2013-2014 - Base line data.

nonetheless programs on these subject areas are offered; new programs have also been launched without the required staff recruited and in place. To impart and maintain quality education it is necessary that faculty be appointed for all disciplines which are taught. Teachers should also be on task: complaints have been made about teachers who teach and leave the school. The lack of a healthy and work-friendly infrastructure is sometimes the cause. The UGC has fixed norms for minimum number of teachers in each department. At Under-Graduate Level (UG) the number of teachers required include 1 reader and 2 lecturers; at the Post-Graduate Level (PG) there must be 1 Professor, 2 Readers and 3 lecturers. Some colleges conducting PG courses do not have designated positions for Professors.

Generally, urban colleges are better staffed than the rural. An urban Women's Government College visited, for example, has 63 permanent filled out of 72 sanctioned posts. The location provides the explanation: many from the rural areas press for transfers to urban colleges in metropolitan areas such as Bhubaneswar, Cuttack and Sambalpur which enjoy better staff numbers leaving rural colleges under-staffed with long-term vacancies. Apparently the Vice-Chancellors have lost the authority they had formerly possessed of being responsible for teacher transfers. Currently, they are unable to change transfer orders made by government officials as teachers of government colleges are employees of the state. The restoration of the VC's administrative autonomy over the movement of teachers might achieve a more balanced teacher deployment situation. In the case of government universities, according to RUSA guidelines, 80% of sanctioned posts should be filled and faculty members cannot be transferred.

Qualified teachers in place may not always be optimally utilized, particularly when staff have not been hired for certain categories of tasks. Some of the Odisha colleges have senior secondary classes (i.e. +2 or classes 11th and 12th). The curriculum as well as teacher eligibility is prescribed by the school education sector, but the institutions are within college campuses. While these schools are expected to be independent of the colleges, college teachers provide administrative and technical support and

are on hand for other ad hoc tasks. Across colleges, teachers described the negative impact of their being directed to take on such tasks, with time taken away from classroom teaching. Additionally, within colleges, laboratories and libraries often do not have the required technicians or support staff. These tasks also fell to teachers.

An encouraging sign is that efforts in DoHE are in place to tackle aggressively the issue of staff recruitment, deployment and vacancies across colleges and universities. After a two-decade hiatus, the Public Services Commission has re-activated its Teacher Selection Committee for government colleges while the State Selection Board for private college teacher recruitment has to date identified 1,625 vacant positions in various subject areas; the announcements for applications for these identified posts are imminent.

Training, Promotion, Career Progression

Training opportunities, which provide powerful incentives for enhanced workplace interest and performance, are few and far between. Most of faculty interviewed had participated in one or two courses conducted by Academic Staff Centres (ASCs), set up in different universities, only for lecturers and assistant professors: these are (a) the one-month Orientation course usually the first course after recruitment (within five years of appointment) and (b) the three-week subject-specific Refresher Programme training course. These are mandatory for promotion but perceived by many as ineffective. The training should include every level of higher education employees who would benefit from cutting edge training to handle challenging situations including changes in rules and regulations. The ASCs were established in comparatively backward areas with few resource persons available in institutions in the vicinity. An area which deserves special attention is that of leadership training which should be seen as essential for top management as well as those next in line.

Capacity for training therefore tends to be limited. Odisha has only two Academic Staff Centres with many trainees having to travel out-of-state for their training. Reportedly, inadequacy of training received

was in terms of the long intervals between available sessions, unsatisfactory or inconsistent quality of resource persons/course lecturers, lacking an innovative approach, poor infrastructural facilities, relevance of course curriculum particularly to local needs, insufficient use of ICT in professional development courses, and minimal offerings mounted for non-academic staff in HEIs and administrative staff in the Department of Higher Education.

Odisha needs more such training centres and would do well to establish its own not only based on the ASC model but also specialised centres which would provide career-long updating of discipline areas and also be in the vanguard of bringing new information to urban and rural teachers such as areas linked to ICT. With improved connectivity, ongoing professional development support can bring the world to the rural institution if the management wills it and sets up a suitable organizational framework. The Government of Odisha may consider establishing its own staff training institute on the model of the MS University of Baroda, the Centre of Professional Development of Delhi University, a precursor to the ASCs, or the Inter-University Consortium of UGC. The highly positive outcomes of commitment to ongoing training and career-long professional development support for teachers at all levels in countries such as Finland and Singapore are globally acknowledged.

