

# Tracking women and men in the SET sector

## SUMMARY<sup>1</sup>

The primary goal of this study was to explore why young people choose to study SET, as well as what causes them stay and progress in the sector, while others don't succeed or leave the sector. A research team of the Gender & Development Unit of the HSRC interviewed 294 students, ranging from undergraduate to senior postgraduate level, at five higher education institutions. They presented this report to NACI during 2006, including recommendations on future tracking of women and men in the sector.

The report shows that factors limiting study and career development in the SET sector can mostly be attributed to historical effects and institutional barriers. Black students at rural institutions are more affected by financial difficulties and battle to overcome inadequacies in their pre-tertiary schooling. Those who move to urban institutions often find it difficult to adapt to city life. Women still face a variety of institutional and cultural obstacles, including marginalization, gender discrimination and stereotyping, lack of role models and mentors, life imperatives, cultural restrictions and role conflicts.

## FINDINGS AND INSIGHTS FROM THE INTERVIEWS

### Reasons why students choose to enter the SET sector:

- The positive influence of educators, parents, relatives and people already in the field;
- To empower themselves;
- To make a difference in their communities;
- To enter an interesting and challenging field perceived to offer good job opportunities and remuneration, job satisfaction, respect and status in the community.

### Findings around the financing of tertiary SET studies

- Many black students, mostly at historically black institutions, face financial difficulties;
- Financial difficulties impact on the academic achievements of men and women and cause some students to abandon their studies;
- Students have to contend with long delays in the outcome of bursary applications;
- Students often struggle to meet the demands of securing or renewing bursaries or loans;
- Most study with student loans, often supplemented by help from (often poor) family members;
- Very few students have government bursaries;
- Some students at historically white institutions benefit from merit bursaries;
- Some students work part-time or even full-time to generate extra income.

### Challenges to entering and succeeding in higher education

- New students have to overcome logistical hurdles and uncertainties and often perceive staff to be unhelpful;
- Women entering the field report that they continue to experience a stigma attached to females studying SET;
- Foreign students face language and cultural barriers;
- Many students are ill-prepared for SET studies because of inadequacies in their secondary schooling environment;

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<sup>1</sup> The comprehensive interim report on this long-term study, entitled: "Tracking women and men in the SET sector: Talking about how the higher education environment impinges on or capacitates career trajectories" was published during March 2006 and is available from the National Advisory Council on Innovation.

- Students experience difficulties with time management, self-discipline and self-confidence;
- Rural students find it hard to adapt to an urban environment, find accommodation and cope with financial constraints.

#### **Key factors determining success in completing a SET degree**

- Personal enablers, such as hard work and self-motivation, staying focused and positive, determination to succeed;
- Support from friends, family, educators and fellow students;
- Ready access to books, computers, internet and shared learning opportunities;
- Suitable accommodation, reliable transport and adequate funds.

#### **Experiences of SET faculties (courses, lecturers and fellow students)**

- Some students experience SET studies as exciting, challenging and interesting, while others are battling with the degree of difficulty of the work and the huge workload;
- Some describe lecturers as competent, friendly, helpful and supportive, while others experience them as unhelpful and unapproachable, with a discouraging teaching style;
- Several issues in terms of gender and race stereotyping persist in group work and in interactions between lecturers and students;
- Some students complain about lack of facilities, mentors and large classes in their departments; while others feel isolated in a very competitive environment.

#### **The impact of personal circumstances**

- Support from friends and family, enough money to pay for studies and own support, safe transport and a suitable place to live and study are essential for successful tertiary SET study;
- Financial problems and difficulties with transport and accommodation are severe obstacles, as are difficult personal circumstances and other demanding family commitments;
- Students who are unable to find solutions to these barriers, especially financial difficulties, are often unable to continue their studies.

#### **Students cope with obstacles in a variety of ways, including:**

- Asking advice and help from their lecturers and tutors;
- Forming networks or study groups with fellow students;
- Sharing books and notes to save money;
- Working harder and being disciplined in attending all lectures and practicals; repeating courses when necessary.

#### **Students' future plans in the SET sector**

The interviews also explored students' future plans to work or study further in the SET sector. Their responses about their future ambitions and career goals are documented, as well as reasons why some will or will not register for advanced SET studies. Some plan to leave the SET field, often to pursue further studies in other fields or to attend to family commitments.

#### **The report is supported by a comprehensive literature review that focuses on:**

- Statistics and trends in South Africa's R&D and higher education sector, with a focus on statistics on women in research, and research done to benefit women.
- Earlier research on barriers facing women in science, as well as enabling factors supporting the meaningful participation of women.
- The reasons for the under-representation of women in science, as well as women's issues in SET research.