THE GRADUATING WORKFORCE

A Tracer Survey of University Graduates on the Malta Labour Market

Godfrey Baldacchino
& Contributors

Workers' Participation Development Centre
University of Malta
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Foreword

An elementary level of literacy among the population at large is usually regarded as an important condition for a country's socio-economic development. Similarly, the extent of participation in higher education is seen both as an indicator of the success of a country's development policy as well as a guarantor of its future prosperity. In today's world, where the rate of technological innovation and socio-economic change is constantly accelerating, higher education has become established as a life-long experience. A University degree is, therefore, seen by individuals as an entry ticket into a competitive labour market, enhancing their career prospects. On the other hand, Government and private employers, being respectively those who provide higher education facilities and those who utilise the services of graduate employees, are both keen to ensure the relevance of the world of learning to the world of work. For this reason it is necessary for both of these to engage in an informed discussion with the University authorities and with the graduate employees themselves on such a pertinent subject.

A informed discussion on higher education and on the labour market into which it feeds should be one based on facts - ideally uncovered through empirical, sociological investigation. It should aim at establishing an overview of the match between labour supply and demand, incorporating both objective experiences and subjective expectations and evaluations. Needless to state, the actors' opinions are among the main sociological 'facts' to which such an inquiry ought to be directed.

In 1993, the Workers' Participation Development Centre (WPDC) was invited by the Foundation for Human Resources Development (FHRD) and the Employment & Training Corporation (ETC) to carry out the first ever local tracer study of University of Malta graduates and their subsequent work experiences. Clearly, there

was a growing concern among employers and policy makers alike with the impact which the recent expansion of tertiary education courses was having on employment and conditions of work. What sort of jobs were awaiting graduates upon the successful completion of their studies at Tal-Qroqq? What further training was necessary? What were the expectations of graduates and employers from each other? How many were opting for self-employment? What aspects of their university experience were most appreciated by graduates? And what suggestions could be made with the aim of improving the content of specific university courses? Questions such as these were often raised but, in the absence of empirical evidence, reliable answers to them had been elusive. The invitation to the WPDC was, therefore, intended partly to fill this deficiency.

The particular interest of the WPDC in exploring this highly topical issue is based primarily on three principles. The first is the WPDC's mission in providing a critical commentary on the world of work and on the contribution of the University, its parent institution, to that world. The second is the concern for the development of the full human person and the democratisation of social structures and processes, an objective difficult to achieve unless certain prerequisites (such as the matching of capabilities to duties; of challenges and risks to initiative) are in place. And thirdly, there is the interest, expertise and ongoing experience of the WPDC staff in social science investigation, fieldwork design and analysis on a wide range of work-related issues and relationships.

For these reasons, the WPDC readily accepted to embark on a research project on behalf of the FHRD, the ETC and the University of Malta. The aim was to investigate the relationship between qualification and occupation, education and economy among the country's stock of graduate workers. This was conceived as a 'tracer' project, locating graduates and their respective employers and asking them two sets of inter-related questions. The first dealt with their assessment and opinions on the match - or mismatch - between the quality and quantity of graduate output

from and by the University of Malta. The second consisted in an analysis of the needs and expectations of graduate employees and of their respective employers/managers in the context of current and future challenges of the local workplace.

This text presents the most important results of this original piece of research. These have been initially drawn from computer analysis of anonymous questionnaires, but mellowed and edited following the criticism raised at a presentation on the survey's interim results in June 1994; the comments forthcoming from the seminar presenting the survey's final results in November 1995, including those of World Bank Education Advisor Prof. George Psacharopoulos; and the favourable reactions to seminar papers revolving around the same theme (e.g. Baldacchino 1994, 1997a; 1997b). Last but not least, a national conference exploring the full implications of the results, organised jointly by the WPDC and the FHRD, was held in July 1997. Key papers commissioned on that occasion from speakers commenting on the various implications of the survey results are also included in this publication. These help to ground the results of a research exercise more solidly within the problems of the real world.

Acknowledgements

The research was mainly entrusted to Dr Godfrey Baldacchino who, as the WPDC Research Officer, acted as the overall Project Leader and as the editor and chief author of this publication. He has piloted the project competently and enthusiastically through the various stages of research design, data collation and analysis as well as the writing of the interim and final reports.

Furthermore, the project owes its success to the critical support of various persons.

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Professor Edward L. Zammit *November 1997*

Director, WPDC

Executive Summary

There is a considerable amount of insight to be gleaned from a proper and detailed perusal of this survey's various findings. However, for the sake of providing a quick guide to the main research results, an executive summary is provided below. Most of items identified are highlighted in the text which follows using bold type:

- Educational qualifications are not regarded by employers as the key element in determining recruitment to many jobs and remain subordinate to non-academic criteria such as motivation, flexibility, discipline and perseverance. This attitude is observable both in Malta and elsewhere.

- Many university graduates express a desire to pursue postgraduate study. This is partly a reaction to what they consider to be unchallenging job environments. In contrast, employers complain that graduates could hold unrealistic, inflated expectations about the nature and content of work; rather, graduates should apply skills and expertise to make their work more challenging and thus more fulfilling.

- The University of Malta's quantitative and qualitative expansion over these last years has been met by claims suggesting the need for the tertiary education institution to establish stronger links with industry. Suggestions have been made auguring a mutually beneficial partnership between tertiary education and the wider economy in such areas as extracurricular credits, placements for staff and students, collaborative research, practical and relevant project work.

- Female graduates have identified gender as one significant factor which is felt to have been an obstacle to their careerist aspirations.

- Graduate leakages from the local labour market may be as high as 15% within the first six years after graduation. The reasons for opting out of the labour market are mainly the pursuit of post-graduate study (for males) and child care or domestic responsibilities (for females).

- The sampled graduate female participation rate in the Maltese labour market is close to 85%: much higher than the current, female national participation rate of some 30%.

- Not a single graduate reported being unemployed when interviewed.

- The sampled graduates are unequally distributed over the Maltese Islands: Lija-Balzan-Attard contain the highest graduate density; the Cottonera area the lowest.

- Some two-thirds of sampled graduates took up public sector jobs on graduation; but there is a substantial 'brain drain' from the public to the private sector.

- Graduates and their employers agree that a University education fosters personal development, enhances flexibility, encourages independent thinking and promotes job satisfaction. But employers add that it also contributes to expectations for career mobility which are not always realistic.

- Fostering a critical attitude and one's own independent work at University - assignments, dissertations, research work, seminar presentations... are deemed by the sampled graduates as having contributed most to their working lives.

- Some three fifths (58%) of sampled graduates have undertaken further training after their graduation, mainly in the form of short training courses. Interest in further training to be taken up in future is however of a strongly academic bent.

- A stronger emphasis in management-related, operational and interpersonal skills is felt by graduates and employers to be the area where the University needs to invest most. This is followed by an interest in computer literacy and practical oriented training. The focus on management is also related to the likely mobility into managerial posts many graduates undergo within their working lives.

- Suggestions for new university courses are divided between deeper and broader curricula: towards the development of more specialisations (especially at post-graduate level) as well as a more generalist, flexible undergraduate programme.

- Graduates from all the sampled faculties consistently claim that their University training was most lacking in the development of their creativity and originality.

- From the sampled faculties, the Faculty of Law has the lowest percentage of graduates who consider that their current occupational duties can be handled, wholly or partly, equally effectively by non-graduates. This opinion is shared by the sampled employers. In contrast, Engineering & Science graduates feel strongly that their occupational tasks can be easily taken up by non-graduates. Employer opinions do not correlate on this latter point.

- Of the graduates sampled, those from the Faculty of Law are the only ones showing a clear disposition towards self-employment.

- Law graduates are least prone to consider post-graduate training; Engineering graduates, instead, exhibit the highest disposition towards post-graduate studies.

- Employer responses suggest that induction training for graduate employees is totally absent in one out of every three cases of graduate recruitment.

Contributors

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Godfrey Baldacchino Ph.D. is Lecturer and Research Officer at the Workers' Participation Development Centre, University of Malta. He specialises in workplace relations and has carried out various social science research projects locally and abroad. He has served as Visiting Lecturer at the University of the West Indies, the Seychelles Institute of Management and the University of the South Pacific.

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Robert Ghirlando Ph.D. graduated in Mechanical Engineering from the University of Malta in 1968 and read postgraduate studies at Liverpool University. He was Chief Industrial Engineer with General Instruments (Malta) Ltd, Chief Production Engineer with Dowty (Malta) Ltd, General Manager of Hydraulic Units/ Engineering Instruments Ltd and Managing Director of Mekkanika Ltd. He joined the University academic staff in 1987 and is currently Associate Professor, Department of Manufacturing Engineering. He is Managing Director of Malta University Services Ltd and has served as Member of the Malta Council for Science and Technology, Chairman of Hydraulic Units/ Engineering Instruments Ltd, Chairman of EneMalta Corporation, Director of Metalfond, President of the Chamber of Professional Engineers and President of the Federation of Professional Bodies.

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Abbreviations Used

The following abbreviations are used in this report:

ACIB = Associate of the Chartered Institute of Bankers

B.A. = Bachelor of Arts

B.Com. = Bachelor of Commerce

B.Ed. = Bachelor of Education

B.Sc. = Bachelor of Science

B.Pharm. = Bachelor of Pharmacy

CAD = Computer Assisted Design

CAM = Computer Assisted Manufacturing

E.U. = European Union

FHRD = Foundation for Human Resources Development

FOI = Federation of Industries (Malta)

HRM = Human Resource Management

IC = Integrated Circuits

LL.D. =Doctor of Laws

LL.M. = Master of Laws

M. A. = Master of Arts

M.B.A. = Master in Business Administration

M.I.A. = Member of the Institute of Accountant

M.Phil. = Master of Philosophy

M.Sc. = Master of Science

M.U.S. = Malta University Services

PGCE = Post-Graduate Certificate in Education

Ph.D. = Doctor of Philosophy

QC = Quality Control

CHAPTER 1:

Education & Work

to graduate - to take University degree;
to divide into degrees, mark, arrange according to scale[1]

The dual meaning of the term **graduation** is not incidental. The ceremonial event which marks the successful completion of a course in tertiary education is at the same time a social marker, an event which initiates the successful into a meritocracy, and assigns a socially recognised emblem of distinction and difference which sets a person apart in society and, presumably, at the workplace. To what extent, however, is this the case in practice? And in what manner does tertiary education graduate among members of the labour force? How do the graduating workers envisage such a graduation? And how do these aspirations dovetail, or clash, with the expectations of employers?

A graduate tracer study is an exercise which can help answer these and various other related, pertinent questions. It seeks out graduate employees, exploring what kind of job duties and responsibilities they hold and the extent to which they had been prepared for them while at University. A graduate tracer study can also seek out the employers of graduate employees, considering their own critical appraisal of the relationship between work experience and University training. The comments of graduate workers and their employers can be

[1] Collins Gem Pocket English Dictionary, London, William Collins Sons & Co., 1976, p.227.

scrutinised to appraise the relevance, range, quality and effects of tertiary education at a given time.

To fully appreciate such a project, one needs to locate and ground it within a wider, open debate on the relationship between the spheres of education and work. This introductory chapter examines some of the salient issues of this relationship. It does so by first positing a dynamic relationship between education and economy, a relationship which tends typically towards either a 'functional - industrial' or 'humanistic - democratic' pole. Secondly, it proposes the relevance of micro and behavioural, as against macro and deductive, considerations of a 'goodness of fit' between the school and the workplace where discrete individuals provide extensive comments on the basis of a semi-structured questionnaire in a face to face, interview setting. Thirdly, it argues for a more critical appraisal of the alleged 'tightening bond' between job requirements and educational qualifications. The chapter is wound up by reference to empirical studies carried out in Malta which help to compare and contrast the results of international research with the local situation.

For Industry or Democracy?

There exist two dominant views about the relationship obtaining between Education and Work, and each of these lies embedded in a larger framework of assumptions about the purpose of schooling in and for society. The first view is closely modeled on the humanistic conception of the human person and its social perfectibility. It upholds the notion that education represents a mechanism for social growth and human development and it is therefore meant to provide a setting for activities of an intrinsically satisfying return.

Educational institutions are intended to deliver an education with broad social meaning and with implications for transforming the present society and its organisational systems to a more participative, democratic and humanised experience. In this context, the nurturing of the younger generation is meant to prepare it to actively transform the extant social organisation of work and instead establish one based upon the values that would arise from their education.

The social efficiency argument contrasts sharply with that of education for social growth and reform. While the latter approach emphasizes the intrinsic worth of educational activities, the former is explicitly functional, focusing on the value of education in preparing the young for existing or imputed adult roles. In this framework, schooling is one important component of a broader socialization system designed to create citizens who are competent in satisfying the demands that a particular society places on its adult members. In this vein, education is viewed essentially as a means to an end and not as a meaningful process in itself. Emphasis lies on the output of the school rather than the process, for the process is important only in so far as it produces the desired results. As far as work is concerned, the desired output consists of competent workers with specific knowledge, skills, behaviour, values and attitudes which are understood as not likely to be forthcoming - in degree and/or kind - from family, church, community or other experiences. Therefore schooling must serve to inculcate these traits during childhood and youth in order to create a properly socialised adult workforce.

More specifically, the performance of the educational system with respect to work is evaluated on how well students are being prepared for the requirements of the workplace. Schooling is understood as a functionalist response to the need to prepare young citizens for meeting the technological requirements and social organisation of work. In a more contemporary variant of this approach, human capital theory adopts a more dynamic and pro-active slant. In understanding the need to tap different values such as individual creativity, flexibility and responsibility, collective problem solving and team spiritedness - essential prerequisites to the modern competitive workplace - the educational system becomes thus responsible for casting future workers who will not only fit passively but actively to and within the demands of their eventual job (Levin 1980).

Both these views yield interesting insights into the relation between education and work. It remains however difficult to compare the two views directly, given that they address themselves to different questions: The first is a vision of the 'proper' role of education as a vehicle for social change and democratisation; the second is driven by a need to accommodate the preparation of youth to the demands of existing reality. Nevertheless, one can recognise that different societies at different times may assign a higher priority to one or the other of the two poles of the intended relationship between education and work.

The pressure on education to deliver recruits for the workplace - and on teachers to teach <u>for</u> work rather than <u>about</u> work (Sultana 1992) - tends to become a heightened topic of debate in circumstances of perceived mismatch between educational output and labour market requirements. *Over-*

qualification (a surplus of qualified employables for whom the jobs available are not attractive because they are targeted at those with lower and different credentials); *under-qualification* (not enough professional personnel to satisfy existing labour market requirements) or *mis-qualification* (a misplaced emphasis on producing, say, medical graduates, when the labour market needs say, dentists) are symptoms, at times concurrent, of a dis-equilibrium in an imputed '*goodness of fit*' condition which educational planners and employers may expect to hold between education and work.

A high proportion of University graduates in many industrialised economies encounter labour market integration difficulties in spite (or because?) of their high level of schooling (OECD 1992). A European Union Report confirms that while graduates are much less likely to be unemployed than their non-graduate counterparts, they are likely to be over-qualified for the jobs they perform (Eurostat 1995). Over-qualification is becoming a common occurrence in labour surplus economies suffering structural unemployment. In Canada, Clark *et al.* (1986) showed that 11% of students who graduated in 1982 were still working part-time 2 years after leaving university, a further 17 % held full-time jobs which did not corresponded to their field of studies, and a further 29% held jobs not even requiring a university education. In a 1985 study by Krahn & Lowe (1991), only a third of Canadian graduates felt that their university education had prepared them adequately for the labour market. More than half of the graduate respondents to a study by Clark (1994) claimed that their university programme provided them with little or no knowledge of career opportunities in their field. Another Canadian study by Trottier *et al.* (1996) furthermore suggests that the graduates who encounter the most difficulties in

their vocational integration are more likely to be women and/or graduates in Arts, Social Sciences and Education.

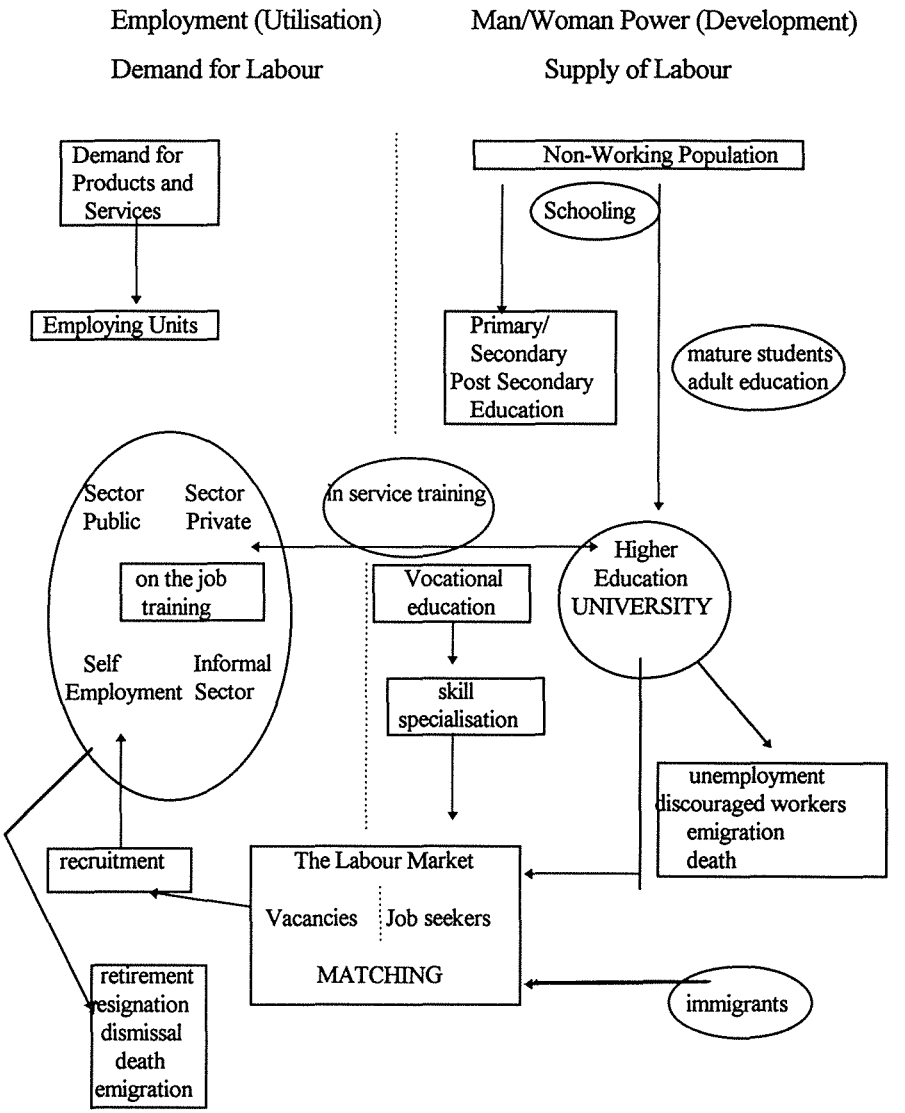
Matching Vacancies to Job Seekers

When such a dis-equilibrium between supply and demand is particularly acute, the main interest groups voice their concern with purported deficiencies of the services being provided by the educational system in preparing people for work and employment.

