

Developing Human Statistical Capacity in a Statistics Agency- the role of SASA

1. Introduction

Last year at the opening the 50th anniversary annual SASA conference, the Minister of Finance, Trevor Manuel, posed a number of challenges for SASA to play a significant role in the production of Official Statistics. These challenges were:

- The restoration of trust in official statistics. Without the vital element of trust, no official statistics will be reliable.
- There are too few South Africans who love statistics or have a passion for it.
- The absence of sufficient discourse on methodology and outcomes.
- To pace ourselves relative to our capacity.

I have chosen to address you today on how we as a statistical association can respond to these challenges. The subject has become a passion of mine, partly because I have been charged with developing human capacity in a Statistics Agency where I work.

I think it is also an opportune time for us to address these challenges. As we start the second century of the existence of this organisation, it is time that we take stock and examine how best we can contribute in the improvement of the quality of life of all our people in this country.

I address you here today in the university they call the Free State. As we celebrate our ten years of democracy, we do so conscious that there are those of us who still yearn to be freed from the shackles of poverty. It is our duty and responsibility as an organisation to use our expertise in assisting government to realise the objectives of the different programmes in place, for eradicating poverty and underdevelopment and improving the lives of its citizens.

2. Government's needs for statistical information

The publication "Towards a ten year review" has identified 22 macro indicators: Current Growth, Sustainable growth, Economic Stability, Unemployment, Innovation, Poverty, Health and Food Security,

Human Resource Development Housing, Public safety, Ethics. These indicators have been drawn by Government to monitor delivery of services in the different departments. The departments also use these indicators to monitor their own performance.

In the year 2000, all the countries of the world agreed to adopt the Millennium Development Goals (MDG). Much of the information needed to monitor those goals is derived from the department records and registers.

The core demands for government departments are:

- Provide training to develop human statistical capacity in departments
- Verify the quality of data being produced by departments
- Improving the scope and quality of information collected by departments
- Standard definitions, classifications and concepts
- Develop capacity to analyse data relating to departments
- Provide expertise in commissioning statistical activities from external contractors
- Provide expertise on developing monitoring and evaluation systems
- Develop deeper analysis of cross-cutting issues

The Policy Coordination and Advisory Services (PCAS) unit, based in the Presidency has been looking at a number of ways for monitoring and evaluation of the different programs. It requires expertise for providing information and statistics to monitor policies and development. In order to successfully achieve its objectives Government needs statistical information so as to make informed decisions. In addition there is a need for statistical expertise at both the intermediate and advanced level.

Monitoring is a continuous function that enables a manager to assess the performance of a program, policy or project. Evaluation is aimed at assessing the success, performance, and relevance of a program, policy or project in a systematic and objective fashion.

3. The role of Stats SA

Statistics South Africa is an official provider of statistical information for government as the major stakeholder, and the public at large. The statistical information is produced in the form of statistical releases. Most of the statistical releases are classified as official statistics.

The Statistics Act (1999) defines Official Statistics as statistics designated as official statistics by the Statistician General. Official Statistics are foreseen as required to assist organs of state, business, other organizations or general public in planning, decision-making, monitoring or assessment of policies. The Statistician General may designate as official statistics any statistics or class of statistics produced from the statistical collection by Stats SA or other organs of state.

A five-tier hierarchy of the definition of statistics produced has been developed:

- **Official Statistics:** Statistics that are sustainable, meet the quality requirements and are beyond the needs of the organ or the agency that collected them
- **Significant Statistics:** Statistics collected on a once-off basis, which satisfy the quality requirements and are relevant beyond the organ or agency that collected them.
- **Departmental Statistics:** Statistics which satisfy all the quality criteria but which are relevant only to departments that collected them.
- **Acceptable Statistics:** Statistics that meet the most of the quality standards.
- **Questionable Statistics:** Statistics collected using suspect methods

The producers of statistics are primarily departments, while the users comprise both departments, the clusters and the Presidency in addition to the public and external stakeholders.

4. The Role of the National Statistics System

Statistics SA has been charged with establishing the National Statistics System (NSS). The NSS is designed to meet the needs of the users and producers of statistics.

The needs arise because:

- Government, like all democratic governments, is currently faced with improving statistics in key policy areas such as health, education and social services
- Government is increasingly turning to evidence-based policy making
- There is a need for one Stop Shop approach, since currently statistics are scattered throughout government departments and difficult to locate.
- Government, especial the Presidency, needs expertise in the analyses of results and strengthening of the monitoring and evaluation capacity.
- Users want accessible, high quality data that is accessible throughout all departments.

The NSS, which was mandated by the Act and resides in Stats SA, must encompass other things:

- quality improvement
- development of scope of the information collected
- archiving
- metadata posting
- standardization of definitions
- capacity building and accessibility.

5. Building Statistical Capacity

For staff to be highly skilled and motivated and be able to adopt to new technologies, training is required. Training is also required to:

- Ensure that various categories of staff fit the job they are doing
- Enhance job performance and professionalism
- Ensure retention of staff and reduction cost

(Central Statistics Office)

In order to produce quality and reliable statistical information and services, Stats SA requires skilled personnel, especially in the area of official statistics.

Stats SA has established Human Capacity Development division and tasked it with addressing the lack of capacity in the organization, especially in the core business area. Early initiatives were to send some of the staff members to the East African Statistical Training Center (EASTC) in Tanzania and Institute of Statistics Applied Economics (ISAE) in Uganda, to be trained in Official Statistics at both the undergraduate level and graduate level, respectively.

The division has now developed a people development framework to align human statistical capacity building with the organizational needs. This framework uses an outcome based approach to training, in line with the NQF and SAQA requirements.

