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**Design of an organizational capacity assessment tool
for enhanced leadership and management in
Ethiopian new public universities**

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Abstract

Design of an organisational capacity assessment tool for enhanced leadership and management in Ethiopian new public universities

The Ethiopian higher education system has realized enormous growth in the recent years and its future ambitions require additional capacity development in quality and in quantity. In planning and monitoring capacity development, organisational assessment plays a major role. This paper outlines the design of an organisational capacity assessment tool for Ethiopian new public universities following a six-step design oriented research approach in which empirical research contributes to decision making in the design process.

Presentation

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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.

This paper describes the design of an organizational capacity assessment tool (OCAT) aimed at enhancing university management decision making in strategic planning and organisational capacity development and to support organisational learning and improvements. The development of the tool was included as a separate project in a larger Dutch funded leadership and management capacity development initiative for 13 Ethiopian new public universities in cooperation with the Ethiopian Education Strategy Centre (ESC) in Addis Ababa. Furthermore, the tool was developed making use of a design oriented research (DOR) approach involving Ethiopian new public universities in the design process.

Ethiopian higher education system

The Ethiopian higher education system is made up of the Ministry of Education (MoE) and higher education institutions (HEI). HEI, both public and private, are responsible for education, research and community service. The MoE is responsible for development and implementation of the national higher education strategy as described in Education Sector Development Plans (ESDP). As such it is involved in approval of the strategic plans of the public HEI. Furthermore, the MoE is responsible for central admission and placement of students. Two higher education councils support the work of the MoE. HERQA (Higher Education Relevance and Quality Agency) evaluates the quality of HEI by means of institutional audits and accreditations. ESC (Education Strategy Centre) aims to contribute to national plans and policies by means of research and acting as a resource centre.

The Ethiopian national higher education strategy, as described in ESDPs, is ambitious and aims to contribute to socio-economic development of the country (Federal Democratic Republic of Ethiopia, 2009) by means of drastically enhancing enrolment capacity. ESDP III (2005/2006 – 2010/2011) led to expansion of the at that time existing eight universities and by building up from scratch thirteen new public universities. ESDP IV (2010/2011 – 2014/2015) focused on strengthening the science and technology sectors of higher education with the aim of having 70% enrolments in this sector. Furthermore, again new universities were erected, the so-called third generation of Ethiopian new public universities. Currently ESDP V (2015/2015-2019/2020) is under preparation. The expectation is that further expansion is aimed at and that a fourth generation of universities is foreseen. In choosing locations for new universities, not only local demand is leading, but also equal spreading of universities across the country.

The Ethiopian new public universities are young institutions. The oldest ones started operations around 2008 or 2009. As an illustrative example, Aksum University (in the north) and Jigjiga University (in the east) each accommodate around 20.000 students, of which roughly half are regular students and the other half are evening, weekend and summer students. It may come as no surprise Ethiopian higher education faces challenges such as in funding (Semela, 2011), staffing (Nega, 2012), teaching practices (Belay, 2008), research and community service (Ascroft & Rayner, 2011), quality assurance (Adamu & Addamu, 2012) and gender (Molla, 2013). To overcome these challenges and to improve the quality of education and other services, university capacity is considered crucial.

Theoretical framework

This paper takes a systems perspective of organisations in general and universities in particular. From this holistic perspective, the functioning of organisations 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 organisations is influenced by elements in its environment. Indeed, universities are part or sub-system of one or more larger systems, such as the national higher education system and the regional 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. 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 organisation towards its objectives. Plan-do-check-action cycles, also to be found in higher education quality assurance approaches, assure the university remains on its track.

This managerial or bureaucratic perspective on universities can be found in literature on higher education organisations (such as e.g. Birnbaum, 1998; Bergquist, 2008; McNay, 1995) and relates to the rather centralized characteristic of the Ethiopian higher education system. It assumes university capacity is prerequisite for its performance and hence a task of management to enhance and develop university capacity to the required level. Organizational capacity assessment helps university management in improved decision making on organizational capacity development thereby leading to improved education, research and community service. OCAT aims to help in identifying strengths and weaknesses used as input for (strategic) development plans. When used properly, they support and enhance university organisational learning and improvement. OCAT's also can be used to monitor capacity development; this would require repetition at discrete intervals.