Furthermore, were the educational system to serve merely as a machine blindly and resolutely transforming citizens into employables, then a strict mathematical relationship may be presumed to hold between education and work. The culmination of this relationship is a match between vacancies and job seekers (See Figure 1):

The model is attractive for its sheer 'market' simplicity and scientific elegance. There is a rendering of the education - work relationship as a smooth, regular and mono-directional flow with a very clear separation of the two domains. Were it not for a provision for in-service training, these would be mutually exclusive concerns. There are however three serious problems with such a rendering of the education - work dialectic.

The first lacuna is the temporal dimension. It takes time for individuals to traverse one box and move on to another. Formal compulsory schooling takes



Adapted from Yavitz & Moise (1973)

typically some ten years and further specialisation may take an average of four years or more. In the meantime, the demand for products and services is liable to change. The whole system must somehow gear itself to produce job seekers at about the same time that the vacancies that they are prepared to fill are available. Forecasting is a dangerous game and all realistic projections must allow themselves a fair amount of flexibility and tolerance.

Secondly, the model suggests that the responsibility for providing education is divorced from industry. The implication is that education is a cost borne by a separate educational system and that this is meant to provide tailor-made employables fully prepared for a job which they then perform for the rest of their working lives. There are at least three wrong premises caught up within such a line of reasoning: (1) apart from the State, Industry is also in part responsible for training employees, especially in customised, technical procedures and skills; (2) jobs for life are an increasingly scarce phenomenon and this demands regular retraining and upgrading opportunities for employees; and (3) the separation of two spheres as education and work, while often a close approximation to how policies are actually divided in practice, is not an adequate conceptualization of how these two spheres of life should ideally blend and feed into one another.

Thirdly, the model fails to consider those functions of the educational system other than those strictly determined by the economic sphere. Among these omissions is the failure to consider students as rational individuals in search of more than simply the baggage to land a particular job. The interest in educational pursuits, especially beyond compulsory schooling, goes beyond immediate employability. It can include social mobility, status passages, personal development, artistic expression, disguised unemployment and/or credentialling. These concerns and aspirations are usually interwoven with others which are more at home in either the human capital or the liberal humanist approaches described earlier. Hence, a proper analysis of the education-work relationship must go beyond the statistics, identifying real people within the system and recognising their assorted agenda of expectations from education (when in industry) and from industry (when in education). A qualitative assessment of what people want and expect from the content and method of the system must complement any exercise in numerical flow-charting. Such a dual-pronged exercise may mete out better justice to both issues of employability and competence on one hand as well as job satisfaction and broad personal development on the other. Considerations of '*goodness-of-fit*' must go beyond skill and vacancy matching to include also worker expectations from education as well as student expectations from work.

A Tightening Bond between School and Work?

How can the integration of members of a specific labour market segment into work and employment be improved? The answers must consider the concerns and demands of employers, both at the present time and in the foreseeable

future; they must consider how these concerns and requirements are met and satisfied from a particular stock of employees, already in employment or yet to be recruited. Furthermore, one needs to acknowledge the human actors and their own assessment (realistic or otherwise) of their work environment and of what, in retrospect, they conclude with respect to their education experience.

Various studies have been undertaken on this relationship between the school and the workplace, at times with due consideration granted to the expectations of the student-turned worker. The interest in such studies and in their results has increased when it is clear that the trend in Malta, along with other countries whether industrialized or developing, is definitely along a steady net expansion in educational investment (Collins 1979; Dore 1976; Reid 1986). Accompanying this widening of educational provision and the associated increase in credentialling are the alleged changing requirements of employers towards the placing of increasing emphasis on formal educational credentials (such as school leaving certificates or examination based qualifications) in determining the criteria for selecting new recruits. On the other hand, since education has increasingly come to be considered equivalent to educational qualification, the function of schooling may have been replaced from one of education to one of qualification - the acquisition of paper passports for entry into the labour market, rather than of useful knowledge, skills and competencies (Gerald 1989; Verslius 1973; Watts 1987). The rationale for the use of education and certification in the control of employment-related decisions is based on certain fundamental assumptions regarding the purported function and value of these qualifications.

It is, however, thoroughly naive and misleading to infer a direct, causal relationship between changes in the level of academic achievement of job seekers and the level of educational qualifications demanded or stipulated by employers. Nor is it correct to suggest a *'tightening bond'* between educational qualification and occupational attainment (e.g. Banks 1976; Watts & Ferreira Marques 1979). The situation is more complex and educational qualifications perform different functions in accordance with the employer strategies resorted to when recruiting for different occupational levels (Watts 1983).

Certainly, it does not appear to be the case that certificates are necessary gatekeepers to the job market. Even without them, it remains possible to obtain employment, especially in semi-skilled jobs. The phenomenon of qualification inflation may have set in, whereby "individuals may be asked to attain qualifications which are above the demands made by the task" to which they will be assigned (Rizzo 1994). Furthermore, the relevance of credentials for job performance, particularly for certain manual occupations, is most dubious and suspect because credentials, as with the examinations on which they may be based, tend to reveal a *certain* kind of ability, and this may have at best only an indirect relevance to many occupations (Burgess & Adams 1980; Grixti 1991; Watts 1983). To strengthen this symbolic function of schooling, employers apparently value qualifications more in terms of personal attributes than in terms of cognitive and technical skills as is widely assumed (Ashton & Maguire 1980). Various studies confirm that employers declare a stronger bias in favour of applicant attitude, communication skills, prior work experience and recommendations from current or previous employers (in that order) in

undertaking recruitment for non-supervisory or production employees[2]. Better qualified employees are not necessarily more productive than less qualified ones and hence qualifications do not guarantee efficiency. Indeed, better educated workers typically have higher rates of turnover and lower levels of organisational commitment (Berg 1970). Professional deformation may also set in, whereby better educated personnel develop an inability to perform certain tasks because of their training - what is referred to as 'trained incapacity' (Veblen 1899).

Educational Qualifications and Recruitment Practice

Research by Ashton & Field (1976) and Ashton & Maguire (1980, 1981) demonstrates how employers do not in practice place as much emphasis on educational qualifications as is often suggested by students, teachers and school administrators..

First of all, qualifications are used by employers to determine what is the minimum level for entry to a particular job - and, in practice, the candidates selected are those with the highest educational qualification. This strategy, which subordinates non-academic criteria, is typically resorted to by academic institutions in their staff recruitment exercises.

Next, educational qualifications are used by employers as screening or filtering devices. Candidates who fail to present the minimum educational qualifications stipulated are automatically excluded for consideration. However, the final decision about whom to employ is generally taken on the basis of non-

[2] It's Your Attitude that Counts to Get a Job' *The Malta Business Weekly*, 27 March-2 April 1997, p.31.

academic criteria. This is typical in the recruitment of professionals, managers and technicians.

Thirdly is an employee selection strategy which shifts the balance in favour of non-academic criteria. Educational qualifications are stipulated as an indication of broader abilities and competence. Thus, if a candidate has non-academic qualities which however meet the requirements, then the educational criteria will not typically be rigidly adhered to. The approach appears quite widespread in the recruitment of clerks, sales personnel and skilled workers.

A fourth variant is a recruitment strategy which considers educational qualifications as either irrelevant or unnecessary for the effective performance of the jobs for which the recruitment drive is being made. Decisions about suitability of candidates are taken on the strength of personality or physical attributes - a strategy common in the context of operatives and skilled personnel.

Lastly, educational qualifications may disqualify candidates outright from being considered for a job. The credentials become a testimonial for the would-be employer that the candidate's ability and ambitions would not be satisfied by the undemanding, mundane nature of the job(s) at hand. The decision about whom to employ is made on the basis of non-academic criteria.

Hence, different jobs are seen to demand different recruitment strategies by their employers. This leads to a differentiated and more complex assessment of the education-work relationship. The usefulness of educational qualifications

apparently increases across the board with an increasing size of establishment, a consequence of the more rationalised hiring practices of large organisations. Furthermore, public sector recruitment is typically governed by rationalised and bureaucratic procedures where the resort to educational qualifications may also be preferred because of its more 'objective', non-discretionary nature.

Graduates in Industry

The question of the integration of university graduates into industry has also been addressed in various research projects. (Brown & Scase 1994; Halsey *et al.* 1980; Hutt & Parsons 1981; Kelsall *et al.* 1970; Mabey 1986; Williamson 1981). These have explored the '*goodness of fit*' between the expectations of graduates, feelings of job satisfaction and the extent of commitment shown by these graduate employees to their employing organisation. These studies, which resort to interviews of graduate employees as well as of employer representatives, identify that there are unrealistic, inflated expectations held by some graduates about what their work should offer them (Ward & Athos 1972); while other graduates held real but unmet expectations about the experience of work. This discrepancy between real and unreal expectations and experience was reflected in high employee turnover in the first years of employment and in post-choice cognitive dissonance (Festinger 1957; Wanous 1980).

The main conclusion of such studies is that those graduates entering the labour market with substantial prior work practice experience less discrepancy or disillusionment, and this is an important factor in determining job satisfaction as well as organisational commitment. But, very often, the organisational

reality does produce a serious element of surprise: criticism is strongest in terms of poorly planned and undemanding training programmes, absence of a sense of challenge and the low levels of work autonomy - these have a significant impact on low morale and job dissatisfaction.

Interviewed employers typically retort on the need for graduates to remember that they are still on the bottom rung of the organisational hierarchy and they must pull up their socks and do their part to fit into the organisation. According to these, graduates are not to be set up on pedestals and should stop regarding themselves as some kind of special, elite group because this could cause alienation from, and tension with, other work colleagues (Mabey 1986; Wanous 1976).

Signs of Strain In Malta

The evaluation of employer strategies and graduate employees' understanding of their work in the context of the Maltese labour market appears not only to bear out and confirm these international trends; it suggests a more strained, local relationship between education and economy. There are various, tell-tale signs of this strain[3]. The strategy and action plan for the restructuring of Malta's manufacturing sector - better known as the Ramboll Report - concluded in 1996 that local industry does not involve itself adequately in curriculum development and hence knowledge about skill requirements within the education system is largely deficient (Ramboll Report 1996). 71% of Maltese companies responding to a 1997 European Business Survey claim that

[3] These are further explored and documented in Chapter 2 below.

the local workforce is poorly skilled and this acts to preclude the recruitment of new staff - this cited constraint is the highest reported in Europe[4]. Useful insights are also gained from the consistent spate of research undertaken by undergraduates[5] mainly from the University's Faculty of Education, under the general supervision of Ronald Sultana, which is building up into an impressive critical database of the interface between education and the wider Maltese society (see also Sultana 1997; Sultana & Sammut 1997).

Amongst these, Zahra & Ebejer (1992) attempt an evaluation of the status and importance of academic certification as a prime requirement for occupational placement. From their interviews with a stratified sample of 60 employers, they conclude that most employers value educational qualifications only in so far as they symbolised other characteristics such as discipline, motivation, perseverance and the ability to defer gratification. Other employers express a concern with the content and quality of post-primary education which they claim is not attuned to the needs of industry and instead remains dominated by the University's entry requirements. Hence, the large majority of students who would be rejected by the system (the 80% or so who never make it to tertiary education) are carrying over their rejection to the workplace. This rejection is reflected in complaints which describe young school leavers as undisciplined, irresponsible, careless and disrespectful - behavioural traits which can read as forms of resistance and of "a counter-school culture" by school leavers on an irrelevant, even violent, school experience (Azzopardi & Bondin 1991; Sultana 1992). The few employer representatives with some appreciation and understanding of curriculum content in schools tend to be the large employers

[4] Grant Thornton 1997 European Business Survey. See *The Malta Business Weekly*, 22-28 May 1997, p.4.
[5] For example, the study by Deguara (1996) is a tracer research exercise directed at Communications Graduates.

recruiting for professional and managerial ranks. Many local employers express a willingness to take on new recruits irrespective of examination results, once they are satisfied with these individuals' background and personality traits. Consequently, they opine that our educational system is fomenting an unnecessary demand for academic qualifications when, in the actual experience of work, less - or none at all - of these credentials are considered as necessary.

Mallia (1994) confirms the above findings in a separate and more recent study. She argues convincingly that students in our schools are continuously exhorted to study and work in order to obtain crucial certificates and this has led to heavy investment in schooling and credentialism, as well as private tuition. However, educational credentials are generally not regarded by Maltese employers as the key element in determining job recruitment as may be often imagined. Employers tend to attach importance to non-academic criteria even when academic criteria are required. Thus, candidates with few or no academic qualifications, but with the desired personal qualities such as motivation, adaptability, a sense of responsibility and/or skills (such as literacy, numeracy, the ability to follow simple instructions or diagrams and familiarity with computer office skills) will still be able to find work, particularly in small and medium sized establishments. Qualification escalation has tended to affect only entry to certain professional and managerial, high level jobs.

On the basis of a sample survey of graduate employees, Cachia (1994) concludes that many university graduates are bent on following postgraduate courses, with the intention of having the academic baggage to clinch jobs

which are both challenging and financially rewarding and for which the competition among graduates is considered to have become intense. On the other hand, the local industrial sector may not be in a position to provide the generous remuneration packages expected by graduates; while certain jobs do not incorporate the sense of challenge and the latitude for discretion and responsibility to which graduates aspire. This disappointment on the part of graduate employees must however be placed next to the priority which employers assign to work experience (which young graduate recruits lack); employers generally feel that most university courses are not offering enough industrial experience and exposure. The inclusion of business simulation programmes, for example, in tertiary education would help graduates adjust better and faster to industry requirements.[6] Furthermore, employees insist on the importance of graduate employees actively applying their knowledge and skills on the job to repel frustration and job dissatisfaction.

Vella & Schembri (1997) appraise employer perceptions of the educational system in relation to the banking and insurance. There is a fairly general condemnation that schools 'spoon feed' students, working against the students' general development of initiative and responsibility (*ibid.*, p.53). Even at University level, employers allege that too much theory and too little practice is provided. A particular employer commented as follows:

> "The University does not have the real imagination of work. It produces business managers without any experience in the related field and

[6] This concern was also evident in the *Skills & Training Needs Survey* (STNS) carried out by the Education Industry Unit of the Malta Development Corporation in 1987. The most recent attempt at bridging this gap, launched in 1997, is the *Education Business Industry Scheme* which envisages an annual, 10-day placement and orientation programme of teachers in various places of work.

sometimes even lecturers themselves do not have the experience of 'work' in their specialised area". (*ibid.*, p.58)

Within the insurance industry, there is a certain ingrained reluctance to engage recruits with high academic qualities. Employers prefer recruiting employees with a pre-university standard of education and then obliging them to follow an insurance related course while at work. (Vella & Schembri 1997, p.51).

Some of the criticism addressed at the educational system may be unfair, since it is not the intention of education to prepare students strictly for the tasks and functions of the workplace. Indeed, this general review definitely suggests that there is a justification for probing employer *and* graduate employee opinions on conditions of work, the role of tertiary education and the relevance of qualification. All the more so when both local and international research proposes that the education - work relationship is neither strictly linear nor unambiguous. Much lip service is given to an imputed, market driven demand for education and qualification escalation to handle competently the economic requirements of a technological, post-industrial society; but the issue is much more problematic than it may appear.

The next chapter will analyse in more detail the contemporary tension between the University of Malta and the Maltese labour market. It will assess how the tertiary education institution promises to address both humanist and vocationalist claims on its services and functions. The issues raised therein will lead on to the research agenda and findings of the 1993 graduate tracer study.

CHAPTER 2:

The University & Malta's Graduate Labour Market

Preamble

The Education Act of 1988 which re-established the University of Malta heralded a quantitative and qualitative change in the local tertiary education institution. There have been, in the 1997/98 academic year, some 6,600 students following a diversified portfolio of programmes ranging from sub-degree, diploma and certificate courses to Master's and Doctoral Degrees.[7] These are administered by 10 Faculties along with a score of some small, some large, specialised institutes and centres, focal points and repositories both for teaching and research.

The University of Malta - the oldest University within the British Commonwealth, outside the United Kingdom - continues so far to exercise a practical monopoly over local tertiary education. In this situation, the institution is obliged to carry alone the onus of providing those measures of instruction and human development which seek to manage satisfactorily the perennial tension between the liberal and functional perspectives to education. A recent White Paper has proposed a series of reforms which aspire to modernise, democratise and render more accountable the workings of the

[7] Information collected from the University of Malta Admissions Office in November 1997.

University, while also opening up a public debate about the aim, level and scope of scholarship and research endeavours which the University promotes (Ministry of Education & National Culture 1997). The theme remains a topic of lively debate, as witnessed by various contributions in the media. Consider, for instance, the skirmish between Ramona Depares and Isabelle Borg:

> "If we educate our young people and give them degrees which they cannot use when it comes to participating in the country's economy, it is a waste of taxpayers' money, students' time and human resources which can be put to better use"[8].

In contrast to:

> "Students who get involved in extra-curricular project son campus learn creative, organisational and managerial skills and have no problems in finding confidence - and eventually jobs... I quite honestly don't believe anyone thinks that there is security waiting directly after a degree... It is far too simplistic to state that tertiary education should be solely for the purpose of finding a job"[9].

Any discussion of the link between the University and Industry must remain critical of an unduly technocratic and strictly vocational rendering of the University's mission. **The vocation of education is not vocational.** Nevertheless, the nature of the relationship between the one local institution of tertiary education and the world of work remains surprisingly under-

[8] Depares, R. (1995) 'Young Hopefuls', Opinion, *The Times*, November 23rd.
[9] Borg, I. (1995) 'Hopeless Careerists', Opinion, *The Times*, November 29th.

researched. An appraisal of such a relationship becomes even more crucial at the contemporary time when the structure of the labour market is undergoing a quantitative and qualitative change towards skill upgrading and tertiarisation.

Qualitatively, human resource management (HRM) philosophies emphasise more than ever before a crucial *'human capital'* dimension as a key prerequisite towards effective, efficient and competitive operation. Flatter organisational structures highlight the need for employees needing to become more enterprising, committed to their own self-development and able to take well-calculated risks on behalf of their organisations (e.g. Zammit 1997).

Quantitatively, the current indications are that tertiary education pursuit might stabilise at some 2,000 annual entrants to the Tal-Qroqq campus. This as long as the proportion of school children opting to study beyond compulsory school age stabilises at current levels[10]; and will not be affected by the reform of student stipends announced in the 1998 Government Budget. The University is poised to see a much larger number of adult students, more likely to take up part-time, staggered, distance learning and diploma courses, when - and if - these become increasingly available. Interest in following courses at Tal-Qroqq is also affected by the existence of alternative, tertiary education possibilities.

Specific Curricular Provisions

In recent years, specific curricular provisions have been introduced by the University of Malta to provide programmes in the fields and directions

[10] Over 66% of students have claimed to want to pursue further study beyond the age of 16. See ETC (1994, p.16). Zammit Mangion (1993) quotes a post-secondary choice percentage of 60%.

suggested by current labour market trends, and in response to demands and concerns by the local, private and public sectors.

These are best appraised by a perusal of the increasingly specialised orientation being adopted by the University during its recent rapid period of expansion. Such a trend towards a diversification of streams of expertise is a necessary reflection and expression of what are diagnosed to be more sophisticated, less diffuse, labour market needs. Specialisation has been sought by either of four different yet complimentary provisions:

(a) The Introduction of new courses within existing Faculties.

These include the Diplomas in Management Studies, Industrial Relations, Occupational Health & Safety, Women & Development Studies, Adult Education, Adult Training & Development, Political Studies, Library & Information Studies; degrees in Legal & Humanistic Studies, Public Health, Business & Computing, Psychology, Theology & Human Studies; post graduate degrees and diplomas such as the Magister Juris, Master's and Doctoral Programmes coming on track in most faculties. All in all, the University of Malta is offering over 60 different diploma and degree courses[11].