Professional, discipline-based teacher associations have in many countries helped to maintain interest and professional advances among teachers. Teachers, particularly in more isolated geographical areas, need to interact on a regular basis to share their expertise as well as learn from peer groups. A common platform provided by seminars and workshops helps to energise teachers' routine classroom approaches. The State may take the initiative, providing funding and identifying institutions to host the associations' activities.In the long run such activities, if well organised, develop competition resulting in better quality teaching and research.

Promotions are based largely on seniority in service in keeping with UGC's 'merit-promotion scheme' in early 1980 through which teachers were promoted after completing a designated number of years of service in a particular position. While this practice provides security to those who have devoted years to teaching, it does not provide the right incentive for quality improvement and innovation in teaching. In fact, it could deter the young and talented whose competence is seen of less value than seniority where promotions to upper grades are concerned. Recognition and rewards for the talented need to be built into the system to keep both morale and interest high. This may be particular significant in more isolated rural areas in order to retain qualified staff who may respond positively to attractive terms. In some countries such as Malaysia, housing and other special allowances have worked in the past to improve teacher deployment in rural areas.

In terms of career progression, changes in professional designation were recommended by the 6th Pay Review Commission which declared that the Lecturers/Readers/Professors scheme be converted to Assistant Professors/Associate Professors/Professors. This has not been implemented in the State and remains a bone of contention.

The various salary scales also provide a constant source of dissatisfaction as revealed by staff in one rural grant-in-aid autonomous college (Table 5). There are five different salary scales in place with the following breakdown and, as is to be expected, there is constant heated discussion about these among staff members.

A teacher hired on an ad hoc basis had started at the level of Rs. 2000 a month reaching Rs. 8000 after 13 years of service. Another teacher on the other hand earned Rs. 100 per class and was given 25 classes a week could take home Rs. 10,000.

TABLE 5: Staff Salary categories in an autonomous grant-in-aid college

Scale	No. of Teachers
UGC	12
Central	13
Block Grant	3
College Management	19
Ad hoc/Contractual	2
Total	**48**

Source: Authors

Confounding the situation is the issue of teachers for self-financing courses who do not need to comply with UGC eligibility norms as well. Moreover, they may be looking for regular employment and leave once their search is successful. It was reported that regular teachers may have to step in at that point.

The Odisha DoHE would do well to review the situation closely and determine if adhering to the 6th Pay Review guidelines would work better to support the state's objective of re-energizing teachers.

The large majority need massive training support which can happen through opportunities to pursue higher degrees in their major disciplines. That is however just one step. During a long teaching career, ongoing programmes need to be set up which are professionally stimulating and which serve as conduits to updating and supporting newly learnt content, pedagogy and relevant skills. Access to financial and physical resources and opportunities for research is another powerful way to update staff knowledge.

CHAPTER EIGHT
RESEARCH AND DEVELOPMENT

The process of elevating government colleges into autonomous colleges and autonomous colleges into universities has resulted in severe infrastructural stress with crowded facilities and insufficient equipment, libraries and documentation access, and high level ICT set-up. Teachers and research scholars sit in dark and dingy rooms. They have no private space in the libraries as well. The physical environment requires to be modernized and upgraded if improved performance is expected in teaching, research and publications (Beteille, 2010).

Quality tertiary level teaching and learning are characterized by two categories of research: (a) action research activities which feed into programmes and courses, providing a built-in mechanism for review and change; and (b) academic research into basic and applied disciplines or multi-disciplinary areas.

In the first category, the interviews carried out in this study suggest a need for systemic action research to be undertaken in areas such as curriculum revision and examinations. The performance of Boards of Studies (BoS) and their impact on college curricula would be one such key area. Similarly the NAAC and the UGC have strongly supported the establishments of Quality Assurance Cells, Student Placement Cells, as well as Instrument Units in Science Faculties. Little is known about the performance of these cells/units, if they have met objectives or what changes need to be put in place to improve their functioning. Apart from faculty involvement, it may be a good

idea to institute third party evaluation studies of bodies within institutions and also overall study of institutions. The process of third party study has borne fruit in the Sarva Shiksha Abhiyaan (SSA) and there is a possibility of its succeeding in higher education as well.

As for the second category, key quality markers in the higher education sector are seen in the body of basic and applied research, publication of research in national and international refereed journals, and citations of publications. A prerequisite to quality research and publications is the participation of qualified and experienced staff who work under a strong academic leader, research facilities and appropriate funding. This is particularly true of newer institutions or those without a tradition of research and publications.

