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Ethiopian University Capacity: Findings of Piloting the Organizational Capacity Assessment Tool

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ETHIOPIAN UNIVERSITY CAPACITY: FINDINGS OF PILOTING THE ORGANIZATIONAL CAPACITY ASSESSMENT TOOL

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1. Introduction

Ethiopian higher education in recent years has realized impressive quantitative growth in public higher education. However, the sector is also facing numerous challenges such as shortage of funding, shortage of qualified staff, programs lacking labour market relevance, limited research and community service output, gender issues and lack of adequate quality assurance. The quality of university leadership and management is considered a critical success factor in overcoming these challenges, especially where strategic planning and organisational capacity development are involved. Providing management information on the actual status of university organizational capacity aims to enhance managerial decision making. Organizational capacity assessment tools (OCAT) aim to provide management with this kind of information.

The OCAT-project, as part of the EP-Nuffic funded University Leadership and Management Capacity Development project, aimed to develop an OCAT for Ethiopian New Public Universities. This paper informs on the findings and recommendations of piloting this tool at two Ethiopian universities belonging to the second generation of universities. The next paragraph introduces the capacity concept and capacity framework used in assessing university capacity. Then, in paragraph three the data-collections is described. The findings of using the OCAT in two universities are described and discussed in paragraph four. The policy brief ends with conclusions and recommendations resulting from the study. Part of the text in this paper draws from the document describing OCAT (Van Deuren, Abay & Mohammed, 2015).

2. Capacity and capacity framework

University capacity

University organizational capacity can be described as the competence of a university to deliver up on its promises, to accomplish mission and realize aspirations. University capacity results from the combined functioning of university resources (such as human, intellectual, financial, physical and infrastructural) and other university parameters (such as structure, culture, processes, management and leadership) (see e.g. Baser & Morgan, 2008; CHE, 2005 and UNDP, 2010).

University capacity is a characteristic of universities that is related to university performance: a higher level of performance requires a higher level of capacity and lack of capacity leads to underperformance and low results. As such university capacity can be conceptualized as intermediate between organizational parameters and resources on the one side and organizational performance on the other side. Not only university parameters and resources influence university capacity. Universities function as part of a larger national higher education system including objectives, policies, laws, rules, budget available, funding mechanisms, national councils and so on. These higher education system characteristics also influence university organizational capacity. Furthermore, university specific circumstances (such as location and history) may influence university organizational capacity. Figure 1 summarizes the concepts and relations surrounding organizational capacity.

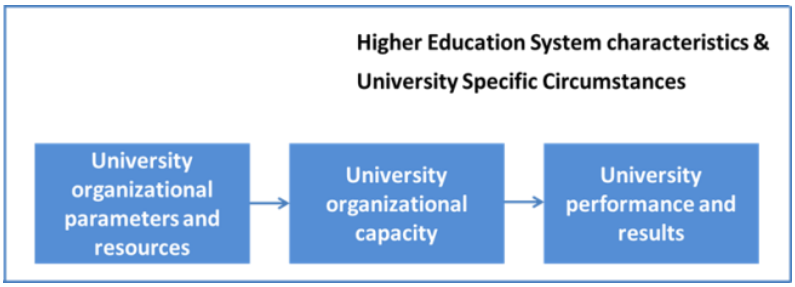

Figure 1 University organizational capacity and relation with relevant concepts

Organizational capacity is a dynamic characteristic of universities. That means that organizational capacity can vary across universities; university A can have a higher level of capacity than university B. It also means that the capacity of a given university can change over time; the capacity today can be higher or lower than the capacity last year. University policies or national policies can influence the level of organizational capacity to a certain extent by means of investments and interventions, the so-called planned change of planned capacity development initiatives. As such, knowledge on the level of university capacity is relevant for policy making at the level of universities and at the national level.

