

Time perceptions of South African accounting academics

MJ Nieuwoudt

School of Accounting Sciences
University of South Africa

JS Wilcocks

School of Accounting Sciences
University of South Africa

OV Kilpert

Institute for Curriculum and Learning Development
University of South Africa

Abstract

Research, teaching and service are usually regarded as an academic's main responsibilities. One of the most hotly debated issues in the international arena is what academics should devote their time to, since time is a limited commodity for academics and tradeoffs are necessary.

The aim of this study was to establish the perceptions of South African accounting academics with regard to how they spend their academic time. Managers can use this information in efficiency planning and individuals can use this information to compare their effort allocations to those of their colleagues. A descriptive study was conducted in which a questionnaire was used to test, *inter alia*, the perception of how South African accounting academics at every SAICA-accredited university use their academic time. Nine activities were tested that relate to management, teaching, research and service.

It was found that South African accounting academics spent 10% of their time on management tasks, 78% on teaching, 5% on research and 7% on service. Half (50%, median) of the respondents spent 5% of their time on management tasks, 65% on tuition and 5% on enhancing their own knowledge. It appears as if excessive time is spent on teaching, whilst inadequate time is allocated to research activities. Time spent on service activities appears to be reasonable.

An Accounting academic's qualification appears to be the best indicator against which to measure time allocation. A clear pattern emerged in a comparison between qualification and time allocation in seven of the nine activities tested. The higher the respondent's qualification, the more time is spent on management tasks, research for both non-accredited and accredited journals, acting as external examiner and community work. The inverse is true for subject-related administration and tuition.

Keywords

Accounting academics
Service
Time perception

Research
Teaching

1 Introduction

Research, teaching and service are usually regarded as academics' main responsibilities (Cooley 1995; Doost 2000; Frank, Lowe & Smedley 2002). One of the most hotly debated issues in the international Accounting arena is what duties academics should devote their time to, as time is the most critical factor that influences research output (Demski & Zimmerman 2000; Mouton 2001; Parker 2005). Time is a limited commodity for academics (Milem & Berger 2000) and tradeoffs are necessary (Frank et al. 2002). According to Cooley (1995), attempts to excel in all three fields, teaching, research and service, often lead to conflict, especially at home. He advises academics to practise proper time management and to seek a balance between their professional life and their personal life at home. As Hershberger et al. (2005) point out, there are only 24 hours in a day, no matter what one does.

Juggling teaching, research, service and a personal life is stressful. Newman (1999) observes that many of the junior academics admitted to feeling overworked, nervous, anxious, and mysteriously depressed. McClain (2003) noted that the most difficult challenge for new academics is how to set priorities in time management.

A comparative study performed by Klass and Hawkins (1997) on five studies completed between 1984 and 1994 identified a lack of time and a lack of effective time management as the most significant stressor category for all groups in the helping professions (nurses, social workers, teachers in specialist roles and regular classroom teachers). The participants in all these studies were all government employees and the departments that employed them had all suffered serious cutbacks in funding.

Gray and Helliard (1994) discuss massive changes in the British university system, particularly institutional pressure to take in more students. Funding at most tertiary institutions now depends on the institution's performance in teaching and research evaluations. These changing perspectives increase general stress in the system, and there has been an increase in the workload related to the management of these developments. According to Parker (2005), academics are progressively losing control of their work environment as they face major increases in teaching and related administration.

South African accounting academics are faced with the same problems as their international colleagues with pressure to excel in all academic areas. During 1996, the government of South Africa started to develop new policies with regard to Higher Education in South Africa (South Africa 1997, 2001, 2003a, 2003b, 2004). A high premium is now put on research output at universities in the National Plan for Higher Education. In future, universities will be measured by their research output and subsidised accordingly (South Africa 2001, 2003a, 2003b). Changes in the funding formula for Higher Education, together with increased student numbers, require academics to identify priorities and apply proper time management.

