JOINT INITIATIVE ON PRIORITY SKILLS ACQUISITION (JIPSA)

INTRODUCTION

SAIA has been involved in discussions with the Built Environment Professional Associations regarding the JIPSA (Joint Initiative on Priority Skills Acquisition) initiative to attract, train and retain more built environment professionals to cope with 2010 and the longer term sustained growth of 6% that is forecast for South Africa.

SAIA requested members (Practices and Individuals) to assist it in identifying the shortages of skills in the profession and thanks everyone who participated in the survey. The information will now form part of a combined submission to Government about the proposed importation of scarce skills in the Built Environment Professions.

The feedback has also revealed interesting aspects of the current situation, provided valuable insight into the composition of practices today and the respondents submitted insightful comments about the skills that need to be developed and improved, either through the tertiary Institutions or by the profession as a whole.

RESPONDENTS

Sixty seven SAIA practices (corporate members) took part in the survey. This represents 3% of the total number of SACAP recorded Architect Practices in the country. The profile according to practice size of participants was in line with all previous indications, and although the sample is not large, it is considered to be sufficiently representative for the purposes of this survey.

The sample furthermore represents 583 architectural individuals in all categories and they are therefore not necessarily members of SAIA. This is 7% of all persons registered with the SA Council for the Architectural Profession at the end of September. A further breakdown confirms that the sample is representative of 7% of registered Pr Architects, 9% of registered Pr Senior Architectural Technologists, 13% of registered Pr Architectural Technologists and 2% of registered Pr Arch Draughtspersons.

THE SURVEY QUESTIONNAIRE

The questionnaire consisted of three parts, divided under the following general headings:

- Numbers currently in the industry (Architectural Profession) and numbers required (9 questions)
- Your experience (5 questions)
- Importing skills - we need to establish what skills are in short supply and where we can best source them from (3 questions)

PART 1

1.1 Shortages of Staff (Question 1)

80% of the practice respondents need additional staff. These practices were representative of all sizes. 20% of practices, generally smaller than ten persons, do not require additional staff.

1.2 Quantum required (Question 2)

The firms looking for staff have reported that, on average they were hoping to increase their architectural staff by 40%. Due to the size profile the average shortage, measured on the overall number of employees of the overall sample, is however only 22%.

1.3 Architectural categories required (Question 3)

The specific shortages reported by the respondents are:

62% are looking for Architects
79% are looking for Senior Technologists
40% are looking for Technologists
19% are looking for Draughtspersons

1.4 Size of practice at present (Question 4)

The size of the responding practices was reported as follows, with a comparative profile indicated in the right hand column according to the norm SAIA has adopted over recent years:

Size of Practice	No of Practices	% of Sample	Profile according to size
1 arch staff	9	13.5%	13.5% Micro
2 arch staff	9	13.5%	21% Small
3 arch staff	5	7.5%	
4 arch staff	7	10.5%	41.5% Medium
5 arch staff	6	9%	
6 arch staff	7	10.5%	
8 arch staff	5	7.5%	
9 arch staff	3	4%	
10 arch staff	5	7.5%	15% Large
11-20 arch staff	5	7.5%	
Over 20 arch staff	6	9%	9% Macro

1.5 Current Ratio of Architectural Staff (Question 5)

The sample represents 583 architectural individuals in all categories of registration. The existing overall ratio of architectural staff in the different skills categories is:

40% Architects
29% Senior Technologists
25% Technologists
6% Draughtspersons

This is a ratio of roughly 8:6:5:1 (or 4:3:3:0).

1.6 Optimum Ratio of Architectural Staff (Question 6)

The respondents indicated an optimum ratio of 2:3:3:2, which differs significantly from the current ratio in the workplace. Telephone interviews were conducted with some of the respondents to clarify this anomaly. Two points of view emerged:

- It was confirmed by several of the medium and large practices that the use of computers and CAD technology has diminished the role of the Draughtsperson in practice. A significant number of firms no longer employ Draughtspersons. There is also a perception that people registered in this category do not possess adequate knowledge of construction standards and building technology to be able to work sufficiently independently without 'hands-on' supervision; and
- The opposite view was held by a number of respondents who advocate that training of staff in all categories was required in a suitably structured workplace, focussed on developing skills at all levels.

1.7 Training Needs (Questions 7 & 8)

It is estimated by the respondents that Universities should train 32% more students as Architects, and Universities of Technology should train 48% more students in the Technology categories. Although these figures may reflect a perception only, it confirms the shortage of staff reported in 1.3 and the optimum ratio indicated in 1.6 above.

1.8 Experiential Training (Question 9)

The recommendations submitted regarding experiential training were:

- That it should take place later on in the course when the students have better technology skills;
- That the courses should be more practice-orientated;
- That learnerships should be established with financial incentives for practices;
- That the tertiary Institutions should coordinate the placement of students through the existing structures within the Built Environment Professions; and
- That Government should also undertake training in relevant departments, perhaps by forming training groups.

Several respondents commented that there was currently no capacity to train. It was also suggested that 'compulsory' training should take place in the public sector structures and that students should spend time on construction sites.

A considerable number of respondents commented that new graduates in all categories possess inadequate skills relating to technology, lack knowledge of general construction processes and, in addition, the salary expectations of students and graduates are unrealistic.