The first step in the framework is to conduct competency profiling and skills audits for each occupation in order to determine the skills gaps. Training is aimed at “filling” the gap, and is competency based. Competency based training ensures that we bridge the gap between training and education. It also ensures that there is a closer link between training and education

Stats SA also offers in-house training in complex sampling. Most of the training on sampling techniques at universities assumes that simple random sampling or the other sampling methods have been used. But most of Stats SA data are collected using complex sampling

Stoker et al (1987) defines complex sampling as a multistage stratified cluster sample consisting of a combination of four probability sampling methods: RS, SS, Cluster sampling and Stratified sampling.

Lehtonen and Pahkinen (1995) state that accounting for the complexities of the sampling is essential for reliable estimation and analysis. Complex sampling affects variance estimation and testing and modeling procedures. Analysing complex data using traditional estimation and testing techniques renders the results incorrect.

6. Role of SASA

It is a fact that there is a lack of human statistical capacity in the country. The situation is worse for people trained in official statistics. One of the reasons is that there is little focus or interest in official statistics at university level.

Staglin (2001) deplors the lack of public awareness in official statistics as the source of vital public asset and the fact that users of statistics are far too reticent about their user requirements.

He states, that even at higher-education establishment, training in the use of statistical tools is often inadequate. Only in a few universities with an economics faculty is it possible to study the contents and working methodology in official statistics as part of a course in economic statistics.

In his opinion, Staglin regards it as one of the main task of Statistical societies to change the situation. I also think that SASA should regard it as their main task.

Murphy (2002), in his paper presented at the ICOTS6 conference, sums the situation as follows:

“ There are many disparate groups who call themselves statisticians. Two of these groups are of interest here: academic statisticians at universities and official statisticians working in National Statistics Offices around the world. In most cases if academic statisticians think at all of official statisticians it is as some kind of a lesser cousins. The two groups rarely mingle, sociologists and economics may have more contact with official statisticians. The fact remains that the interaction between the two groups is not widespread”.

Murphy (2002) also argues that when we consider that the word “statistics” was coined originally to mean “facts for the use of the state” or “state arithmetic”, it is ironic that academics calling themselves “Statisticians” do not display more interest in official statistics. Many graduates of Statistics programmes end up working in National Statistics Offices (NSO), but few have training directly applicable to such work.

He proposes that a course in official statistics should cover some of the topics: National Accounts, Balance of Payments, Demography, Business Register, Prices, Tourism, Vital Statistics, Index numbers. He also recommends that guest lecturers who are involved in the collection of official statistics or whose work make a significant use of official statistics are invited to address students. This has the effect of reinforcing the relevance of official statistics.

Schmerbach (2002) states that the current public impression of the role of official statistics as a provider of a very important public good still doesn't correspond with its great importance in the various parts of the society. Confidence in the work of official statistics, acceptance and appreciation of their products can only be developed through fundamental knowledge about contents and working principles of official statistics.

He proposes that internships and studies for the students in statistical offices should support the process.

How do we build partnerships with university institutions? We have started discussions with some of the universities, but it is not enough. The Minister of Finance wants us to come with a model that will involve universities to play a more significant role where theory and on-the-job training can be utilized.

There is a need for customized training based on what Statistics SA does. This can be achieved by establishing partnerships between Stats SA and universities/technikons, with universities responsible for the theory and Stats SA with on the job training.

There is a need to establish institutions like the EASTC and ISAE in the country. Universities can play a very significant role in this process.

The IAOS competition was another attempt at getting institutions to participate in Official Statistics activities. As you know four of our SASA members will be traveling to Amman Jordan later this month to attend the IAOS conference.

7. The Challenges

In his weekly column Inside Statistics, Lehohla (2004), the Statistician General, states that the demand for statistical information is growing at a fast rate. There is a need for statistical information and statistical skills at all three tiers of government: national, provincial and local. It is estimated that at least 80 000 staff will need to be trained at this level each year. In addition, for our users to understand our products they need basic training, universities and technikons can also assist in this regard.

Last week, the Minister of Finance, Trevor Manuel, in his address to parliament on the tabling of the medium term policy statement, remarked: “ A challenge for the decade ahead is to improve the performance of the State, to consolidate the institutional reforms of the democratic transition, to build capacity where service delivery falls short and promote greater participation and interaction of people with organs of government”

An audit of government departments, by Guteland and Strode (2004), the World Bank consultants in Stats SA, has revealed that not only does Stats SA have a shortage of statistical skills but there is a bigger shortage at other government departments. This shortage at other departments will have to be addressed by Stats SA through the NSS.

The consultants stated that while there is clearly a need for Stats SA to strengthen its internal quality procedures, there must also be a speedy improvement in the quality of other government statistics. (To give an example, in the Department of Education: How many students are registered for mathematics and science? What is the drop-out rate? Number of children in school? Housing: Number of houses build? Health: Number of patients treated?)

For reasons of accountability, transparency, and efficient public finance utilization, better departmental statistics are required.

As the world’s governments begin to address poverty reduction and effective policymaking, the demand for high quality, reliable statistics has increased dramatically.

8. Conclusion

- I hope that in this presentation, I have been able give a picture of what the situation is in terms of skills needs and skills shortage
- I also hope that I have been able to convince some of you to take up the challenge on participating in the training on official statistics and other short courses.
- I believe that the partnership can work and together we can deliver to the users.

Let me now take this moment to thank all of you for your support during my term of office as the President of SASA. It was an

enjoyable experience which I will cherish all my life. I wish all of you a very enjoyable conference.

9. References

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