

Identifying Key Performance Indicators for Academic Departments in a Comprehensive University through a Consensus-based Approach: A South African Case Study

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ABSTRACT The main objectives of this paper were to formulate consensus-based Key Performance Indicators (KPIs) for academic departments in a university and to identify the concerns in achieving them. The research involved both a quantitative (questionnaires) and a qualitative design (interviews). The sample consisted of 243 academics and 12 members of the university management from one South African public higher education institution. The analysed data served as pointers to optimum KPIs for departments. They included graduation rates recommended for certificates, diplomas and degrees, throughput rates; departmental evaluations and programme reviews; and minimum levels of staff qualifications per programme (one qualification higher than what he/she is teaching). However, the following concerns need to be addressed if the KPIs suggested could be realised: under-qualified staff, underprepared students, too lax entrance requirements, lack of quality tutorials, lack of resources and high workloads. Recommendations include short- medium- and long-term measures to achieve the KPIs.

INTRODUCTION

The concepts of performance indicators (PIs) and quality assessment in higher education (HE) have clearly become international issues (Dochy et al. 1990; Kells 1992; Daniel 1997; Chen et al. 2006; Law 2010; Ntshoe et al. 2010; Kleijnen et al. 2011; Rajkaran and Mammen 2012; Andrew 2013; Kalinina 2013; Lodesso et al. 2014; Pereira et al. 2014). Jackson (1996) emphasised self-evaluation as an important tool for self-regulation of quality. Kleijnen et al. (2011) investigated whether internal quality assessment contributes to more control or improvement of higher education. They found that "... quality management is influencing improvement positively" (Kleijnen et al. 2011: 141).

Performance indicators play an important role in identifying opportunities for improvement and quality costing, comparing performance against internal standards, process control and improvement, and comparing performance against external standards and benchmarking (Oakland 1995). Therefore, statements such as "what gets mea-

sured gets attention" (Eccles 1991: 131), "if it cannot be measured, it cannot be controlled" (Finch 1994: 65), "what gets measured, gets done" (Stables 2001: 315); "if you can't measure it you can't manage it" (Ketteridge et al. 2002: 78); and "if you cannot measure it, you cannot improve it" (Lomas 2002: 76) have been echoed to stimulate and catalyse quality development, quality assurance (QA) and quality control in universities. In this context, terms such as 'critical success factors', 'performance measures', 'performance indicators' and 'key performance indicators' (KPIs) dominate.

Well back in 1990, Dochy et al. (1990: 2) gave a number of reasons why performance indicators are gaining popularity in Higher Education Institutions (HEIs): due to economic restraints, new management techniques becoming essential for the institutions and government; HEIs obligation priorities and responsibilities to the individual and to society; a move towards a greater autonomy for individual institutions; effectiveness and efficiency becoming central concepts in managerial reports requiring adaptability to the changing needs of society in general and the economy in particular. Similar concerns continue to exist as observations in this century's research outputs such as Law (2010), Kleijnen et al. (2011), Rajkaran and Mammen (2012), Andrew (2013) indicate. HEIs also require the ability to allocate limited resources and continuously strive for improved quality and excellence in teaching.

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Al-Turki and Duffuna (2003) researched performance measures for academic departments. A top-down approach to decide the KPIs had been causing delays and at times rejection by professionals and academics. Recently, for example, McCance et al. (2011) and Rajkaran and Mammen (2012) made use of a consensus-based approach to establish KPIs: the former for nursing and midwifery care and the latter for university academics. In an era that places emphasis on quality management in the HE sector, it is indeed pertinent that institutions formulate consensus-based KPIs for academic departments which ought to result in academics' buy in. In the light of the foregoing, an apposite as well as pertinent question arises: What consensus-based key performance indicators would be considered as acceptable by academics and academic administrators as optimum ones for academic departments in a South African (SA) public comprehensive university (CU)?

The purpose of this paper is to present the findings that emanated as consensus-based KPIs for Academic Departments in a CU. The determined KPIs can be used as benchmarks for self-evaluation by academics and the departmental and university managements can make effective comparisons.