Theoretical perspective on universities

The OCAT used in assessing university capacity takes a systems perspective on organizations in general and universities in particular. From this holistic perspective, the functioning of organization's and universities is the result of the functioning of its parts and the relations between the parts (Jackson, 2003). Universities as systems are characterized by a number of aspects. First, they are conceptualized as open systems, meaning the functioning of the university is influenced by elements in its environment. Second, universities are perceived as human systems in which both hard, technical aspects (such as e.g. finance, infrastructure, curricula and policies) and soft, human aspects (such as e.g. culture, motivation and leadership) interact and influence performance. And third, universities are perceived as instrumental and as goal oriented systems aimed to realize objectives as part of a national higher education system. In order to achieve goals, processes are identified at three levels. First, inputs from the outside world are transformed into outputs in primary processes. Secondary processes support the primary processes and management is responsible for developing

and steering the organization towards it objectives. Plan-do-check-action cycles, also to be found in higher education quality assurance approaches, assure the university remains on its track (see e.g. IUCEA, 2010). This managerial or bureaucratic perspective on universities can be found in literature on higher education organizations (such as e.g. Birmbaum, 1998; Bergquist, 2008; McNay, 1995) and relates to the rather centralized characteristic of the Ethiopian higher education system.

University capacity framework

The framework for university capacity used in OCAT consists of nine areas of capacity grouped into three categories. The first category of capacity refers to the primary or operational process in the university: education, research and community service. These are the core processes and core capacity areas in the university that directly contribute to university performance and results. The second category consists of capacity areas and processes supporting the operational processes. Capacity in the management of students, staff and facilities directly impacts on the operational process and capacity and thereby indirectly influences university performance. Finally, the third category is made up of capacity related to leadership, management and organization. These areas relate to the capacity to steer, lead and develop the university, both in the operational capacity areas and in the supporting capacity areas. Figure 2 depicts the nine capacity areas grouped into three categories and the relationships between the categories.

Figure 2 University capacity framework

Based on literature, expert knowledge and interviews with representatives of university management, the nine capacity areas are further divided into one or more sub-dimensions per category. Annex I gives an overview of the sub-dimensions per category.

3. Data-collection

Data on university organizational capacity were gathered at three groups of internal stakeholders: management, universities and academic staff. By means of this so-called triangulation of data a higher level of reliability is aimed for. In preparing the questionnaires for the three groups, indicators were defined for the sub-dimensions of the nine capacity areas as mentioned in annex I with help of results of interviews with representatives from university management, expert knowledge and literature (e.g. Bunting & Cloete, 2012; Cadri,2007; Cameron, 1978; CEPU, 2013, Hazelkorn, 2005; Lusthaus et al., 2002; Mizrahi, 2003; Mugabi, 2015; Preece, 2011, Toma, 2010, Van Deuren, 2013 and VPP, 2001). For each stakeholder it was identified what indicators would be relevant. The management questionnaire includes all indicators. However, the questionnaires for students and academic staff only contain those indicators that can be assessed by students and staff. Furthermore, the management self-assessment questionnaire uses four-point ordinal scale with pre-defined answering options. Answering option 1 refers to a lack of capacity (red), 2 to basic level of capacity in place (orange), 3 to moderate level of capacity (yellow) and 4 indicates a high level of capacity (green). Both the questionnaire for students and the questionnaire for academic staff use five-point Likert scales.

Data were collected at two Ethiopian, second generation universities (indicated as university I and university II). The management perspective on university capacity was collected by means of a mixture of self-administration and focus group discussion by members of the management council. Students and academic staff questionnaires were self-administered. Academic staff respondents is 300 in total, of which 12 female and 288 male, average age is 28.6 years and average time working at the university is 3.4 years. Degree levels held by respondents: 66 bachelors, 231 masters and 3 PhD. Student respondents totals 527, of which 137 female and 339 male and average age is 21.6 years. Table 1 informs on the spreading of respondents over programs.

	Academic staff	Students
Agriculture & Veterinary	44	49
Business & Economics	38	58
Engineering & Technology	65	284
Health & Medicine	18	41
Natural & Computational	64	58
Social science, literature, law	63	32

Table 1 Respondents per sector

4. Findings and discussion

Findings are organized in three sections: management perspective, academic staff perspective and student perspective.