Aside from the pressure to do research, the South African Institute for Chartered Accountants (SAICA) accredits only certain universities to deliver the Certificate in the Theory of Accountancy (CTA), which is an entry requirement to write Part I of the Qualifying Examination. The standards required by SAICA put enormous pressure on accounting academics to allocate a substantial amount of their time to teaching.

South African accounting academics are also exhorted to perform service duties. Cooley (1995) defines service as service to others including the department, the university, the

profession and the community. He also regards consulting work, even when it is very highly paid, as service. Cooley (1995) argues that a time allocation of about 10% to service may be regarded as reasonable.

In a study conducted in 2005 by Nieuwoudt and Wilcocks on the attitudes and perceptions of South African accounting academics about research (the current study is an extension of the 2005 study), the overwhelming majority of the respondents indicated that they do not have enough time to do research and that adequate research time is not planned into their annual work programme (Nieuwoudt & Wilcocks 2005).

In the UNISA 2015 Strategic Plan, an agenda for transformation (UNISA 2005), several problematic aspects were noted in the situation analysis section, including the following: staff morale was low, largely due to uncertainties surrounding merger issues (dramatic changes have taken place in the post-merger period); academics reported that the time they had available for research was diminishing as administrative and teaching loads escalated; and this has been compounded by the proliferation of policy and planning initiatives in higher education that have placed additional demands on staff time (with growing administrative demands, compliance and reporting workloads for many staff members). The authors of the UNISA 2015 Strategic Plan anticipate that these demands will continue for the foreseeable future.

2 Review of prior studies

Several international studies have examined the time perceptions of academics or time allocation at university and college level (Cox, Boze & Schwendig 1987; Enders & Teichler 1997; Frank *et al.* 2002; Oshagbemi 1996). The findings of these studies are discussed and summarised below in order to identify trends, factors and patterns used in the discussion of the perceptions held by South African accounting academics with regard to their academic time allocation.

2.1 Frank *et al.*'s study

Frank *et al.* (2002) reported, *inter alia*, on the time allocation perceptions of assistant professors in Accounting. The perceptions of actual time allocation versus perceptions of optimal time allocation in three areas were reported, namely teaching, research and service. Perceptions as to actual time allocations suggested time spent on teaching to be 44%, on research 44% and on service 12%. Assistant professors perceived the optimal time allocation to be 40% on teaching, 51% on research and 9% on service.

2.2 Enders and Teichler's study

Enders and Teichler (1997) analysed some findings and implications of the 'International Survey of the Academic Profession' initiated and coordinated by the Carnegie Foundation. In different countries, the term 'professor' has a different meaning and, therefore, to avoid confusion, Enders and Teichler (1997) used the term 'professor' to refer to those who hold the rank of professor, senior lecturer and reader. The following countries were included in the study: Germany, the United Kingdom (UK), the Netherlands, Sweden, Japan and the United States of America (USA). The time spent on teaching ranged from 28% (in Japan) to 43% (in Germany), whereas time spent on research varied from 26% (in the Netherlands)

to 44% (in Japan). The last category related to administration, service and other activities; and the percentage of time allocated to it ranged from 28% (in Germany) to 38% (in Japan).

2.3 Oshagbemi's study

Oshagbemi (1996) conducted a study on the time perceptions held by university teachers in managerial positions. He examined the time spent on activities performed in a particular week. He found that the overwhelming majority of university teachers did not know how long they had worked in a week or the average duration of an activity. He compared the estimated and actual time spent on particular tasks by academics in the UK and in Nigeria. Both groups overestimated the time they spent on teaching, but they estimated the time they spent on research remarkably accurately. The UK academics worked a total of 45 hours a week; and the percentage of their time (to the nearest hour) they spent on each activity was as follows: research 25%, teaching 15%, consulting 4% and administration and management 56%. Their Nigerian counterparts worked a total of 44 hours a week; and the percentage of their time (to the nearest hour) they spent on each activity was as follows: research 23%; teaching 19%, consulting 3% and administration and management 55%.