(b) The Restructuring of existing Faculties, new departments and areas of study being established in recognition of a specific realm of knowledge or research which deserve sustained support.

Meriting particular mention here is the Faculty of Arts which, while having nine Departments, offers 30 areas of study, mostly in collaboration with

[11] The University of Malta Calendar, 1997-98.

outside - Faculty sources. The Faculty of Mechanical and Electrical Engineering, traditionally with only these two departments, has now added a further four: Micro Electronics, Communications and Computers, Metallurgy & Materials and Manufacturing. Also note worthy here are the new Departments of Computer and Artificial Intelligence along with the Department of Information Systems within the Faculty of Science. A Department of Marketing has been set up within the Faculty of Economics, Management and Accountancy. A new Faculty of Information Technology is now being mooted. The restructuring has enabled some important fine tuning to emerging needs and challenges. Exciting new courses and research projects in the wings include avionics, naval architecture, coastal engineering, raw materials, electronics, bio-technology, hydrology and alternative energy.

(c) The Establishment of new specialised centres and institutes.

These report directly to the University Council and are intended towards the promotion of specific research and educational initiatives, in accordance with outside 'user groups' from whom the demand for the setting up of the centres is often forthcoming in the first place. The University now has 18 such institutes, the prototype effectively being the Workers' Participation Development Centre, set up back in 1981. Most of these institutes and centres are providing diploma, degree or postgraduate courses. The largest, in terms of budgetary, staff and student terms, is the Institute of Health Care.

Seven new Institutes became operational since 1993, these being set up in the areas of Child Development, Agriculture, Youth Studies, International

Business Studies, Social Welfare, Forensic Studies, and Masonry & Construction Research. The latest addition to this list is the Institute of Public Administration & Management, set up with backing from the public service in 1997. Another specialised unit of the University is the Gozo Centre, set up in 1992. This shares responsibility for all University courses held in Gozo with the competent university bodies. The number of institutes has more recently been scaled down as result of an ongoing exercise in 'scientific pruning' intended to rationalise and pool resources.

(d) The Packaging of specific educational, consultancy and research provision by forging links within and beyond the University.

These inter-disciplinary exercises are expressions of a new relationship between the University and non-University bodies, both local and international. The Mediterranean Academy of Diplomatic Studies, the International Ocean Institute, and the International Maritime Law Institute are now all firmly established at the Tal-Qroqq campus. Collaboration with, and active participation on, bodies such as the Malta Council for Science and Technology, the Foundation for International Studies, the Institute of Tourism Studies and the United Nations International Institute on Ageing enable the University to involve itself in specific programmes often benefiting from outside sponsorship.

Under the aegis of the Foundation for International Studies other institutes (such as those for Peace Research and Islands & Small States) as well as post-graduate diploma programmes as the one on Environmental Management (being financed under the aegis of the European Union MEDCAMPUS

programme) and on Educational Management and Administration in Small & Island States (sponsored by the Commonwealth Secretariat).

Interdisciplinary courses involve the revamped Contemporary Mediterranean Studies programme along with the now very large variety of short courses, publications and consultancy projects embarked upon by Malta University Services Ltd., the commercial arm of the University. Table 1 highlights some of the startling quantitative changes in student numbers which have taken place at the University over the last decade:

Table 1: Student Numbers: A Comparison

	October 1984	October 1994
Faculty of Laws	94	305
Faculty of Medicine & Surgery	364	354
Faculty of Engineering & Architecture[a]	293	295
		141
Faculty of Dental Surgery	25	36
Faculty of Education	290	982
Faculty of Management Studies[b]	313	804
Faculty of Arts	-	872
Faculty of Science	-	216
Faculty of Theology	-	203
Institutes	-	862
Other Courses[c]	300	109
Foundation Course[d]	-	236
STUDENT NUMBERS: Total =	1,679	5,415

[a] now two separate faculties
[b] now Faculty of Economics, Management & Accountancy
[c] excluding those run by Malta University Services Ltd.
[d] discontinued and replaced by Junior College from October 1995.

The development of tertiary education provisions are meant to shadow closely the parallel developments of the Maltese labour market. As an "intermediately developed economy" (Briguglio 1988, p.171), Malta is very rapidly consolidating that which has always been its historical mission - service provision - without however missing out on the opportunities resulting from its potential to serve as a platform for international industrial investment. Indeed, in 1993, for the first time ever in Maltese economic history, employment in private market services exceeded that in agriculture and manufacturing combined. This is a strong indication of Malta's comparative and competitive advantage in allocating skilled, professional services to foreign customers - be these tourists, financiers, traders, language students as well as industrial investors. In the process of graduating from a low-wage, labour intensive base for export-led industrialisation fuelled by foreign investment and technology, Malta must spearhead its involvement in productive activity where quality rather than quantity, cost-effectiveness rather than cost efficiency and knowledge-based rather than energy-based skills are the crucial prerequisites.

The fastest growing sector in the world economy - that of information technology - is another beckoning vast and lucrative domain in which Malta has an excellent opportunity to find another appropriate niche for itself. Another promising area is that of launching Malta as an international financial services centre.

Within these development concerns, the traditional separation between industrial manufacturing and market services tends towards insignificance. The

way forward in our nation's economic development is dominated by concerns for specialist skills in the context of a stable democratic structure and state-of-the-art infrastructural provision. These are the magnets which have attracted (and arguably will continue to attract) the interests of foreign clients and the accessibility of foreign markets. Our mission, our vocation, is posited as that of serving as a platform for trans-national traffic and cargo within the global village scenario. Government's intention is to catapult Malta into the high value added services sector. This would also provide profitable and satisfying employment to the thousands of graduates completing their University studies in the coming years.

Concurrently, one must not forget that Malta's size carries both advantages and disadvantages. The difficulties of generating economies of scale and home grown technological expertise are real; these are confronted by the possibility of niche-oriented strategies for foreign market penetration. Our location on the doorstep of one of the world's largest and most lucrative pan-national markets is an asset which must be exploited wisely. But a niche-oriented strategy carries with it a proviso for a fair degree of flexibility, a consistent measure of adaptability in the face of ever changing and unpredictable economic circumstances.

Flexibility is one integral requisite of the local labour market. If anything, the very large number of job transfers reported every year - close to 30,000 - is witness to the turbulence in the demand for labour. If specialisation is necessary to provide the sophisticated demands of the 'post industrial' world, then this specialisation must not be indulged in at too early an age, nor

introduced *instead* of flexibility but *alongside* it. Hence, an investment in flexible specialisation or multi-skilling, an orientation which is already part of the traditional occupational culture of Maltese workers, who have in the past struggled to survive under the unpredictable vagaries of a fortress economy. Economies of *scope* become the best alternative to economies of *scale*.

A Look Ahead

The University of Malta is geared to play its part in strengthening the skill and knowledge repertoire of the Maltese labour force in this multi-skilling direction. It becomes such a "multiversity" firstly and primarily by its investment in the ever increasing assortment of courses, specialisations, areas of study and research initiatives. Secondly by encouraging and making possible the combination of specific courses under the credit system, with course options which can be selected from a wide shopping list not restricted to one particular faculty or discipline. Thirdly, by recognising the importance of generalist, undergraduate streams - particularly in the Faculties of Arts, Science, Economics, Management and Accountancy and, more recently Law and Theology - which orient students in particular directions but nevertheless empowering them with sufficient occupational latitude to adopt to changing labour market conditions. (This sense of roundness is also manifest in the cultural domain with the insertion of the Systems of Knowledge programme and the introduction of the Junior College at pre-university level). Fourthly and lastly, by the provision of in-service, adult, outreach and distance learning programmes, underpinned by a philosophy of continuing education to ensure the technical and knowledge competence - and hence the employability - of the local labour force.

The University is also expanding its clientele beyond the 18 year-old undergraduate stereotype. Mature student numbers are increasing, as are the number of postgraduate students on campus. Sub-degree courses have also caught on, and the University has taken upon itself, via MATSEC, the onus of replacing the U. K. General Certificate of Education examinations with local equivalents of a similar standard yet bearing a sensibility to local conditions. The replacement exercise was completed in 1997.

The University is also seeking to become yet more accessible to non-full-time students. It is feasible to project that the number and variety of short courses - including summer schools - will increase, the University campus being farmed out to Government, business and industry to provide customised programmes of instruction, skill upgrading and human resource development. The latter by the way includes the University's own staff, academic and non academic, which now number close to 1,000 tenured employees. A University Radio Station is providing distance learning to a still wider circle of 'students' and other listeners. All this over and above the sponsorship of a large number of cultural initiatives and artistic expression.

Rumblings from Industry

Nevertheless, the above measures while commendable, may not be sufficient and the rumblings forthcoming from industry have not abated.

Representations from constituted bodies concerned with the quality and quantity of our labour force - particularly the Federation of Industries, (FOI), the Employment and Training Corporation (ETC) and the Foundation for Human Resources Development (FHRD) - have been expressing their concern during these last few years about how the University of Malta and the whole educational system generally could somehow address their misgivings more squarely. Criticism has been levelled at those members of the University's academic staff who have never experienced working life in industry (Farrugia 1992); on how the skills profile of the graduates should coincide, at least roughly, with the skills profile expected by the workplace (Xerri 1992). Editorials have lambasted the institution for being close to degenerating into a glorified secondary school[12]. Only 6% of representatives from the private sector believe that the local education and training systems are meeting their personnel needs "to a great extent" (Gallup 1993, p.79). A key position paper published by the FOI has made suggestions for a more flexible University curriculum which promotes a basic, generalist programme (FOI 1993); a sensitivity to labour market needs and trends which appears to have been taken on board by the University in seeing itself as a centre for the development of flexible specialists. But the tenet of these suggestions remains for the university "to forge stronger links with industry"; developing mutually beneficial partnerships between University and industry; including on the job experience qualifying as extra-curricular credits;[13] and for the organisation and execution of an audit of tertiary education, existing teaching programmes allegedly needing a review to establish whether they are satisfying personnel requirements.

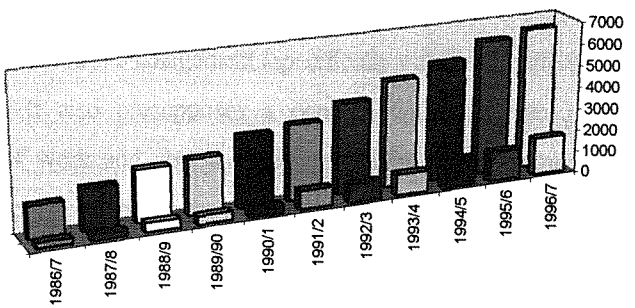
[12] 'The Tal-Qroqq School', *The Malta Independent*, Sunday 25th May 1997, p.14.

[13] Such a partnership is widely practised in the US. See for example Brazziel (1982) and Simon (1989).

The call for involvement and evaluation becomes stronger when one remembers that the University is now creaming off 20% of the 18-year old age cohort, as against 11% in 1989-90 (WHEG 1990, p.2)[14]. The explosion of student numbers and, after a brief time lag, of graduates, is a very recent phenomenon (See Table 2):

Table 2: Expansion of Student Population & Graduates at University

Year	1986/7	1987/8	1988/9	1989/90	1990/1	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7
No. of Students in Tertiary Education	1448	1867	2354	2511	3242	3470	4155	4886	5415	6168	6466
Number of Graduating Students	267	252	422	387	409	862	827	959	1277	1361	1714



Methodology

This is the context to the project embarked upon by the WPDC on behalf of the ETC, FHRD and the University of Malta to investigate the complex relationship between qualification and occupation, education and economy

[14] 18% of New Lyceum (now Junior College) students expressed their intention to proceed to tertiary education. Source ETC (1994, p.38).

among the country's stock of employed graduates. A representative sample of graduates was identified and their assessment and opinions on the nature of the match between the quality and quantity of graduate output from and by the University of Malta was sought, with full confidentiality and anonymity guaranteed. The needs and expectations of graduate employees in the context of the current and foreseeable challenges of the local workplace were also documented. Finally, the employers/managers of the sampled graduates were invited to submit their own opinions and assessment of the University's graduate product and of how this institution could better meet their man (and woman) power needs. A detailed breakdown of the research objectives and design of the tracer project is elaborated in the next chapter.

CHAPTER 3:

Research Objectives & Design

The research project's overall objective is posited as having both quantitative and qualitative dimensions. It concerns the identification and description of the nature of the match between educational provision and occupational requirements (labour supply and labour demand) at the level of graduate training in Malta.

Conceptual Framework

In detail, this presupposes a clarification of experiences and expectations from both sides of industry: Management (specifically public and private enterprise) and Labour. It also presupposes a concern with both the present/actual dimensions of work and also the future/potential or reconstitutive nature of work. These concerns are diagrammatically reproduced in Figure 2.

These four domains can each be operationalised with a research framework as follows:

(a) To evaluate, at the institutional level, the correspondence between perceived graduate capability and desired competencies.

(b) To appraise, at the institutional level, the flexibility and adaptability of the graduate human resource when urged/expected to respond to specific new challenges and future circumstances.

(c) To consider, at the human level, the correspondence between structured job requisites and the possibility of actually complying to such requisites on the basis of the factual, conceptual, technical and critical baggage available thanks to one's University experience.

(d) To assess, at the human level, the growth/career possibilities available and possible at the workplace, and the likelihood of actually identifying and carving out these HRD features on the basis of one's University preparation.

Figure 2: The Four Research Domains

	SKILLS PROFILE	
	COPING (Present) (Structured)	DEVELOPMENTAL (Future) (Dynamic)
Expectations & Concerns		
Managerial [Institutional]	a	b
Graduate Worker [Individual]	c	d

Research Design

The design adopted for the exploration of this aspect of the university - work linkage in Malta consisted in:

(a) A time frame of seven years, incorporating students from the University of Malta who graduated between 1986 and 1992. The 1986 lower limit was chosen to link up with the country's graduate population as identified in the 1985 National Census exercise.

(b) A focus on six faculties (these being Arts, Engineering, Economics, Management and Accountancy (FEMA), Law and Science, along with Pharmacy graduates from the Faculty of Medicine) which are not strictly vocational and where the relationship between education and occupation is arguably more elastic than in the remaining five faculties (these being Architecture, Dentistry, Education, Medicine and Theology).

(c) The selection of a stratified random sample of graduates, controlling the year of graduation, faculty and gender. This was decided beforehand to comprise a 10% sample of the total population. Where the 10% does not reach 30 discrete respondents, the sample size was to be increased to reach 30 respondents per faculty. The latter procedure was in fact carried out for graduates in law, pharmacy and science.

(d) The selection of a random number of employers, managers and heads of department, drawn automatically as those responsible for the sampled graduates at their place of work.

(e) The development of two distinct questionnaires, one for graduate employees and one for their employers/managers, to be administered by

trained interviewers during structured interview encounters. The interviewers were all University students.

Research Process

The total population of graduates (1986-92) was obtained from official University records, broken down by faculty, gender and year of graduation. Total number of graduates was worked out as 3,427, of which 2,153 had graduated from the six faculties under consideration (See Table 3).

A statistical head count had already been undertaken in the latest national census exercise of October 1985. As reported in the Census results, around 6,000 persons had attended the University of Malta (or an equivalent institution); of these 3,500 had obtained a first degree or a higher qualification (COS, 1986, p.79). Adding this last statistic to the number of graduates over 1986-1992, one can roughly conclude that **Malta had a total graduate stock of just over 7,000 persons - 1.94% of the total population - in summer 1992**[15]. *The number of Maltese graduates has doubled between 1992 & 1997.*

The totals obtained for the six selected faculties were then sampled, as explained above, obtaining a total graduate sample size of 237 (See Table 4).

[15] This figure is not corrected for death, emigration, immigration or other forms of mobility into or out of the country's graduate labour market. (Refer also to Figure 1 above).

Table 3: University Graduates by Year, Gender and Faculty: 1986 - 1992

Faculty	Year																
	1986		1987		1988		1989		1990		1991		1992		Total		Gross Total
	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f	
Arts	1	1	-	-	26	24	18	20	49	55	56	68	88	95	238	263	501
Engineering	37	-	27	1	41	3	51	3	26	-	33	5	102	9	317	21	338
FEMA	43	7	45	9	46	18	58	23	52	33	120	64	67	45	431	199	630
Law	32	7	32	18	30	15	10	7	7	7	58	33	4	8	173	95	268
Pharmacy	16	25	-	-	20	24	-	-	3	16	22	29	44	36	105	130	235
Science	-	-	-	-	-	-	10	1	29	20	46	17	31	27	116	65	181
Total	129	40	104	28	163	84	147	54	166	131	335	216	336	220	1380	773	2153
Other Faculties	64	34	80	40	104	71	106	80	69	43	148	163	137	134	708	565	1273
All Faculties	193	74	184	68	267	155	253	134	235	174	483	379	473	354	2088	1338	3426

Sources: Published List of Graduates,University of Malta, 1986 - 1990;

Printouts of all University graduates, 1991 & 1992 - Courtesy of University of Malta Student Affairs Office

Table 4: Sample Size

	TOTAL	SAMPLE SIZE
Arts	501	50 (that is 10%)
Engineering	338	34 (that is 10%)
FEMA	630	63 (that is 10%)
Law	268	30
Pharmacy	235	30
Science	181	30
Total	2,153	237

The bulk of the interviews were conducted over summer 1993. As part of their summer work-phase duties, a group of University students were assigned to work on this project under the overall supervision of WPDC staff. They were briefed on social science research design and interview techniques, and they participated in the formulation of the questionnaires eventually used for this tracer project. A fresh round of interviews was attempted in November 1993 by a different set of interviewers to follow up those graduates who had, for a variety of reasons, failed to respond to the first round. A third and final attempt was made in March 1994 by a different interviewer. In those cases where interviews could not be carried out because of insufficient co-operation with the graduate or an impossibility of finding a suitable time and/or place to hold an interview, replacements were selected on a *'next in line'* basis from the lists of graduates published in alphabetical order by the University authorities, but only as long as the three key variables (that is, year of graduation, sex and faculty) could be held constant (See Table 5).

A number of law graduates, mainly self-employed, could not fix an appointment with our interviewers or, failing this, did not respond to a postal

questionnaire. Unfortunately, a situation was reached whereby the possibility to replace from the total population of law graduates by controlling for year and sex was soon exhausted. Hence, the responses from the Faculty of Laws do not add up to the pre-determined sample size. The analysis which follows is therefore based on the responses of the 189 graduates who actually answered the questionnaire.

Table 5: Analysis of Graduate Response from total sample

Faculty	Total in sample	Total not in labour market	Total who answered	Total who refused/ could not answer
Arts	50	7	43	-
Engineering	34	4	30	-
FEMA	63	14[a]	46	3
Law	30	4	18	8
Pharmacy	30	1	29	-
Science	30	6	23	1
	237[b]	36[c]	189	12

a Most of whom are following a B..A. (Hons.) degree.

b These being 137 males and 88 females

c Analysed further in Table 6 below

Graduate Leakages from the Labour Market

This sampling strategy also identifies those graduates who were not available to the labour market during the months (August-September 1993) when interviews were being held. After all, leakages both in and out of the graduate

stock are inevitable. While leakages *into* the graduate stock (such as by graduates from foreign universities) could not be identified from the research results, leakages *out of* the graduate stock were readily documented.

Such leakages include unemployment, the discouraged worker effect, further education and natural wastage (Gerada 1992). The actual levels of this graduate stock and reasons for its lack of involvement in the labour market are important indicators and carry policy implications.

