

## **Graduate Employment and Work A Challenge for University Staff**

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Concern has grown rapidly about graduate employment and work in European countries recently. At the same time, the number of surveys on graduates employment and work has increased substantially. In the *European Journal of Education* (Vol. 35, No. 2, June 2000), a selected number of such surveys about different European countries has been published.

One of the main reasons for the increase of such surveys is the structural and functional changes that have taken place and are still taking place in universities.

These changes lead to the assumption that the discrepancy between competences acquired in education and those required in “real life” has grown to a large extent. Kellermann & Sagmeister (162/2000) point out three possible origins for this discrepancy. “First, the educational system might be so far removed from the workplace that educators are unable to anticipate the competences graduates will need for a productive life (under-qualification)”. Second, the workplace might be organized in such a way that graduates’ skills cannot be used efficiently (under-utilization) and finally the graduates might be overqualified according to the discrepancy itself, especially from the graduates’ point of view.

Teichler (151/2000) assumes that the number of privileged and intellectually highly demanding positions has not grown over the last few decades in the line with the expansion of higher education. He assumes further that the perceived threshold between a somewhat appropriate graduate job and underemployment or inappropriate employment certainly has changed as a consequence of the growing supply of graduates, and finally it seems obvious that employment in general – and more especially that of higher education-trained persons – has become more risky in recent years than “regular employment” for a graduate in past.

In developing countries the problems of graduates’ employment do not seem to be of crucial importance in comparison to other multifold problems of universities at the present. However, a number of surveys in the 90’s concerning the role of higher education in general and the role of universities specially assume that change in universities world wide is necessary if they are going to survive (World Bank, 1994, 1994, World Conference on Higher Education, 1998, Gibbons, 1994, World Conference on Higher Education for all, 1990).

This paper focuses on these changes in close relation to graduates employment and work in universities and tries to point out the importance of research in this area and discusses some methodological bias to such a kind of research, especially in the universities of developing countries.

### **Need for Change**

The debate on necessary changes in universities points out the following aspects:

- Universities worldwide are facing crucial problems due to the new role that they have to play in the near future,
- the survival of universities depends very much on the readiness of universities to actually take the future changes into consideration,

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- Internalisation and globalisation put the economies and science under pressure and require the implementation of necessary changes in the universities and ask for their positions and programmes,
- the universities are facing severe financial crisis according to their efficiency, competition patterns and their co-operation with corresponding institutions in the society,
- governmental support of universities probably will be replaced by self-management and operational autonomy in the near future,
- the change of paradigms in universities' teaching, research and administration has already started in many universities. For their quality assurance, universities need more efficiency, co-operation and competition.

Universities under state control have hitherto rarely involved themselves with organisational changes on their own support. They have more so reacted on the decision-makings of their governments in the case of innovations. It has been possible or necessary to improve the curriculum, the teaching, the research and the administration in favour of students and graduates of their university.

### **Need for research on graduates' employment**

The employment and work situation of graduates is one of the issues most frequently referred to in the current debates on the social function of higher education. Information about graduate employment and work is generally considered as a core area of knowledge that can stimulate reflections on the function of higher education. Information about graduates' employment is, however, far from satisfactory (Paul, Teichler, van der Velden/139/2000). The reasons are firstly that the universities and staff are essentially not interested in dealing with the processes of transition of their graduates and leave the regulation of the employment to the economy of the societies. Secondly, reflection and research on the relationship between education and employment are frequently depicted as being ideologically bound to support a belief that higher education should subordinate itself to the needs of the economy. Thirdly, tracer studies have not been taken seriously into consideration and have mainly been done by individual university staff members according to their very close personal interests. The effects of such studies and their practical implementation have been hardly tangible. Fourthly, students in universities are basically and mainly not interested in dealing with future employment and work during their studies. They simply shield the aspects of future employment, believing strongly in the given chances compared to the non-educated in the society.

However, thinking in a much broader conceptualisation of graduates' employment opens not only an innovative search area in social and economic sciences, but enables the achievement of substantial arguments in debates on the economic and social functions of universities and the growing relationship between universities and other institutions of society. This is in terms of co-operation rather than the above mentioned sub-ordination to/or even the domination of the economy.