2.4 Cox et al.'s study

Cox et al. (1987) studied academic accountants and investigated how academic accountants allocate effort across the areas of teaching, research, service, administration and consulting (practicing as accountants). A total of 249 accounting academics completed the questionnaire, but only 222 respondents completed the effort allocation. Although tests of significance were conducted, only the means are reported on for the purposes of this study. The effort allocation by rank is summarised in the table below.

Table 1 Effort allocation by rank

Rank	Full		Associate		Assistant		Instructor	
Tenure status of each rank for total population (249)	83.9%		64.6%		21.1%		8.7%	
PhD status of each rank for total population (249)	80.6%		69.2%		65.8%		8.7%	
N (222)	55		56		70		41	
Effort in hours* (% of effort)**	Hours	(%)	Hours	(%)	Hours	(%)	Hours	(%)
Teaching	24.6	(51)	25.1	(57)	27.2	(61)	30.4	(74)
Research	10.0	(20)	7.6	(17)	11.2	(25)	3.5	(9)
Service	5.9	(12)	5.5	(12)	4.8	(11)	3.0	(7)
Administration	8.2	(17)	6.2	(14)	1.2	(3)	4.0	(10)
Consulting	4.5		4.0		3.2		7.2	
Total hours (% excluding consulting)	53.2	(100)	48.4	(100)	47.6	(100)	48.1	(100)

* Effort in hours per week.

** Percentage of effort excluding consulting.

Source: Summarised from Cox et al. (1987)

The US accounting academics who participated in the survey worked more than 40 hours a week, even when consulting was excluded from the total number of hours spent on academic activities. The tenure status of accounting academics has a large impact on effort allocation among the US Accounting academics.

It is important to compare Cox *et al.*'s (1987) study with the more recent study by Frank *et al.* (2002). If the effort allocation of assistant professors in Accounting reported by Cox *et al.* (1987) is converted into percentages, then 61% of time was spent on teaching, 25% on research and 14% on other functions (excluding consulting). Frank *et al.* (2002), 15 years later, show that the effort allocation for assistant professors in Accounting was 44% on teaching, 44% on research and 12% on other functions.

A comparison of effort allocation by type of degree held in Cox *et al.*'s (1987) study showed that academics with a PhD teach less, do more research, are more involved in service and administration and do less consulting than their colleagues without a PhD.

2.5 Summary

Only two of the above studies relate directly to accounting academics, namely Cox *et al.*'s (1987) study and Frank *et al.*'s (2002) study. Cox *et al.* (1987) show that a clear pattern emerges when the respondents' effort allocation was compared to the respondents' qualifications. A clear pattern in the allocation of effort between ranks was also reported, with the exception of the assistant professors, regarding research and administration. It appears that the assistant professors substituted administration effort with research effort and recorded the highest research effort and the lowest administration effort. Frank *et al.* (2002) show a remarkable increase in the research effort by assistant professors over a 15-year period.

The lowest research effort reported in Enders and Teichler's (1997) study was 26% among academics in the Netherlands. Oshagbemi (1996) reported on the effort allocation of university teachers in managerial posts and the effort allocation was 25% for research.

The lowest research effort reported by these four studies relates to the effort allocation of instructors in the US in the 1987 study: they allocated only 9% of their time to research.

3 Aim

The aim of this article was to establish the perceptions that South African accounting academics held on how they spend their academic time. Managers can use this information in efficiency planning and individuals can use this information to compare their effort allocation to that of their colleagues.

4 Research design and methodology

This is a descriptive study. A questionnaire was used to test the perception of how South African accounting academics at every SAICA-accredited university use their academic time. A response rate of 56% was obtained.