The staffing pattern in Table 3 suggests that academic leadership is a major drawback in institutions' research and publication endeavours with only four Professors in the entire state to provide leadership. The absence of such leadership is perhaps part of the explanation for the paucity of outputs seen in Table 6. The data and information gathered in this study show that the research outputs are modest and perspective plans for the next three years are equally modest. The following table gives a snapshot of the current situation state-wide of universities and colleges under DoHE and the targets aimed at by 2016-2017. It does not include the technical universities and colleges under the Department of Science and Technology nor the research institutes.

TABLE 6: Current and Planned Research Outputs 2013-2014/2016-2017 in DoHE HEIs

Parameter	2013-2014	2016-2017
No. of research publications in refereed Indian journals	640	700
No. of research publications in refereed international journals	226	255
No. of patents	00	00
No. of sponsored research projects completed	85	100

Source: State Plan for Higher Education at a Glance, 2014.

Contributing to the analysis of institutional productivity and having a strong bearing on research policy, output and knowledge transfer are publications and citations. The target of 60 additional articles in Indian journals, and 29 planned for international journals from 2013-14 to 2016-17 as per the State Higher Education Plan at a Glance, does not paint a positive quality scenario for Odisha. The fact that completion of only 15 additional sponsored research projects are expected in three years' time is probably a reflection of research funding levels, expertise and the state research infrastructure as a whole. Over two years five Odisha Universities spent only 1% on research activities and 64% on Salary, Allowance and Retirement Benefits (EY, 2015). The picture from 15 Odisha Colleges is equally grim: with 87.9% expended on Salary, Allowance and Retirement Benefits, the category of Research Activities merited only a negligible 0.3% (EY, ibid. Figure 19, p. 20). While research grants are available from UGC, HEIs reported that the UGC research application and award process are unnecessarily cumbersome.

A useful proxy measure of an institution's technological inventions and innovations which have potential economic value may be derived from a country's level of patenting. They also indicate technological readiness for moving into a knowledge economy. Faculty personnel and graduate students reported that equipment and machines often are not available for laboratory experiments as well as research activities. A background of supportive management practices needs to be crafted for HEIs in terms of experienced leadership, funding allocations, framework for national and international collaborations, an enabling infrastructure of facilities, and equipment and instrumentation to help them translate their creativity into workable innovations and local solutions based on technology.

Establishing a Research and Publication Culture

Governments invest a great deal in research activities and researchers who lead them with the expectation that the country benefits in the long-term from increased productivity and enhanced social development. In Malaysia, the Government has designated five well-performing universities out of its 20 public universities as research universities which entitles them to higher levels of allocations for research in the annual approved budget. National and international collaborative projects are encouraged as are university-industry linkages, expecting some of these may be in time designated Centres of Excellence. In Bangladesh, their UGC manages an Academic Innovation Fund open to public and private universities, administered on a competitive basis. The additional funds and a transparent public system of research funds allocation has energized the university sector as seen in recent research outputs.

In several colleges visited, including those which conduct PG courses, faculty had never been awarded research funding for projects nor had they printed an article in a journal of repute. However, given the general conditions of remuneration and working conditions, the finding was not unexpected. Moreover, allocations for research funding are negligible and access to other funds, given the absence of a research culture, seem insurmountable. HEIs and DoHE could start a Research Fund which could work in phases, starting with participation

in seminars and workshops, participating in the affiliating university's research seminars, perhaps moving on to joint research projects where they could develop research skills almost as interns. College teachers need to develop skills to access and receive research grants from external funding bodies such as the UGC, ICSSR, ICAR and others. Those who are successful could be rewarded with matching funds or participation in conferences at home and abroad. However, availability and maintenance of research facilities and equipment are basic to any research activity for which recurrent funds need to be earmarked.

At the State level, the Department of Higher Education needs to set up a competitive research grant scheme for HEIs, opening it up to public and private institutions to stimulate healthy competition and increasing qualitative inputs. A well-organized competitive public research funding system, even if it starts small, can sow the seeds of significant research possibly leading to the commercialization of research outputs, helping to place institutions on the first few rungs of national and global research activities. Such a system needs to be transparent, well monitored with a database in the public domain, an information system compatible with those of participating institutions, and a website which prompts full disclosure regarding announcements of available funds, details of application proposals, the process of selection and awards, and research findings.

CURRICULUM AND DEVELOPMENT

All colleges follow the state approved curriculum with 20% room for adaptation in curriculum to local situations, a positive sign if colleges had the relevant expertise and experience to benefit from the policy. The common under-graduate curriculum was seen as restrictive, overly theoretical both in content and presentation, with insufficient attention to the need to prepare students for the job market. Pervasive curriculum issues include a focus on information recall and rote learning at the expense of critical and analytical thinking. These features are reinforced by the nature of assessments and examinations which focus on rote learning and information recall rather than higher order cognitive skills as making inferences and judgements based on information and data or critical analysis.