Management perspective on university capacity

Table 2 and 3 present the results of the management questionnaire for university I and university II. The tables indicate the proportion of indicators per capacity level as explained in the previous paragraph. E.g. management of university I indicates that all indicators in the capacity area Leadership are in category 3 (orange) and management of university II finds 83% of indicators at moderate level of capacity (orange) and 17% at good level of capacity (green).
Management of university I (table 2) indicates most indicators are at moderate or good level of capacity. Capacity gaps exist in all capacity areas but are lowest in Education and higher in Leadership, Planning & Control, Research and Facilities & Infrastructure.
Management of university II (table 3) indicates most indicators are at the basic or moderate level of capacity. Gaps are highest in the supporting capacity area Human Resource Management, Student Management and Facilities & Infrastructure but all other areas also indicate gaps in capacity.

Capacity area	1	2	3	4
Leadership			100	
Planning & Control		20	70	10
Organization & Systems			23	77
Education			6	94
Community Service			25	75
Research			37	63
HRM			20	80
Student Management		8	25	67
Facilities & Infrastructure			50	50

Table 2 Findings management university I

Capacity area	1	2	3	4
Leadership			83	17
Planning & Control		9	82	9
Organization & Systems		7	57	36
Education		35	53	12
Community Service		20	80	
Research		12	88	
HRM	14	43	43	
Student Management	25	37	38	
Facilities & Infrastructure		75	25	

Table 3 Findings management university II

In comparing the university capacity from the perspective of management it becomes clear capacity of university I is at a higher level than capacity of university II.

Academic staff perception on university capacity

In analysing the data of academic staff respondents' scores per indicator are combined at the level of sub-dimension and average scores per sub-dimension are calculated. It should be remembered not all sub-dimensions were measured from academic staff. Figure 3 presents the average score per sub-dimension.

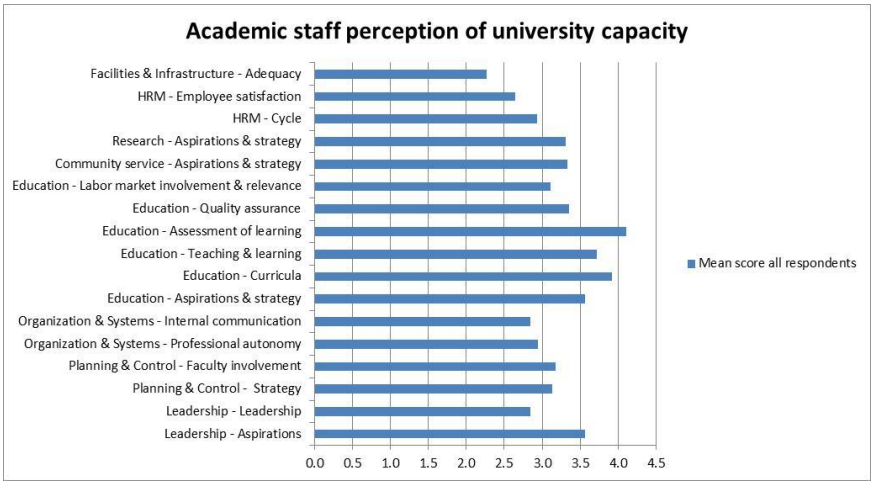

Figure 3 Average score per sub-dimension academic staff

From this it becomes clear academic staff considers capacity in education sub-dimensions rather high with average scores above 3.5 for most sub-dimensions. With an average score below 3.0 rather low are leadership (ability to influence other and explain rationale for change), professional autonomy, internal communication, HRM cycle, employee satisfaction and adequacy of facilities and infrastructure. From analysing the data at university level it is found academic staff perception differs from management perception in university specific capacity areas. E.g. in university I academic staff hold perceptions different from management when it comes to decision making and faculty professional authority and to labour market relevance and involvement. In university II discrepancy exists on the assessment of leadership capacity as far as inspiration and institutional transformation are concerned.