Goal-setting research emphasizes the role of conscious intentions in work (Locke and Latham 1984). Goal-setting has been a central feature of management theory and practice. Goal-setting theory states that people who set goals outperform those who don't set goals (Locke and Latham 1990). Steers and Porter (1991: 172) also convincingly argue that people who have set goals or objectives consistently outperform those who have no goals or who are instructed to meet goals. The organizational process of goal setting deals with (1) aligning personal and organizational goals and (2) rewarding goal attainment. Goals can help to direct attention and action, mobilize effort, create persistent behaviour over time and lead to strategies for goal attainment (Locke et al. 1981). It is within this background that PIs were being formulated for academic departments in Universities. Soutar and McNeil (1996: 72) state that, "it would seem appropriate if all faculties became involved in the establishment of clear strategic goals for their respective departments and developed pertinent PIs to measure progress towards these goals." According to Al Turki and Duffuaa (2003: 331), "... performance measures should be based on a clear purpose, linked to the goals and objectives of the (academic) department".

The concept of quality in higher education (QHE) and QA often remains vague and unspecified. According to Nishoe et al. (2010: 112) "quality remains elusive as ever". Also, QHE and QA, "... remain contested terrain, which raises the issues of whether these concepts are relative and context-bound or whether it is feasible, and indeed desirable, to talk of universal criteria, standards and benchmarks of quality and QA, regardless of the context" (Ntshoe et al. 2010: 112). QHE can be defined in terms of fitness for purpose, transformation and value for money (Nightingale and O'Neil 1994; Aschroft 1995; Harvey and Green 1996). There is a strong argument that in SA, there should rather be reference to notions of quality instead of a definition (Singh 1999). These notions are: "quality exemplified in an exceptionally high standard; quality as transformation; quality in terms of fitness for purpose; quality as quest for zero defect; quality as value for money; and quality as a product evaluated against customer satisfaction" (Bornman 2004: 374). South African Higher Education Quality Committee (HEQC) that is responsible for promoting QA in higher education (HE) developed a quality assurance framework and criteria, based amongst others, on 'fitness for purpose', 'quality as transformation' and 'value for money' (HEQC 2004). Performance indicators (PIs) are essential ingredients of quality. Cuenin (1986) cited by Green (1994: 11), defines PIs as empirical quantitative or qualitative data that are relative rather than absolute and imply a point of reference that enables an assessment of achievement against a defined objective. In practice, quantitative indicators are found more commonly than qualitative ones and very few indicators that genuinely help evaluate teaching quality have been developed. PIs are statements that are built in, not only to direct performance but also to measure performance. They are stated clearly and act as the driving force for effectiveness and efficiency against which success or failure can be measured (Mammen 2003: 15). KPIs are therefore a group of PIs that are important to achieve certain stated objectives.

Performance indicators are used to achieve one or more of the following six objectives: establish baseline measures and reveal trends; determine which processes need to be improved; indicate process gains and losses; compare goals with actual performance; provide information for individual and team evaluation; and manage by fact rather than gut feeling (Bester-

field et al. 1995: 102). These objectives are surely critical in any HEI. The following are some of the key performance indicators (amongst others) for academic departments:

Student Output: The core business of a HEI is teaching and learning. Therefore an important performance indicator is the student output. This consists of the success rates of students (ratio of passes to enrolments at course level), with emphasis on throughput, graduation and cohort completion rates. Ntshoe et al. (2010: 113) call these 'outcomes indicators'. The DoE (1997: 1.22, 2.24) in the White Paper 3 did set two main goals and performance measures for student outputs: (1) to meet the efficiency requirements of the system, student throughput and output rates must improve; and (2) to meet the equity requirements of the system, the success rate of black students must improve.

The following references were made use of in calculating the quality measures (KPIs) referred to above. (1) The *graduation* rate as the percentage of the total number of registered students who graduated in a given year (Border Technikon 2004: 9). (2) The *throughput* rate as calculated by dividing the number of graduates in any given year by the total number of students (head count) enrolled in that year (Cloete and Bunting 2000: 30). Paterson and Gordon (2010) calculated the under-graduate throughput rates using a time-to-degree measure which tracked entrants from one year to the next over a number of years, allowing for a seven-year graduation rate for the initial cohort. (3) The *cohort* completion rate as the outcomes over time (HEQC 2004: 17). This entailed calculating the number of students who graduate as a percentage of the original number that registered for the programme.