Most of the OCAT's work in a similar four-step way (Simister & Smith, 2010:12). First, it is required to break down the broad concept organisational capacity into a framework of manageable areas. The framework used for breakdown of organisational capacity results in a number of capacity dimensions. Following the logic of capacity enhancement indicators, these dimensions are further divided into sub-dimensions and indicators of organisational capacity. No standard or widely accepted model exists for the breakdown of capacity, although a higher conceptual level, most models include similar aspects. The second step in the OCAT process involves the development of a ranking or rating system. Basically, this involves deciding on interval scales for measuring capacity (such as Likert scales) or on ordinal scales (making use of pre-defined answering options). The third step focuses on how data is collected and who is involved. Numerous options are available here ranging from e.g. use of focus groups with top management to surveys involving staff and students. The last steps in organisational capacity assessment involve the actual collection and analysis of data and use the results for input in managerial decision making.

Design oriented research approach

Verschuren and Hartog (2005) notice the growth of a particular objective of practice-oriented research in social sciences aimed to contribute to the design and construction of an artefact aimed at improving existing practices. They describe a design cycle made up of six steps to arrive at the construction of an artefact. The design cycle starts with a description of a *small set of goals or objectives* of the artefact. Next, it requires investigating *assumption and requirements* from a functional, contextual and user perspective. The third step involves describing the *structural specifications* of the artefact under construction, listing the characteristics, aspects and parts the artefact must have in order to fulfil requirements and assumptions. The following step involves the design of a *prototype* of the artefact that can be used for *piloting* and testing in the fifth step of the design cycle. The last step involves *evaluating*

the artefact in line of the goals described at the beginning of the design process. Research aimed at contributing to solving construction problems is called design oriented research (DOR). Assuming OCAT can be perceived as an artefact to be designed, the six-step approach was used to create the OCAT for Ethiopian universities. Empirical research was used to support the design process. A first empirical study used semi-structured interviews with 17 Ethiopian university management representatives to find out about management perspectives on OCAT objectives and about user requirements. The second empirical study was about piloting the OCAT in two Ethiopian new public universities, thereby gathering data leading to management information on organisational capacity. Finally, the third empirical study aimed to evaluate the OCAT use and objectives making use of semi – structured interviews with the local project team and local university management. Figure 1 illustrates the design oriented approach in OCAT development. OCAT development was done by a project group consisting of initially four and later three organisations, both from the Netherlands and Ethiopia.

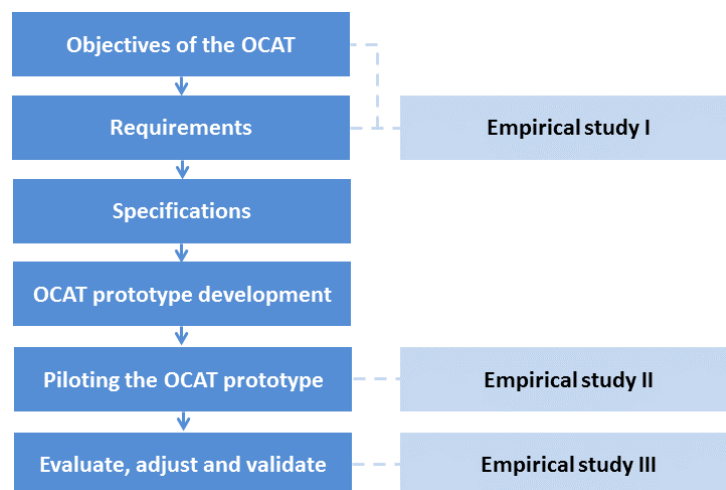


Figure 1 Design oriented approach in OCAT development

Results

Goals and objectives and empirical study I

In the first step of the design cycle, the OCAT goals and objectives were tentatively described by the project group as i) to support (strategic) decision making and priority setting on organisational capacity development, ii) to contribute to organisational learning, iii) to create opportunities for bench marking with other universities and iv) to contribute to Balanced Score Card planning and control cycle by widening the scope of organisational capacity and make things visible that previously were out of sight. The findings of empirical research I validated the pre-defined OCAT goals. Representatives from university management strongly support the OCAT function of organisational learning above the use of OACT for external accountability.

Requirements and empirical study I

Step 2 in the design cycle aims to find out about user, functional and contextual requirements and assumptions. Empirical research I provided input for step 2 in the design cycle and informed on user requirements. Respondents indicated the need for measurement of relevant capacity area's such as academic factors, administrative services and student life factors. The results also indicate respondents agree on the use of both objective and subjective indicators of university capacity, especially because not for all elements objective indicators are available. However, following previous university rankings experiences, some respondents warn not to use Likert-scales in situations where different raters can come to different assessments and where more objective and qualitative measurements are more appropriate.