This article focuses on Question 8 in the questionnaire. In Question 8, nine activities were identified and participants were asked to estimate the percentage of time they spent on these activities. As a guideline, and to get a comparative response, an academic year was estimated as amounting to 1840 hours. Outside work was defined as work where the

university does not benefit directly and therefore outside work for one's own account was excluded from the activity list. Community work was also defined as work that was not remunerated by the university.

The nine activities relate to management, teaching, research and service. Activity 1 relates to management, Activities 2 to 4 relate to teaching; Activities 5 and 6 relate to research and Activities 7 to 9 relate to service. The activities are the following:

- 1 Management tasks
- 2 Subject-related administrative tasks
- 3 Formal academic courses (government subsidised)
- 4 Research to enhance your own knowledge
- 5 Research for non-accredited articles or conferences
- 6 Research to publish in an accredited journal
- 7 Acting as external examiner for other academic institutions
- 8 Community work not compensated (e.g. referee for a journal)
- 9 Outside work through the university (non-formal courses or lectures)

The management activity was included for Heads of Department and course co-ordinators and included committee work for the university. The activity relating to 'research to enhance your own knowledge' was included to make provision for accounting academics who update their knowledge regarding important changes in their subject field.

The time allocation marked in all the usable responses was first summarised out of a 100% for the nine activities, after which a number of statistical procedures were performed on the data set, as suggested by Babbie and Mouton (2001), who recommend that, when nominal or ordinal independent variables (rank, qualification) and a ratio dependent variable (% time spent) are used, the following statistical tests should be done, namely means, the t-test and ANOVA (analysis of variance).

The mean is simply the arithmetic average of a group of numbers. The t-test is used to compare two (estimated) population means. The ANOVA procedure is used for designs with one independent variable consisting of more than two groups. The ANOVA tests for an effect rather than for a difference between means (Tredoux & Durrheim 2002).

5 Findings

A total of 261 respondents completed the questionnaire. This represents 56% of the total number of full-time accounting academics employed by the 12 SAICA-accredited institutions in South Africa. From the total number of responses, 237 usable responses were collected on Question 8 (51% of the total number of full-time Accounting academics). The survey reflects the views of an equal number of males and of females. Table 2 sets out the profile of the respondents.

Table 2 Rank, publications in an accredited national journal and qualifications

Rank	Number of respondents	Number of academics that have published	Academics with a master's degree	Academics with a doctorate
Lecturer	51	3	11	-
Senior lecturer	114	16	38	3
Associate professor	42	24	34	3
Professor	30	19	12	18
Total	237	62	95	24

The above information was used to compare effort allocation on the nine activities that have been identified. In Table 5, effort allocation by contributors to an article in an accredited journal versus non-contributors is measured and discussed; Table 6 deals with academic effort based on rank and Table 7 deals with effort allocation by qualification.

Table 3 Breakdown of the academic time spent by the respondents (N = 237)

Activity	Median	Mean	Standard deviation (Std dev)
1 Management tasks	5	9.9	15.112
2 Subject-related administrative tasks	10	16.5	13.840
3 Formal academic courses (government subsidised)	55	53.0	22.697
4 Research to enhance your own knowledge	5	8.3	8.790
5 Research for non-accredited articles or conferences	0	1.3	2.763
6 Research to publish in an accredited journal	0	3.4	7.235
7 Acting as external examiner for other academic institutions	0	1.9	5.758
8 Community work not compensated (e.g. referee for a journal)	0	1.8	3.844
9 Outside work through the university (non-formal courses or lectures)	0	3.9	6.204
Total		100.0	

The median or the 50th percentile is a value that divides a distribution into two halves. Thus 50% of the scores are below the median and 50% of the score above (Tredoux & Durrheim 2002). The midpoint for management tasks is 5%, for tuition (administration included) it is 65% (10% + 55%) and for effort allocation to enhance own knowledge it amounts to 5%.

