

Professional skills gap analysis of Distance Education Professionals at the Technikon of Southern Africa (JF van Koller)

1. Introduction

The main themes that this paper will address, either directly or indirectly, are the following:

- Skills profile
- Skills Gaps
- National skills requirements
- International skills requirements
- Technology-driven and knowledge-based age

The key issues dealt with in the paper, focus on the following aspects:

- Skills needed from academics at a distance education institution within the current and emerging technology- and knowledge-based era (nationally and globally).
- Staff development needs.
- Programmes to address skills gaps.

2. Background to paper

The research project on which this paper is based, had its origin within the context of a number of factors. The first of which, was the need that was always felt at the Technikon of Southern Africa (TSA) for the development of academic staff (lecturers or Distance Education Professionals (DEPs) as they are called) at TSA because of the following reasons:

- The fact that many newly appointed lecturers normally did not have any previous lecturing/teaching/facilitation of learning experience or formal teaching/training qualifications.
- Some who might have the above types of qualifications or experience might not have acquired it at a technikon or distance education institution.
- The increasing need for lifelong learning and continuous upgrading of skills and competencies in order to remain at the cutting edge.
- The fact that we find ourselves within a rapidly changing educational environment, which creates changing roles and new demands on the kinds of skills expected from DEPs.

A second factor was the introduction of various pieces of legislation in South Africa which were aimed at the regulation of skills development and acquisition among the South African workforce in an attempt to address national skills shortages. The conditions that lead to the promulgation of the legislation (the Skills Development Act of 1998 and the Skills Development Levies Act of 1999) were the generally low Skills levels of the majority of the South African workforce (Department of Labour, 1997:6). The overall aim of the Acts was to ensure that there were systematic and continuous efforts to improve the competencies of employees at all places of employment nationally. That included institutions of higher learning.

A third factor, which prompted the research project, was the emerging knowledge revolution and technology-based economic and social era that are increasingly engulfing the globe. The latter developments seem to demand new types of skills and competencies from almost everyone. Educators at higher education institutions in particular, are not exempted from the above

demands. In fact, it seems as if there is a growing demand that educators should take the lead in developing and creating opportunities for the development of the "new skills" required by the new economic and social environment.

It was within the above context that the Institute for Staff Development (ISD) at TSA started asking the following questions: Which types of skills and competencies will be required from TSA's DEPs by the new era? The above question raised the following sub-questions:

- What are the required areas in which DEPs should be competent?
- What are the main or core functions/Main function areas of DEPs?
- What are the specific functions of DEPs?
- What are the required competencies to perform those functions?
- What are the current levels of competence in terms of those functions?
- Are there any gaps in terms of competency levels?
- Are the intended or required skills in accordance with the new technological and knowledge-based era in which we currently find ourselves globally?
- Will the skills, that we wish our staff to acquire, have international currency?

The above questions resulted in an extensive research project which attempted not only to describe the skills/competencies required from Distance Education Professionals (DEPs) at TSA, but also to determine whether any professional skills gaps existed among academic (faculty) staff. This paper intends to describe the research project briefly and to focus on the gap analysis process and the resultant conclusions.

3. Research methodology

The main research methodologies used in the project were as follows:

- Literature review: Mainly secondary and the most recent sources were used.
- Document analysis: Internal TSA documents were analysed.
- Consultation in the form of formal presentations and workshops with staff members from all programme groups (academic departments).
- Two draft documents and a final version. Comments from participants were incorporated and a final document was prepared.
- Questionnaire: The questionnaire was used to conduct a gap analysis of the professional (lecturing) skills of academic staff (DEPs).

4. Description of research project

4.1 Phase 1: Establishing a theoretical framework (literature review)

Since TSA does not operate in a vacuum, it was necessary to conduct a literature review which would provide a theoretical foundation or framework within which the research project could be contextualized.

Mulusa (1990:115), for example, states that any form of scientific inquiry requires a profound theoretical foundation in order to make such inquiry logical, valid and scientifically accountable.