### **Research on employment and work**

Research on employment and work is of course based upon the existing secondary statistics of graduates. These are on the one hand not complete and occasionally not correct, and on the other hand they do not focus on the relevant research aspects in this area. Teichler (2000) suggests themes addressed in graduate surveys as follows:

- The collection of information about the graduate labour market,
- the support sought for and provided by employment agencies, institutions of higher education, friends and relatives, etc.,
- the length of the search,
- search activities,

- search criteria as well as perceived recruitment criteria on the part of the employers,
- transitory activities, such as accepting jobs that are not considered related to one's professional identity,
- timing of transition to first regular employment,
- characteristics of first employment, e.g. Short-term contact, involuntary part-time contact, etc.

Following the above-mentioned themes in research on graduates' employment, one recognises easily that a combined research methodology is required to cover all of those aspects.

The experiences in the University of Kassel – Witzenhausen show that the use of combined methods for an integrated search on graduates' employment is not easy if the research is to be carried out by individual researchers. Besides the findings of some of the integrated parts of survey do not necessarily justify the efforts that lie behind it.

The following instruments are however necessary if an integrated research is planned in this area:

- Critical review of existing research materials on graduates employment and work
- Development of new instruments and techniques to study change and employment
- Organization of interaction between employment and university
- Support of students in their employment and work conceptions and of innovations in the world of work.

## Methodological Issues

### *Survey on new entrance students*

It is not only of importance to have statistics on the total number of students available for the survey, but to organise a special survey to collect relevant data, especially in terms of the future perspectives of the freshmen and of their future occupational visions. To achieve this, the groups of freshmen are invited to give information about their social origin, their motivations to study certain subjects, their expectations and last, but not least, to give information about their attitudes concerning the world of work and also the kinds of work that they may prefer to do after graduation. The most important objectives of this kind of survey which can be carried out in close co-operation with the registrar's offices of the universities, which very often have similar information collection, is to follow the changes of the profile of entrance students permanently and identify the changes that might have taken place over a period of years. In countries in which surveys of this kind are totally new, the establishing of a data bank seems to be essential and can be used for further surveys, especially for tracer studies in years after education. A second important objective might be the analysis of data in relationship with the curriculum of higher education and to discuss whether the given curriculum is close to the expectations or is far from it. This can be used as an indicator for the organisation of students' career planning and somehow for the slight functional changes in the curriculum or syllabi. As an example, there has been a tradition in the Faculty of Eco-Farming in Witzenhausen/University of Kassel since 1985 (Bichler/Amini/1999) to carry out surveys on entrance students (92/93 (100); 93/94 (59); 96/97(62); 97/98 (50); 98/99 (60), where we could follow and analyse the decreased number of students (1991: 1018; 1997: 605), increased number of female students among all students: 92/93 (34/76); 98/99 (59/41), increased number of entrances with German school leaving certificate (Abitur): 96/97(66%); 97/98 (74%); 98/99 (81,7%) and finally the decreased number of students with parents owning agricultural farms (since 1996 nearly 1/4 of the students).

### *Longitudinal surveys*

The second kind of survey focuses on the changes in attitudes of the students that might take place during their education. Panel surveys are especially adequate to follow the specific changes in attitudes that might have taken place during the students' active participation in lectures,

seminars, excursions, laboratory work and the life on the university campus. Longitudinal studies are not only very expensive, but also very work-intensive. What is much more important is that many experiences and surveys show little outcome of this kind of survey, because the attitudes of the students generally do not change significantly during their study. For the above-mentioned experience at the University of Kassel, there were changes in a few areas only in terms of the future occupational conceptions as the following figure stresses:

Future employment	Average 1=very much; 5= not at	Tendency at Repetition
Environment/Protection	<b>2,07</b>	-
Practical Agriculture/Farm Management	<b>2,12</b>	0
Co-Farming	<b>2,50</b>	-
Development/Aid	<b>2,74</b>	0
Public services	<b>2,90</b>	0
Marketing	<b>2,93</b>	0
Research/Science	<b>3,01</b>	0
Regional Planning	<b>3,01</b>	Not compared
Farm Foundation	<b>3,03</b>	0
Education	<b>3,03</b>	0
Consulting	<b>3,11</b>	+
Industry	<b>3,17</b>	0
Continuing Education	<b>3,41</b>	+
Homework/Family	<b>3,66</b>	0
Administration	<b>4,13</b>	+

However, longitudinal surveys might play a great role in other cases, where search on this theme is missing and no experiences have been existent before.