This data suggests that **there is a leakage of up to 15% of all graduates from the labour market for the six faculties under scrutiny**. Just over 6% of graduates from the same set of faculties are pursuing local postgraduate study; another 5% are abroad for purposes of work or study; 1.7% are on maternity leave while just over 2% have opted to take up a domestic role.

While the overall *'opt out'* rate is equally distributed between males and females, the reasons for doing so differ markedly across gender: Male graduates indicate a much higher readiness to take up postgraduate study or to take up a post/course abroad than females, whereas the latter are the exclusive exponents of non-labour market choices (See Table 6).

Nevertheless, this does not detract from the fact that female graduates have a much higher participation rate in the economy than non-graduate females. While the national female participation rate is close to 30% (WPDC 1992, p.19), **the participation rate of female graduates from the six-faculty sample works out as 85%.**

Table 6: Graduates not available to labour market

Faculty	Total No.	Males No.	Reasons ss	ab	Females No.	Reasons ss	ab	nw	ml
Arts	7	2	2	-	5	1	-	4	-
Engineering	4	3	-	3	1	-	1	-	-
FEMA	14	9	6	3	5	1	1	-	3
Law	4	1	1	-	3	1	2	-	-
Pharmacy	1	1	-	1	-	-	-	-	-
Science	6	2	1	1	4	2	-	1	1
TOTAL	36	18	10	8	18	5	4	5	4

ss = still studying locally - pursuing full time post graduate course.
ab = abroad for a spell lasting more than 2 months, for work or education purposes
ml = on maternity leave
nw = never worked, housewife

Various observers have commented on the local female participation rate, currently the lowest in Western Europe (*e.g.* Delia 1994, pp.462-3). The '*opt out*' data above suggests that a female working age population which is more exposed to tertiary education will participate more actively in the economy and will adopt a longer term careerist orientation. The University population is now practically divided equally between the sexes, and there is an anticipated annual graduate turnover of at least 1,500. In such a situation, and all things being equal, **the female participation rate should move up by some 2% by 1999,** with a net increase of some 2,000 female graduate job-seekers.

CHAPTER 4:

The Graduate Sample

The 189 graduates in the sample who answered the questionnaire - these being 119 males and 70 females - had graduated from the six faculties under scrutiny as follows (See Table 7).

Table 7: Distribution of Graduate Respondents by Faculty

Arts (A) =	43
Engineering (E) =	30
Economics, Management & Accountancy (M) =	46
Laws (L) =	18
Pharmacy (P) =	29
Science (S) =	23
Total	189

Replacing faculty by year of graduation as the key independent variable, the 189 graduates in our sample represent a spread of graduation years. The numbers reflect very clearly **an almost 300% increase in graduate output from the six faculties in question registered between the epochs 1988-90 and 1991-92** (See Tables 3 & 8). This graduate explosion is bound to have a staggered, ripple effect, first on the number of students following postgraduate training as well as on the number of graduates on the local labour market.

An evaluation of the age of the sampled graduates worked back to their year of graduation reveals that the University is increasingly developing postgraduate

students and generating various lifelong/adult education opportunities, in line with its own Strategic Plan. This is documented from the steady increase in the mean age of graduates (See Table 8).

Table 8: Spread of Graduation Years by Sampled Graduates and Mean Age

Year	No.	Mean Age at Graduation (in years)
1986	12	24.8
1987	9	26.0
1988	24	25.2
1989	20	26.4
1990	15	27.3
1991	53	27.7
1992	55	24.4[a]
	189	

[a] The 1992 figure includes at least 12 respondents pursuing part-time postgraduate tertiary education (PGCE, M.Sc., M.A., Ph.D., M.B.A.). The mean age recorded thus does not reflect the eventual tertiary education achievement of this graduate segment.

As expected, the large majority (174: 92%) of graduates in the sample are now employees, but 13 (6.9%) are working as self-employed, while 2 (1%) are employers at the time that interviews for this study were undertaken. 97 graduates (53%) had not been sponsored to pursue university training.

Not one single graduate has reported being unemployed at the time of being interviewed; and, among the 78 graduates who had not been sponsored to attend University by their eventual employers, only 7 (all males) spent six months or more registering for work.

The place of residence of these respondents is scattered all over the Maltese Islands; but a comparison with the total resident populations of towns and villages enables a more discriminatory analysis (See Table 9):

Table 9: Residential Spread of Graduates

Locality	Total of Sampled Graduates Residing in Area	Total Population (as from 1985 Census)	University Graduates per10,000 population
Cospicua, Vittoriosa, Senglea, Kalkara	1	17,547	0.6
Valletta, Floriana, Marsa, Pieta, Hamrun	9	38,682	2.3
Zabbar, Zejtun, B'Bugia, M'Scala, M'Xlokk	9	34,199	2.6
Tarxien, Gudja, Ghaxaq, Mqabba, Qrendi, Safi, Kirkop, Zurrieq, Luqa	14	33,746	4.2
Paola, Fgura, Santa Lucia	11	23,206	4.7
Sliema, Gzira, Msida, Ta' Xbiex	23	30,782	7.5
L-Ibragg, Pembroke, San Gwann, St Andrews, St Julians Swieqi	30	36,836	8.1
Rabat, Dingli, Siggiewi, Zebbug	11	30,619	3.6
B'Kara, Santa Venera, Qormi	23	46,468	4.9
Balzan, Lija, Attard	22	13,540	16.2
Bugibba, San Pawl, Mosta, Naxxar, Mellieha, Gharghur, Qawra	24	32,108	7.5
Gozo	12	25,682	4.7
Total	189	345,418	5.5

The data reveals an unequal graduate spread across the Maltese Islands. Top of the list are the three towns of **Balzan-Lija-Attard, with a graduate density three times higher than the national average** of 5.5 per 10,000 population.. In contrast, **Cottonera has the lowest graduate presence** with only one graduate within the sample. The Inner Harbour Area and the South East are also under-represented in the graduate sample. In spite of the obvious difficulties, the proportion of Gozo graduates is not far from the national norm.

The range of jobs held by the graduates is very diverse. For comparison's sake, these jobs are collapsed within the same categories used in the 1985 Census (COS, 1986, pp.86-91); (See Table 10). As expected, **most graduates enjoy professional/technical positions or higher administrative/ managerial posts in the private or public sector.** Only 2 of the graduates reporting an executive/clerical post have graduated before 1990.

Table 11 supports the notion that **the majority of graduates from the six faculties under scrutiny take up a job with the public sector upon graduation**. Still, some 20% of these join the private sector when the right opportunity turns up. No graduate reported switching jobs from the private to the public/parastatal sector. **One third of all sampled graduates have taken up employment with the private sector or self-employment right after graduation**. All of these appear to have stayed there, though a few have opted for complimentary part-time work with private/public sector agencies.

Thus, graduates from the sampled faculties are likely to: (a) follow post-graduate courses; (b) take up salaried work in a professional/ administrative

capacity; (c) not to reside in a working class area; and (d) to join the labour force as public officers, perhaps moving later on to the private sector.

Table 10: Occupational Spread of Graduates

	National Sample (by %) from 1985 Census	Graduate Sample (N = 189) N	(by %)
Employers	2.1	2	0.5
Own Account Workers	10.2	13	6.9
Employees, of which			
- Professional/ technical	7.7	105 [a]	55.6
- Administrative/ managerial	5.2	55 [b]	29.1
- Executive/Clerical	19.2	14 [c]	7.4
- Skilled/Semi-skilled	15.1	-	-
- Unskilled	20.4	-	-
Total	100%	189	100%

[a] including 9 accountants, 5 assistant lecturers, 9 lawyers, 24 teachers, 17 engineers, 15 pharmacists, 4 professional officers.
[b] including 5 administrative officers, 24 managers, 5 medical reps, 4 pharmacy analysts.
[c] including 4 bank supervisors, 4 research assistants, 2 clerks, 2 executive officers, 2 administrative assistants.

Table 11 : Spread of graduate employment: private & public sectors

	N	%
- Worked in Public & Parastatal Sector	100	52.9
- Worked in Private Sector	59	31.2
- Moved from private to public sector	-	-
- Moved from public to private sector	22	11.6
- Work in both sectors (full\part time)	4	2.1
- Other/Not available	4	2.1
Total	189	100%

CHAPTER 5:

Analysis of Graduate Responses

Most graduates (176: 93%) are in agreement that **their period at University has contributed to their own personal development**. They explain that the university has given them a broader, more holistic perspective to life; a deeper understanding of the world around them; a stronger and wider store of knowledge; a more rounded, richer and mature outlook and personality; an opportunity to discipline one's character; the provision of the foundations for future development; a key to self-expression; learning how to learn and think; and a wide variety of skills - analytic, social, critical, organisational, as well as how to work under pressure.

There is also a fair, though less strong, agreement that **a University education develops a more flexible personality**. 133 (70%) of the sampled graduates shared this view. These feel that their University programme helped them adapt better to different demands and situations; by widening options for thought and action; by providing broadmindedness, confidence and fostering innovation.

Still, a slim majority of the sampled graduates (107: 57%) opine that part of their present duties and responsibilities at work can be handled just as well by non-graduates. The various duties and details to this response are tabulated below (See Table 12). Such responses could be indicative of a state of

underemployment where graduates occupy posts which are not intrinsically as demanding and challenging as what these graduate employees expect.

The next set of questions dealt with those courses/topics which graduates, in hindsight, feel were either most or least relevant to their work. Students were asked to indicate, on a scale running from one to four, whether a number of pre-selected aspects of their university life were effective in enabling the person to acquire the competencies required from the graduate's present post. A result of 1.0 would imply that all graduates felt that the aspect of University life had been very effective: while a result of 4.0 indicates that all graduates consider this aspect as having been least effective (See Table 13).

Table 12: Duties which Non-Graduates can perform as well as Graduate Employees (N = 107)

Details Given	No.	%
Routine work (e.g. clerical, stocktaking, testing, dispensing, filing)	31	16.4
Routine administrative / office work	16	8.5
Practically all duties	9	4.8
Experience can easily replace qualification	11	5.8
Personality can easily replace qualification	7	3.7
Most duties, though graduates would perform work differently	13	6.9
Training can easily replace qualification	4	2.1
Others (various)	16	8.5
Total	107	57%

Table 13: Aspects of University Life ranked in order of contribution to Present Job (N = 189)

Assignments and Dissertations	1.86 (most important)
Research activities	2.02
Casual discussions with staff and students	2.08
Tutorials, seminars and presentations	2.18
Examinations	2.38
Formal classroom lectures	2.56
Summer work	2.61
Participation in campus societies and student bodies	2.74 (least important)

Overall, graduates do not express a very wide variance of opinion on all these issues, the range of rankings falling within less than one unit of variance (1.86 - 2.74). But **graduates still ascribe most importance to their own independent work and encounters while at University as having had the greatest contribution to their working lives**. Lowest scores are assigned to participation in campus societies and student bodies along with formal classroom lectures and summer work.

Such results can be compared to responses concerning the contribution by University training to occupational competence, as perceived by the graduates in the sample, Answers, tabulated in Table 14 below, are also ranked on a scale running from 1 (being most effective) to 4 (being least effective):

Note that the range of responses is now narrower and more inclined towards lower figures (Range: 1.85 - 2.56). This implies a stronger agreement among the graduates as to the importance of all these features of a tertiary education

milieu to the world of work. Highest score is achieved by **the development of a critical orientation;** while the fostering of creativity ranks last.[16]

Table 14: Aspects of University Training Ranked in order of contribution to Occupational Competence (N =189)

Critical Orientation	1.85 (most important)
Factual Knowledge	2.03
Application of Theory to Practice	2.16
Organisational Skills	2.19
Technical Skills and Techniques	2.28
Development of Creativity	2.56 (least important)

As expected, the sampled graduates mentioned a large assortment of job expectations they had held prior to graduation, most preferring to identify a particular job or occupational grade (See Table 15).

Table 15: Job expectations prior to graduation (N=189)

Reasons	N
A specific job [a]	118
Extrinsic rewards (high wage; promotion prospects)	9
Intrinsic rewards (fulfilment, self-development, to open own business)	23
None	4
Others (various)	35

[a] of which accountant = 8; pharmacist = 8; teacher = 13.

[16] These results are similar to those of Brown & Scase (1994) from data collected from a sample of graduates from three U. K. Universities.

Of these, a slim majority (105: 55.6%) feel that **these job expectations prior to graduation were no different from their present job title**, suggesting that their earlier expectations had therefore been fulfilled via their present work.

The remaining graduates (84: 44.4%) explained why they felt that **their present job did not match the expectations they had held prior to their graduation**. Among these responses, some indicate a degree of disappointment, others a degree of surprise and enthusiasm at the 'difference' between the actual and the desired for (See Table 16).

Table 16: Reasons for mismatch between expectations and current Job status (N = 84)

Blocked Opportunities; bleak labour market prospects	25
Insufficiently qualified	9
Unexpected greater satisfaction in new job	10
Unexpected lower satisfaction in current job	19
Others (various)	21

Table 17 tabulates the sampled graduates' intentions and plans for their future career at work. The interest in further training and study, the intention to join the University academic staff along with the intention to pursue a specialisation, means that at least 46 graduates (27.5%) are potential candidates for further education. This suggests a new relationship between the University and the economy, with a more frequent exchange of traffic from one sector to another as the interest in, and necessity for, continuing education, in-

service training and staff development picks up more momentum. First of all, exposure to university life seems to increase the disposition towards further training. **More than half (110: 58%) of the sampled graduates undertook further training after graduation** (See Table 18).

Table 17: Future Career Plans (N = 189)

Reason	N	(%)
Advancements & Promotion within Current Job	53	28.0
Further Study or Training	16	8.5
Emigration (permanent or temporary)	6	3.2
Gain Working Experience	6	3.2
None in particular; as present	12	6.4
More job responsibility (directorship; higher management levels)	20	10.6
Specialisation	17	9.0
Start own business	14	7.4
Join University Academic Staff	13	6.9
No answer	15	7.9
Others (various)	17	9.0
Total	189	100%

Secondly, **graduates express a very strong interest in further education** when asked explicitly whether they intend to undergo such training to meet their future career plans (See Table 19). Only 23 graduates (12%) claim not to have any plans for their own further training; the remainder express a variety of options, including a substantial number (56: 30%) interested in higher degrees.

The sampled graduates were also asked whether there were any specific topics or areas of study not covered during their University education which, in

retrospect, would have enhanced the fulfilling of their expectations had they been covered.

Table 18: Post-University Training (N = 110)

Short Courses (e.g. MUS., MISCO, FOI) =	47
Higher Degrees (B. A. (Hons.), M. A., M.Sc., LL.M., M.Phil., Ph.D.)	21
Post-Graduate certificates/diplomas (PGCE, IDPM, MIA)	18
In-house training	21
Others (various)	13
	110[a]

[a] Of whom at least 30 involved in studies and/or research abroad.

Table 19: Graduate Options for Further Training (N = 189)

	N	%
Further on-the-job and in-house training	16	8.7
M.A./M.Sc./Ph.D./M.Phil./LL.M	44	23.3
MBA	12	6.3
Other postgraduate study (unspecified)	16	7.9
ACIB/MIA/IDPM	7	3.7
Study abroad	14	7
Short courses/seminars	20	10.6
Other (various)	------	------
Sub Total	166	87.8
	-------	------
Not interested in Further Training	23	12.2
	------	-----
Total	189	100%

A very strong percentage (156: 83%) suggested topics and courses which would have, in their opinion, improved their University training. Among these, **a better understanding of, and more practice in, management-related skills is the most powerful concern**. This involves both operational and general management duties (such as planning and marketing) as well as human relations (such as interpersonal, 'soft' skills). It is followed closely by **computer literacy and applications with a greater investment in practical oriented training** (See Table 20). The common feature of the responses tabulated below is an appreciation of how University training could improve on its sensibility to the practical concerns of the world at large.

Table 20: Specific topics missed in University Training (N = 156)

- Process & Product Skills (planning, marketing, office management)	=	39
- People / 'Soft' Skills (psychology, communication, inter-personal skills, human relations, public speaking)	=	13
- Computer literacy and applications	=	27
- Fieldwork, projects, applications, case studies, problem solving, research techniques and methods	=	23
-Social and human studies (economics, ethics, philosophy, politics, sociology, statistics)	=	27
- Others (various)	=	13
- None specified	=	14

These opinions are backed by the sampled graduates' remarks on what they identify as the changes needed by the University to improve the professional development of its students. First are suggestions on ***course variety***. 136

graduates (72%) recommend changes, advocating both deeper (specialised) and wider (generalist) educational curricula (See Table 21).

Table 21: Suggestions for New University Courses (N = 136)

More specialisations (e.g. pharmacy management, computer courses, industrial design, journalism, EU affairs, food technology, international business, marine biology, political science)	= 49
A more general curriculum (with more diversity and interdisciplinarity)	= 38
More post-graduate studies	= 11
A better organisation of existing courses	= 12
Staff development	= 8
More evening/ professional development courses	= 8
Other (various)	= 10

Next are suggestions for an improvement in the ***contents and topics of courses***. Again the concern for **a greater relevance, applicability and up-dating of educational provision to the contemporary needs of industry and society** comes across forcefully. To 84.6% of the graduates, such changes are crucial. Issues dealing with a deeper\wider course layout and with management and computer related education recur (See Table 22). The issue of balance between theory and practice was explicitly raised in another question. The results speak for themselves (See Table 23).

Grouping graduate responses within each of the 6 sampled faculties and by gender allows a build up of distinct profiles. This permits an evaluation of the University experience and of its contribution to particular work segments. Such a response breakdown follows in the next chapter.

Table 22: Suggestions for improving university courses (N = 160)

Courses need to be more applied and better related to real life situations	= 40
Syllabi need to be updated and regularly evaluated	= 31
Need to address needs of industry and society	= 10
More specialised courses	= 19
More general and interdisciplinary courses	= 14
Improvement in standard\quality of lecturing	= 14
More computer-related topics	= 11
More management-related topics	= 6
Other (various)	= 15

Table 23: Suggestions on Balance between Theory and Practice (N = 189)

Balance to remain as it is	= 14
Depends on subject	= 4
A more practical orientation is needed (e.g. better organised work-phase, utilisation of case studies, less irrelevant theory, more laboratory facilities, more placements, more company visits, more supervised practicals, more seminars with practitioners, involvement of practitioners in coursework...)	= 146
Other (various)	= 14
No answer	= 11

CHAPTER 6:

Responses by Faculty

This chapter differentiates the graduate profiles and responses by each of the six represented faculty groupings. In this way, characteristics which may prove idiosyncratic to specific faculties will stand out from the general population. This will enable a critique attuned more specifically and concretely to a particular course of studies and to its own labour market niche. Ideally, this exercise should be in a position to discriminate responses not only by faculty but also by department - in recognition of the different structures, curricula and labour market segments fed by each. But this would not be a reliable exercise with the low number of discrete responses involved in this study.

ARTS GRADUATES

Although adopting an alphabetical sequence, it is most appropriate to kick off this analysis with the Faculty of Arts. The most liberal of faculties at the University of Malta, the Faculty spent a number of years in suspension during the hey-day of vocationalism in the early 1980s. Reinstated in 1987, the Arts Faculty now competes with Education and FEMA in terms of student numbers, and enjoys practically equal numbers of males and females. It is also the largest faculty in terms of the number of departments, academic staff complement and the number of courses offered. In this period of very rapid growth, the faculty has also penetrated the continuing/adult education market, and holds today the track record for the highest mean age of full-time students.