The effort allocation as distributed between the main four activities tested (to the nearest 1%) amounts to management function 10%; teaching 78%; research 5% and service 7%. It appears that excessive time is spent on teaching, whilst inadequate time is allocated to research activities. If we take Cooley's (1995) definition of service into account (that includes committee work), one can argue that at least some of the time spent on management tasks relates to service. It appears that the service component stated by South African accounting academics appears to be reasonable. The Department of Education (DOE) sets 1.25 accredited research outputs per full-time academic as a research standard (UNISA 2005). If only 3.4% (63 hours or 8 days) of academics' time is allocated to

research to publish in an accredited journal, it is unrealistic to expect that the benchmark of the DOE can be met.

The total population was distributed equally in terms of gender, namely 118 males and 118 females (one respondent did not indicate his/her gender). T-tests were performed on the time allocations by males versus those of females. The only significant difference related to the effort allocation to community work that was not compensated by the university. The mean for males for this activity amounted to 2.3 and the mean for females amounted to 1.3. The T-value of 2.11 indicates a significant difference at the 5% confidence level ($p < 0.05$) for community work.

The t-tests were also performed on Chartered Accountants (CA) ($n = 194$) and academics without a CA qualification ($n = 73$). The only significant difference that was noted related to subject-related administration – CAs performed less subject-related administration. The mean calculated for CAs for this activity amounted to 15.2 and the mean for non-CAs amounted to 19.5. The T-value of 2.25 indicates a significant difference at the 5% confidence level ($p < 0.05$).

In Tables 4 and 5 time allocations by academics at UNISA (primarily a distance education institution) versus the time allocations by academics at other universities (primarily residential universities) (see Table 4) and by contributors to accredited journals versus that by non-contributors (see Table 5) were compared to establish whether there were significant differences between the time allocations of these groups.

Table 4 Comparison of the breakdown of the academic time spent by academics employed by UNISA versus that spent by academics at other universities

Activity	UNISA (N = 78)		Other (N = 159)		df	t
	Mean	Std dev	Mean	Std dev		
1 Management tasks	8.9	17.513	10.3	13.819	126	-0.63
2 Subject-related administrative tasks	12.8	12.793	18.3	14.014	235	-2.91**
3 Formal academic courses (government subsidised)	55.9	24.160	51.6	21.885	235	1.36
4 Research to enhance your own knowledge	8.5	8.056	8.2	9.152	235	0.19
5 Research for non-accredited articles or conferences	1.2	2.493	1.4	2.893	235	-0.38
6 Research to publish in an accredited journal	4.1	8.468	3.1	6.549	124	0.93
7 Acting as external examiner for other academic institutions	1.7	3.070	1.9	6.701	234	-0.35
8 Community work not compensated for	1.4	3.406	2.0	4.036	235	-1.16
9 Outside work through the university (non-formal courses or lectures)	5.5	6.909	3.2	5.690	130	2.62**
Total	100.0		100.0			

* $p < 0.05$

Significant difference

** $p < 0.01$

Highly significant difference

Accounting academics employed by universities other than UNISA spent more time (5.5% more) on subject-related administrative tasks than their colleagues employed at UNISA (the only university primarily devoted to distance education in South Africa). A highly significant difference was noted. This may be due to the centralization of all student-related administrative functions (including the capturing of marks) in a separate unit at UNISA. There is a significant difference, as pointed out by the t-test, between the time academics at UNISA and academics at other universities spent on non-formal courses. Academics at UNISA spend 5.5% of their time on non-formal courses, whilst academics at residential universities spend 3.2% of their time on such courses. This trend may be related to the remuneration structures at UNISA (which does not pay scarcity allowances to CAs whereas most other universities do). UNISA also allows its academic staff to use 15% of academic time for working on non-formal courses or for consulting work. These non-formal courses are delivered through various UNISA centres which specialise in providing non-formal courses.