The success rate of students in the HE sector has not been very pleasing in the past. Various studies (Agar 1990; Zaiman et al. 1998; Koch and Foxcroft 2003; Lourens and Smit 2003; Fass-Holmes and Vaughn 2014) reported high failure rates, resulting in poor throughput. This was pointed out by the former South African Minister of Education when she stated, "in order to give our nation value for (HE) investment, universities must attend to the low throughput rates at first-year level, must develop effective academic development programmes (not pass one pass all) ... Programmes should have the pulse of every course at their fingertips. They must be able to anticipate failure and must be competent at promoting success" (Pandor 2006:

10). According to the National Plan for Higher Education (NPHE) SA's graduation rate of 15% is the lowest in the world (Letseka and Maile 2008; MacGregor 2012; Mthali 2013). According to Letseka and Maile (2008), graduation benchmarks approved for contact programmes for the period 2004/05 to 2006/07 were as follows. [The benchmarks for 2004 (Ministry of Education 2004: 10) are given in brackets.]

Undergraduate:	up to 3 years	22.5%	(22.5%)
Undergraduate:	4 years or more	22.5%	(18%)
Postgraduate:	up to Honours	18%	(54%)
Postgraduate:	up to Masters	54%	(30%)

Internationally, in 2008, Finland had the highest graduation rate (63%); New Zealand (48%); Sweden (40%); United States and United Kingdom (37%) and Germany about 25%. The Organisation for Economic Co-operation and Development (OECD) reports an average of 38%. Graduation rates have generally declined in the UK and the US (Labi 2009; Coughlan 2010; Schneider 2010). In 1995 the US ranked first in completion rates, but in 2007 it occupied 14th spot (Labi 2009). Between 2000 and 2008 the UK's graduation rate fell from third highest to fifteenth among top industrialised nations (Coughlan 2010). In fact there are over 25 United States Universities that have graduation rates ranging from 0% to 4%. The State of Texas, for example, got seven of its state universities on this list (O'Shaughnessy 2011). Even in 2013 the US has only managed a graduation rate of only 54% (Mangan 2013). Many of these universities have extremely low admission standards. The above review clearly indicates that many countries have a problem with their graduation rates.

Programme Review: The word review refers to viewing or revisiting something again with the purpose of enhancing how it operated (process) or what already existed (product). In a HE context, both the process and product are equally important. Programmes offered by departments must be assessed regularly, and the focus should be on teaching and learning systems, as well as on processes and outcomes of HE provision (Bornman 2004: 372). Two types of reviews can take place: minor reviews on an annual basis and major reviews after four or five years (Ellis 1993). A programme review ensures that the focus is still on quality and that the programme is relevant after a period of time. Programme review in HE is a universal phenomenon (Ellis 1993; Van Vught and Westerheijden 1994; Mouton and Dowling 2001; Smout and Stephenson 2001; Bornman

2004; Becket and Brookes 2006; Mizikaci 2006). The review process is being used by universities to assess programme quality, to enhance institutional decision-making, and in some cases to provide a basis for the redistribution of marginal resources within the institution (Van Vught and Westerheijden 1994; Mizikaci 2006). National technikon programmes were evaluated in a four-year cycle (Jacobs 1999 cited by Smout and Stephenson 2001).