Observations and field findings appeared to indicate that on becoming autonomous, colleges are anxious to both complete the syllabus/course on time as well as show good student results. In order to achieve this, there are reports that the curriculum has been diluted. Firstly, most colleges did not have the expertise locally available to review and renew the curriculum; secondly, they did not have the funds available to invite experts from different parts of the state and nation to collaborate. Some mechanism can be developed to improve the curriculum with affiliating universities having a larger role. Different universities have their own mission and vision and they must be allowed to follow their own mission.

Curriculum revision is regularly taken up by the Board of Studies (BoS) in which specialists from other colleges are invited as required, a major responsibility being to review and monitor the curriculum during the academic year. The Board's findings provide the basis for changes to the curriculum within the 20% leeway which exists. Many of the changes reported dealt with peripheral rather than core issues of design and outcomes. One college cited the introduction of term projects, student presentations and new novels with relevant themes in a college which had a significant proportion of tribal students. Examples were given also of recommended reading of texts which were not available and opening of courses for which teachers had not been recruited. Members of Boards need to be abreast not only with changes in their discipline areas but also possess specialized skills in curriculum monitoring, review and development. The composition of Boards as well as the training and professional development opportunities which currently prevail within the college sub sector strongly suggest that this is not the case generally. It would be timely to examine the impact of Boards of Studies on teacher performance and student achievement to identify ways in which the system could have a more positive impact on teaching and learning.

Broadening the composition or activities of Board members to include stakeholder views, such as those of employers, industry and student

representatives might increase the relevance of programs. The process of recognition of altogether new courses is time consuming and ill-equipped to respond quickly to changes in knowledge as well as the market. Proposing a new course is laborious and time consuming with inspections undertaken separately by affiliating universities and the local inspection team. A joint inspection effort would help make colleges more responsive to market demand.

Curriculum design is a crucial issue. All universities and all colleges need not necessarily have the same or identical syllabus. There is a difference between the clientele of different institutions (autonomous colleges and universities) and this difference needs to be understood as well as respected. The Biswas committee report (2009) has highlighted this role of the universities and the report has also been accepted by the Central Advisory Board on Education (CABE).

Self-Financing Courses

In order to generate funds, colleges conduct self-financing courses which fall outside the purview of Boards of Studies. Students pay tuition fees for these courses which are largely run by part-time faculty who are paid on a lecture basis. Sometimes a ceiling is fixed for payment to any single guest-faculty who cannot survive on this source of income alone. They tend to look for other part-time work restricting their time for teaching-related activities. Concerns include the fact that guest lecturers need not be in compliance with UGC qualification requirements nor is their course content and methodology subject to any kind of supervision by the college. this issue is more serious in private institutions. Performance of self-financed learners may be better than in regular programs as the course is run on time and properly. Students would benefit however if there were clear guidelines set by UGC or the State, regarding teacher qualifications, fees, course content and conduct of classes.

ICT UTILIZATION

Emphasis on and investment in modern communication technologies are ubiquitous. Funds have been given making campuses Wi-Fi enabled and use of communication technologies has become common amongst students especially for social media. However, despite available funds and better connectivity actual use of institution supported connectivity for academic use is often absent. For the professional development of staff and greater efficiency, both teaching and non-teaching ICT networks need to be embedded in institutions as an essential element in the lifelong learning and development process. For managers and administrators as well as academic staff, on-line training and enrichment modules are available on recent developments in content, policies as well as governance processes. Institutions need to work on popularising the use of infrastructure as well as connectivity.

MAKING INSTITUTION INCLUSIVE

As a policy, India intends to make education for SC/ST and OBC categories of students completely free as well as support them through various measures. However large sections of these learners as well as and the physically challenged are not provided the support they require from the institutions. Children from weaker sections of society require special assistance in language (especially English and sometimes other National Languages), Computer application, Mathematics and the Sciences, among others. Institutions should design and provide special classes in these areas to children. Some institutions are making serious efforts but concerted public will and supporting funds are required.

Hostel as well as recreational facilities for listed categories are inadequate. There are instances of girls who have represented the State during their school days but have no sport facility at the college to develop their talent further. Sport centres and facilities need to be built for both boys and girls. Most campuses are unfriendly for the blind, orthopedically challenged as well as mentally retarded learners. During discussions, officers/authorities appeared sensitive towards this issues but very little has been done in these areas on the campus.