It was with the above purpose in mind, that a literature review was undertaken for the research project in order to determine the following:

- what the international context, in terms of the functions and competencies of Education, Training and Development (ETD) Practitioners, entails;
- what the national context, in terms of functions and competencies of ETD Practitioners, entails;
- what the distance education context, in terms of functions and competencies of ETD Practitioners, entails.

Mainly secondary sources were used. Literature that focuses on national and international contexts was consulted. Preference was given to the most recent sources. Three categories of literature were consulted. These were the following: International literature (general); South African literature focusing on the new National Qualification Framework context; and Literature focusing on distance education.

The findings emanating from the literature review also served as benchmarks for the determination of a profile of the functions and required competencies of Distance Education Professionals at TSA and laid the theoretical framework within which an analysis of the TSA context was done. The data gathered from the actual TSA context was compared and aligned to the benchmarks found in literature.

4.2 Phase 2: Document analysis:

Various documents at TSA were consulted and studied to gain a clear understanding of existing practices at TSA. The following documents were consulted: TSA Annual Strategic Report (1999); Technikon SA (2000); Moore, 1997: 9 - 11; Groenewald, 1999: 6 - 10; Critical

Performance Area (CPA) documents of approximately 15 pages each from the following three Programme Groups: Applied Communication, Human Resource Management and Real Estate and Economics, in 1999.

4.3 Phase 3: Consultations and presentations

Consultation in the form of formal presentations and workshops with staff members from all programme groups were conducted. Two three-hour workshops were conducted in 1998 (one in May and one in August) which were attended by two or more representatives from each of the programme groups at TSA on both occasions. The second workshop served as a follow-up on the first and helped to refine the data and suggestions that resulted from the first one. The author also made presentations on the topic at meetings of the Executive Committee of each of the four faculties at TSA.

4.4 Phase 4: Designing a profile of functions and competencies

Two draft documents were prepared on the basis of the earlier phases. On receipt and incorporation of the feedback and comments on the two draft documents, a third and final document was prepared. The document, in essence, determined what the main professional function areas of DEPs at TSA are, as indicated under point 5.4. Those areas were the professional areas in which DEPs needed to be competent in, addition to their subject- or field-specific competence. The document was tabled at the TSA SENATE meeting in March 2001, where it was officially approved as a policy document for the regulation of the professional development of academic staff members at TSA.

4.5 Phase 5: Gap analysis

Based on the above document, a questionnaire was drafted to determine whether any skills/competency gaps might exist in terms of the professional skills/competencies of Distance Education Professionals (DEPs). The questionnaire focused on the seven main professional function areas of DEPs.

Of the total number of 270 questionnaires distributed to the same total of DEPs at TSA, the ISD received back 92 completed gap analysis forms, which represented over one third of the total number of DEPs. The gap analysis was based on those returned questionnaires.

For the purposes of this paper, this is the phase that will be focused on. However, it is necessary to describe briefly the main conclusions reached during the previous phases.

5. Description of the main conclusions of the first four phases:

5.1 Conclusions based on findings from literature review

5.1.1 Conclusions based on the findings of international literature

Based on the findings from the following sources (Hughes, Hewson and Nightingale (1997: 2-7), Zuber-Skerritt (1992:211 - 220) Meister (1998:59); Forest (1998:59-60); Entwistle (1998: 73 - 74); Yadav and Panda (1997: 5-11); and Laurillard (1993:85, 94), the following main conclusions had been derived:

- The changes in the roles of ETD Practitioners, which is seemingly becoming a growing trend globally, will also have an effect on the functions and required competencies of DEPs at TSA. They will have to become more involved in the management of processes and

programmes and in the performance of more administrative functions. They will also need to become more competent in the use of technology for instructional purposes. It is in particular the last requirement that relates most directly to the emerging era described under point 2.

