second language students may be at a disadvantage does not necessarily mean that they are under-prepared or that increased fluency in English is sufficient to reverse poor academic performance.

Drawing on the results of this study may help to clarify some of the central concepts related to academic development issues. Apart from the obvious disadvantage entailed by the use of a second language in a learning situation, the different distributions for E1 and E2, with respect to language and mathematical competence, reflect the disparity in the educational backgrounds of the two groups of students. Consequently, students are disadvantaged to the extent that the quality of their prior education limits their subsequent academic performance. This does not mean that disadvantaged students are necessarily under-prepared or that under-prepared students necessarily fail.

To the extent that language and mathematical proficiencies are necessary conditions for tertiary education, students who fall in the low competence categories could be described as under-prepared for university study. However, the results (Table 3) do not support a strong necessary relationship between passing examinations and initial competence in English language and mathematics. At best, there is support for a weak sufficient relationship as relatively few students in the high competence categories failed. Under-prepared students, whether first or second language speakers, were clearly more at risk. But, given that a significant proportion of LL students passed (Table 4), it seems preferable to attempt to manage, rather than eliminate, the risk by providing appropriate educational interventions.

The implication for curriculum reform is that intervention programmes, in addition to emphasising second language problems, should focus on the more general problem of under-preparedness. Retrospectively, the term 'potential' can properly be applied to those students who initially present an under-prepared academic profile but, nevertheless, manage to pass and even to perform at above-average levels. But it does not seem warranted to attach the term 'potential' prospectively to indices of English or mathematical proficiency. In the low competence categories for language and mathematics, more than 60% of E1 students and 45% of E2 students passed. This presents a problem for student selection, in particular if the aim is to select for potential on the basis of language and mathematical competence.

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Systematic biologists of South Africa, unite!

G.F. Smith, C.K. Willis and B-E. van Wyk

Systematics is the comparative study of the kinds of living and fossil organisms (species), including their description, distribution, and the phylogenetic relationships that they share.

Numerous international initiatives and funding possibilities have lately become available to systematic biologists,[1–3] not only to access funds, but also to demonstrate their relevance in today's often disbelieving society. However, apart from a few regional initiatives such as the Southern African Botanical Diversity Network (SABONET) project, a botanical capacity building initiative which was recently launched on the subcontinent,[4,5] and SAFRINET [the Southern African (SADC) LOOP (Locally Organised and Operated Partnerships) of BioNET-INTERNATIONAL], a regional network especially concerned with the biosystematics of invertebrates and microorganisms,[6] South African systematists have not collectively bargained in a coordinated fashion to secure some of the international funding to research, capture in databases and curate the collections of which they are custodians on behalf of the country with, amongst others, the richest temperate flora in the world and the whole of one of the world's six floristic kingdoms.

The good news is that this situation is about to change for biologists working in South Africa. At the 24th Annual Congress of the South African Association of Botanists (SAAB) recently staged at the University of Cape Town, a multidisciplinary meeting was held where systematic biologists formed an interim working group charged with overcoming this unsatisfactory situation.

This historic workshop, convened by Brian Huntley, chief executive of the National Botanical Institute (NBI), took place on 14 January 1998 at the Kirstenbosch Research Centre in Cape Town. To set the scene for the meeting, it was preceded by three lectures, presented at the University of Cape Town, by Brian Huntley on potential sources of systematics funding, Joel Cracraft (American Museum of Natural History, New York) on Systematics Agenda 2000,[1,2] and Gideon Smith (NBI) on Species plantarum: World Flora and Species 2000.[7,8]

Following these presentations, no fewer than 64 systematic biologists from 40 institutions attended the Kirstenbosch workshop, where future collaborative

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efforts to secure funding for this field of scientific endeavour were discussed.[9] The discussions were facilitated by Clarke Scholtz (University of Pretoria) and Huntley, and under their guidance the meeting accepted the following objectives for the discussions at the workshop: 1) to secure funding to promote systematics in South Africa, 2) to identify key actions and role players, and 3) to set out an agenda for action. The meeting nominated the following to serve in an interim working group to take this initiative forward: Tim Crowe (convenor, tmcrowe@ botzoo.uct.ac.za), Bill Branch (pemwrb@ zoo.upe.ac.za), Barbara Cooke (bac@maties.sun.ac.za), Michelle Hamer (mhamer @nmsa.org.za), Peter Linder (plinder@ botzoo.uct.ac.za), Tracy McLellan (108 trm@cosmos.wits.ac.za), Ed Rybicki (ed@molbiol.uct.ac.za), Clarke Scholtz (clarkes@scientia.up.ac.za), Gideon Smith (gfs@nbipre.nbi.ac.za), Peter Taylor (petert@durban.gov.za), Ben-Erik van Wyk (bevw@rau3.rau.ac.za) and representatives of the Foundation for Research Development (FRD) and the Department of Environmental Affairs and Tourism (DEAT). It is envisaged that this team will be replaced by a formally elected group once a South African Systematics Society has been formed, it is hoped not later than 1999.

On 15 January, the day after the workshop, the interim working group met at Kirstenbosch to discuss future actions. It was evident that a broad survey and audit of three aspects were required as a matter of urgency, namely the state of biological collections (the biodiversity treasure houses), human resources (experts and expertise or the lack thereof) and the taxa (biological entities). This 'state of the art survey' is also a prerequisite as part of the national study required for those countries that are signatories to the Convention on Biological Diversity (CBD). Article 25, 2(a) of the CBD states[10] that contracting parties will '... Provide scientific and technical assessments of the status of biological diversity; ...' . This needs assessment is also in line with recommendations made by the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to the Conference of the Parties (COP) on Biological Diversity, namely that: '... each country should conduct a taxonomic needs study'.

Undertaking a comprehensive survey of the current state and needs of biological collections and expertise in South Africa is indeed one of the essential steps in securing funding for systematics research. To this end, Gideon Smith and Christopher Willis (botanical collections) and Peter Taylor (zoological collections) drew up simple questionnaires aimed at capturing the data required. These documents have been circulated to all herbaria and other natural-history collections in South Africa and consist of a number of sections covering specimen, taxon, infrastructure, library, and human resources. The challenge to all systematists in the country is to complete these forms as comprehensively as possible to reflect the current unsatisfactory state of funding for the science. The questionnaires should be returned to Smith (see address below) or Taylor (Durban Natural Science Museum, Private Bag 4085, Durban, 4000 South Africa) before the end of May for consolidation before the first week of August 1998, when the interim working group will meet at the University of Pretoria to monitor progress, further discuss actions to be taken and initiate the funding proposal. At this meeting the interim working group will also investigate the formation of a South African Society of Systematics and select an appropriate venue and forum from which to launch it.

Systematic biologists should use this opportunity NOW to argue their case collectively. Otherwise, they might well miss an opening that may not come around again soon, if ever ... .

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