This is also reflected in the profile of the 43 arts graduates (22 males, 21 females) in our sample. 27 of these (63%) confirm having been in employment prior to entering University.

39 of the 43 sampled arts graduates are employees. Their spread of job titles is an important indicator of the eventual jobs taken up by arts students who typically are among the least motivated by labour market considerations in opting for particular courses. The bulk of employment lies in the education sector, with a smaller clustering in management (Table 24).

Table 24: Job Titles currently held by Arts Graduates (N = 43)

Teacher (14)	Assistant Lecturers (4)
Administrative Assistant (2)	Clerk
Designer	Executive Director
Director of Studies	Education Assistant
Executive Officer	Guidance Counsellor
Kindergarten Assistant	Managing Director
Occupational Therapist	Office Director
Research Assistant	Supervisor
T.V. Producer	

Half (N = 21) of these graduates have undergone further training after their graduation. Such a decision may be expected after a preference for a liberal curriculum, re-tooling this in line with a (more) specific occupational horizon. The training options adopted by our arts sub-sample are very assorted. Education still remains the most preferred pursuit, but with a much sharper

focus suggesting specialisation. Management & media related training is also fairly popular. A few of the respondents have undergone further training abroad (Table 25).

Table 25: Post Graduate Training pursued by Arts Graduates (N = 21)

Post-graduate certificate in education (6)	Master's Degrees and Doctorates (4)
Teaching English as Foreign Language (2)	Consultancy
European Studies (2)	Theatre Studies
Legal practice	Project Management
Radio Production	Religious education
TV Production	

The career plans of this arts sub-sample suggest that the large majority are reconciled to their current line of work, although there is no guarantee that the fairly frequent shifts in jobs which most of these respondents declare in their occupational history will not recur in future. However, a substantial minority have set their sights on the University as their eventual employer, while very few indeed are contemplating self-employment. This vision is also backed by the declared pursuit of further training, most of which is academically oriented. Few indeed seem to consider the option of in-service training (Table 26).

Table 26: Career & Training Plans of Arts Graduates (N = 43)

Career Plans	Training Plans
further study/lecturing at University = 14	M.A./M.Phil./M.Ed. = 18
set up own company = 3	Ph.D. = 7
emigration =1	PGCE = 2
unsure/stay as is = 25	in-service training = 4

	no further training = 10

Few of the sampled arts graduates express any difficulties in finding employment. This finding goes against the grain of the presumed difficulty of finding suitable jobs when one's tertiary education is not sufficiently vocational. Only 2 respondents complained that their expertise was not considered relevant in the sphere of academic production. This situation may change with the larger number of graduates on the local labour market.

Still, the liberal mould of tertiary education may increase the likelihood that jobs performed by graduates can be carried out just as well by non graduates. Just over half the arts graduates (N = 22) consider this to be so, particularly in tasks concerning administrative, clerical and secretarial office duties.

The courses which Arts graduates consider as having been most relevant to their work situation fall mainly within the sphere of psychology and the understanding of human behaviour (Table 27). The choice with respect to the least relevant courses falls on the History of Mediterranean Civilisation (HMC), a compulsory subject for students in the Faculty of Arts. 11 Graduates (26% of the sample) identified this topic. Other responses were scattered.

Table 27: Most Relevant courses to Arts Graduates (N = 43)

educational/organisational psychology	=	7
philosophy/ethics	=	7
history	=	5
discourse analysis/linguistics	=	3
counselling	=	3
industrial relations/management	=	2

Various aspects of knowledge, social skill development and field experience were considered by the sampled Arts graduates as requiring a better and wider coverage in the curricula of the Arts Faculty (Table 28).

Table 28:Topics deserving better University Coverage: Arts (N = 43)

clinical/organisational psychology	N = 5
practical management/lateral thinking skills	= 4
use of media technology/computers	= 3
life-skills/counselling	= 3
fieldwork/practical projects/community work	= 3
research methods and techniques	= 2

The research activities, assignments and dissertations undertaken during their undergraduate years are considered by Arts graduate workers to have contributed most to the competences required at the present jobs. The poorest rating is assigned to summer work experience and participation in campus societies and student bodies (See Table 29). Meanwhile, it is the critical orientation (the ability to question, examine and evaluate circumstances and situations) which is prized most in the university training undergone. The provision of technical knowledge and skills is ranked lowest (See Table 30).

The arts graduates' overall appraisal of how the University can contribute better to the professional developments of its student body beckons towards both diversification (wider choices) and specialisation, the latter in the final undergraduate year or else in postgraduate courses.

Table 29: Aspects of University Life Ranked in Order of Contribution to Present Job - Arts Graduates (N = 43)

Research Activities	1.66
Assignments and Dissertations	1.77
Casual Discussions with staff and students	1.85
Tutorials, Seminars and Presentations	1.89
Exams	2.32
Formal Classroom lecture	2.47
Participation in Campus Societies and Student Bodies	2.65
Summer work	2.76

Table 30: Aspects of University Education Ranked in order of Contribution to Occupational Competence - Arts Graduates (N =43)

Critical orientation	1.88
Organisational skills	2.05
Factual knowledge	2.08
Application of theory to practice	2.18
Development of creativity and originality	2.38
Technical skills and techniques	2.58

ENGINEERING GRADUATES

Originally incorporated within the Faculty of Architecture and Engineering, the Faculty of Engineering today has a separate status and includes six departments, a development reflecting a response to the technical sophistication and assorted applications of the discipline in the contemporary world. The Faculty benefited from the vocationalist policy of the early 1980s by attracting substantial numbers of students sponsored by their would-be employers. The latter were mainly Government and parastatal corporations but private local and international firms were not lacking. The student worker scheme was suspended for new University entrants in 1987 but 24 (72%) of the sampled engineering graduates have benefited from a sponsorship by their eventual employer. The experience gained from summer work is considered to have been much more relevant by the graduates of this faculty than by any of the other sampled graduates.

The jobs currently held by the sampled engineering graduates are mainly professional-technical, but a substantial minority have a job designation which is explicitly managerial. It is likely that **graduate engineers enter managerial posts as they grow older.** (Table 31).

Some 77% (23) of sampled engineering graduates have undergone further training since their graduation. This is the highest proportion among the six faculties sampled. Contrary to the arts graduates, the large majority of these engineers have pursued technical in-house/in-service training sponsored by

their own employing organisation; in a number of cases this has necessitated training abroad (See Table 32).

Table 31: Job Titles currently held by Engineering Graduates (N = 30)

Engineer (industrial/maintenance/production/process/electrical operations/ mechanical/manufacturing/quality/research and development)	= 17
Manager (Ship Repair Manager/Manager/Assistant Manager/ Project Leader/Head of Department/ Section Manager)	= 9
Others (teacher/research fellow/technical services analyst/ project designer)	= 4

Table 32: Post-University Training of Engineering Students (N = 30)

company sponsored	
- local (in service/on-the-job training)	N = 12
- abroad	N = 8
MBA/PGCE	N = 3
No further training pursued	N = 7

Future training plans are mainly oriented towards a similar technical specialisation, but a substantial number have further academic pursuits in their sights. The proportion of graduates expressing a satisfaction with their current job status is very slim; in fact, very few have no plans for further training. The majority appear concerned to take up more responsible and more challenging occupational roles, particularly as entrepreneurs. (See Table 33).

Table 33: Career & Training Plans of Engineering Graduates (N = 30)

Career Plans		Training Plans	
Set up Own Company	= 8	Local/in-house training	= 8
Management Post	= 8	Technical training abroad	= 4
Specialisation	= 7	Post-graduate Degree/MBA/MSc	= 8
Work abroad	= 2	Business Management/Marketing	= 3
Move to private sector	= 2	Other	= 3
Unsure / stay as is	= 3	No plans	= 4

This willingness to move on is shared by a fairly large number of respondents who opine that most/all of their present work can be handled just as well by non-graduates. 67% (N = 20) of sampled engineering graduates hold this view and this is the largest proportion among the six faculties sampled. Duties and tasks specified as not requiring graduate training includes supervision, file updating, letter writing, administrative routines, testing, sample preparations, tedious and repetitive work which does not involve decision-making. Such comments suggest **an unclear demarcation line between technicians and engineers**[17]. They may also indicate a qualification inflation in tasks which intrinsically demand technical (and not professional) expertise: 4 respondents claim that their main obstacle to career plans is that the local market is not sophisticated or advanced enough to utilise their eventual specialisation.

The managerial responsibilities with which engineering graduates find themselves involved, especially after benefiting from promotions, are perhaps

[17] See for example 'Employers criticised for engaging unqualified staff to save money', *The Times*, November 19th, 1994, p.8.

the basis for claiming a stronger management input into the Faculty curriculum (Table 34).

Table 34: Topics deserving better University Coverage: Engineering (N = 30)

General Management/Social Skills/Personnel Relations/ Industrial Management	=	13
Computer Studies	=	5
Other Technical (Plant Engineering/ pneumatics/ C.A.D./74 series IC/semi-conductors/artificial intelligence/electronics manufacturing/hydraulics)	=	10
No answer	=	2

It may appear surprising that Engineering graduates share the opinion of arts graduates that their university training has been most effective in developing a critical orientation - the ability to examine, question and evaluate circumstances and situations. The provision of technical knowledge occupies a low, joint-fourth, position out of six choices. Such a selection may reflect an attempt by these graduates to identify that feature which they consider makes them stand out from other, *'technician'*, non graduates. They also criticise formal university education by identifying casual discussions with staff and students as that aspect of their campus experience which most contributed to the development of the competences needed for their present job. (Table 35).

Once again, the engineering graduates' overall assessment of how the University can contribute to the professional development of its students is conditioned by what they claim are *'the limitations of the local market'* to

specialist pursuits. Others suggest that the priority should be a closer alignment of university curricula to the needs of industry, especially modern techniques (computer applications, CAD, fibre optics, digital control, control engineering). For this to be done, better equipped laboratories are considered essential, along with more seminars and other types of presentations. University - Industry exchanges should also involve a shuttling of staff, both on the local and international fronts.

Table 35: Aspects of University Education Ranked in Order of Contribution to Occupational Competence - Engineering Graduate (N = 30)

Critical orientation	1.70
Application of theory to practice	2.03
Technical skills and techniques	2.17
Organisational skills	2.17
Development of creativity and originality	2.43
Factual knowledge	2.57

These results can be compared with those of another survey, organised by the Chamber of Professional Engineers in 1984. In spite of the time lag, the CPE survey identifies a similar concern with (a) the need to match the theory received during University life "with as much or more content of application and practice" and (b) the increasing involvement of Engineers in supervisory/management responsibilities[18].

[18] The survey results, based on 20% of 350 practising & student engineers in Malta at the time, appeared in *Teknika* (Journal of the Chamber of Professional Engineers) Vol.1, No.4, 1984. I am grateful to Prof. Ing. Robert Ghirlando for alerting me to this source.

F.E.M.A. GRADUATES

The Faculty of Economics, Management and Accountancy - in short F.E.M.A. - is one of the youngest at Tal-Qroqq, having been uplifted from polytechnic status in the late 1970s. The faculty has grown to become one of the largest in terms of student numbers, with the bulk of these registered for courses leading to degrees in accountancy or business management. Other courses direct students to degrees in economics, public policy and banking & finance. Sharing the growth curve of other faculties, FEMA has registered large increases in student numbers, which were translated in large increases in graduate output by 1991. The age profile of these sampled FEMA graduates suggests a relatively early entry into tertiary education, often straight from sixth form. The low mean age (the lowest in the faculty groupings) is also a function of the very large increase in FEMA graduates during the last few years.

The range of jobs held by these graduates reflects the two main sub-stream of the faculty - namely, accountancy and management along with a much smaller number of administrative officers in the public sector (See Table 36).

Almost two-thirds of these sampled FEMA graduates (63%; N = 29) have undergone further training after their graduation. These training courses come in three main types. They are in-house managed, short courses sponsored by the employing organisation or else taken usually on one's initiative in the pursuit of a further qualification (See Table 37).

Table 36: Job Titles currently held by FEMA graduates (N = 46)

Accountant/auditor/financial controller	=	15
Manager/Assistant Manager/Supervisor/Business Co-ordinator	=	14
Resource/Marketing/HR Executives	=	6
Administrative Officers	=	4
Teachers	=	2
Other (Various)	=	5

Table 37: Post Graduate Training Pursued by FEMA graduates (N = 46)

In-house (local)	=	10
In-house (abroad)	=	4
Short courses on computer programming/ effective management/leadership	=	7[a]
Further qualification MIA-PGCE-IDPM-MBA	=	8
No training pursued	=	17

[a] FOI, MIM, MISCO and MUS courses are singled out in particular

A significant proportion of sampled FEMA graduates have their sights set on further training. These come in two main varieties: Short training courses, typically in the specific areas of **marketing, insurance or management which are the most frequent specialisms indicated in the future career plans of these graduates**; and longer courses leading to recognised vocational

qualifications which may also imply a promotion, increment or other beneficial career prospects (See Table 38).

Table 38: Career & Training Plans of FEMA graduates (N = 46)

Career Plans		Training Plans	
Specialisation in Financial Management	4	Short Training Courses (marketing	
" other areas of management	8	finance/insurance/management	= 8
" marketing	4	Other qualifications	
" accountancy	6	(ACIB-IDPM-MBA-MA-MIA)	=17
Teaching	2	Work Abroad	= 2
Auditing	2	No particular plan	=19
Establish own company	3		
Move to private sector management post	3		
Other	9		
As is	5		

This strong interest in further qualification - as results also from the sampled Arts graduates - may be indicative of a **perceived surge in competition for suitable jobs and posts**. Most comments by male FEMA graduates identify labour demand limitations as envisaged obstacles to the successful accomplishment of career ambitions: *"competition for limited jobs/ Malta's limitations/ too many graduates/ limited opportunities/ saturated labour market"*. The bulk of female FEMA graduates in contrast identify family-related impediments: *"family/ young children/ motherhood/ female and married"*.

The career-based self-image being pursued by these graduates may in part explain why a substantial majority (28 = 61%) consider that non-graduates

could handle their current job duties just as well. They single out data collection, routine work, organisational duties and other forms of 'donkey work' as not requiring particular graduate competence.

The sampled FEMA graduates also identify those courses which, in their opinion, deserve more emphasis in the FEMA curriculum. These suggestions are practically divided between courses which develop **familiarity with the business environment and applications** - with computer studies and case studies in particular; and those geared towards **personal, social leadership and communicative skills** (See Table 39).

Table 39: Topics deserving better University Coverage: FEMA (N = 46)

Computer Studies and Applications	18
Marketing/International Business/Management/ Production Planning/HRM	11
Inter-Personal Skills/Communication/Public Speaking	7
Practicals/Real Case Studies/Outdoor Visits	5
Statistics/Econometrics/Applied Economic Policy	2
Other	3

The development of a critical orientation is, yet again, ranked highest from a range of possible contributions by University training to occupational competence. Sadly, the development of creativity and originality is ranked lowest of all. Creativity in business studies today is recognised as a key ingredient in ensuring organisational survival and development in a global environment whose extent of insecurity and erraticity is unprecedented. If

tertiary education business studies remains unduly technical shorn of opportunities for the nurturing and promotion of new ideas - in marketing, human resource management, organisational development, customer care, financial management - the Maltese graduate recruiting firm may not exactly conform to the imaginative organisation, seen as the prototype of the successful, competitive, contemporary firm (Morgan, 1993). Similarly, exposure to computer simulations and real life scenarios would complicate and enrich the universe of classroom material, making novel and challenging permutations and combinations more likely (See Table 40).

Table 40: Aspects of University Education ranked in order of contribution to Occupational Competence - FEMA Graduates (N = 46)

Critical orientation	1.70
Provision of factual knowledge	1.93
Technical skills and techniques	2.07
Application of theory to practice	2.13
Organisational skills	2.15
Development of creativity	2.43

The sampled FEMA graduates suggest further opportunities for specialisation within the FEMA courses of study, with a shift in teaching style from the didactic, lecture format to one based on discussions and presentations. This recommendation is related to a perception that it is precisely the assignments, presentations, research activities and discussions at University which

contribute most - and in a clear cut manner - to the acquisition of the competences demanded by their occupational posts (Table 41):

Table 41: General Suggestions by FEMA Graduates for the Improvement by the University to the Professional Development of its Students[a]

More specialisation in and international exposure to the following areas (European Union/HRM/Computer applications/financial management/IT)	= 18
More practical sessions, discussions, presentations, tutorials, factory visits	= 16
Better teaching techniques/depart from traditional lecture format	= 16

[a] The above are answers to 3 different questions; hence numbers do not add up to 46.

PHARMACY GRADUATES

First impressions may suggest that the inclusion of pharmacy graduates in this study was ill-conceived. The group forms an identifiable sub-stream within the Faculty of Medicine & Surgery, one of the most vocational of all at Tal-Qroqq because of its orientation towards the training of medical doctors. Furthermore, it is a fairly popular opinion to image all pharmacy graduates working as pharmacists, in state or private practice. A breakdown of the current jobs held by sampled pharmacy graduates (N = 29, of which 18 are females and 11 are males) indicates that an imputed strict vocationalism for such a graduate sub-stream is nothing short of a myth: only 16 (55%) of the sample conform to the narrow category of 'pharmacist' (See Table 42). This situation conforms to

the recommendation of international organisations (e.g. WHO) that the pharmaceutical industry should engage properly trained pharmacists in the area of marketing and promotion of medicines in order to maintain high professional standards.

Table 42: Job Titles currently held by Pharmacy Graduates (N = 29)

Senior/Managing Pharmacist	=	8
Analyst/Pharmacist	=	8
Medical Representative	=	6
Laboratory Officer	=	2
Teacher	=	1
Brewer	=	1
Research Assistant	=	1
Food & Beverage Manager	=	1
No answer	=	1

Almost two thirds of the sampled graduates (N = 18: 62%) have proceeded to further studies after their graduation. The ample diversity of these activities is indicative of how the B.Pharm. operates as a general degree which provides a framework for the eventual pursuit of specific, job-related specialisms, if this is felt necessary or desirable (Table 43).

The career plans of the sampled pharmacy graduates indicate a preference for academic pursuits. Others propose to further their current work experience by delving deeper into specific domains. A third sub-sample plans to advance to managerial positions. To satisfy these ambitions nearly two thirds of the pharmacy graduates (18: 62%) are contemplating further training, mainly intended towards the achievement of a second degree (Table 44).

Table 43 : Post-Graduate Training Pursued by Pharmacy Graduates (N = 29)

M.Phil.	=	2
PGCE (Teacher Training)	=	2
M.Sc. (Clinical Pharmacy)	=	1
Brewing (abroad)	=	1
Analysis Training (abroad)	=	1
Marketing/Personality Training	=	1
Pharmaceutical Training	=	1
Quality Control Management	=	1
Paramedical Nutrition (abroad)	=	1
Product Knowledge Course	=	1
Petroleum Laboratory Analysis Course	=	1
Other short courses (not pharmacy oriented)	=	5
No further training pursued	=	11

Table 44: Career & Training Plans of Pharmacy Graduates (N = 29)

Career Plans		Training Plans	
Teaching/Lecturing	= 8	MBA/MSc/Post Graduate/PGCE	= 12
Management	= 4	Management/business/marketing	= 4
Research	= 3	Computer applications	= 2
Clinical Pharmacy	= 1	No training plans	= 11
Work Abroad	= 1		
As is / Gain more experience	=11		

Just over half the pharmacy sample (15:52%) suggests that non-graduates (such as compounders) would be able to handle competently some of the requirements of their current job. These include handling orders, accounting, compiling drug lists, stocktaking, managing expiring items, even dispensing medicine. These and similar everyday tasks mainly associated with the administrative duties of pharmacy practice in state or private sector provision are not considered to demand any particular graduate qualification.