It is suggested to enhance access and equity to labor market relevant higher education for marginalized youth in remote areas. This could be done through a targeted effort to strengthen the quality of universities and colleges in remote areas with a high tribal population. Components of such an effort could be to develop:

◗ Satellite campuses to be established in remote areas to provide alternative innovative demand driven short-term courses which are linked to livelihood and income generating opportunities in the region.

◗ Online and web-based courses focusing on institutions' and students' needs in remote areas including piloting MOOCs courses.

◗ 'Earning-while-learning' type of vocational education will be developed and scaled-up in remote areas. Short-term courses would be designed by the university/college in consultation with local industries and corporate houses. Resource persons from those industries/corporate houses could be engaged as resource persons.

AFFILIATING UNIVERSITIES, AFFILIATED COLLEGES AND QUALITY ASSURANCE

Affiliating universities provide the teaching and assessment materials but do not follow up regularly with much-needed academic supervision and on-going teacher support which would be key to quality enhancement in the many cases of under-staffed and inexperienced faculties at colleges. While regulatory norms prescribed by the state and UGC for taking on affiliated colleges exist and are known, it would appear that there is insufficient expertise or capacity to enforce them. Quality improvement grants are available from UGC but colleges cannot always meet conditional requirements for receiving them and it would appear that this is a nation-wide phenomenon. Of the 16,000 colleges under UGC's purview in 2008, 5,813 (36%) colleges received UGC grants having met the minimum standards required. Nationally less than 10% of 3,492 colleges had been accredited by NAAC, with major deficiencies attributed to availability of qualified faculty, physical and other infrastructural facilities (Lee, 2011).

In Odisha, in Table 7 (extracted from State Higher Education Plan at a Glance), it is noted that NAAC accreditation has a long way to go. Only 41.67% of State Universities, where affiliating universities are key to the quality of the college system, have been accredited; Government Colleges, numbering 43, are doing better with 81.4%; and the large number

TABLE 7: Basic Profile of Higher Education Institutions – NAAC Accreditation

	Total	2f	12B	NAAC Accredited	% NAAC Accredited to Total
State Universities	12	12	12	05	41.67
State Private Universities	03	03	03	00	00
Deemed Universities	02	02	02	02	100
Government Colleges	43	32	32	35	81.4
Aided Colleges	318	318	318	93	29.255
Private Colleges	316	00	00	34	12.03
Total Post-Graduate Departments in State Universities	174	00	00	00	00
Academic Staff Colleges	02	00		00	00

Source: State Plan for Higher Education, 2014, Odisha.

of Aided and Private Colleges are doing poorly with only 21.25% and 12.03% respectively having received accreditation. Most worryingly, none of the State's 174 Post-Graduate Departments have been accredited.

75. It may be the case that NAAC is over-burdened and is unable to cover the institutions at a more accelerated rate; or that the institutions have not been able to meet the required criteria. If the former, the State must hold frequent discussions with NAAC State coordinator to accelerate the process; if the latter, the Government may need to fund higher education for meeting accreditation process requirements and organize orientation workshops and provide capacity building support for preparation of self-assessment report.

Given the set of policies for reform, and the framework for implementing them, serious concerns arise regarding the failure of the large majority of institutions in meeting quality goals. The pertinent question then is one of implementation: to what extent have state level structures been successful in setting the scene for college level reform and help them move towards excellence? And To what extent do colleges meet the criteria set out for becoming an affiliated college and how satisfactory is the process which is in practice?

India's Quality Assurance and Accreditation framework is well-known among South Asian countries and indeed provides an important model for quality enhancement in the college sector. However, weakness in implementation, structural and organizational challenges and access to sufficient development funds for basic infrastructural facilities render this important segment of higher education in Odisha less effective than need be in terms of contribution to human capital growth.

Concerns about graduate unemployment resonate across the globe, with stakeholders calling for better linkages between higher education institutions and the work place, helping students develop work related experience and skills in efforts to improve employability upon graduation. Linkages can happen in many ways often relying much on local industry. There are cases where such a relationship brings about: participation by employer/industry in Boards of Studies orienting the curriculum to market signals; a cluster of institutions who work with industry in different ways; and a source of student internships (which may lead to jobs on graduation). Sometimes the result of such relationships can lead to industry-sponsored degrees and certificates and open up to a lifelong learning-work connection.