Departmental Evaluation: Departmental evaluation in HE can be defined as a practical effort to determine the worth and merit of an academic department, by judging, among other things, whether it has been successful in attaining its fundamental objectives (Hugo 1994: 85). The objectives of departmental evaluation are as follows: to produce useful information for the advancement of departmental activities; to provide information to management of the department and the institution for decision making and to do planning; to improve performance; to assist the faltering, motivate the tired and encourage the indecisive; to incorporate the ongoing concern for self-study and self-improvement; to assess the extent to which accreditation standards are being met; to provide proof that resources are being used optimally; to ascertain the quality of HE provided by the academic department (professional accountability); and to provide a clear statement of the relationships between the goal and objectives of the academic department and the mission of the institution (adapted from Hugo 1994). Departmental evaluation is also suggested by Al-Turki and Duffuaa (2003) and Bornman (2004). At Trinity University (Texas, USA) departments are reviewed at the beginning of the third year, especially if the Head is seeking for re-appointment for another term. Some international universities (e.g. University of Pittsburgh) have their academic units evaluated every ten years (Office of the Provost 2002).

Staff Qualifications: Staff qualifications provide a guide to institutional capacity. Amongst others, the numbers and qualifications of full time lecturing staff are important inputs that have an impact on QHE (Mammen 2003: 17). According to Gillard (2004: 28), at least 25% of all full-time and part-time academic staff in Australian HEIs must have a relevant PhD and research experience. In well-established universities, between 60% and 80% academic staff should have a PhD and research experience (Gillard 2004). Geber (2009: 676), reports that at the University of the Witwatersrand

in 2008, only 48% of the teaching staff, at all levels from early career lecturer to Professor, had Doctorates. The Southern Africa Regional University Association (SARUA 2009) citing Business Day of 02 August 2009, reported that "more than 60% of academic staff at public HEIs in 2007 did not even have a Master's level degree". Staff qualification (especially at the Master's and Doctoral levels) appears to be a challenge in SA. Gibbon and Kabaki (2002: 211) suggest that Doctoral degrees be the indicator of capacity in universities and Master's degrees as the primary indicator of capacity in technikons. However, this differs from faculty to faculty and across disciplines. The academic staff for undergraduate programmes has relevant academic qualifications higher than the exit level of the programme, but at minimum a degree (HEQC 2004: 10). For example, a staff member with an Honours degree may teach undergraduate courses leading to a degree.

METHODOLOGY

The main problem was to formulate acceptable KPIs for academic departments at the CU. Following an extensive literature survey, two questionnaires (one for academics and one for Management) were developed. Feedback from a pilot study was helpful to revise and modify the questionnaires. Ethical parameters were adhered to in the instrument and the method of data collection as stipulated by the sampled university. The questionnaires were mailed to 243 academics and 12 members of Management in one CU. Stratified sampling was used to ensure that academics from all Faculties were represented. Due to the geographical location of the four campuses of the CU, a mail survey was conducted. Despite many reminders only 108 questionnaires were returned and out of these, only 100 were usable. Only 11 members of Management responded. In terms of number of usable questionnaires, the return rates were 41% (academics) and 92% (members of Management). The questionnaires were followed up by personal interviews with 11 members of Management. The data were analysed for frequencies and percentages using SPSS. The interviews were analysed using an inductive analysis approach recommended by McMillan and Schumacher (2001). Data triangulation and method triangulation were used as means of enhancing the credibility of the findings. On most of the structured items, the mem-

bers of the sample were requested to respond to a statement on specific performance indicators on the Likert scale options of 'Strongly agree', 'Agree', 'Neutral', 'Strongly disagree' or 'Disagree'. They had to comment if they disagreed or strongly disagreed on the unstructured part.

RESULTS

The responses in the returned questionnaires for the Likert scale items 'Strongly agree' and 'Agree' were collapsed to 'Agree' and 'Strongly disagree' and 'Disagree' were collapsed to 'Disagree'.

Respondents' Biographical Data and Spread of Academic Respondents across Faculties

Respondents' Data

The academics' ranks ranged from Junior Lecturer to Professors with the majority (79%) in the Lecturer and Senior Lecturer category. The majority (72%) had either Master's (55%) or Doctoral degrees (17%). The academic ranks of the participants from the university management were Executive Deans (27%); Vice-Dean (18%); Directors and equivalent levels (55%). Amongst them 36% were Professors. The respondents' academic affiliations before the merger were 32% in Technikon and 68% in University. From the above description, it is evident that the respondents were adequately qualified and experienced enough to apply their minds while responding to the items in the questionnaire.