Courses in Pharmacology (N = 10) and Pharmacy practice (N = 5) are considered to have been the most relevant and useful to the work situation of these graduates; whereas Mathematics (N = 6) and Chemistry (N = 5) are considered the least relevant. The direction of critique is once again towards the need for courses which combine specific job related skills with pharmacy related applications (Table 45). A major restructuring of the B.Pharm. curriculum, undertaken over the 1994/5 academic year, has taken cognisance of some of these issues and has, as a result, increased or introduced the coverage in subjects such as management skills, pharmacy practice and nutrition. Other subjects, such as pharmaceutical chemistry, which appear 'least relevant' could be incorporated in a way which will make them of value in the actual practice of pharmacy.

Research Activities stand alone as those aspects of University life which contribute most to the acquisition of competences required in the sampled pharmacy graduates' present jobs. All other seven variables register much lower scores although (as in the case of engineering) summer work achieves a commendable rating. There is, furthermore, no clear-cut indication of how

university training has enriched occupational competence; but the ability to apply theoretical concepts ranks first, while the development of creativity and originality is relegated definitely to last place on the provided list of six variables (See Table 46).

Table 45: Topics deserving better University Coverage: Pharmacy (N = 29)

Management skills	8
Computer Applications	3
Pharmacy Practice Familiarisation	2
Social Studies	2
Psychology of Interpersonal Relations	2
Clinical Pharmacology	2
Nutrition	1
Business Ethics	1
No answer	8

Table 46: Aspects of University education ranked in order of contribution to Occupational Competence - Pharmacy Graduates (N = 29)

Application of theory to practice	1.90
Provision of factual knowledge	1.97
Critical orientation	2.03
Technical skills and techniques	2.17
Organisational skills	2.45
Development of creativity and originality	2.90

SCIENCE GRADUATES

The Faculty of Science comprises the traditional departments of chemistry, physics, biology and mathematics along with computer science. It has also experienced a period of suspension along with the Faculty of Arts in the strict vocationalism of the early 1980s. Its graduate output recommenced in 1988 after an 8-year lapse, but the number of undergraduates, while on the increase, has not experienced the explosion witnessed in other sampled faculties.

The range of occupations currently held by the sampled science graduates reads as an interesting blend of technical, administrative, academic and managerial roles (See Table 47).

Table 47: Job Titles held by Science Graduates (N = 23)

Teacher	=	7
Quality Control/Assurance Manager	=	3
Systems Analyst/Programmer/Administrator	=	3
Senior Technician	=	2
Research Assistant	=	1
Laboratory Assistant	=	1
Assistant Lecturer	=	1
Management Systems Officer	=	1
Software Services Manager	=	1
Professional Officer	=	1
Project Manager	=	1
Technical Manager	=	1

Half these graduates (N = 11) took up further training after their graduation by 1992, this being the time that they were interviewed. This is a significant ratio, considering that for the sample at hand, the length of time after graduation could not be more than 4 years. Such post-graduate training pursuits appear directed mainly towards **technical specialisation** (See Table 48).

Table 48: Post-Graduate Training Pursued by Science Graduates (N = 11)

In-house training	=	4
Technical specialisation abroad	=	3
Project management	=	2
Master of Science degree	=	2

The career plans of this science sub-sample suggests that the majority are aware of their potential, even inevitable, inclusion into **senior managerial positions**. The training plans which go hand in hand with the careerist aspirations of the sample are mainly academic, but nevertheless management focused (Table 49). As in the case of engineering graduates many science graduates envisage a career involving senior management responsibilities.

Table 49: Career & Training Plans of Science Graduates (N = 23)

Career Plans		Training Plans	
Senior Management	8	M.Sc. (business management/computing)	= 7
Further Study/Academic Life	4	M.B.A./M.A./Ph.D.	= 7
Teacher	1	Management Training	= 4
More experience/as is	10	No plans	= 5

70% of the sampled graduates (N = 16) had no job guaranteed on completion of their university programme. Nevertheless they had no difficulty in finding a job as soon as they entered the labour market. Only four reported spending up to 15, 12, 4 and 2 months each respectively looking for work.

The assignments and dissertations undertaken by the sampled science graduates during their undergraduate years are ranked by far as the most important and effective pursuits in enabling an acquisition of the competences needed by their present posts. On the other hand, participation in campus societies and student bodies, along with summer work, are considered as having the least relevance; they are both assigned a very low ranking indeed.

The provision of factual knowledge is perceived as having been the key aspect of university training which has contributed to occupational competence. The development of creativity and originality is placed last of all (See Table 50). No wonder that 65% of sampled science graduates (N = 15) feel that their current work might as well be taken up by a competent non-graduate.

Table 50: Aspects of University education ranked in order of contribution to occupational competence - Science Graduates (N = 23)

Provision of factual knowledge	1.78
Development of critical orientation	1.91
Organisational skills	1.91
Provision of techniques and skills	2.36
Ability to apply theoretical concepts to practice	2.50
Development of creativity and originality	2.54

Mathematics is singled out by 30% of the sampled science graduates as having been the least relevant subject pursued in the course of their university programme, as far as occupational requirements are concerned. On the other hand, computer-related courses (computing/ databases/ system analysis/ computer practice) are identified by 25% of the science graduates as having been the most relevant university courses, job wise. A similar emphasis on **computer education**, along with more **managerial skills formation**, are considered as the area in which to invest in the University's science programme (Table 51).

Table 51: Topics deserving better University Coverage: Science (N = 23)

Business Management Skills	6
Computer knowledge and practice	5
Programming Languages	3
Industrial Practice Routines	3
Modern Apparatus and Techniques	3
Industrial Chemistry	3

The gist of the recommendations of these sampled science graduates on the university is for this institution to **combine scientific education with real life applications**, particularly via a greater investment in management education, laboratory practice and other forms of practical sessions. **Team work and project work skills,** which are staple requirements of science-oriented occupations, should also be duly cultivated in undergraduate programmes.

LAW GRADUATES[19]

We now consider the perception of graduates from the Faculty of Law, one of the oldest faculties on the Tal-Qroqq Campus. The faculty has of late reformed its core LL.D. programme, splitting it into a two-tier course, the first component being a general, more liberal oriented degree in socio-legal studies. The faculty is often considered as strictly vocational, a popular understanding of its graduate output being that this is exclusively made up of lawyers, who then practise as self-employed lawyers or notaries.

An analysis of the occupations of the 18 law graduates in the sample suggests that this is not exactly the case. A considerable number of law graduates are employees, and not necessarily employed as legal experts (See Table 52).

Table 52: Current Employment Status & Job Title of Law Graduates (N = 18)

Status - Employer	= 1	-	Company Director (1)
Self-Employed	= 6	-	Lawyers (5) Notary Public (1)
Employee	=11	-	Legal Officers/Advisors (4)
			Managers (3); Supervisors (2)
			Solicitor (1); Head of Department (1)

[19] (Note that the analysis of the sampled law graduates is not as elaborate as with the other five sub-samples. This is because of the smaller database of 18 discrete respondents resulting from an incomplete sample base having non-substitutable non respondents).

It is likely that the restructuring of the Law Degree will result in larger numbers of law graduates with a more diversified occupational orientation. The above departures from strict vocationalism appears to be an indication of an ongoing trend. Nevertheless, many of those currently employed intimate that self-employment (setting up their own office or joining a legal partnership) is part of their career plan. The Faculty of Law thus emerges as that **most inculcating an entrepreneurial culture** from among those in the University sample. Indeed, out of the 13 self-employed/employer graduates in the total University sample, 7 are law graduates.

The Faculty appears to have the lowest percentage of graduates (44%) who move on to a post-graduate qualification or to further training. Indeed very **few of the sampled law graduates have any further training plans at all,** except reading, keeping abreast of developments and following short courses. The pursuit of a degree abroad, particularly an LL.M. (Master of Laws), appears to appeal to a small minority.

The relatively low number of graduates from this Faculty with admissions which had been held on alternate years may have contributed to a maintenance of substantial market power. All sampled Law graduates found work directly after graduation, even if they had not been sponsored during their course.

The Faculty also has the lowest percentage of graduates (39%) who consider that their current occupational duties can be handled equally effectively by a non graduate. Such duties consist in administration and research tasks, letter drafting and contacting people.

The sampled Law graduates do not single out any particular topic or course which they deem as particularly irrelevant to their work demands. In contrast, Civil Law stand out as having been especially relevant (mentioned by 56% as the most relevant course of all). Practical experience mock trials, public speaking, more court experiences in the drafting of legal documents, is recommended above all for course improvement.

Again, assignments and dissertations top the list of the most effective aspects job-wise of university life. The range of choices is however very narrow and it would be more exact to state that no clear choice emerges in this respect.

A sharper picture emerges in the case of the contribution of University training to occupational competence. The ability to examine, question and evaluate circumstances and situations is ranked topmost, while the development of creativity and originality is once again relegated to the lowest position... even lower than the provision of technical skills which, for a Faculty of Law, is nothing short of surprising (See Table 53).

Table 53: Aspects of University education ranked in order of contribution to occupational competence - Law Graduates (N = 18)

Development of Critical Orientation	1.56
Provision of Factual Knowledge	1.83
Ability to apply Theoretical Concepts	2.39
Provision of Technical Knowledge	2.41
Development of Organisational Skills	2.56
Development of Creativity & Originality	2.88

A COMPARATIVE REVIEW

At this point, one can compare and contrast a number of responses by the Faculty sub-groups

Take, for instance, the question of whether one's occupational duties can be handled just as well by a non-graduate (Q.18). Engineering graduates agree most with this hypothesis, with Science and FEMA graduates following closely. **Law graduates stand apart in their confidence that their jobs cannot be handled by non-graduates** (See Table 54)[20].

Table 54: Can one's Job be handed just as well by a non-graduate? (N = 189)

Faculty sub-group	Yes (by %)	No (by %)
Arts (N = 43)	51	49
Engineering (N = 30)	67	33
FEMA (N = 46)	61	39
Law (N = 18)	39	61
Pharmacy (N = 29)	52	48
Science (N = 23)	65	35

Another issue, tackled in passing, is the inclination towards the pursuit of further training after one's graduation (Q.8). The most clear and notable result

[20] Other than the perceptions of Arts graduates, these trends are closely matched by the opinions of the sampled employers (See Table 61).

here is the high propensity to go for further studies among Engineering graduates most of all (Table 55).

Table 55: Pursuit of Further Training after graduation (N = 189)

Faculty sub-group	Yes (by %)	No (by %)
Arts (N = 43)	49	51
Engineering (N = 30)	77	23
FEMA (N = 46)	63	37
Law (N = 18)	44	56
Pharmacy (N = 29)	62	38
Science (N = 23)	48	52

Other interesting results follow when comparing the response to the questions eliciting whether either of the parents, older or younger brothers/sisters of the sampled graduates were themselves university graduates (See Table 56).

The overall impression is **the staggering change in educational attainment** witnessed across generations. Only 15% of the sampled graduates have at least one graduate parent. Tertiary education is not therefore an issue of following in the steps of one's parent(s), nor of one's elder brother or sister, as the statistics above suggest. The University 'bug' seems to have bitten hard, since already 23% of the graduates sampled claim to have younger brothers or sisters who are themselves also graduates. A distinct pattern of **inter-generational transfer** only occurs in the case of **Law Graduates**. A notable one-third of these have a graduate parent; more than a third have an elder graduate brother/sister. In contrast, only 4% of FEMA graduates has a graduate parent.

Perhaps it is **FEMA** which, among the 6 sampled faculty groups, has the most representative social class basis among its students and graduate ranks.

Table 56: Exposure to University of: (a) Parents (b) Elder Brother/Sister (c) Younger Brother/Sister - (N = 189)

	Either Parents %		Elder Brother/Sister %		Younger Brother/Sister %	
Faculty	Yes	No	Yes	No	Yes	No
Arts	15	85	26	74	29	71
Engineering	17	83	40	60	30	70
FEMA	4	96	20	80	15	85
Law	33	66	39	61	17	23
Pharmacy	21	79	31	69	21	79
Science	13	87	17	83	26	74
All	15	85	28	72	23	77

Finally, have the issue of gender, experience and/or social class helped, hindered or had no effect on the sampled graduates' careers? The responses to these 3 interrogatives suggest that, as far as the sampled graduates' perceptions are concerned, none of these factors has exercised much influence, negative or positive, on their occupational careers. The only significant result is that **female graduates are much more likely to identify gender as an obstacle** to careerist aspirations. This observation is equally strong across all six sampled faculty groupings (See Table 57).

Table 57: Has Gender hindered or helped your career? (N = 189)

Gender of Respondent	Hindered	No Effect	Helped	No Answer	Total
Male	1	93	24	1	119
Female	12	46	11	1	70
Total	13	139	35	2	189

CHAPTER 7:

The Employer Sample & Responses

The focus of analysis now shifts to the opinions of employers and employer representatives responsible for graduate employees. A sample of these employees was obtained by locating the persons responsible for the 189 workers who formed the graduate sample. The response from these employer representatives was a very positive one since all the persons concerned either agreed to be interviewed or else indicated a substitute to speak on their behalf.

The number of employer representatives (that is, 56) is much less than the number of sampled graduates (that is, 189). This was to be expected because (1) certain graduates were self-employed; (2) certain employers had only one graduate employee and therefore it was not felt opportune to request personal comments; and (3) a large number of graduates work in the same large organisations and therefore only one employer representative would be chosen to represent reactions to a number of graduates. In these latter cases, a larger spread of employer responses was obtained by also interviewing lower level officials such as sectoral managers and heads of department.

The employer sample consists of 56 persons (50 Males & 6 Females) hailing from a fair spread of organisations (See Table 58). Of these, 33 are senior managers, 16 are executive directors and 6 are heads or assistant heads of departments, with a mean of 5.5 years' experience in their present post. Their

organisations employ 15,735 workers in all, 1,236 of these being graduates. Thus, **the employer sample includes those responsible for 12% of the total gainfully employed population, and for some 17% of the total national graduate stock**[21]. These employer representatives together have at least 525 graduate employees under their immediate responsibility, the number ranging from just 1 graduate (in 12% of cases) to a maximum of 44. This apart from **the University, which is the country's largest graduate employer.** Its graduate employees today number over 600.

Table 58: Organisations represented in Employer Sample (N = 56)

-	Government Departments (Industry, Education, Health, Social Security, Works ...)	=	7
-	Parastatal\Public Corporations (ETC, MIMCOL, METCO, MSU, Central Bank, Air Malta, Enemalta, Telemalta, University, Freeport, Marsa Shipbuilding ...)	=	14
-	Bank of Valletta\Mid-Med Bank	=	4
-	Local Private Business (Corinthia, Farsons, Medairco, Preluna, Telecell, Zammit Tabona ...)	=	20
-	Foreign Private Capital (Baxter, Brandstatter, Medelec, Rodenstock, SGS-Thomson, Toly...)	=	10
-	Unspecified	=	1

[21] As worked out from *Economic Trends* (August 1992) and on the assumption of a national graduate stock of just over 7,000.

Employer Responses

Employer representatives indicated the length of induction training they offered their graduate employees after these had assumed their work duties. Surprisingly, **training is totally absent in a third of cases**. This may substantiate an impression that graduates have had enough training for their job (See Table 59); as if a University qualification is understood to cater for particular rather than general job requirements.

Table 59: Length of Induction Training for Graduate Workers (N = 56)

Nil	=	33%
Up to 2 weeks	=	7%
From 2 to 4 weeks	=	5%
From 4 to 8 weeks	=	7%
From 8 to 12 weeks	=	4%
From 3 to 6 months	=	17%
Over 6 months	=	4%
At director's discretion	=	5%
Continuous, on-the-job training	=	15%
Unspecified	=	3%

Employers were also requested to indicate whether the work currently being carried out by graduate employees could be carried out just as well by non-graduates. These responses are broken down by faculty; note that employers were asked to table their opinions only with respect to those faculties from which their own employees had graduated (See Table 60).

Table 60: Could Work Be Carried Out Just As Well By Non-Graduates? (N = 56)

Faculty	Yes	No	(Ratio)
Arts (A)	6	2	3.0
Engineering (E)	8	10	0.8
F.E.M.A. (M)	10	18	0.6
Laws (L)	-	5	-
Pharmacy (P)	2	5	0.4
Science (S)	4	6	0.7
Total	30[a]	46	0.65

[a] Details are broken down by faculty in Table 61 below.

These results may come as a surprise. **Only in the case of Law graduates is there solid agreement by employers that graduates are non-replaceable.** With respect to the other five faculties, and especially with respect to the Faculty of Arts, graduates are not seen to be absolutely necessary in 40% of cases. The reasons given for this willingness or ability to replace a graduate employee with a non-graduate employee are largely related to: (a) The over-qualification of the graduate for the tasks at hand; and (b) the requirement for practical, managerial and administrative skills which may appear to evolve more effectively through experience than through tertiary education (See Table 62). Of course, an undeclared reason could be related to savings on wages.

When asked about flexibility most employer representatives (38: 70%) agreed that **University training has helped their graduate employees to respond flexibly within their job to new challenges and changing circumstances.** This is seen to result because of a greater adaptability in the graduate character to shifting and multiple demands along with a greater predisposition to 'go the extra mile' (See Table 62).

Table 61: Reasons for Ability to replace Graduate With Non-Graduate Employees (N= 30)

Simple data collection; routine financial control clerical work	A =1; M =2
Managerial skills required	A=1; E=1; M=2
Experience is sufficient	E =4; M =3; S =1
Alternative qualifications are available	M =1
Graduates are overqualified	E =3; S =4; M =1; A=1
Unspecified	2

Table 62: How Is Flexibility Demonstrated by Graduates At Work? (N = 38)

Graduates move easily from one job\task to another	=	10
Graduates are able to change procedures in line with changing demands and practices	=	14
Graduates have a greater willingness to adapt and rise to the occasion	=	6
Other (Various)	=	8

Although not asked for, employers who did not agree that graduate employees were necessarily more flexible gave reasons for this. These include comments about arrogance and unwillingness to adapt (2 responses); the inevitable pressure for total flexibility on all workers in a small firm, be they graduates or otherwise (2 responses); and that flexibility does not depend on University training but on character and disposition (1 response).

Indeed, most employer representatives agree that **graduate employees are more likely to expect promotions** (42: 75% agree; 11: 20% disagree; 3: 5% no answer). Yet, only a slim majority of employer representatives (31: 55%) believes that career mobility opportunities are actually more probable for graduates. Employers feel that graduates may expect career mobility - and quickly - simply on the strength of their credentials. Indeed, more realistically, **one has to prove one's worth to merit a promotion** - and this is more likely to come about through dedication, responsibility and general performance.

Further insights on the preference for graduate employees emerged from a question requesting reasons for filling vacant posts with graduates. Although the choice for a graduate employee is not always there, the general idea is one which deems **graduates as being better workers because they are more knowledgeable, flexible, trained to think and innovative** (See Table 63).

The appraisal of University education by these employers reconfirms the concern, already expressed by the sampled graduates, for a more practical orientation, addressing university resources both to the general and specific concerns of employers and managers at large (See Table 64).

