

Towards a common theme

- *A vision statement for the Faculty of Science*

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1 Introduction

A faculty is more than just its Dean. This necessarily means that the outlook for our faculty must be shared. The ideas presented in these notes should be viewed as an attempt at a vision and subject to improvement and clarification. I offer a starting point for the conversation.

A vision statement in its various guises is a description of what we want to become. Such forward-looking intentions cannot be composed in isolation. To create a hope for the future, we need to understand the present. This calls for a mission statement, that is, a succinct description of what we do. Our mission must be immutable and compatible with our vision and reflect commitment to best practises of academia. The means by which the vision can be realised can be encapsulated in a set of strategies. A mission statement and a strategic plan buttress a vision.

The aim of this submission is to describe the mission of the faculty of science as I understand it and from there suggest a vision. I then list some strategies on how we can realise our vision.

2 Concerning our mission

The faculty of science is distinguished from the other faculties at this institution by the following three attributes:

2.1 *Outstanding research achievements*

The faculty of science is the most active in terms of graduates produced, papers published in peer-reviewed journals and various other research outputs. For instance, statistics show that at the last count, the faculty was responsible for up to 60% of all research papers at this university¹. Although the separate matter of quality of researchers is not easy to quantify, the increase in the number of rated researchers attests to national and international credibility. The faculty has 7 SARChi research chairs and 48 NRF rated staff. This can be compared to 2 SARChi chairs and 30 rated staff in 2009. In addition, 4 out of 5 recent Vice-Chancellor's Distinguished Senior Awards have been given to a member of the faculty of science.

¹ Rhodes University Digest of Statistics, Ver. 17, 2013

2.2 *Good teaching practises*

The faculty of science in the main recognises the importance of good teaching. For example, my own department was one of those that led a national survey on teaching and learning of physics in South Africa². There are other examples specific to other departments within the faculty that can be cited. It is worth noting that the first recipient of the Vice-Chancellor's Distinguished Teaching award was from this faculty. Many others have followed Emeritus Professor Eddie Baart since 1991 with Professor James Gambiza in 2010 and Mr Andrew Todd in 2014 the latest examples. The existence of an *ad-hoc* discussion group on teaching led by Professor Steffen Büttner suggests that commitment to good teaching in the faculty of science has not wavered.

2.3 *Exemplary Outreach*

The participation of the faculty in community engagement activities is ably led by Mrs Joyce Sewry, a Deputy Dean. This is in addition to the efforts of other academics in their personal capacity.

My understanding of outreach or community engagement is that social responsibility requires academics to consider using their skills for the benefit of those who would otherwise not have access to them. The end result should always be that learning takes place both by the academics and, or their students, and the members of the community. The nature of the interaction should always be respectful and developed in conjunction with the community that it is designed to assist. In this sense, the need for and benefits of community engagement are not in question.

3 **A mission statement**

In view of the key attributes of the faculty as discussed, our mission statement may be formulated compactly as follows:

The faculty of science is committed to excellence in research, best practice in teaching and, exemplary participation in community engagement.

The statement expresses that in our research endeavours, we are mindful that the quality of our work should measure up to relevant standards; that in our teaching we are conscientious of effective teaching methods borne of experience and learnt from scholarship of teaching and finally that we accept that we have the means to help improve our immediate community.

² Report available at <http://www.saip.org.za/index.php/projects/review-of-physics-training-in-sa>

4 Towards a vision statement

4.1 Some drawbacks

The commendable successes of the faculty summarised in section 2 also draw attention to a number of concerning matters.

Whereas senior researchers have consistently garnered an award in their category of the Vice-Chancellor's research award for the last 15 years or so, the situation for the under-40s is less encouraging. In the five year period from 1999 through 2003, 4 out of 5 awards for the under-40s went to the faculty of science. This number decreased to 3 in the next span and, in the last lustrum, there was only one. This apparent systematic decline in success is open to interpretation. It is unlikely that the award has lost its appeal. If the number of good, upcoming young researchers is limited, the question of succession arises. This reality has been acknowledged before.

Concerning teaching, the national graduation rate for a 3-year degree, at about 30%, is well exceeded by the faculty's figure of 44%. Nevertheless, there are many niggling problems enough to temper any optimism. The most obvious is that the rate of exclusion for first year students, teetering close to 10%, is too high for comfort. The faculty needs to continue to strongly support initiatives such as the Augmented and, Extended Studies Programmes established to deal with this problem. Although the causes of poor performance at first year are many; under-preparedness being one of them, we need to collectively accept that perhaps we can do more to retain more first year students.