Spread of Respondents' Across Faculties

Table 1 presents the data on the distribution of respondents per Faculty. According to Table 1, the return rate in descending order per faculty was 65% Faculty of Education (FED), 50% Faculty of Humanity and Social Sciences (FHSS), 41% Faculty of Health Sciences (FHS), 40 % Faculty of Business, Management Sciences and Law (FBMSL) and 35 % Faculty of Engineering Science and Technology (FSET) respectively. FBMSL and FSET were two of the largest faculties and they offered programmes at three of the four campuses. The return rates amongst faculties were, in descending order, 35% and 29% for FBMSL and FSET, respectively, and 13% each for FED and FHS.

The overall return rate for the sample was 41% and in the context of the other studies on quality management with return rates of 35% (Elmuti et al. 1996) and 34% (Hay and Herselman 2001) the return rate of 41% is considered as satisfactory.

Table 1: Distribution of respondents per faculty

Faculty	No. of respondents in the sample	No. and % of respondents returning questionnaires per Faculty	% of respondents returning questionnaires per faculty
FED	20	13 (65%)	13%
FHSS	20	10 (50%)	10%
FHS	32	13 (41%)	13%
FBMSL	88	35 (40%)	35%
FSET	83	29 (35%)	29%
Total	243	100 (41%)	100%

Note: Business, Management Sciences and Law (FBMSL); Education (FED); Engineering, Science and Technology (FSET); Health Sciences (FHS); Humanities and Social Sciences (FHSS).

Graduation Rates

Table 2 provides a summary of the graduation rates for the various programmes as suggested by respondents. The percentage recommendation of the graduation rates for each programme is provided in the second column. The level of agreement/disagreement by both academics and members of management are provided in column three and four.

A graduation rate of over 70% is recommended by the respondents. The formula used for the graduation rate was as referred to earlier:

$$\frac{\text{No. of students passing a qualification (programme)}}{\text{No. of students registered in the final year}} \times 100$$

Throughput Rates in Departments

There was a general degree of approval by both academics (52%) and members of Management (72.7%) that the throughput rate in a department should be between 20% and 25%. However, many respondents indicated that it should be higher than this. Some even indicated that it should be higher than 40%. This would be difficult using the following formula:

$$\frac{\text{No. of students graduating in a department}}{\text{Total no. of registered students in the department in all semester/year levels}} \times \frac{100}{1}$$

Programme Review

Both academics (89%) and members of Management (73%) agreed that all programmes should be reviewed every three years. Six academics that disagreed indicated that the review should take place every five years. Members of Management that disagreed also indicated that the review should take place every five years. Comments ranged from: "Every five years, we can't do it all the time," "Five years as National Audits" and "I agree. Although at one CU it is five years."

Departmental Evaluation

Both academics (82%) and members of Management (73%) agreed that all departments should be externally evaluated every three years. Some that disagreed stated that the evaluation should take place every five years. One respondent stated that a three year cycle is too short as it does not allow time for correction and review.

Another stated: "Why not do internal evaluations at least every three years and external every five years." Other academics (those that agreed) indicated that the evaluation would be useful for setting and maintaining standards.

Staff Qualifications

Table 3 summarises the minimum qualifications for staff at the various teaching levels. The minimum staff qualification is indicated in column two and the level of agreement/disagreement are provided in columns three and four respectively.

There was a general degree of approval by both academics and members of Management that staff must have one qualification higher than what he/she is teaching (where relevant). However, many respondents (who disagreed) pointed out that the minimum qualification for staff should be a Masters degree. Actually this is the requirement at one CU. A common comment by staff from the Faculty of Health Sciences was "Doctoral or equivalent" referring to professional degrees. This would also be relevant for qualifications in Accounting and Law.

Table 2: Graduation rates for the various programmes

Programme	Recommendation	Level of agreement/disagreement	
		Academics	Management
Certificate	71% to 75%	59% disagreed with 40% to 50%*	64% disagreed with 40% to 50%
Diploma	71% to 75%	57% disagreed with 40% to 50%	64% disagreed with 40% to 50%
Undergraduate Degree	71% to 75%	55% disagreed with 40% to 50%	64% disagreed with 40% to 50%
B Tech	70% to 80%	57% agreed	45% agreed
Honours	70% to 80%	74% agreed	55% agreed
Masters	70% to 80%	66% agreed	55% agreed
Doctoral	70% to 80%	61% agreed	64% agreed

*40% to 50% was the benchmark indicated on the questionnaire.