Figure 4 and 5 on the next page present the results of t-test indicating significant differences between groups of academic staff. Figure 4 presents the comparison between academic staff from both universities. Figure 5 highlights the differences between staff holding a bachelor degree and staff holding a master degree. In both figures * indicates significance at the $p<0.05$ level and ** indicates significance at the $P<0.01$ level.

From figure 4 it can be concluded academic staff from university I perceives university capacity higher on adequacy of facilities and infrastructure, employee satisfaction, HRM-cycle, community service aspirations and strategy, education assessment and learning and education aspirations and strategy. This observation confirms the observation resulting from the management self-observation questionnaire that university capacity of university I is higher than capacity of university II. From figure 5 it can be read quite some difference exists in how different degree holders in academic staff perceive university capacity. Except for five sub-dimensions of university capacity, master holders significantly value the capacity of the university lower than bachelor holders. Assuming that master holders hold a longer working relationship with the university than bachelor holders it was also tested how academic staff university perception relates to length of working at the university. Table 4 presents the significant correlations between the two variables. From this it can be found that for quite some capacity sub-dimensions academic staff perception decreases with a longer stay in the university. The relationship is the largest for leadership, university culture and internal communication. Repeating the same correlation calculation between age and capacity perception, only one sub-dimension showed significant low relationship, being assessment of learning. So age seems less related to academic staff university capacity perception than length of staying in the university, degree level and the university itself where the staffs are working.