#### *Conferences and workshops*

It is of crucial importance to organise workshops with this theme during the survey. There are two kinds of workshops relevant in this case. First, workshops might be organised to discuss with representatives of the corresponding employers, students and staff members the issues of employment and work from different viewpoints. It is necessary to follow the survey in line with the experiences and expectations of these three parties and make it clear that all viewpoints have been taken into consideration. Furthermore, employers are emphasized to get in contact with universities if they are to know how to manage it. Such contacts may lead to a kind of starting co-operation with the world of work and try to integrate some legitimate expectations of the potential employers into the curriculum. Our experiences in Witzenhausen show that there are a number of potential employers, who miss several basic key qualifications, which are not thought of at the university. The employers themselves do not have the necessary equipment to train the candidates easily at their place of employment. Other employers have very specific expectations not to be dealt with at the university, especially in the case of administration the public sector (Amini/Jahr, 1999). However, this must be checked out from case to case. Another interesting issue in these kinds of workshops is the opportunity to identify potential employers, who can join

a mentor-programme, which might be of eminent importance for the future employment of later graduates. However, the organisation of mentor-programmes might be not easy, but quite effective. Secondly, workshops might be organised with experts from different universities to discuss the methods of surveys on graduates' employment. The standards of these kinds of surveys to make a comparison of different surveys looked for (Amini/Jahr, 1998).

#### *Supply of courses on employment and work for students*

The supply of elective courses might be of interest to some of the students. They will not only be motivated to deal with their future employment during the study, but also learn a lot about the techniques of application, special communication skills, dialogues etc. Our experience shows that this kind of supply is very effective and is evaluated very positively by students who have participated in these courses. However, from different points of view the number of students, who demand such courses, is small.

#### *Tracer Studies*

Tracer studies are the main part of search on graduates' employment and work. The specific objective of tracer studies is to collect information about the process of the employment of the graduates in terms of the transition from academic life into the "real life", adequateness and appropriateness of the occupation in close relation to academic qualification, the career planning of the graduates in relation to non-academic employees and finally the graduates' interpretation and evaluation of their actual position at work. Besides, it is necessary to collect information about the potential employers in corresponding fields and the economic and social aspects of the labour market in the corresponding society. From this, tracer studies need information about the link between the higher education system and the society (Teichler/1989).

Tracer studies take the personal socio-economic background of graduates into consideration. Starting with a tracer study, the question may come up, whether graduates can be identified by addresses, since it works necessarily with a questionnaire. This is probably one of the greatest difficulties of the trace study, especially in the case when a data bank with addresses of the graduates is missing. This is very often the case in developing countries, simply because the connection to the university breaks down after graduation. After a period of years, there is not any information about the former graduates. Their addresses have changed several times and the permanent addresses do exist only in a few cases. There is simply no solution to this problem, except that a planned tracer study in future is to be prepared systematically. This will be by collecting data of graduates who then remain in permanent contact so that their addresses can be actualised from time to time. This is probably not an easy job and must be organised at the university institutionally. The title of this paper refers to UNISTAFF as a possible form of institution, which may take this interesting task into consideration (see below).

Another difficulty of tracer studies is that the existence of a data bank with addresses is so far no guarantee for getting answers from graduates, should they not see the sense of these kinds of investigations and their contact to their former universities. This is of course, a large challenge to the institution dealing with the organisation of surveys of this kind. However, dealing with this question gives many interested researchers the opportunity to open a new area of research with an interesting paradigm and enable them to develop themselves as experts in this area of research. This is not only crucial to the scientific community, but also to policy makers, university and curriculum planners and higher education managers.

Tracer studies usually collect data about the ratio of graduates in the age group, age at the time of graduation (delays in finishing education or the age of entrance, etc.), gender issues, participation in the labour force, higher education and income, the relevance of the graduation rate, employment problems of the graduates, equality of opportunity and graduate employment, the time of transition and the different occasional jobs until permanent employment and finally their satisfaction.