Table 3: Minimum qualifications for staff at various teaching levels

Level	Minimum qualifications	Level of agreement/disagreement	
		Academics	Management
Diploma and Certificate	Degree	84% agreed	64% agreed
Undergraduate Degree	Honours	76% agreed	55% agreed
B Tech	Honours	66% agreed	82% disagreed
Honours	Masters	95% agreed	100% agreed
Masters	Doctoral	90% agreed	100% agreed
Doctorate	Doctoral plus experience	91% agreed	91% agreed

When asked what should be the minimum qualification of staff at a CU, 59% of the academics stated that Masters should be the minimum requirement for permanent academic staff in a CU; 32% indicated that it should be Honours; 8 % indicated a Degree and only 1 % Doctoral. All members of management agreed that the minimum qualification should be a Masters. Regarding the percentage of academic staff that should have Doctoral degrees – 63% of academics and over 80% of members of Management indicated that at least 50% of staff should have Doctoral degrees.

DISCUSSION

A graduation rate of over 70% was recommended by the respondents for the programmes offered in various Departments. The expected KPI for graduation rate as per the findings is indeed high compared to what has been actually realised in SA. A graduation rate of between 20% and 25% would be more realistic. According to MacGregor (2012), SA universities have relatively low success rates: 74% in 2010 compared to a desired national norm of 80%. This results in a graduation rate of 15%, which is stated in the green paper. This is confirmed by Letseka and Maile (2008) and Mtshali (2013). This is well below the national norm of 25% for full-time students in three year degrees. Even at the end of 2003, only 22% of the total first-time-entering student intake had graduated. Even after four years of study, just a third of the intake, (36 % university students and 26% of technikon students) had graduated (Pandor 2006: 10).

Internationally, in 2008, Finland had the highest graduation rate (63%) followed by New Zealand (48%); Sweden (40%); United States and United Kingdom (37%) and Germany about 25%. The Organisation for Economic Co-operation and Development (OECD) reports an average of 38% graduation rate. Graduation rates have generally declined in the UK and the US (Labi 2009; Coughlan 2010; Schneider 2010). In 1995 the US ranked first in completion rates, but in 2007 it occupied 14th spot (Labi 2009). In fact there are over 25 United States Universities that have graduation rates ranging from 0% to 4%. The State of Texas, for example, got seven of its state universities on this list (O'Shaughnessy 2011). Even in 2013, a graduation rate of only 54% was achieved in the United States of America (Mangan 2013). The above re-

view clearly indicates that many countries have a problem with their graduation rates and SA is not an exception.

The NPHE defines the graduation rate as the proportion of the students enrolled (headcount enrolments) for a particular degree in a particular year who graduate in that year. According to Watson (2008: 728) this indicator is influenced by three factors. Firstly, the length of the degree – the graduation rate in a three year degree would be 33.3% (that is, a third of the students in the degree would be in the final year and would graduate in that year). All qualifications of three years or less are grouped together, irrespective of length. Secondly, the indicator is affected by the number of occasional students in the system: students who are taking single courses for their own benefit only and who have no intention of graduating are currently included in the calculation of the graduation rate, to the detriment of the institution. Thirdly, a factor which strongly influences this indicator is the stability of intake numbers in the degree. Using this definition the graduation rate in 2002 and 2003 was 18% (HEQC 2004: 34). The Centre for Higher Education Transformation (CHET) set a graduation target of 20% for SA Universities (Cloete and Bunting 2004: 102). Under such circumstances, the numerator and the denominator used for the calculations are based on different cohort sizes which tend to understate the actual graduation rate (HEQC 2004: 20). Ideally the graduation rate should be calculated by tracking the members of a cohort of students through their university careers to see how many of them graduate and when. Many students take an additional two years to complete their degrees. Using these guidelines the graduation rate for 2003 was in the range of 38% to 68% depending on the Matric Point Score (HEQC 2004: 22). Watson (2008: 729) suggests a longitudinal study or a 'cohort study'. A cohort is defined as the number of students who first registered for a particular programme in a particular year and whose progress toward that qualification is subsequently tracked. This should be complemented with retention, attrition, completion and progression rates (Watson 2008). This paper did not set a standard for dropout rates and is therefore accepted as a weakness. Paterson and Gordon (2010) recommend that institutions use more than one method of calculating graduation rates because graduation rates exclude part-time and