Furthermore, respondents came up with the following sources for information on university capacity: students, staff (academic and administrative), management (university management, middle management, university boards) and external stakeholders.

Also in step 2 of the design cycle, *functional requirements* are derived from Simister & Smith (2010), as mentioned paragraph on background and literature. In breaking down capacity into manageable capacity areas a framework was used differentiating between i) primary university activities (with education, research and community service as dimensions), ii) secondary or supporting activities (dimensions: human resource management, student management and facilities) and iii) leadership and organisational aspects (dimensions: leadership, planning and control and organisational characteristics) (see figure 2 for illustrations). Following the logic of capacity enhancement indicators (Mizrahi, 2003) the framework is used to identify dimensions that are further divided into sub-dimensions and indicators.



Figure 2 University capacity areas to break down capacity

Structural specifications

Structural specifications describe the elements the OCAT is made up of. For the OCAT this is fairly simple; the OCAT consists of instruments and procedures for collecting and analysing data on organisational capacity. Following the outcomes of phase two it was decided to include measuring instruments for finding out about management, students, academic and administrative staff perspective on organisational capacity. Taking into account a feasible scope of the project, it was decided not to include external stakeholders in this phase of OCAT-development.

Within each capacity area a number of sub-dimensions and indicators were developed making use of existing tools and relevant literature (such as e.g. Brinkerhoff & Morgan, 2010; Buntingh & Cloete, 20122; Cadri, 2007; Cameron, 1978; CEPU, 2013; Hazekorn, 2005; IUCEA, 2010; Lusthaus et al., 2002; Preece, 2011; Toma, 2010 ; VPP, 2011). Table 1 informs on sub-dimensions used in the OCAT. As an illustration table 2 informs on indicators of the capacity area leadership. For other dimension, similar tables were created resulting in an overview of nine areas of capacity with underlying sub dimensions and indicators (Van Deuren, 2014).

Table 1 Capacity areas and sub-dimensions

<i>Capacity area</i>	<i>Sub-dimensions</i>
Leadership	Aspirations Formal leadership and university management
Planning & Control	Strategy Planning and control
Organisation & Systems	Organisational culture Decision making Organisational structure Internal communication External relations
Education	Education results Education aspirations and strategy Curricula Teaching and learning Assessment of learning Internal quality assurance Labour market relevance and involvement
Community Services	Community service results Community service aspirations and strategy Community service involvement
Research	Research results Research aspirations and strategy Research organization and management
Human Resource Management	Human resource planning Human resource management cycle Human resource diversity Human resource quality and efficiency Employee satisfaction
Student Management	Student information and selection Student support Student administration Alumni relations Student diversity Student satisfaction
Facilities & Infrastructure	Physical infrastructure Technological infrastructure Academic infrastructure Housing and campus facilities

Prototype development and empirical study II

The prototype represents the first realization of the OCAT ready for testing in an empirical setting. First, measuring instruments were created for each group of respondents in the form of questionnaires where items function as operationalization of indicators. User requirements indicated the need for as much objectivity as possible in measuring capacity. Therefore, it was decided to use for the management a self-assessment questionnaire with ordinal, pre-described answering items describing capacity at four levels (VPP, 2011). Questionnaires for students and staff have the objective to validate the self-assessment and use Likert scale to measure perceptions of organisational capacity. All questionnaires are in English, except the questionnaire for administrative staff that is translated into the local language. The management questionnaire asks about all capacity areas. Questionnaires for stakeholders are limited to areas expected to be visible to them. Sampling of respondents and procedures for data-collection were developed in a workshop with representatives from the two piloting universities. Actual data-collection included self-administered written questionnaires to 527 students and 300 academic staff in the two universities. Administrative staff data-collection was partly self-administered with written questionnaires and partly with help of interviewer. Collecting data from management with the self-assessment questionnaire for management was done in focus group discussion in university I and individual filling in in university II, because of not being able to get together for focus group. Data were recorded and

analysed in EXCELL. Finally, the results were described in reports for the university management informing on results of all stakeholders and confronting management perception with perceptions from the internal stakeholders. After approval of both universities, reports were shared. The results from using the OCAT at two universities indicate a/o substantial difference in level of university organisational capacity between the two universities and differences between management perceptions and stakeholder perceptions at some sub-dimensions (such as e.g. formal leadership, facilities and infrastructure). The results were also used as input for a policy paper and presented at an Ethiopian conference on higher education and development in July 2015.