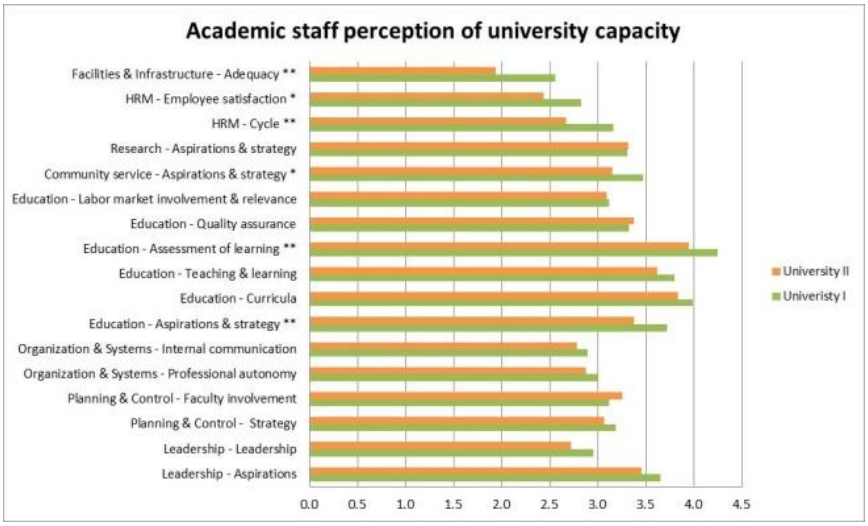

Figure 4 Average score academic staff per university

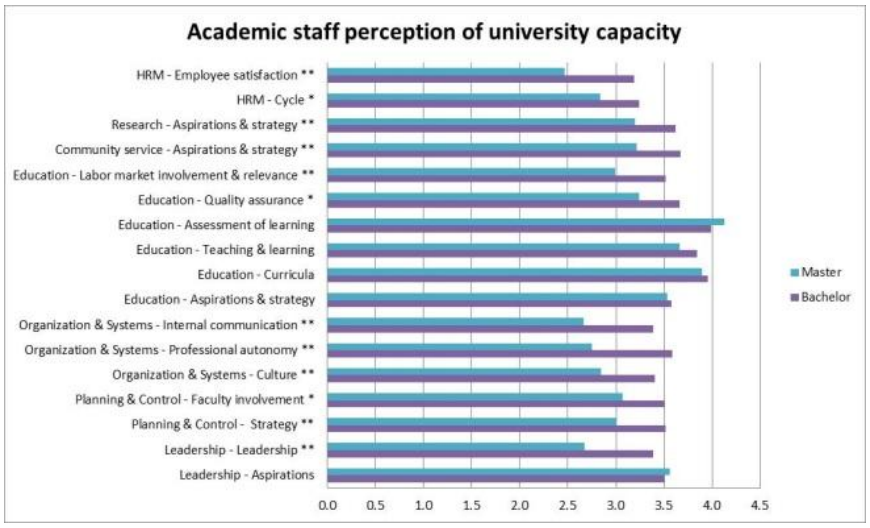

Figure 5 Average score academic staff for bachelor- and master-holder

Capacity sub-dimension	Correlation	Significance
Leadership - Leadership	-0.35	**
Planning & Control - Strategy	-0.28	**
Planning & Control - Faculty involvement	-0.17	**
Organization & Systems - Culture	-0.30	**
Organization & Systems - Professional autonomy	-0.27	**
Organization & Systems - Internal communication	-0.34	**
Planning & Control - Strategy	-0.28	**
Education - Teaching & learning	-0.13	*
Education - Labor market involvement & relevance	-0.23	**
Community service - Aspirations & strategy	-0.18	**
Research - Aspirations & strategy	-0.27	**
HRM - Cycle	-0.15	*
HRM - Employee satisfaction	-0.23	**
Facilities & Infrastructure - Adequacy	-0.17	**

Table 4 Correlation between academic staff length in the university and university capacity perception

Student perception on university capacity

In analysing the data of student respondents' scores per indicator are combined at the level of sub-dimension and average scores per sub-dimension are calculated. It should be remembered not all sub-dimensions were measured from students. Figure 6 presents the average score per sub-dimension.

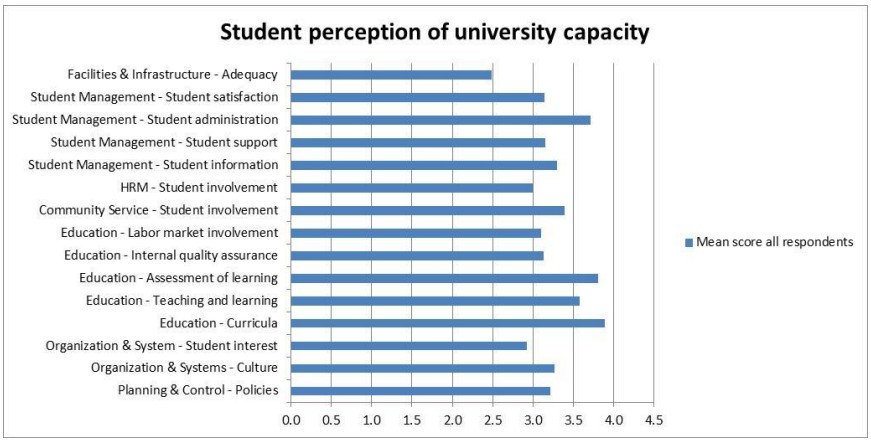

Figure 6 Average score per sub-dimension students

From this it becomes clear students consider capacity in education sub-dimensions and student administration rather high with average scores above 3.5 for most sub-dimensions. Students' perception of adequacy of facilities and infrastructure is below 3.0, the same goes for how students' interested are included in university decision making. From analysing the data at university level it is found student perception differs from management perception in university specific capacity areas. E.g. in university I students hold perceptions different from management when it comes to labour market relevance and involvement and adequacy of facilities and infrastructure.

Figure 7 and 8 on the next page present the results of t-test indicating significant differences between groups of students. Figure 7 presents the comparison between students from both universities. Figure 8 highlights the differences between male and female students. In both figures * indicates significance at the $p<0.05$ level and ** indicates significance at the $P<0.01$ level.