transfer students and they mask differences in the admission policies of institutions. A new equity index is being proposed for SA which will play an important role in monitoring graduate throughput rates, amongst others (SAPA 2013). Another project being embarked in SA is the Quality Enhancement Project whose aim is to improve student success with a view to increasing the number of graduates (Council on Higher Education 2014a). These projects would be beneficial in the medium- to long-term.

There was a general degree of consensus amongst both academics (52%) and members of Management (73%) that the throughput rate in a department should be between 20% and 25%. The figure for one CU in SA was around 11% (for 2005) and the expectation set was to improve to 15% by 2010 (WSU Revised Institutional Plan 2007).

According to Frank Meintjies (Deloitte Consulting), cited by Nair et al. (2004) throughput rates in SA HEIs were 8% for African learners and 25% for White learners, respectively. Throughput rates per subject/learning area were: 3% (Engineering); 9% (Medicine) and 12% (Natural Sciences) respectively. Even for SA students entering HE in the period 2000 to 2006, the throughput rate was not improving (Council on Higher Education 2014b). These figures were not pleasing and therefore achieving anything close to 20% and above would be plausible. Due caution must be taken when comparing international statistics as countries (and some institutions) make use of different formulae for both the graduation and throughput rates. It is for this reason that only comparison from SA institutions are given for the throughput rate in this discussion.

Both academics and members of Management agreed that all programmes should be reviewed every three years. Those among academics and Members of Management that disagreed indicated that the review should take place every five years. Programme review in HE is a universal phenomenon (Ellis 1993; Van Vught and Westerheijden 1994; Mouton and Dowling 2001; Smout and Stephenson 2001; Bornman 2004; Becket and Brookes 2006; Mizikaci 2006). The results are more or less in line with those of Ellis (1993) and Smout and Stephenson (2001). Technikon programmes were evaluated in a four-year cycle (Smout and Stephenson 2001). Ellis (1993) suggested annual minor reviews and major reviews after four or five years for universities. At

the University of York (2011), programme review takes place annually. However, at the University of Pittsburgh, new programmes are evaluated within five years (Office of the Provost 2002).

Both academics (82%) and members of Management (73%) agreed that all departments should be externally evaluated every three years. Departmental evaluation is suggested by Hugo (1994); Al-Turki and Duffuaa (2003) and Bornman (2004). This is in line with Trinity University (Texas, USA) where departments are reviewed at the beginning of the third year, especially if the Head is seeking for re-appointment for another term. Some international universities (for example, University of Pittsburgh) have their academic units evaluated every ten years. In the case of those departments in which some programmes are subject to evaluation by external professional accrediting groups (for example, Medical, Accounting and Law degrees), the scheduling of the evaluation may be coordinated with the accreditation (Office of the Provost 2002).

There was a general degree of consensus amongst both academics and members of Management that staff must have one qualification higher than what he/she is teaching. However, many respondents (who disagreed) pointed out that the minimum qualification for staff should be a Masters degree. This is in line with the HEQC (2004: 10) requirements that states that it is a generally accepted practice in most disciplines that academic staff for undergraduate programmes has relevant academic qualifications higher than the exit level of the programme, but at minimum a degree. For example, a staff member with an Honours degree would be responsible for undergraduate courses leading to a degree. Academic staff for postgraduate programmes has relevant academic qualifications at least on the same level as the exit level of the programme.