Table 5 Comparison of the breakdown of the academic time spent by contributors to accredited journals versus that spent by non-contributors

Activity	Contributors (N = 62)		Non-contributors (N = 175)		df	t
	Mean	Std dev	Mean	Std dev		
1 Management tasks	15.0	18.472	8.0	13.319	84.5	2.72**
2 Subject-related administrative tasks	13.5	10.536	17.6	14.711	149	-2.37*
3 Formal academic courses (government subsidised)	44.4	20.720	56.1	22.645	235	-3.54**
4 Research to enhance your own knowledge	7.6	8.364	8.5	8.947	235	-0.71
5 Research for non-accredited articles or conferences	2.3	3.249	1.0	2.493	87.8	2.85**
6 Research to publish in an accredited journal	7.5	8.975	1.9	5.885	80.3	4.54***
7 Acting as external examiner for other academic institutions	1.9	2.808	1.9	6.496	226	0.01
8 Community work not compensated for	2.6	3.649	1.5	3.880	235	1.94
9 Outside work through the university (non-formal courses or lectures)	5.2	6.390	3.5	6.090	235	1.91
Total	100.0		100.0			

- * p < 0.05 Significant difference
 ** p < 0.01 Highly significant difference
 *** p < 0.001 Very highly significant difference

Respondents that indicated that they had written an article or had contributed to an article in an accredited journal were identified as 'contributors' for the purposes of this comparison. Statistical evidence shows that contributors spend more time on research and less time on teaching and subject-related administration tasks. However, contributors tend to be more involved in management activities than non-contributors. This difference may be attributed to the appointment of Heads of Department on the basis of their research profile.

Table 6 sets out the comparison of time allocations by the different ranks. The one-way ANOVA indicated very highly significant ($p < 0.001$) differences between the different ranks for management tasks and formal academic courses. See Annexure A (Tables A 1 and A 2) for the statistical analysis. The discussion continues after Table 6.

Table 6 Comparison of the breakdown of academic time spent per rank

Activity	Heads of Department (N = 13)		Professors (N = 22)		Associate professors (N = 37)		Senior lecturers (N = 114)		Lecturers (N = 51)		F
	Mean	Std dev	Mean	Std dev	Mean	Std dev	Mean	Std dev	Mean	Std dev	
1 Management tasks	50.7	23.609	9.5	14.332	10.4	11.793	5.6	7.593	8.7	12.282	45.97***
2 Subject-related administrative tasks	15.9	14.694	13.6	18.733	13.0	6.793	16.4	13.343	20.6	15.473	1.99 ^{NS}
3 Formal academic courses (government subsidised)	22.2	18.142	48.4	24.023	50.3	18.164	57.5	21.835	54.7	21.993	8.52***
4 Research to enhance your own knowledge	2.8	3.833	10.7	10.490	7.7	7.040	9.1	9.564	7.2	7.690	2.21 ^{NS}
5 Research for non-accredited articles or conferences	1.2	2.166	2.3	3.670	2.2	3.604	0.9	2.268	1.1	2.622	2.35 ^{NS}
6 Research to publish in an accredited journal	2.7	5.991	6.0	8.813	5.1	8.242	2.7	6.620	2.7	7.138	1.60 ^{NS}
7 Acting as external examiner for other academic institutions	0.8	1.519	2.9	3.796	2.1	2.532	2.3	7.822	0.7	2.104	0.90 ^{NS}
8 Community work not compensated (e.g. referee for a journal)	1.1	1.935	3.4	4.837	2.8	4.664	1.5	3.666	1.4	3.243	2.12 ^{NS}
9 Outside work through the university (non-formal courses or lectures)	2.6	4.718	3.2	5.679	6.4	6.347	3.9	6.160	2.9	6.477	2.01 ^{NS}
Total	100.0		100.0		100.0		100.0		100.0		

- * $p < 0.05$ Significant difference
- ** $p < 0.01$ Highly significant difference
- *** $p < 0.001$ Very highly significant difference
- NS: Not significant

See Annexure A (Tables A1 and A2) for detailed results of the one-way ANOVA tests for all significant differences.