From figure 7 it can be concluded students from university I perceive university capacity higher on all sub-dimensions of capacity included in the student questionnaire. This observation confirms the observation resulting from the management self-observation questionnaire and from the academic staff questionnaire that university capacity of university I is higher than of university II. From figure 8 it can be read hardly any difference exists in how male and female students perceive university capacity. Only at two sub-dimensions a significant difference was found; female students have a lower perception of the curricula and a higher perception of the adequacy of facilities. Similar as for academic staff correlation analyses were done for finding out about relationship between capacity perception and length at the university and age of students. Only few correlations were found. Length at the university significantly correlated with teaching and learning (-0.10), internal quality assurance (-0.10) and labour market involvement and relevance (-0.10). Age of students only significantly correlated with organizational culture (+0.10). So it seems that the university where the student is studying has the biggest influence on how students perceive university capacity.

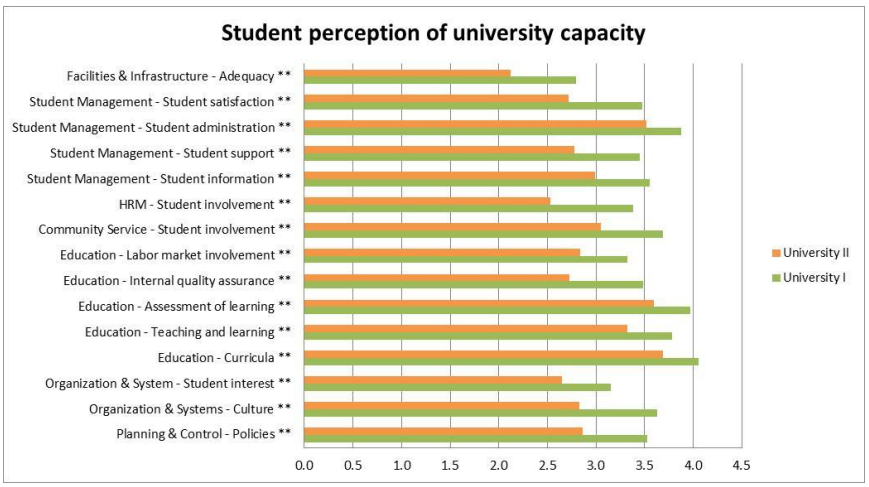

Figure 7 Average score student per university

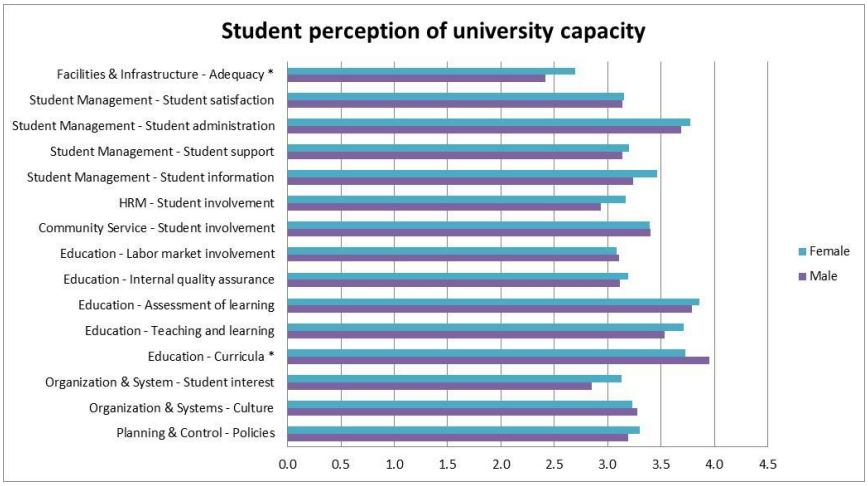

Figure 8 Average score male and female students

5. Conclusions and recommendations

The results presented in this paper are based on capacity assessment at two Ethiopian universities, both from the second generation of universities. This limits the generalizability of the results to other universities in Ethiopia. However a number of conclusions and recommendations can be presented from the findings.