Quality of colleges may be measured by several indices: academic staff qualifications, student achievements in examinations, school-community relations, teacher participation in seminars and workshops, and publications. Probably the acid test of quality is that of graduate employment, bearing witness to the value of acquired learning and work-related skills to society and the economy.

In Odisha, unemployment is highest at post-graduate level amounting to 42.86% which shows an increase by 66.6% over the previous year. Of Diploma and Certificate holders, 29.3% were unemployed compared with 23.1% of graduates (Issue Paper on Quality, Odisha).

Table 1 showed the percentage change in under-graduate and post-graduate student enrolments according to academic area. Disaggregated data sharpen the issue but given the preponderance of college graduates in the higher education sector it may not be incorrect to say that college education does not match what employers look for, particularly at post-graduate level. It would appear that the increases in enrolment are going in the right overall direction in terms of selection of discipline – Science, Engineering, Technology and Architecture – reflecting one of the state's objectives of providing quality education with multi-skills to make graduates more employable. The fact that Diploma and Certificate programs did not show any increase perhaps indicates that students are reading the market signals. The outlier seems to be the ordinarily popular Management programs whose enrolments have dipped in 2009-2010 by 8.5%. All HEIs have Student Placement Cells but not all are equally functional. Cells are headed on a part-time basis by a member of faculty who is a full-time teacher of a discipline, fitting in management of the cell where able. None of the colleges visited had cells run by full-time staff with suitable qualifications and experience. Students interviewed during field visits indicated that they would want to see the Cell provide professional career guidance and counselling; provide individual psychological counselling; organize internships with industry/employers to equip students with practical work-oriented skills; organize regular on-campus fairs with employers providing information on their requirements and building networks; and build soft skills applicable to the world of work such as communication and enhanced ICT skills into UG and PG programs.

Skills development, much sought after by employers, were supported by some colleges through well-planned co-curricular activities and processes. Experience with interactive sessions outside the regular classroom environment increase the flexibility and ease with which graduates can adapt to new environments. One college listed the following: seminars, workshops, debates, elocution competitions, study tours, participation in performing arts, quizzes and various extension activities, seeing in them the nurturing of cooperative learning, teamwork, and analytical thinking.

The increasing attention to employability issues is seen globally as the following example from the Melbourne-based Australian Technical and Management College demonstrates. One of its attractions to students is its focus on helping students build their careers by: emphasizing information on the Australian and International labour market and workplace culture; working on internationally sought after workplace skills; helping students find internships and part-time employment; clarifying rights and responsibilities of workers; assisting with resumes and interview skills; introducing students to online resources; career coaching and counselling; and providing graduate work placement assistance (www.amtc.edu.au).

While it is difficult to handle precisely the mismatch between education programs and employment, Graduate Tracer Studies mounted by units such as Student Placement Cells could usefully track employment destinations of graduates, the wait period prior to job appointment, employer feedback on performance, and develop over time a profile of skills which appear to be in demand. This is recognized as a continuous process as demand for a set of skills in one year may be followed by a surplus in the next. HEIs which have already initiated such studies may provide assistance/training to those who have not. At the very least, affiliating universities need to take the initiative and undertake a sample tracer study which could reveal important findings relative to several aspects of teaching, learning and assessment. These findings would benefit those responsible for identifying subject priorities and overall program design. Study findings could also link up with financing of students in priority discipline areas.

Notwithstanding market demand and supply, HEIs need to ensure the quality of learning outcomes. While norms, regulations and guidelines exist, they are not enforced equally across the system. The findings reported earlier on Quality Assurance Cells and Student Placement Cells are cases in point. Similarly regulatory norms for the affiliation relationship are not observed, resulting in lack of support for regular academic supervision. A confounding factor in the setting of norms and ensuring their enforcement is the fact that while affiliating universities oversee all academic matters of affiliated colleges, some colleges are under the purview of UGC, AICTE and NAAC as well.

Centurion University of Technology and Management (CUTM): *An example of blending education with skills development in Odisha*

CUTM is a unique private State University in Odisha. The institute is focused towards imparting appropriate and relevant education. Their objective is to broaden the definition of University to include skills development. Even in research, the focus is more on action research projects.

The University is trying to implement a faculty led governance system. This implies faculty led admissions, research and other reforms. Faculty councils to deliberate and decide on courses, grading pattern and blending of skills component are held every month. Faculty development programs are conducted regularly every weekend. Also, domain knowledge trainings are held such as courses on New Age Teaching on innovations in teaching methods. The focus is on practice- oriented pedagogy.