- Despite the trend of changing roles of ETD Practitioners, there still seem to be certain common function areas of ETD Practitioners at higher education institutions that will remain intact. Those functions should form part of the profile of functions of all ETD Practitioners, including DEPs at TSA. Those functions are as follows:
 - Research
 - Teaching
 - Community involvement

5.1.2 Conclusions based on the findings emanating from South African literature which focuses on the new National Qualifications Framework (NQF) context in SA

Based on the scrutiny of the following sources((Department of Education, 2000; SAQA, 2000; SAQA, 2001), the following conclusions were reached:

The profile of functions and competencies of DEPs at TSA should as far as possible be aligned to the following professional functions and required competencies:

- The roles reflected in the policy on the Norms and Standards for Educators (Learning mediator; Interpreter and designer of learning programmes and materials; Leader, administrator and manager; Scholar, researcher and lifelong learner; Community, citizenship and pastoral role; Assessor; Learning area/subject/discipline/phase specialist);
- The functions represented by the unit standards for occupationally-directed ETD Practitioners (Guide and counsel learners and/or colleagues; Manage a quality assurance

system; Engage in occupational development; Facilitate learning through selecting and integrating methodologies; Co-ordinate the design of a variety of learning materials; Manage multiple learning programmes; Plan a curriculum; Design, conduct and manage research; Evaluate learning systems) ; and

- The competencies reflected by the unit standards for ETD Practitioners at higher education institutions
 - Analyse Higher Education and Training mission, context and legislation
 - Mediate and facilitate learning in Higher Education
 - Mentor and advise learners in Higher Education and Training
 - Design, develop and implement assessment of learning in Higher Education and Training
 - Interpret and design learning programmes and modules for Higher Education and Training
 - Manage learning facilitation in Higher Education and Training
 - Conduct action research into Higher Education and Training practice.

However, in instances where the functions referred to above, do not sufficiently reflect the unique situation of DEPs, the profile of functions should also make provision for those unique functions or roles.

5.1.3 Findings emanating from literature focusing on distance education contexts

In view of the findings resulting from the literature based on distance education contexts (Cookson (1995: 3-7); Thompson (1995: 2-9); Mullick (1997: 200 - 201); Manohar (1997:217); The Directorate: Distance Education, Media & Technological Services, Department of Education

(1996: 65); Lentell (1996:41); Ravis (1994: 219 - 234) and Holmberg (1995: 32, 46)), the main conclusion reached, was that it would seem crucial for the profile of functions of DEPs at TSA to include, as a minimum, the five functions indicated as possible core functions at distance education institutions. Those functions are as follows:

- Teaching
- Course/instructional design
- Research/reflective practice
- The use of instructional technology
- A good understanding of the distance education practice

5.2 Conclusions based on the findings emanating from document analysis, consultation and workshops conducted at TSA

A careful analysis of the following documents from TSA: TSA Annual Strategic Report, 1999; Moore, 1997: 9 - 11; and Groenewald, 1999: 6 - 10; Critical Performance Area documents of approximately 15 pages each from the following three Programme Groups: Applied Communication, Human Resource Management and Real Estate and Economics, in 1999;) and the consultation process with TSA staff members, yielded the conclusions cited below.

It seems crucial that all the functions of DEPs at TSA should be based on the following key and fundamental TSA approaches:

- Distance education
- Flexible learning
- Co-operative education

DEPs should therefore have competencies that are congruent with the above approaches.

It seems as if the main professional function areas of DEPs should, as a minimum, include the following areas:

- Courseware design and development
- Tuition
- Community Service

5.3 Findings emanating from the workshops and consultation sessions

The workshops and consultation sessions conducted with the programme groups listed under point 4 resulted in the following findings:

- The majority of participants at the two workshops in 1998 felt that the CPA documents referred to above did not provide a true reflection of the various functions performed by DEPs at TSA.
- The participants at the workshops distinguished the following list of functions of DEPs at TSA:
 - Courseware design and development
 - Tuition
 - Research
 - Learner Support
 - Management/Admin
 - Community Service

5.4. Drafting of a profile of functions and required competencies

After the above processes (document analysis and workshops), the author compared the list of functions suggested by participants at the workshops with the benchmarks from literature as indicated under point 7.4. It became evident that the list of functions identified by participants during the workshops, captured most of the functions indicated in the various benchmarks from literature.