Related to both teaching and research is the fact that most of our research outputs are produced by a minority of researchers within the faculty. That is what the raw statistics suggest anyway. However, I would like to offer a different take on this. Given that the faculty of science has 125 academics, 90 of whom are permanent and with 48 now NRF rated, the issue could be one of participation. Since there are disciplines which do not lend themselves to large volumes of papers (e.g. some areas of mathematics) or indeed ones in which a research output is not necessarily the published paper, my feeling is that more academics need to get involved in productive research. I believe there is, in the faculty of science, enough goodwill, skill and credentials to draw on to address this problem.

5 A provisional vision statement

We need a vision statement because, apart from being a guide for the Dean, the statement will inform our teaching, research and administrative practices. Just as every flotilla has a flagship, we need to tout our most obvious strength, research. The pursuance of excellence in research occupies a central role in our faculty and this should remain so. We also need to have an outlook on teaching and some hope for community engagement. In view of our attributes and the problems we face, our vision statement for the period 2015-2020 may be stated as follows:

We aspire to enhance and consolidate our position as a research intensive faculty that also places emphasis on effective teaching. We aim to improve and where necessary, modernise our teaching methods; to reduce the exclusion rate at first year; to increase the number of postgraduate students, publications as well as academics involved in research; and to make exemplary community engagement an important part of our remit.

6 Immeasurables

The purpose of the faculty and how well this can be achieved can benefit from respectful cooperation and understanding in the faculty. This collegiality cannot be quantified but is essential for the proper functioning of the faculty. We are cosmopolitan and need to be aware of and respect each others' values and dignity; that of all students included.

7 A vision statement

Acknowledging the need for collegiality, the vision statement can now read

We aspire to enhance and consolidate our position as a research intensive faculty that also places emphasis on effective teaching. We aim to improve and where necessary, modernise our teaching methods; to reduce the exclusion rate at first year; to increase the number of postgraduate students, publications as well as academics involved in research; and to make exemplary community engagement an important part of our remit. We will carry out our work in an ever improving spirit of collegiality.

7.1.1 Practical aims

In terms of measurable aims, I propose the following modest but important practical objectives:

- a) We should increase the number of academics involved in productive research, that is, publications and supervision of students. Our research committee together with heads of department can discuss the practicalities of this.
- b) The number of exclusions due to unsatisfactory performance at first year has doggedly remained around 8-10% or so for the past 5 years (excluding the 18% of 2009). We should aim to reduce this by up to 1% by 2020. Given that under-preparedness of incoming first year students is unlikely to change very soon, this aim might be ambitious but is a challenge we can face up to.
- c) Although applying for an NRF rating is a personal choice, the benefits that this brings probably means that doing so is a choice the faculty has to encourage academics to make.

7.1.2 Strategies

Departments in our faculty are autonomous and set their own administrative practices. Within this autonomy, departments should see to the minutiae of strategies to achieve the common vision.

However, I suggest that common themes could include that:

- a) Members of staff who are involved in research should be encouraged and assisted to succeed. In particular, upcoming researchers should be helped in their will to start or sustain research programmes.
- b) Departmental administration should take into account and be sensitive to the needs of researchers when setting policies that are likely to affect every member of staff.
- c) Whereas teaching should be consistent with effective practices and draw on scholarship of teaching, we should also try to address problems that may exist despite our efforts, for example, inadequately prepared first year students.
- d) Departments should recognise the need for community engagement.

8 Transformation

Transformation has become an essential aspect of strategic planning at Rhodes University. We as a faculty should offer opinions on the discussions and actively participate in seeing to some change. I believe that transformation is the changing of institutional culture and practises to achieve a more inclusive climate. Transformation is synonymous with for instance, non-racism, non-sexism and equity, the latter meaning fairness and justice. Transformation and academic excellence are not incompatible. Details of transformation are mutative and cannot always be precisely defined. That we need to contribute to the discussion is not in question. What is important is acquiring the knowledge or literacy to do so meaningfully and making personal, departmental and faculty-wide decisions that contribute to transformation to make the faculty a collegial and representative entity that all its academics can identify with.

9 Summary

We need to get better at what brings us prestige, research. In particular, we should improve and strengthen the research capacity within the faculty by supporting younger researchers and enabling others gain the means to get involved in research. Attrition at first year is a problem and as we work to improve and modernise our teaching, I feel that that's where we should focus first. As a faculty, we have a responsibility to aid society and what better way to do this than by community engagement. The immediate previous Dean, Prof Ric Bernard, left well-functioning and successful administrative practices that we can build on in a spirit of *collegiality*. I leave this as my last word.