PART 2

2.1 The Braindrain (Questions 1-5)

The respondents who participated in the survey range from Architects who qualified in the sixties to the very recent past, and are representative of the six University Schools of Architecture in South Africa. The average final year class was 22 students. Six of the respondents hold foreign qualifications. The respondents, who qualified here, estimate that approximately 50% of the students in their final year are no longer in South Africa or simply no longer practice.

PART 3 : IMPORTING SKILLS

3.1 Skills in short supply (Questions 1)

What disciplines or skills do you consider to be in short supply in Architecture?

Six of the respondents did not reply to this question. Of the remainder, 55 had identified a range of specific skills required in the following order of importance:

- 38% Documentation & Technology
- 29% Experienced Practitioners (to manage projects independently)
- 15% Design
- 11% Business Management & Contract Administration
- 4% Urban Design
- 4% Specialists; Architects with International Experience & Academics

Categories in short supply

In addition to the skills identified, 15 of the respondents also identified the shortage in accordance with specific categories of registration. The number of responses so submitted was:

- 6 All Categories
- 5 Architects
- 2 Senior Technologists
- 1 Technologists
- 1 Draughtspersons

These figures must also be compared to the figures in 1.3.

3.2 Appropriate Country (Questions 2)

For each registered Professional Category please indicate the appropriate countries from which you think it would be best to source such expertise.

The respondents replied selectively to this question. An evaluation of the replies with regard to the four categories of registration revealed the following with regard to:

Architects: 9 - no answer; 6 – 'don't know'; 51 - identified a range of countries
S Tech: 42 - no answer; 2 – 'don't know'; 21 - identified countries; 1 - 'not required'

Only 10% of the respondents identified countries from which Technology and Draughting skills could be sourced, and over 20% said it was not required to import these skills. Approximately 70% of the respondents did not provide further suggestions regarding the importation of Technologists and Draughtspersons.

The following countries were identified by the respondents to be suitable for the importation of scarce skills:

- 27% English speaking countries; including the UK (14%) and Australia (7%)
- 18% Africa; especially the SADEC countries, also Kenya and Nigeria

15% Europe; also specifically Germany, Portugal and Spain; Eastern Europe (2%)
12% Asia and the Middle East; specifically India; also Japan and China
8% South America; Argentina, Brazil and Columbia (4%); USA and Canada (4%)
6% Expats: UK, Ireland, Australia

The remaining 13% of the respondents indicated that the focus should be on training South African citizens and on retaining skilled people in the country.

3.3 Period Required (Questions 3)

For what period would these people be required?

Of the total number of 66 participants, only 49 replied to this question, of which 10% indicated they did not know, 4% indicated it was not necessary to import scarce skills, 16% suggested short term contracts (±3 years), 29% said 5 years, 6% said 6 or 7 years, 14% said 10 years and 20% said permanently, some with the proviso that growth continues.

CONCLUSIONS

It is concluded that practices are experiencing a significant shortage of staff, in particular of experienced practitioners, Architects and Senior Technologists, who respectively have managerial and technological skills. The first has to do with contract administration, while the second has to do with competence in construction technology.

The practice profile according to size (number of architectural staff) is in line with the profile that emerged from previous surveys. There are however indications that the average size of firms has the potential to increase if suitable staff can be found.

The existing ratio of architectural staff represented in the sample consists largely of Architects (40%), Senior Technologists (29%) and Technologists (25%). Only 6% of the sample comprised Draughtspersons. In comparison, the overall registration figures of the SA Council for the Architectural Profession (SACAP) at the end of September 2006 are:

Category of Architectural Staff	Candidates	Professionals	Total in Category	Total in Category as % of O/A	% of Candidates in the Category	Professionals in Category as % of Total Professionals
Non-Practicing Pr		94	94	1%	0%	1%
Architects	438	3164	3602	40%	14%	39%
Sen Technologists	135	1984	2119	24%	7%	25%
Technologist	176	1107	1283	14%	16%	14%
Draughtspersons	179	1673	1852	21%	11%	21%
TOTAL	**928**	**8022**	**8950**			

From the above one could conclude that proportionately more Senior Technologist and Technologists are in formal employment than is the case with Draughtspersons. This may signify that a large percentage of Draughtspersons, perhaps persons without formal qualifications, are practicing as individual entities, either on a full or part-time basis.

RECOMMENDATIONS

Whilst the survey was focussed on establishing the extent of the skills shortage within the different built environment professions, at the different categories within each profession and on the most appropriate countries for government's proposed importation of scarce skills, the results raise a number of additional issues which requires further investigation and/or consideration before action is taken on importing additional skill.

Inadequate managerial and technological skills:
These problems must be addressed in two ways:
- At the highest level with the tertiary Institutions who provide BAS and B Tech qualifications
- By providing suitably structured CPD courses to improve the skill of current practitioners.

Productivity, Computer Literacy & Outsourcing of Construction Technology Expertise:
The above-mentioned aspects should be investigated further as these issues could contribute to current perceptions regarding the level of scarce skills within the profession.

In-house Skills Development & Training:
The extent of training by recognised experts in any particular field in the existing practice structures must be investigated further.

Government Participation in Capacity Building:
The Department of Public Works could participate meaningfully in creating opportunities for experiential training opportunities.

We believe that there is enough uncertainty around skills shortage to suggest that Government should proceed cautiously with regard to importing of skills. In addition, great care should be taken in investing in 'additional' skills if these skills do not feature in the long term planning of the industry.

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