Further analysis in the form of multiple t-tests was performed on management tasks. These indicated that the main differences that were significant at the 5% level were those between Heads of Department and all other rank categories. This is mainly due to the fact that Heads of Department are generally more involved in the management of the institution than in teaching activities.

The effort allocation between the four main activities tested for professors (the highest academic rank in South Africa), to the nearest 1% amounts to management functions 10%; teaching 73%; research 8% and service 9%. If the effort level is compared to that reported in Cox *et al.*'s (1987) study, it seems that the effort levels of South African accounting professors can be compared to those of instructors (the lowest rank at the US universities) in the USA.

A clear pattern can be detected in the comparison between qualifications and academics' time allocations for seven of the nine activities listed. The higher the academic's qualification, the more time he/she spent on management tasks, research for articles in both non-accredited and accredited journals, acting as external examiner and community work. The inverse is true for subject-related administration and tuition.

Table 7 sets out a comparison of time allocations by academics with the different qualifications. The one-way ANOVA indicated significant differences ($p < 0.05$); highly significant differences ($p < 0.01$) and very highly significant differences ($p < 0.00$) for the following activities among the different qualifications: management tasks, subject-related administration, research for non-accredited journals, research for accredited journals, and acting as an external examiner. See Annexure A (Tables A 3 to A 7) for the relevant statistical analyses.

Further analyses in the form of multiple t-tests were performed on management tasks, which indicated that the main significant differences (at the 5% confidence level) were between the time allocations by respondents who had a doctorate and those by all other respondents (those without a doctorate). According to the multiple t-tests, the main contributors to highly significant differences on subject-related administrative tasks at the 5% confidence level were respondents with another qualification as opposed to respondents in all other categories (those with either a doctorate, a master's degree or an honours degree or a CTA qualification).

The discussion continues after Table 7.

Table 7 Comparison of the breakdown of academic time spent based on academic qualifications

Activity	Doctorate (N = 24)		Master's degree (N = 95)		Honours/CTA (N = 109)		Other (N = 9)		F
	Mean	Std dev	Mean	Std dev	Mean	Std dev	Mean	Std dev	
1 Management tasks	17.5	24.895	10.1	15.874	8.3	11.241	4.4	6.821	2.89*
2 Subject-related administrative tasks	13.1	12.291	14.8	12.922	17.6	13.018	31.1	25.345	4.73**
3 Formal academic courses (government subsidised)	42.0	26.962	52.3	22.345	55.6	21.508	58.3	22.361	2.62 ^{NS}
4 Research to enhance your own knowledge	7.5	8.387	7.8	7.969	9.3	9.652	2.2	3.632	2.09 ^{NS}
5 Research for non-accredited articles or conferences	2.3	4.146	1.8	2.967	0.8	2.109	0.5	1.333	3.84*
6 Research to publish in an accredited journal	6.9	9.364	5.1	8.289	1.4	5.094	0.0	0.000	7.40***
7 Acting as external examiner for other academic institutions	5.2	16.075	1.8	3.013	1.3	2.427	1.2	3.308	3.13*
8 Community work not compensated (e.g. referee for a journal)	2.3	4.255	2.0	3.388	1.7	4.241	0.6	1.667	0.60 ^{NS}
9 Outside work through the university (non-formal courses or lectures)	3.2	4.351	4.3	6.134	4.0	6.762	1.7	3.536	0.62 ^{NS}
	100.0		100.0		100.0		100.0		

* p < 0.05 Significant difference
 ** p < 0.01 Highly significant difference
 *** p < 0.001 Very highly significant difference
 NS Not significant

(See Annexure A (Tables A3 to A7) for detailed results of the one-way ANOVA tests for all significant differences.)