Conclusions

First, from the findings it can be concluded differences exist in university organizational capacity. Differences exist across universities, across stakeholder perceptions and across capacity areas. All stakeholders indicate capacity of university I is higher than capacity of university II. At the university level differences exist between management perception and perception of students and academic staff. Second, from the data collected it can be concluded that perceptions of female students and male students on university capacity only slightly differ. The same goes for the length of the period the student is involved in the university and his or her age. Only the university where the student is studying influences his or her perception of university capacity. Finally, with regards to academic staff differences exist in perception based on university, degree level and length of working at the university.

Recommendations

Findings of the study are relevant both at the level of the university and at the level of national higher education policy. At the university it is recommended to include the results in the university strategic planning and organizational development. Furthermore, it is recommended to enhance internal communication in the university as to align capacity perceptions among stakeholders. Also it is advised for universities to repeat the capacity assessment at a later point of time to find out about impact of capacity development interventions. At the inter-university level it is advised universities contact each other as to find out what each university can learn from each other. At the national level it is advised to engage in further research to find out more about the concerns raised by the findings from the academic staff questionnaire. These are in line with literature signalling threats of brain drain where qualified staff not only leaves Ethiopian higher education but also moves to better established, less remote and older Ethiopian universities (Ashcroft and Rayner, 2011; Belay, 2008; Semela, 2011a; Semela, 2011b). Policies aimed at satisfaction and retention should be devised since academic staff is crucial in realizing Ethiopian higher education ambitions.

Furthermore, it is suggested to include in future versions of OCAT also to include external stakeholder perspectives, such as from alumni and employers to get an even better understanding of university capacity, specifically as it relates to relevance of higher education programs.

Finally, a word of caution should be mentioned in jointly combining OCAT functions of learning with external accountability. Learning requires university management to take an open attitude towards strengths and weaknesses as to optimise the perception of university capacity. When used for external accountability, the interests at stake may be high and thereby leading to less open perceptions and focussing on strengths and hiding weaknesses.

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Annex I Capacity areas and sub-dimensions

Leadership	
Aspirations	Mission, vision and goals
Leadership	Inspiration, influence and change
Planning & Control	
Strategy and policies	Existence, quality, use and held in the university
Planning and control	Planning, information and performance measurement
Organization & Culture	
Culture	Culture reflects quality and open-mindedness
Decision making	Formalization, participation and communication
Organizational structure	Structure, job design, reporting and coordination
Communication	Internal communication
External relations	Partnerships, community relations and public relations
Education	
Aspirations and strategy	Existence, link with overall strategy, use and held in the university
Curricula	Learning objectives, course outlines, innovation
Teaching and learning	Practices in line with course outlines, innovative teaching, resources
Assessment of learning	Policy, criteria, transparency and feedback
Internal quality assurance	Policy, practices and quality improvements
Labour market	Labour market relevance and involvement
Community Service	
Aspirations and strategy	Existence, link with overall strategy, use and held in the university
Involvement	Involvement of students and link with research
Research	
Aspirations and strategy	Existence, link with overall strategy, use and held in the university, research agenda
Organization and management	Culture, structure, planning, funding and cooperation
Human Resource Management	
HR planning	Existence, quality, information and competence
HR cycle	Recruitment, selection, compensation, training and development, evaluation
HR diversity	Expertise, policies, results
Employee satisfaction	Satisfaction with working at the university
Student Management	
Student information and selection	Information for prospective and selection of admitted students
Student support	Policies, information, career planning, counselling, complaints
Student administration	Correctness of data and grades
Alumni relations	Policies, practices and alumni involvement
Student diversity	Policies, competence and organizational roles
Student satisfaction	Satisfaction with studying at the university
Facilities & Infrastructure Management	
Physical infrastructure	Policies, organizational roles, resources and adequacy
Technological infrastructure	Policies, organizational roles, resources and adequacy
Academic infrastructure	Policies, organizational roles, resources and adequacy
Housing and campus facilities	Policies, organizational roles, resources and adequacy