The autonomy of the institution allows it to be market oriented and develop a skill-based curriculum which is a new and worthwhile approach for creating relevant knowledge base and preparing students for employment. Curriculum is revised every 3-4 years. Faculty, students and alumni are involved in this process. The University has also developed online course content and makes MOOC courses available to students.

Besides general courses, the University runs various short term skill development courses through its social outreach entity, Gram Tarang, and also runs Industrial Training Institutes (ITIs). Students undergoing these courses also have the facility of taking the Board examination for XIth and XIIth standards from CUTM which has a tie-up with National Institute of Open Schooling (NIOS) of Government of India, for this purpose. The students of certificate, diploma and degree courses share the same hostels and frequently work jointly in the workshops. This inculcates a spirit of inclusion among the two groups which are very different socially and economically.

LEADERSHIP AND INSTITUTIONAL QUALITY

Vice-Chancellors (VCs) of affiliating universities in Odisha play a key role in managerial, administrative and academic leadership. Not only is this true in terms of their own university and constituent colleges but also in terms of the heterogeneous body of colleges affiliated to them which, as in the case of Utkal University, numbers more than 300.

To bring the range of responsibilities, institutions and human resources into a functional and productive set of entities, the VC needs to propel personnel forward based on sound vision, strategic planning, strong academic and management experience as well as interpersonal skills, to name a few characteristics. Given a three-year stint with no Pro-Chancellor (as there is in all Central Universities, and in the State of Bihar) to share his many administrative responsibilities, he or she has little space to function freely and nurture his vision. His or her powers are constrained by rules and regulations: examples include restrictive financial powers as defined by the outdated Accounts Manual of 1997 and the loss of authority over transfers of government teachers in affiliated colleges.

Studies have highlighted the value of continuity of sound leadership in enhancing institutional strength. In a performance analysis of the National University of Singapore (NUS) and the University of Malaya (UM) between 1962 and 2008, it was found that during this period NUS had five respected scholars as VCs. This experience contrasts with UM's ten VCs over the same period: some were scholars, few from

the civil service and many served a three-year stint and at least two did not complete their tenure. Few had the experience or could not develop these skills during their brief tenure to 'steer a large complex educational institution through a highly political environment. Many have, therefore, relied heavily on rigid government guidelines with scant regard for managerial, academic and financial autonomy' (Mukherjee and Wong, 2011). In the continuing efforts to climb world ranking tables, NUS has demonstrated how it has outshone UM and sound leadership over time has been acknowledged as a major element of its success.

Vice-Chancellors in Odisha have on their own initiative begun to meet together to discuss areas of mutual concern and to identify possible solutions to them. Such meetings on a regular and possibly more formalized basis would do much to unearth rich experiences as well as establish a thriving horizontal relationship among institutions. It may be beneficial to extend some of these meetings to Principals and Registrars to share and embed principles and ideas across the system. The successful outcomes of the Committee of Vice Chancellors and Principals in the UK (now known as 'Universities UK') provides a working example of a strong advocacy group which brings people together to share knowledge and good practice. To sustain the benefits of positive managerial experience on institutions, extending the VC's term to five years, perhaps based on a review at the end of three years, may reap good dividends for the higher education sector as a whole in Odisha.

RECENT INITIATIVES

The Odisha State Higher education Department has put in place a number oftechnology-based tools to increase accountability and efficiency in the system. It would be of value for the DoHE to carry out an impact evaluation of these innovations and assess the extent to which they have contributed to good governance. A more efficient governance and management system is not only more effective but also frees up resources for a stronger focus on learning outcomes:

(i) The implementation of examination reforms where examination scripts are scanned and uploaded and examiners place their marks on the answer sheets leads to the makings of a transparent and efficient system. The initial effort is directed at the 'plus 2' level examinations and is expected to be implemented at under-graduate level in 2016. The system is linked electronically to the Higher Education Department which is able to zero in on any aspect of the examinations and their evaluation from its offices. Additional measures to increase trust in the initiative is the presence of CCTV surveillance which operates during the actual examination taking as well as the process of evaluation of exams.

(ii) A key initiative in streamlining system management is seen in the digitization of personnel databases as well as payroll management. The Personnel Information Management System is a complete database of teachers in all government colleges to whose bank accounts salaries are sent directly. All training completed by teachers is captured in this system neatly facilitating overall faculty status information and development/training needs. A grant from UGC will support the HED in its plan to extend such digitization to non-government colleges.