In view of the above findings, the author reached the following conclusions:

The main function areas for DEPs at TSA should be as follows:

- Design/development of courseware/study material
- Tuition (which includes assessment)
- Use of technology and media
- Learner support
- Research
- Management/Administration
- Community service/Strategic Initiatives

The above main function areas were officially approved at a TSA Senate meeting in March 2001 and were since the meeting regarded as the profile of professional functions of DEPs at TSA. The gap analysis which ensued later, was based on this profile.

6. The gap analysis project

6.1 Determination of the required norm

Before the actual gap analysis could be done, a clear norm or standard had to be determined in terms of each of the seven professional function areas, which could serve as basis on which the competencies, training and experience of DEPs could be evaluated. For that purpose norms were determined for the following three evaluation categories:

- Competence
- Training
- Experience

Below is a reflection of the norms that were identified per seniority level of DEPs. The levels are as follows in rising order: Junior DEP (JD); DEP (D); Senior DEP (SD); Deputy Chief DEP (DCD); Chief DEP (CD); and Programme Manager (PM).

NB: It should be noted that the norm indicated in this document only refers to what is regarded as the minimum requirements for a person on a particular level. It does not indicate or imply that a person at a particular level should remain at that level or that such a person is not expected to reach a higher level.

Norms for DEPs on various seniority levels

Category	Job level	Norm
Competence	JD	2: Able to perform function at a basic level but not independently
	D	3: Able to perform function independently
	SD	3: Able to perform function independently
	DCD	4: Able to perform function at a higher than average level
	CD	5: Able to perform function at a superior/advanced level
	PM	5: Able to perform function at a superior/advanced level
Training/ development	JD	1-2 Days
	D	3-6 Months
	SD	3-6 Months
	DCD	1-2 Years
	CD	Above 2 years
	PM	Above 2 years
Experience	JD	0-1 years
	D	1-2 Years
	SD	2-3 Years
	DCD	4-5 Years
	CD	Above 5 Years
	PM	Above 5 Years

6.2 Summary of overall findings

Below is a concise representation of the overall findings of the gap analysis process.

NB: The information below reflects the percentage of staff on each seniority level who did not comply with the norms of each of the three components that were analyzed (competence, training and experience) in terms of each of the main function areas listed under point 5.4.

Each of the ratings indicated below is based on the average rating or score per main function area (not per specific function). The specific functions of each main function area were also analysed, but have not been included in this paper.

The sizes of the various gaps have not been indicated since it will form part of a more detailed analysis which will be conducted at a later stage.

Junior DEPs

Main function area	Competency gap (%)	Training gap (%)	Experience gap (%)
Design/development of courseware/study material	27	60	0
Tuition	0	33	0
Research	45	55	0
Learner Support	55	55	0
Use of technology & media	20	40	0
Management/Admin	15	40	0
Community Service/ Strategic initiatives	44	60	0
Quality Assurance	40	40	0
Average gap	31	48	0

DEPs

Main function area	Competency gap (%)	Training gap (%)	Experience gap (%)
Design/development of courseware/study material	23	85	28
Tuition	18	71	22
Research	62	71	65
Learner Support	23	77	40
Use of technology & media	39	40	17
Management/Admin	12	54	19
Community Service/ Strategic initiatives	43	83	65
Quality Assurance	39	77	62
Total	32	70	40

Senior DEPS

Main function area	Competency gap (%)	Training gap (%)	Experience gap (%)
Design/development of courseware/study material	15	85	7
Tuition	19	70	26
Research	28	78	39
Learner Support	17	89	25
Use of technology & media	44	66	44
Management/Admin	17	72	19
Community Service/ Strategic initiatives	35	75	64
Quality Assurance	33	44	44
Total	26	72	34