The main significant differences (at the 5% confidence level) in terms of research for non-accredited articles or conferences occurred between respondents with an Honours degree or a CTA qualification and a Master's degree, and between an Honours degree or a CTA qualification and a doctorate. Very highly significant differences were indicated on research for accredited journals at a 5% confidence level. These differences are between respondents who have a doctorate and those with either an Honours degree or a CTA qualification or other qualifications and between respondents who have a Master's degree and those with either an Honours degree or a CTA qualification or other qualifications. The comparison between academics with a Master's degree and a doctorate did not reveal significant differences. It appears that respondents only spend significant time on research-related activities once they have completed a research-related degree (a Master's degree or doctorate) and feel more empowered to publish.

The main significant differences in terms of acting as an external examiner (at a 5% confidence level) occurred between respondents with a doctorate and those with either a Master's degree or an Honours degree or a CTA qualification.

6 Conclusion

South African accounting academics spend 10% of their time on management tasks, 78% on teaching, 5% on research and 7% on service. The findings show that 50% (median) of the respondents spend 5% of their time on management tasks, 65% on tuition and 5% on enhancement of their own knowledge. It appears as if excessive time is spent on teaching, whilst inadequate time is allocated to research activities. Time spent on service appears to be reasonable.

It was found that an accounting academic's qualification is the best indicator of how he/she will allocate his/her time – this is similar to the finding in Cox *et al.*'s (1987) study. A clear pattern was detected in the comparison between the respondents' qualifications and their time allocations in seven of the nine activities listed. The higher the respondent's qualification, the more time the person is likely to spend on management tasks, research for both non-accredited and accredited journals, acting as external examiner and community work. The inverse is true for subject-related administration and tuition.

The one-way ANOVA indicated significant differences ($p < 0.05$), highly significant differences ($p < 0.01$) and very highly significant differences ($p < 0.001$) for the following activities among the respondents with different qualifications: management tasks, subject-related administration, research for non-accredited journals, research for accredited journals and acting as an external examiner.

It is distressing to note that the effort allocations for professors (the highest academic rank in South Africa) in South Africa are in line with the effort levels of instructors (the lowest rank in US universities) in the USA. It appears that an in-depth analysis of the current time allocation versus optimal time allocation for accounting academics should receive immediate attention and priority at all South African academic institutions, in order to meet the new demands of higher education in South Africa.

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Annexure A

ONE WAY ANOVA TEST using the GLM procedure

- * $p < 0.05$ Significant difference
 ** $p < 0.01$ Highly significant difference
 *** $p < 0.001$ Very highly significant difference

Statistical analysis relating to activities in Table 6: Comparison of the breakdown of academic time spent per rank that indicated significant differences

Table A1 Rank and management tasks

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	4	23829.36212	5957.34053	45.97***
Error	232	30067.16953	129.59987	
Corrected total	236	53896.53165		

Table A2 Rank and formal academic courses (tuition)

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	4	15570.5263	3892.6316	8.52***
Error	232	106007.4061	456.9285	
Corrected total	236	121577.9325		

Statistical analysis relating to activities in Table 7: Comparison of the breakdown of academic time spent, based on academic qualifications, that indicated significant differences

Table A3 Qualification and management tasks

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	3	1936.37774	645.45925	2.89*
Error	233	51960.15390	223.00495	
Corrected total	236	53896.53165		

Table A4 Qualifications and subject-related administrative tasks

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	3	2595.03256	865.01085	4.73**
Error	233	42612.16575	182.88483	
Corrected total	236	45207.19831		

Table A5 Qualifications and research for non-accredited articles or conferences

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	3	84.827521	28.275840	3.84*
Error	233	1717.299061	7.370382	
Corrected total	236	1802.126582		

Table A6 Qualifications and research to publish in an accredited journal

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	3	1074.63561	358.21187	7.40***
Error	233	11278.08169	48.40378	
Corrected total	236	12352.71730		

Table A7 Qualifications and acting as an external examiner for other academic institutions

Source	DF	Sum of Squares (SS)	Mean Square (MSS)	F
Model	3	303.175371	101.058457	3.13*
Error	233	7520.503954	32.276841	
Corrected total	236	7823.679325		

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