(iii) The ground-breaking Student Admissions Management System with its e-administration and e-admissions tools now permits student application to multiple HEIs electronically without having to be physically present, expanding program choices for students without the burden and expense of travelling in person to various campuses. Student performance is also tracked electronically.

(iv) Other electronically-based reforms increasing overall system efficiency include: the management of scholarship application and award (known as e-medhabruti) with funds transmitted from the Department of Higher Education directly to students' bank accounts; establishment of 55 language laboratories in collaboration with IIT-Kharagpur; and the Biju Patnaik SMART campus in College and University Scheme which aims at developing Wi-Fi ready campuses, library automation, language laboratories and SMART classes.

FINANCING OF UNIVERSITIES AND COLLEGES

Financing of higher education institutions in Odisha draws from the following sources: Annual State Budget, grants from UGC, budgets of various Central Government schemes, donations and internal revenue from student fees, examination fees, affiliation, etc. The total expenditure on higher education by Odisha State government is approximately Rs. 1,200 Crore which represents 0.5% of its Gross State Domestic Product (GSDP). This includes plan and non-plan for revenue and capital expenditure. The state's annual per capita expenditure on higher education for its 18-23 years old population is about Rs. 2,700 (EY, 2015). Odisha stands nineteenth in terms of per capita expenditure on higher education among all 30 Indian states with Goa (above Rs.14,000) and Tamil Nadu (about Rs.13,000) leading the way and Uttar Pradesh and Jharkhand bringing up the rear, both below Rs.1,000 (EY,2015). Odisha ranks among the lowest in India in capital expenditure on higher education with high levels of revenue expenditure on teacher salaries. Teacher salaries constitute approximately 98% of total expenditure in the state, higher than the national average of 85%, indicating a lack of funds available for instructional and research support such as laboratories, libraries, industrial visits, and training workshops and seminars. Even infrastructure maintenance is seriously underfunded.

Colleges determine fee structures for their various programmes. Salaries of regular staff follow government salary norms with colleges deciding on ad hoc staff salaries. Student fees and salaries of guest lecturers/ad hoc are fixed by colleges and fees from these courses provide some leeway for independently determined institutional expenditure. Little information is available on how the revenue from fees are spent. Expenditure on infrastructure and high value purchases require approval from the government, a process which causes delays. Colleges have access to funds for some levels of purchases and expenses but overall their financial autonomy is limited. Odisha state has the lowest level of financial decentralisation in India with only 7% of expenditure of state funds accessible by institutions contrasted with the national average of 43%. Limited financial autonomy constrains administrative processes and institutional potential to act nimbly or creatively in response to changing circumstances.

Budget planning in institutions do not show alignment with institutional strategic development plans or indeed overall Government sectoral development plans. A bottom-up approach of preparing formal institutional strategic plans would support the development of priority quality enhancement steps, with earmarked funds. An institutional strategic plan, while taking on board national and state development plans, would focus on its own needs in terms of institutional vision and goals, students, staff, clientele and the territory it serves. Given greater financial autonomy, institutions would be in a position to enhance identified quality inputs required for their growth. Without such leeway, expenditure will continue to be standardized for all, with expenditures going largely for salaries and little attention to specific needs unique to individual institutions such as increasing intake

capacity. Outputs and outcomes of implementation would be identifiable and monitorable, keeping institutions accountable. With the State's success in recent, electronic-based initiatives, educational management systems could be upgraded to strengthen accountability measures.

The national and state goal of increasing GER, for example, should set in train plans with required budget for additional staff for new programs, and development of facilities and overall infrastructure to accommodate increases in student enrolment. This is not the case. The current practice is to increase the previous year's budget by a certain percentage which does not help to target growth and teaching-learning priorities. Delays in receiving funds in a timely fashion from both State and Central Governments add to institutions' financial management difficulties. Greater autonomy in financial and administrative terms is essential, if staff are to be sufficiently motivated with a sense

of ownership to undertake reforms/changes which bring about greater qualitative improvements.

To improve the health of the higher education system with incentives for institutions to implement and sustain quality enhancing steps, findings of this study support the financial management study proposals that (i) per capita expenditure be increased in Odisha based on a comparison with all states in India, allowing for increased expenditure on non-salary areas of development and support such as research and infrastructural facilities; and (ii) the low level (lowest in India) of funds transfer or decentralization from the State Higher Education Department to state institutions needs to increase significantly from the current 7% (national average is 43%) (EY, 2015). To optimize the utilization of higher levels of funds transferred from the center, well-considered institutional strategic development plans need to become a regular feature of HEIs and be monitored periodically to satisfy accountability requirements.

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