Table 2 Capacity area leadership; sub-dimensions and indicators

<i>Sub-dimension</i>	<i>Indicators</i>
Aspirations	<i>Mission</i> Extent to which a (written) mission expresses universities reason for existence, including values and purposes. Extent to which the mission is broadly held in the university and frequently referred to.
	<i>Vision</i> Extent to which a clear, inspiring, shared and demanding but achievable understanding exists of what the university aspires to become. Extent to which the vision is consistently used to direct actions and set priorities.
	<i>Overarching goals</i> Extent to which the vision is translated into clear, bold and measurable set of goals that university aims to achieve. Extent to which goals are broadly known and consistently used to direct actions and set priorities.
	<i>Inspiration</i> Extent to which formal leadership is able to influence attitudes, behavior and values of others towards university goals.
Formal leadership / university management	<i>Support of formal leadership</i> Extent to which academic and administrative staff support the formal leadership roles in the university.
	<i>Institutional transformation / change</i> Extent to which university leadership is able to communicate and discuss the rationale for change and 'sense-making' ('collective creation of a new reality through language').

Evaluation and empirical study III

Evaluation of piloting the OCAT in two universities by the local project team responsible for data-collection indicated that in both universities it was difficult to get the management together to discuss and agree on perspective on university capacity. The management of the university that did manage to get together, considered the tool to be invaluable and of great relevance to use in strategic planning. The management of the university that did not get together, found the questionnaire long and time taking. Data-collection from students in one university was smooth, in the other university complicated because students initially did not show up or were reluctant to fill in the questionnaire without receiving financial compensation. Data-collection from students in one university was smooth, in the other one more complicated because data of HRM department did not match reality and sampling had to be redone as a result of this. In both universities, academic staff reluctant in filling in questionnaires. Data-collection at administrative staff was rather complicated, part of the administrative staff being illiterate. Because of lack of ICT-support, self-administration of questionnaires and data-preparation was quite laborious. Furthermore, the project group evaluation indicated a number of remarks on unclear wordings etc. in questionnaires.

Evaluation of presenting the university results to university management indicated that management of both universities saw OCAT results as a learning opportunity to find out about different perceptions from different stakeholders and to engage in communication to create synergies in perceptions on university capacity. Furthermore, they suggest a more detailed level of analysis, and finding out about why capacity gaps exist is suggested; eventually further research may be needed to do so. It is also suggested to include recommendations on how to improve university capacity. Especially in the case of using the results for

some form of ranking or budgeting, it is strongly recommended to take into account the specific situation and scarce resources of a university in evaluating and comparing university capacity. All OCAT objectives as identified at the start, are deemed possible, taking into account above mentioned suggestions and comments.

Conclusions and discussion

The OCAT-project aimed at design and development of an organisational capacity assessment tool for Ethiopian universities to support university leadership and management in strategic planning and prioritizing in capacity development plans. It was expected, by choosing a design oriented research, university management as future users, were involved in an early stage in the development and their opinions were taken into account in developing the OCAT. The results of the evaluation research seem to affirm this expectation. The results of the evaluation research also indicate the usefulness of the OCAT for managerial decision making on strategies and organisational capacity development contributing to higher education quality in Ethiopia. Furthermore, combining data of both universities can serve as input for national policy making on higher education.

Nevertheless, a number of remarks can be made. First, OCAT development and piloting was limited to only two universities both from the second generation of universities. It is recommended to implement OCAT in more universities, also in universities of other generations and to learn from their experience. Second, because of the scope of the project, it was not possible to include external stakeholders such as alumni and employers. It would be wise, in a next version of OCAT to include these stakeholders in organizational capacity assessment. Third, universities in Ethiopia are not yet accommodated to collect data with help of ICT. This made the data-collection and –preparation process quite laborious. It is hoped that this will change on short notice, thereby facilitating data-collection. Fourth, quite some respondents were reluctant to fill in the questionnaires since they were not used to being asked for their opinion or expected compensation. It is expected that by enhanced communication between management and staff and students on the results of the OCAT will lead to less reluctance in filling in the questionnaires. Fifth, looking at how the management of the two universities filled in the self-assessment questionnaire, it seems the value of OCAT is partly in discussing with each other on university capacity. Sixth, in comparing results from various universities it is suggested to include local circumstances of the university, such as e.g. university location where a less attractive location may lead to less satisfied employees and students. Finally, the main aim of organisational capacity assessment relates to organisational learning and improvement. Whenever this function is combined with using the results for external accountability, this may lead to less openness that is crucial for learning and improvement.

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