Referring to our experience in Witzenhausen again, we could identify the following selected findings in a tracer study carried out in 1998/99 about the graduates of Eco-Farming from 1992 – 1998:

710 Graduates between 1992 and 1998 in Witzenhausen; 45% of which answered our questionnaire.

The background was the survey on graduates by Bichler/Schomberg (1979 to 1992).

Questions were about motivation of study in Witzenhausen, personal situation, employments procedures, career planning and finally the actual employment situation; special attention was paid to the graduates of Eco-farming

The survey methodology was prepared due to a conference that had taken place by inviting experts in the field of research on employment and work for improvement of databases and of unified models enabling the comparison of findings.

As it can be seen from the table below the average income of the graduates from Eco-Farming is under standardised conditions less than half of the graduates of the classical fields of study. This finding was very important to check the risks of innovative courses, which are not yet fully integrated in the system of labour market and to enable change in parts of the curriculum, taking for example the economic aspects of the curriculum into account.

*Income situation of graduates in Witzenhausen*

Field of Study	Average p. a. gross Income [DM]
Eco-Farming	28669,35
International Agriculture	31059,35
Farm Management	60650,63
Animal Production	45202,29
Plant Production	62478,26
Total	47912,08

The next table shows the income of male and female graduates, which is partly to 1/3 lower with female. This is a crucial problem of society as a whole and demonstrates once more that even the same academic qualification gives rise to differences in employment in terms of gender.

*Gender and income situation in Witzzenhausen*

Field of Study	Average p. a. gross Income male [DM]	Average p. a. gross Income female [DM]
Eco-Farming	31425	25523
International Agriculture	37961	21855
Farm Management	62481	55347
Animal Production	54277	35592
Plant Production	68144	42080
Total Average	50857,6	36079,4

The satisfaction of graduates is demonstrated in the next table. On a scale from 1 to 5 (very satisfied - not satisfied at all), the indices for satisfaction in terms of different levels of satisfaction are stated. The figures show that the satisfaction of the graduates of Eco-Farming is less in general to other graduates, except the ethical satisfaction, which somehow makes sense in the case of employment in environmental sectors. The results might be disappointing in regards to the curriculum, but it should be stressed that first, Eco-Farming is a new and innovative course. The economy needs time to adapt this kind of education into its programme and second, the question is still open, whether the graduates in Eco-Farming could have any chance to find a job without higher education.

*Satisfaction of employment of the graduates in Witzzenhausen*

	Eco-Farming	International Agriculture	Farm Management	Animal Production	Plant Production	To-tal
Financial	3,21	3,03	2,53	2,63	2,52	2,74
Employment	2,13	2,33	2,01	2,17	2,32	2,16
Career	3,00	2,68	2,59	2,67	2,77	2,72
Ethical	2,08	2,26	2,68	2,61	2,52	2,48
Personal	2,41	2,18	2,08	2,28	2,45	2,24
Total	2,55	2,38	2,08	2,23	2,26	2,26

The examples given above cover only a few findings of surveys on employment and work. Other issues that have been named in this paper, are the further results which partly focus on the communication and interaction between university and society and refer to a number of changes derived out of findings in favour of improvement of the university, university staff, students,

graduates and policy decision-makers. For the further procedures, a comparative study can be carried out for the identification of differences in employment and work among different disciplines, like Engineering, Social and Economic Sciences, Humanistics and Natural Sciences, which might have different patterns of transition into the working world.

### **Institutional and Organisational Issues**

It seems to be evident that search on employment and work, if it should be carried out in the suggested integrated model, cannot be easily done by individual researchers in universities. Individual researchers are probably able to carry out parts of the survey and introduce parts of the model from their very narrow viewpoint only. Therefore, it is necessary to look for organisations in the university which take these themes into their programme and care for a continuous process of collecting data.

Local University Staff Development Programmes (UNISTAFF) that have been established in universities that have the objective of improving teaching and learning, organisation of the university and finally research management, might play an important role in this context.

UNISTAFF-Programmes that have taken “Research Management” as a part of their programme (these are quality assurance of research, research training, research policy) may add doing research into their programme to demonstrate practically co-research work with an interdisciplinary approach as it is very often the case in research on employment and work. The idea that this kind of research is located in economic and social sciences is no longer feasible, simply because search on employment and work cannot be carried out without the participation of representatives of the corresponding disciplines, who might have a better view of the insight of their discipline.

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