Deputy Chief DEPS

Main function area	Competency gap (%)	Training gap (%)	Experience gap (%)
Design/development of courseware/study material	33	93	0
Tuition	40	97	47
Research	55	95	40
Learner Support	40	100	35
Use of technology & media	70	80	40
Management/Admin	20	95	20
Community Service/ Strategic initiatives	88	100	76
Quality Assurance	20	100	40
Total	46	95	37

Chief DEPS

Main function area	Competency gap (%)	Training gap(%)	Experience gap(%)
Design/development of courseware/study material	0	33	0
Tuition	20	40	40
Research	0	20	0
Learner Support	25	25	25
Use of technology & media	100	0	0
Management/Admin	25	0	0
Community Service/ Strategic initiatives	40	40	40
Quality Assurance	100	0	0
Total	39	20	13

Programme Managers

Main function area	Competency gap (%)	Training gap (%)	Experience gap (%)
Design/development of courseware/study material	87	87	73
Tuition	77	87	80
Research	95	90	95
Learner Support	90	100	100
Use of technology & media	100	100	100
Management/Admin	85	85	80
Community Service/ Strategic initiatives	96	92	100
Quality Assurance	80	100	100
Total	89	93	91

Overall gaps (combined)

Position	Competency gap (%)	Training gap(%)	Experience gap (%)
Junior DEP	31	48	0
DEP	32	70	40
Senior DEP	26	72	34
Deputy Chief DEP	46	95	37
Chief DEP	39	20	13
Programme Man.	89	93	91
Average gap	44	66	36

6.3 Interpretations and conclusions

The following interpretations and conclusions were based on the findings cited above:

- Based on the above findings, it seems evident that serious gaps concerning the professional (ETD) competencies of DEPs at Technikon SA exist.
- The biggest gaps seem to be in the area of training and the lowest gaps seem to be in the field of experience.
- The above finding seems to be a common trend among all the job categories, that is: the highest gaps is in terms of training and the lowest gaps in terms of experience.

- In most instances it seems as if there is no positive correlation between competence gaps and training gaps, because in most instances the training gaps are much bigger than the competency gaps. If one moves from the premise that training results in improved competence, one would have expected that the size of the training gaps would have correlated positively with the size of the competency gaps.
- There does however seem to be a significant difference between the findings of the Chief DEPs and the Programme Managers since the gaps of the latter group is much bigger than the first group. On inquiry it emerged that persons appointed as Programme Managers do not necessarily have to have teaching/lecturing experience to become appointed in those positions.
- It seems as if many DEPs started off with various functions on a trial and error basis because they have apparently not received training for those functions. Much of the competency ratings seems to be based on "competence" achieved on a trial and error basis.

7. Closing comments

- It seems as if, despite possible subject or field expertise, that most of TSA academics (DEPs) had no formal ETD training or qualifications prior to their appointment at TSA.
- The findings and conclusions that resulted from the research project will make it possible for us to identify clear training/staff development needs and it will enable the ISD to embark on meaningful staff development planning and practice in future.
- The types of staff development programmes will be based on the profile of functions and will be informed by the gaps identified during the gap analysis process.

List of Acronyms

CPA	:	Critical Performance Area
DEPs	:	Distance Education Professionals
ETD	:	Education, Training and Development
ISD	:	Institute for Staff Development
TSA	:	Technikon of Southern Africa

List of Technikon SA terms

Programme Group: Academic department

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Additional sources

- CPA Documents from the following Programme Groups at Technikon SA: Applied Communications, Real Estate and Economics and Human Resources Management.
- Two workshops held at Technikon SA in 1998 on the topic: Profile of a Distance Education Practitioner.
- Comments from TSA staff members on the two drafts of the document titled: Profile of the functions and required competencies of Distance Education Professionals at Technikon SA.