Table 63: Reasons for filling a vacant post with a Graduate (N = 56)

No real choice - stipulated by law	12
No real choice - a graduate was already in post	4
Graduates are professional and innovative	10
Graduates are more knowledgeable	7
Graduates are more disciplined, trained to think	6
Graduates have a good academic background	6
To avoid clashes with junior grades	1
Already, trained, and therefore less costly	1
No answer	8

Table 64: Suggested Improvements to Range &Variety of University Courses (N =56)

Leave as is	=	8
A wider variety of courses	=	13
More practical and professional education (e.g. short diploma courses, evening courses, middle-management programmes)	=	19
Upgrade lecturing staff	=	3
Other (Various)	=	3
No answer	=	10

These opinions are strengthened by suggestions for the improvement in the content/topics of university courses; these also put forward a plea for a transferability of knowledge, a competence to handle the skills not only of today but also of tomorrow (See Table 65).

Table 65: Suggested Improvements To Contents and Topics of University Courses (N = 56)

Leave as is	=	4
Increase applications, topics to reflect reality in practice	=	16
Increase management, computer and communication skills	=	13
Greater specialisation	=	3
Other (Various)/ No answer	=	20

Opinions on the use of training methods propose a departure from standard 'chalk and talk' and note-taking formats to **more participative teaching settings** with more projects involving theory applications (See Table 66).

Table 66:Suggested Improvements to Training Methods at University (N = 56)

Leave as is	=	1
More applications, projects, placements, contact with outside world	=	18
More imaginative and interactive teaching (e.g. use of visual aids)	=	10
Unspecified	=	5
No answer	=	22

The answers to the direct question on the balance between theory and practice points unequivocally to **the concern by employer representatives for the University to dedicate more attention to the practical side** (See Table 67).

Table 67: Proposed Change to Relation of Theory & Practice at University (N = 56)

Leave as is	=	2
More theory	=	2
More practice	=	35
Difficult to get right balance	=	5
Other (various) / No answer	=	12

CHAPTER 8:

Reactions from a Panel of Commentators

During a Half-Day Conference organised in July 1997, position papers were solicited from a variety of exponents from the world of work and education. The panel was chosen to consist of speakers who could relate to the tracer survey results in a multiple manner: because of their own personal experience as graduates; because of their involvement as educators and trainers; because of their responsibility for graduate subordinates; because their experience allows them also to address issues from a labour market and employer perspective. These are concluded with the critical comments of a graduating student. What follows are their edited papers.

David Fabri

I have been asked to contribute some comments on the findings of the 1995 Tracer Study on the graduating work force, and to do this drawing on my own experience. "Experience" here presumably refers to my having been a student, a graduate, a self employed lawyer, an employee in the private sector and, more recently an employee in the public sector. My contacts and encounters with students and graduates come at various levels. At the Malta Financial Services Centre, where I work, I sometimes find myself involved in the recruitment of personnel, which may of course include graduates, and in the course of my daily work, I frequently have professional contacts with young lawyers, accountants and other business graduates fresh out of University. Within the Department of Commercial Law at the University of Malta, I lecture at both graduate and post-graduate levels, including the new financial services masters course which (as you may be aware) is not restricted to law students or to lawyers. My contacts with University students and graduates are therefore frequent and varied, and are not restricted to the Faculty of Law. My comments here today shall however mainly concern graduates in law. This will permit me to retain these brief comments within manageable limits. I shall concentrate on five points.

1. Twenty years ago, about the time I left University, it was generally considered outlandish for lawyers to go into employment in the private sector. Very few in fact did. The proper place for lawyers was considered to be in court. There, as independent self-employed professionals, they could exercise advocacy, ironically a subject they were not even taught at University, but a form of skill lawyer were expected to pick up by trial and error. Employment kept young lawyers away from their natural home and, worse, shackled their independence. At most, perhaps employment with the Office of the Attorney-General or other major institution was acceptable but was still largely considered an uncertain career move. A rather dim view was held of lawyers in employment.

I suggest that attitudes in this area have been and are undergoing significant changes, although I have no survey or statistic to support this proposition. In these last years, more and more law graduates have been observed to be interested in taking up full-time employment, whether in the private or public sector. A number of graduates have began shifting their intentions away from the courts and saying so clearly. These tend to consider Court procedures as rather frustrating, tedious and time-wasting. One may suggest that they may also be seeking to preserve the predictability and reassurance of the monthly pay cheque, which they have grown accustomed to receive during their University years. Possibly, the habit of receiving a monthly stipend from the University may have helped to alter perceptions on the desirability employment. We may also be witnessing subtle changes resulting from the massive female presence in this formerly male dominated course.

Many students nowadays freely express their wish not to end up working in Court. There is certainly no physical place for all the graduating lawyers in Court. A number of young lawyers attend in Court particularly in the mornings and more or less spend their time doing largely unproductive work, often in a state of semi-employment. Better utilization of resources would be achieved if more of these lawyers could be enticed into more productive job opportunities with a high legal content away from the courts.

The University law course has managed to react to this evolving scenario, but only to an extent. The course still lays heavy emphasis on the learning of court procedural regulation. Should this be retained in its present form? Should we start thinking of converting it to an elective subject? These and related matters deserve some more attention. In the meantime, the Chamber of Advocates, comfortably cosseted in its premises within the law courts, remains blissfully

unaware or indifferent to the changing moods and attitudes of some of its younger and newer members.

2. My second comment relates to a particular finding in the tracer study which I find rather peculiar. This says that "*there is no graduate who reported moving from the private sector to the public or parastatal sector for employment purposes*". This is surely not the general position today. In my experience, people are no longer as reluctant as in the past to consider public sector employment. Indeed, university graduates occupy half of the MFSC's senior managerial posts. These 13 graduates hold either a law or a business-related degree. Half of them were recruited from the private sector (and again half of these are females). This may be indicative of a more generalised trend not entirely in line with some of the findings of the Report. Evidently, where the public sector is able to offer competitive salaries and suitable working conditions, defections from the private into the public sector may be expected to increase.

3. More and more graduating lawyers have therefore started creeping into managerial and executive posts in the private and public sectors. For a number of different reasons, some find it difficult to adjust and to come to terms with their working environment, especially during their first months of employment. This could prove a traumatic experience for some. In some organisations, the working environment, with its fixed working hours, lack of autonomy, reporting procedures, possibly cramped desk space, and other features, may appear unduly restrictive and unfriendly, falling far short of expectations - certainly far removed from the relaxed atmosphere of the campus. Possibly these are just every-day problems of ordinary employment, and lawyers are no different from other newly recruited employees. But certainly newly recruited law graduates often find themselves expected to play roles for which they may be totally unprepared, like working with older and more experienced but less academically qualified employees, having to handle younger staff with their own problems and frustrations, working as a team with specialists from different disciplines, understanding and working within the culture and internal politics of the organisation, living with prejudices against their profession, and so on.

It would therefore appear useful, as suggested in the Tracer Study, to find ways and means of introducing graduates to the real world of employment and to "*develop management related, operational and inter-personal skills*". While still at University, they should be given the opportunity to discover at an

earlier stage how private and public organisations operate, how employees inter-act, what the employment relationship actually implies in real and not in mere abstract terms. However, I firmly believe that if something is to be done, this should not be undertaken at the expense of legal studies. The law students must first know their law. That must remain their first priority at University. It is already a difficult enough task to fit so many legal subjects in the existing curriculum to even contemplate forcing in some additional employment or management-related subjects on a mandatory basis. Such an approach may be counter-productive. What may be considered is to offer specially selected, brief and tailor-made courses organised on a strictly optional basis during the sixth and final year of the course, at a time when the students should be engaged on their thesis. The suggested timing would seem appropriate for at least two reasons - firstly, these courses would not be perceived as an unnecessary hindrance to exams-related studies, and secondly, during the final year the students would usually have ample time and motivation to ponder career possibilities and implications.

4. The Tracer Study makes a favourable reference to the recent restructuring of the LL.D. course into "*a two-tier course, the first component being a general, more liberal-oriented degree in socio-legal studies*". Graduates from the 3-year general course are now being observed gradually filling employment opportunities which may require some legal training and background without warranting the engagement of fully fledged lawyers. A number of legal graduates from this new category have found employment with law firms, with nominee companies working in the financial sector, and with audit and accounting firms. This development should be considered a positive one, which has provided the labour market with a new category of academically prepared legal graduates, who may not have wished to undergo the entire six-year course. Another step in the right direction, at least in the Department of Commercial Law in which I am involved, is the continual introduction of new short elective credits on subjects which are of high contemporary interest and practical relevance. The LL.D. curriculum now includes subjects like financial services law and consumer protection, and from last year a new Masters in Financial Services has been launched. Most if not all the lecturers who handle the responsibility for these courses are active practitioners themselves, a feature which should help to bring the outside working environment closer to the students.

5. I have now arrived at my final point, and it is a rather negative one. It is distressing to discover in the tracer study that the law graduates sampled assigned to the notion of the "*development of creativity and originality*" the

very lowest priority as a factor that contributed to their occupational competence. This raises a number of sore points concerning graduates, which should not be ignored. There is quite a widespread view at least among many of my colleagues that the standard of a sizable number of our students and graduates is deteriorating. Those of us who correct assignments and supervise or examine theses and dissertations regularly witness the painful inability of many final year students to write proper English, or to use appropriate punctuation, or even to write or think in an original or logical manner. It seems that the system has been showing too great a sympathy for the academically poor and the mediocre, those who seem to be able with a little effort to stumble through the entire 6-year law course without contributing one single original thought or initiative. They study the minimum necessary to achieve the minimum passing mark, which is indeed conveniently low. Plagiarism is gradually becoming widespread to the extent that some students seem to consider it a smart working method, and feel no shame in committing it. There are also clear signs that many students carry out very little independent reading, or none at all. Quantity may be easily outpacing quality.

In this rather bleak scenario, it is not surprising that the level of professionalism, the sense of dedication and discipline and of taking one's work seriously have become visibly lacking. If these propositions are correct, even in part, they may have a direct bearing on some of the findings and underlying assumptions of the Tracer Study, particularly where this deals with the inadequacies effecting new graduates entering the labour market and with the reaction of their employers. These are therefore some additional factors that may warrant attention and investigation in future tracer studies.

Victor Ferrito

Our deliberations today have been focused on "graduate training in Malta".

1. We have pulled a piece, admittedly a sizable piece of the jigsaw puzzle, out of the complete picture - the total workforce and its needs for education and training.

I am not suggesting that we should look at the whole picture today, but we must keep in mind the strong structural link, that necessarily exists between graduate and non-graduate workforce when interpreting data obtained by the survey. As representative of the Federation of Industry I feel I must emphasize the crucial importance of constantly reviewing education and training of supporting staff - the other 80 per cent plus of the potential workforce.

We must not overlook the possible link between some of the comments made by the interviewed new graduates for example "*Engineering and science graduate feel that much of their current work consists of routine occupational tasks which can be undertaken as effectively by non-graduate employees*" - and the lack of properly trained supporting staff. Is it not possible that these new graduates are asked to carry out these tasks because not enough properly trained technicians are available on the labour market??

We at the Federation believe it is tempting providence to focus on one sector, promote its development at the expense of other sectors of the workforce because this approach leads to distortion and bias with the likely consequence of undermining the very sector we are trying to promote. We need a Balanced Action Plan. My point is that it is possible that some of the observations coming out of the survey could very well be a consequence of this out of balance development we have had in the recent past. The possible error lies not in the development of the tertiary sector by the lack of development of other sectors to keep in step.

2. We very often hear the comment: "The Employer finds that their newly employed graduates know a lot of theory but are not very practical". This comment, on the other hand, is interpreted by potential employees as "The Employers wants a tailor made graduate - a perfect fit".

I wonder and I would like you to stop and wonder with me whether the real reason is that many - obviously not all, here we talk about the average graduate which is the bulk of graduates - know the theory but have not been educated to understand theories and concepts properly and apply them to practical situations. I contend that to solve problems one must understand how things work, to understand what is wrong and then try to offer solutions.

But this is not alas our culture in education! The prevailing culture is to know, rather than to understand; to reproduce texts in exams and recognise patterns of set solutions. The objective is to pass exams and obtain good grades and

mercifully be allowed to forget material learned. It is important to consider this carefully as it could change the perspective of the outcome of the survey.

3. Having myself both a University and Industry background, I can understand why and sympathise with Maltese employers when they do not regard Educational Qualifications as the key element in determining recruitment to many jobs. I do not believe this is unique to Maltese employers! The employer sees his employees as members of his team-management and operators. They all have to function together in harmony much like musicians in an orchestra. These play together and in support of each other under the overall direction of the Conductor. Needless to say that it is useless having excellent designs, excellent production and excellent quality assurance if the sales function is lousy. But I must warn here about Red Herrings: we must beware of such statements as: *"imparting of management and communication skills to all graduands"* and *"imparting a more practical dimension to undergraduate study"*.

We must not upset the correct balance in the education and training of graduates. Should not management and communication skills have been imparted through the subject matter like engineering studies, chemistry, physics etc.?

If educated and trained properly, should not our graduates be capable of applying what they have learnt, and of achieving a more practical dimension to their studies themselves?? I would not even call him or her graduate if he/she can't! Having obtained a few "credits" in management does not make graduates managers. I would say yes to imparting these skills but through the way we teach and anyway not at the expense of basics in the discipline.

It is far better to find out what our undergraduates are cut out for, what potential they have and guide them into the right career path for them. Giving me brushes, paint, canvas and a few hints or skills and techniques does not make a Michaelangelo of me!

4. What I certainly would agree with and wish to promote strongly is an education system that makes it possible for employees to pick and choose modules they consider useful for their careers and at their own pace, gather enough modules that obviously make up a coherent whole to obtain a diploma or degree or a specialisation certificate. In a word - a more user friendly educational system - that encourages and promotes life long education,

continuing education, even remedial education - call it what you like - and that provides the stimulus, the motivation for self development, for realising the full potential of the individual.

5. The final point I want to make is not to forget our limitations: not to be 'discouraged' by them but to find ways and means of turning them into advantages. To overcome some of these limitations we must learn to utilise better our available human resources by sharing this valuable resource. Who is better equipped to talk about fermentation than the qualified oenologist/brewer with years of practical experience of wine/beer making? Who is better equipped to talk about validation of analytical techniques than the University lecturer who carries out analytical work day in day out? So why can't we share resources? Why not look for a closer, much closer symbiosis between Industry and Education?

We are small - so communications should be easy. We cannot on our own, industry and Education have the whole range of expertise - so let us share! What are the invisible barriers? Is one jealousy for our domains? Let us become less concerned about receiving and start being concerned more with giving. I am sure that in the end we will receive more than we give, since all we be givers and all we be receivers.

Robert Ghirlando

I have been asked to comment on three conclusions of the tracer study, Graduates on the Labour Market.

The first statement is the following: "*The fostering of a critical attitude and one's own independent work while at University - assignments, dissertations, research work and seminar presentations - are considered by the sampled graduates as having had the greatest contribution to their working lives. The University's weakest contribution to occupational competence is deemed to lie in the area of development of creativity*".

I can understand why graduates would have made these two comments and I would basically agree with them. The first comment is also quite positive as it would indicate that students prefer to learn rather than be taught. One of the

main criticisms that I hear about our teaching methods in the Faculty of Engineering is that we spoon-feed students. Hence we really ought to make an effort and give them more assignments and less classroom work. The University should be learning and not a teaching institution!

In a way, I consider myself fortunate that my subject at University allows me to use project-work as the main didactic tool. I teach Engineering Design to third year engineering students in the mechanical stream and I do this mainly through a Design Project. My experience is that students enjoy working on their own rather than listening to lectures, taking notes or handouts and then reproducing them at examinations. The problem with this design project is trying to control the students from overdoing it! Some of them get so carried away by the project that they devote far too much time to it at the expense of their other studies. This year, I have changed the course description in an attempt to give the students a sense of balance between the time that they may devote to the project and the time for the other subjects.

On creativity, it would be wrong to assume that nothing is done at University. I am not aware that it is being taught explicitly, in the Edward De Bono style, so to speak, but a number of courses, some by their very nature, have a strong element of creativity. Architecture, for example, and my own Engineering Design are courses that develop creativity. One of my lectures in the Engineering Design course is a brain storming session, which students and myself thoroughly enjoy. having said that, I do believe that not enough is being done to foster more creativity, and the country badly needs it. The other area where I would like to see more being done is in entrepreneurship. Too many of our graduates leave the University expecting to find a job rather than creating work for themselves and others; this was also confirmed in the Tracer Study. It is ironic that whereas we are ready to take so many physical risks with ourselves (just see our low level of safety at work), we should be so reluctant to take the intellectual risks inherent in creativity and the financial risks associated with entrepreneurship.

A second statement emerging from the tracer study conclusions is: *"Suggestions for new university teaching and research programmes fall into two camps: deeper curricula (that is more specialisations) and broader curricula (that is more generalist programmes)".*

This is a never-ending debate and it reminds me of a similar debate that went on for years within FEANI, the European Federation of National Engineering

Institutions, of which I attended five annual meetings. The various European National Engineering Institutions were very keen to establish a common title (the EurIng) that would make it possible for engineers from different parts of Europe to be recognised all over Europe as being competent to practise as engineers. The problem was how to reconcile the different educational systems; the extremes of which were typified by the British and the Italian systems. The British position was that three years at University were enough but they insisted on practical professional experience (the Chartered Engineer) while the Italians maintained that nothing less than five years could produce a competent engineer, although for them practical experience was not so important. On the other hand, everybody accepted that variety was a strength and not a weakness, and that all the diverse systems in Europe produced competent engineers. Eventually after many years, a system was devised that satisfied everybody. This was based on the concept that the *formation* of an engineer requires at least 7 years, made up of at least 3 years at University, 2 years professional experience and another 2 years of University, training or experience. Our engineering warrant is based on a 7-year formation concept and our degree is 4 years. Incidentally the British are now contemplating a four-year degree as the minimum standard for chartered status!

The difference between the 3-year and the 5-year degree could be explained in terms of depth and breadth of courses. The British degree was shorter than the Italian one because it was narrower, not necessarily because it was shallower. British engineers were simply less of a generalist than their Italian counterparts but just as competent because they had the same depth.

I believe that both extremes (too broad or too narrow) are dangerous. University education is not simply about imparting skills and knowledge but also about imparting a complete education that besides skills and knowledge, gives our graduates maturity, a sense of professionalism, an understanding of the ethos and culture of their chosen profession, qualities of leadership, critical and independent judgement, ability and love to learn, creativity etc. The attached list of competencies is what FEANI expects from engineers who apply for the EurIng title and which was devised as a way of ensuring that different university and formation systems were leading to the same result:

- An understanding of the engineering profession and of the registrants' responsibility to their colleagues, to employers or clients, to the community and the environment.

- A thorough knowledge of the principles of engineering, based on mathematics, physics and informatics, appropriate to their discipline.

- A general knowledge of good engineering practice, in their field of engineering and the properties, behaviour, fabrication and use of materials, components and software.

- Knowledge of the use of technologies relevant to their field of specialisation

- Use of technical information and statistics

- The ability to develop and use theoretical models from which the behaviour of the physical world can be predicted.

- A capacity to exercise independent technical judgement through scientific analysis and synthesis.

- An ability to work on multidisciplinary projects.

- Knowledge of industrial relations and the principles of management, taking into account technical, financial and human considerations.

- Skill in communication, oral and written, including the ability to write clear, cogent reports.

- An ability to apply principles of good design in the interest of ease of manufacture and maintenance, and quality, at economical cost.

- An active appreciation of the progress of technical change and of the continuing need not to rely solely on established practice but to cultivate an attitude of innovation and creativity in the exercise of the profession of engineering.