In a profiling exercise in the Faculty of Education at a HEI in SA, Carl and Kapp (2004: 22) suggest that a Lecturer should have a Master's degree and a Senior Lecturer should have a Doctorate, or in exceptional cases, at least a Master's degree. At least 50% of the academic staff for postgraduate programmes has relevant academic qualifications higher than the exit level of the programme (HEQC 2004). This does not apply to doctoral programmes, or to master's programmes in certain fields of study, for example, Medicine and Accounting, where Masters in Medicine (M Med) degrees and Chartered Accountants (CAs) (together with experience) are

regarded as adequate. The above guidelines would be the ideal situation if staff is properly qualified and abundantly available.

Institutions in urban areas have the ability to attract and retain highly qualified staff than rural areas (Gibbon and Kabaki 2002: 211). The location of Black HEIs (due to apartheid legislation which led to the establishment of separate universities for each of the main racial groups) in areas far from modern amenities and services, make it difficult to draw well-qualified and experienced staff (Smout and Stephenson 2001). The researchers can confirm this from their own experiences at a Historically Disadvantaged Institution (HDI) where staff members in Accounting and Law are especially difficult to recruit and there were no full-time Professors in four departments for several years. In Australian HEIs at least 25 % of all full-time and part-time academic staff must have a relevant PhD and research experience (Gillard 2004: 28). Gibbon and Kabaki (2002: 211) suggest that Doctoral degrees be the indicator of capacity in universities and Master's degrees as the primary indicator of capacity in technikons. Some universities are striving to improve the number of staff with PhDs. Examples are the University of Dar es Salaam in Tanzania with the assistance of the German government (Syllivester 2014) and the University of Fort Hare in South Africa which makes use of its own research funds and funding from the National Research Foundation (NRF) in South Africa. Another initiative is to ensure that university academics have teaching qualifications (Grove 2014). Most South African universities encourage this. Finally strategies (such as job satisfaction, salaries, academic promotion and development) must be in place to retain suitably qualified and motivated staff (Selesho and Naile 2014). These efforts will assist in improving throughput and graduation rates.

CONCLUSION

This paper identified consensus-based KPIS for academic departments in a CU. These were: graduation and throughput rates of between 20% and 25%; departmental evaluations and programme reviews every three years; and minimum staff qualifications as follows: Degree for Diploma and Certificate programmes; Honours for Undergraduate and Bachelor of Technology programmes; Masters for Honours programmes; Doctoral for Masters programmes and Doctoral

(plus experience) for Doctoral programmes. However, to achieve this, the following concerns - as identified in the paper - must be addressed: large class sizes, under-qualified and inexperienced staff, underprepared students, too lax entrance requirements, lack of quality tutorials, lack of resources and high workloads.

RECOMMENDATIONS

Short- medium- and long-term measures are recommended to achieve the KPIS identified for academic departments. The short-term measures recommended are tightening up entrance requirements; making meaningful tutorials available for underprepared students; and facilitating equitable workloads. The medium-term measures recommended are institutional support to improve staff qualifications; making resources available; and positive steps to lower staff-student ratios. In concurrence with the Goal Setting theory the authors recommend that institutions set some long-term goals. Members of the management actively engage with academic departments in joint activity to set goals. One of the key elements in a performance management system is the development of Departmental KPIS in order to attain the strategic aims of the university. Similar research should be carried out at other Universities nationally and internationally and CUs in particular, in order to formulate KPIS that may be internationally recognised. Further studies could look into the achievement of quality while ensuring the satisfaction of KPIS's.

LIMITATIONS OF THE STUDY

However, the design had four main limitations: Firstly, it took place when HEIs in SA were undergoing a major transformation emanating from the merger and revised vision and mission statements. The educational environment was unstable and this might have resulted in respondents sometimes being negative in their responses. Secondly, the subjects of the design were from one CU. It would influence the external validity of the results. Thirdly, due to costs and time constraints only a few KPIS were studied. Finally, the study does not have a measure of quality control in the process of identifying KPIS. Despite these limitations and with due caution and employing a method of triangulation, the researchers assume that the limitations may not have adversely affect-

ed the credibility of the results. However, this paper notes that quality is not guaranteed in the achievement of the KPI's. It could in fact be sacrificed.

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