- An ability to assess conflicting and multifarious factors (e.g. cost, quality, safety and time-scale) both in the short and long terms and to find the best engineering solution.

- An ability to provide for environmental considerations.

- The capacity to mobilize human resources.

- Fluency in one European language other than the mother tongue.

One can see that the list goes well beyond just knowing the subject! I would contend that a course that is too specialised and too narrow would not allow students to develop this cultural and professional maturity. Too broad a course would have the same effect; its graduates would have no depth. Hence it is necessary for a first degree to be well balanced. Specialisations should come in special courses outside the first degree. Having said that, there is still plenty of latitude between the two extremes in which to make a course broader or narrower. We need more and constant dialogue between the various parties concerned. State, Employers, Constituted Bodies and the University to continually adjust our degree content according to the needs of the country. It is the University that must go out to Industry, for, in my experience, Industry will not come to University. It is pertinent to point out at this stage that the University has set up a University-Industry Liaison committee with members from the academic staff, including myself, and prominent members from industry.

We must remember however that we do not produce graduates by just-in-time methods; the course itself takes four years. We are also preparing youngsters for a life-long career. hence our vision must be very long term. We must be careful not to react to situations which may seem very important at the time but may in fact turn out to be short term conditions in the world of work. I sometimes worry that in talking about content we miss the wood for the trees. It is important that when deciding what topics to include at the expense of others, a new topics can only be included if we remove something from the curriculum, we do not lose sight of the importance of ensuring that students receive a good basic foundation in their chosen discipline and are properly formed culturally, as discussed above, and not just armed with a shopping list of subjects.

The third statement culled from the tracer study which requires my comments is this: *"Engineering and science graduates in particular feel that much of their current work consists of routine occupational tasks which can be undertaken just as effectively by non-graduate employees. This contributes to low levels of job satisfaction".*

First of all, I would point out that all jobs have an element of mundane, routine and boring tasks that must be accomplished as part of the job. I have to assume however that graduates are not complaining about the boring elements inherent in work but about jobs that contain too much routine work.

This particular complaint indicates two things to me. First of all, it seems that we may have employers that have not yet realised the full potential of engineers and scientists and may therefore be wasting them in low-level activities. This may be due to the relative youth of these professions in Malta, although the Engineering profession has come a very long way from when I graduated.

What worries me however is that this may be a symptom that our engineers and scientists have the wrong perception of work or the wrong expectations or are not thinking about their jobs. They have wrong perceptions and expectations if they expect all work to be high-level and exciting, and that anything else is beneath them. On the other hand, I believe that as professionals and people who have been trained to think they should be applying some of their energy to finding ways of getting rid of the routine work. Delegation, mechanization, computerisation, and the use of documented procedures and the appropriate forms are just some of the methods that can be used to reduce some of this tedious work. Far too often I get the feeling that people prefer mental laziness to physical laziness and end up spending unnecessary energies because they have not planned their work. We are often not critical enough about the tasks that we think we should be carrying out. Perhaps it is my training in Work Study, but I have lost count of the number of times that I have just stood and watched people doing work which is either unnecessary or else could be done by a machine.

Philip von Brockdorff

I cannot say for certain whether my academic studies have contributed positively to my career prospects. I have only been promoted once in my career and that happened following a rigorous selection process two years ago. What I can say is that University education, particularly my experience in Britain, helped me develop my analytical and creative skills.

However, there have been times in my career when these skills have not been put to use. Administrative work can be very dull and uninspiring especially if the head of department has no wish to upset the status quo in his or her organisation. I know of several graduate employees who have asked to be transferred to departments where they believe the work to be more challenging.

Graduate employees are not a privileged class in the Public Service and have to prove their worth day in day out just like anybody else. The Public Service is not easily impressed by degrees. Career progression is a slow and competitive process, as evidenced by the examination for senior principals held two years ago.

This controversial selection process tested the ability of officials to prepare, under examination conditions, a report for senior management. Several graduate employees, including some with higher degrees failed the written exam. I cannot say why they failed but I do know that having a degree or two does not guarantee success in a public service career. Relevant skills and additional qualifications (not necessarily academic) are required.

One such skill is effective writing. Very often graduate employees believe they possess this skill as if it were a God-given right. This is far from the truth. It is a skill which needs to be developed. Academic writing may help but the writing skill required in an office environment is altogether different.

Many graduate employees in the public service have not been able to master this skill. But this can attributed to individual incompetence rather than failure on the part of University to prepare people for work. It is not University's role at first degree level to teach students basic office skills.

As lecturer in the Department of Economics, I meet several students who find Economics too abstract for their liking. As in any other science, Economics abstracts from a complex reality and its theoretical limitations must, therefore, be accepted.

This notwithstanding, economic research can provide important insights which make policy-making more effective. It is amazing, for instance, how much mileage can be made with basic economic concepts such as opportunity cost or the trade-off between alternative courses of action. Economics may not appeal to everyone but its relevance cannot be disputed.

And this brings me to the question whether University education can help to contribute towards personal development and encourage independent thinking. It can, but only if the subject taught is based on a careful pedagogical plan which complements classroom learning.

Consider Economics again. If the theory is complemented by real-world case studies and issues, the subject becomes more practical, relevant and exciting, and could change the way students see the world.

This approach is perhaps the most effective way for helping students build their critical thinking skills which, I believe, should remain the principal aim of University education. Working towards this goal is by far more important than teaching students basic office skills which they can learn through experience at work or by attending specialised courses.

This is not to say that work experience and office skills are not important. They are and graduate employees who believe they know it all are mistaken. In 1989, the Public Service Reform Commission found serious gaps in skills and expertise even among graduate employees.

The Public Service reform exercise was put into motion in the early 1990's. Whether this expensive exercise lived up to its expectations insofar as improved service delivery and cost savings are concerned is a matter for debate. On a more positive note, however, it triggered off new opportunities for graduate employees to develop new competencies and skills.

Between July 1990 and May 1997, over 3,500 graduate and non-graduate employees attended overseas training or academic institutions. Few applications for overseas training or post-graduate studies were turned down. Not surprisingly, the number of graduate employees who apply or inquire about post-graduate studies is steadily rising.

The reasons for this growing interest in further training and studies are various. One of the reasons identified in the tracer study, namely that interest shown is partly a reaction to what graduate employees consider unchallenging work environments, also holds true for the Public Service.

Many graduate employees in the Public Service are still involved in routine and mundane tasks: processing files and filling forms. For them, an opportunity to

further their studies is viewed as a temporary break from the boredom of repetitive work. There are, of course, those who take a more positive view and consider this opportunity as a once-in-a-lifetime experience.

For some graduate employees this opportunity is an enriching experience—certainly not in the literal sense of the word but mainly because it helps them build self-confidence. For a select few this experience was a determining factor in their appointment as head of department.

Whether society is reaping the benefits of this investment, however, remains to be seen. According to modern growth theories, the skills and knowledge that individuals acquire through training and life experiences are fundamental to the economic growth process. But the question remains whether the training and opportunities that are being provided to graduate and non-graduate employees alike are producing tangible benefits to citizens.

As a seasoned public officer, I shall not attempt to answer this question. Nonetheless, as a trainer I do feel that in a climate of limited resources and rising public expectations, we seriously need to re-evaluate the effectiveness of post-graduate studies and training programmes. Skills are costly to acquire but they are necessary. More reason, therefore, for focusing on those skills and studies which produce benefits to individual citizens.

The Public Service, and I suspect a growing number of parastatal and private organisations, are becoming more aware of the *real* cost of further training, in particular the indirect costs. With rising labour costs, employers would be less inclined to provide induction training to graduate employees.

They would rather employ graduates who possess innate abilities and attributes. These can be very strong if not overwhelming determinants of a person's potential productivity. Smart appearance, co-ordination, mental alertness and so on are all facets of non-acquired 'human capital' and thus have some bearing on whether a graduate is suitable for a job or not.

The effectiveness of training may be questioned but with an increasing number of graduates seeking work, mismatch problems between unemployed graduates and job vacancies are likely to grow. In these circumstances, more relevant training opportunities would need to be created to help graduates acquire the skills and experience that will help them find regular employment.

We are living in a rapidly changing technological environment. Graduate employees will need to be more flexible and adaptable. Education and work experience allows an individual to be more versatile in the things he or she can do. In the final analysis, however, it is the willingness to learn that counts. For no matter how carefully planned our education system and training policies are, it is people that matter most—an important dimension that seems to have been given short shrift in an increasingly competitive and materialistic world.

Lawrence Zammit

Some of the conclusions of the study related to the importance of academic qualifications and how employers perceive graduates. I would like to approach these issues through a set of questions.

The starting point of this seminar is the tracer study conducted by the Workers' Participation Development Centre on behalf of the Employment and Training Corporation and the Foundation of Human Resources Development. That study concluded that educational qualifications are not regarded as the key element in determining recruitment to many jobs. In fact it is not the single key element for any job. In some cases it may be a desirable element, in others it may be an essential element, but never on its own.

Employers look for technical knowledge, the skills required to apply that knowledge, and attitudes. This is why motivation, flexibility, discipline, analytical skills, perseverance, decision-making, communication and inter-personal skills are so necessary. However shouldn't university education sharpen such skills and help to improve attitudes? What should be the role of university education towards such aspects of personal development?

Students should also look at assignments as practical work experiences and take on a more active part in extra-curricular activities. The University may even consider making compulsory, participation in extra-curricular activities.

An implication of this study is can Malta afford such a high number of graduates? Could this lead to what the study calls "educational inflation" - recruiting better qualified employees to perform the same job? Does the cliché

that people are the country's only resource need repeating? If people are our only resource, should we not as a country, as individual organisations and as individual persons, seek to get the best and the most out of that resource? Doesn't university education seek to achieve this?

One should not look at things statically but dynamically. I would expect graduates to enhance the job they are entrusted to do. If they cannot, what use has their university education been?

This brings in another aspect. What should be the nature of the link between university education and the economy? Should we adopt a utilitarian view to education? I appreciate the need for vocational courses at university level; however to restrict access or increase access to university education on the basis of the extent to which our economy can generate jobs is wrong. if anything, the country needs to develop further post-secondary education.

What about employers? Are they equipped to handle graduates? The key is the way human resources are looked at in an organisation. What is the critical means of production - machines or brainpower? If it is brainpower, therefore knowledge, then the employer would know how to maximize the potential of graduates. This is why business organisations need to become knowledge-based. In the term information technology, information is far more important than technology.

Graduates' expectations is another aspect that needs to be looked at. Just as much as I believe that access to university education should not be restricted, I equally believe that the primary responsibility of finding a job lies with the graduate. he/she also has a primary responsibility to keep updating his/her knowledge and skills. University education does not provide a magic wand that solves the graduate's job problems. If graduates do not have what it takes, no amount of academic qualifications can do the job for them. A job is as challenging as the graduate makes it out to be.

All this indicates that there is a need for better communication between the university, the students and business. We need to understand better each other's expectations and this is why an improved career guidance service at the university is required. However graduates need to understand even more that university life is not the working life and that graduation is the starting point and not the finishing line.

Education & Economy: Views of a Graduating Student

Clyde Attard

A graduate leaving University after long years of studies, lectures, thesis and other academic work faces a crude reality. The professional degree so hard to achieve is useless unless it is accompanied by appropriate experience. At first sight it sounds quite obvious, since who wouldn't fear the inexperienced surgeon or pilot. However the latter assimilate their years of study with supervised simulation of their job - resulting in surgeons and pilots with hands-on experience before operating an open-heart surgery or before flying you to any destination. Students reading for a teacher's degree, too are required to practice their profession before embarking on their career. Is this venture possible for all University students?

I recall the invaluable management experience I gained through the 'Young Enterprise' Scheme, where students are encouraged to set up their own company, plan, control and manage it, reaping the results at the end of year. Or the NSTF Mini European Assembly where students learn through experience how to master public speaking and debating skills. It is such programs that present an opportunity for Tal-Qroqq's walking books to practise accumulated knowledge. Employers alike must give more credit to these programs.

All employers demand some form of work experience - which is impossible to attain given the structure of our courses. Our system is an Anglo-American mixture with too many credit modules and a double examination system. Modules are of an academic bent and little space is left for learning by doing.

One may consider the setting up of a Unit within each Faculty, headed by a person from industry with the aim of finding relevant manners for students to apply their knowledge. The Unit must ask "What will the graduating student require in order to smoothen the transition from University to work?".

The research results point at the urgency of imparting management and communication skills to all graduates. This is indeed obvious even when considering that lawyers and doctors might well end up as managers, chairmen, or Ministers. There are other basic skills required as a foundation to any career path. I would propose a new compulsory module to be provided to

all new students, imparting management and communication skills, general office duties, and an appreciation of Information Technology.

The findings among employers also hinted at students to tone down their expectations. Although the University's primary aim is academic formation, we live in no vacuum. The University programs should serve as a means rather than being an end in themselves. Graduates will utilise their scholarly insight to establish smarter ways to work, better medicines to cure illnesses, fairer distribution systems and so forth. Our idealism must not be hampered neither by 'straight-jacket' lecturers, nor by a change-resistant industry, nor by a bureaucratic public sector. Lack of intellectual entrepreneurship stems not from uncreative students, but from the system itself that promotes traditionalism.

Moreover, how can students tone down their expectations when a cleaner at a local bank earns the incredible amount of Lm325 a month; when a watchman in the public service can earn a maximum of Lm480 a month including overtime; when buying a basic apartment means forking out Lm20,000?

The increase of female participation at tertiary level, requires planners to think for the mid-term availability of child care facilities - if the country is not to lose its university investment. Other measures, such as evening reading of electricity meters and distribution of gas cylinders, are desperately required.

A major discovery of this study concerns the unequal distribution of sampled graduates from the 6 faculties under scrutiny: a quota of 0.6% from Cottonera as against a quota of 16.2% from Lija-Attard-Balzan. This finding confirms an established trend in the Maltese social fabric. A genetic deficiency theory presented in the past has been replaced by a new model whereby society reinforces its social strata through education. Lack of community and family educational culture inhibits youngsters from the pursuit of academic careers, at times not even kindling the inner wish for one's own educational improvement.

I appeal to the competent authorities to invest in programs like the SWDP Community Development Scheme, which empowers citizens with education. Moreover I propose without delay the coming into force of a flexible national curriculum for schools, where different student requirements are met, and of a system of accountability at an operational and a technical level to include all aspects of schooling. How about a nation-wide educational scrutineer?

Finally enough discussions were held, let us now act. All proposals must be taken seriously, evaluated, decided upon and implemented as soon as possible.

CHAPTER 9:

Conclusion

The general conclusions forthcoming from the above analysis are hereby being identified by revisiting the general objectives outlined at the start of this report.

(a) **The correspondence at the institutional level of perceived graduate capability and desired competence.** Here, employers and their representatives perceive graduates as being more or less sufficiently trained employees who are more professional, self-disciplined and creative in their work than non-graduates. These attributes do not however exclude the opinion that, with the exclusion of Law graduates, work assigned to graduates could, wholly or partly, be carried out just as well - if not better - by non-graduates.

(b) **The flexibility, at the institutional level, of the graduate human resource in response to specific new challenges and future situations.** A majority of employer representatives opines that graduates have both the disposition and resources to adapt flexibly to changing environmental or organisational settings. A significant minority however argues that being a graduate makes no difference or, worse, reduces the ability to adapt to change.

(c) **The correspondence between one's knowledge, skills and aptitudes as developed by tertiary education and the requisites of the workplace, assessed at the human (employee) level.** There is a strong view shared by graduate employees that University education contributes to personal

development, while there is fair agreement that University education also contributes towards enhancing one's flexibility at work and in society at large.

There is however agreement with the employer representatives that, in a majority of cases, graduates believe that they are performing work which, wholly or partly, can be carried out just as well by non-graduates. This is most strongly felt with respect to Engineering graduates and least with respect to Law graduates. In these cases, being a graduate is not seen to make much of a difference since the tasks at hand are routine and since training, practice or personality can easily replace qualification. These appear to be indications both of bloated expectations by University graduates as well as of a situation of under-employment (or of over-qualification) where graduates occupy posts not intrinsically as demanding as what they would expect.

(d) **The correspondence between the avenues for a career path at work and the possibilities of exploiting these options on the basis of one's University preparation.** Graduate employees consistently single out independent work - such as assignments, projects and dissertations - as having been the most significant occupationally formative experience during their University education. The University's contribution towards innovative and creative skills is felt to be most lacking. University authorities - as well as employers - could show a greater appreciation towards the development of such independent work. Furthermore, the enterprising urge and unleashing of imaginative pursuits ought perhaps figure more prominently across the board in the University curriculum. There is also a fair consensus that undergraduate courses should carry a broader, more flexible, more generalist orientation.

The satisfaction expected from work is achieved by the majority of graduates in their actual work experience, whereas a minority express disappointment due primarily to blocked career opportunities.

There is also a strong interest to pursue further education, especially via post-graduate training. This may partly be due to a consideration by graduates of pursuing an academic career at the University. The institution remains, after all, the largest employer of graduate employees in Malta.

These conclusions are cast in a setting where the demand by graduates for both postgraduate and continuing education is increasing. These same demands are in turn having their own effects on the labour market, including an increased female participation rate. Another consequence of the burgeoning number of graduate employees will be a greater pressure to provide fast-track routes to promotions, away from seniority and more towards merit considerations. This may send shock waves through the industrial relations system and to oblige trade unions and human resource managers to somehow come to terms with both the new and entrenched careerist interests in the labour force.

Both the sampled graduate employees and their employer representatives share the view that the University would deliver a still better service to industry and to its workforce were it to (a) encourage a more practical orientation in its undergraduate curricula; (b) allocate more resources to adult and continuing educational programmes for graduate employees (which generally remain limited in industry); and (c) introduce a stronger management component in all undergraduate courses. In part, these concerns reflect a changing relationship

between education and economy; but they also suggest a greater pressure on graduates to specialise and qualify further in search of challenging jobs and opportunities they deem fit for themselves. These jobs and options increasingly appear as scarce resources, for which intense competition is expected.

The tenet of this report is not to be misconstrued as a dovetailing of the interests and functions of education and the economy. That will be a sad day indeed. Rather, it is important to maintain and acknowledge a healthy conflict and contradiction between education and work, ensuring that they continue to scrutinise and nudge each other in their different objectives. If this were not so, there would be no need for two separate spheres of operation.

The responsibility being borne by the University of Malta as the dominant provider of local tertiary-level education is, to say the least, extraordinary. There is a dearth of alternative routes of education at tertiary level, since the incorporation of the former Polytechnic within the University structure; and the lack of a recognised higher technological college. Policy measures are expected to be taken soon to part-remedy this situation. Still, disturbing effects on the labour market could be inevitable and may, for all we know, already be upon us. We may be heading towards an 'hour glass labour market' where too many over-qualified personnel and too many non-qualified personnel co-exist, leaving a staff vacuum at middle management, supervisory and technical level.

Finally, if such a tracer exercise has proved of some worth, then it may become a regular ongoing research assignment carried out at fixed intervals to get a direct and critical feel of University graduates on the local labour market.

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This publication documents the results of Malta's first graduate tracer study. The key research objective was to investigate the relationship between qualification and occupation, education and economy among the country's stock of graduate workers and their employers. This at a time when the local economy is coming to terms with a massive increase in the University of Malta's graduate output.

The tracer study was undertaken by the Workers' Participation Development Centre (WPDC) on behalf of the Employment & Training Corporation (ETC), the Foundation for Human Resources Development (FHRD) and the University of Malta.

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