
Higher Education and Work Life: A State of the Art Report

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1. Introduction

The relationship between higher education and work life is an area of research that has gained increasing interest among researchers during the last years. The number of articles on the topic has increased and there are also some books available (c.f. Brennan & Teichler, 1996). There are in all likelihood several reasons for this interest, but the changing structure of higher education from elite to mass education, as well as the growing interest in student centred education (SCE), have probably raised questions about in what direction higher education is developing. There are both texts on a system level, reporting enquires on the match between the output of higher education and the societal demands for academically trained manpower, as well as studies on the expediency of higher education as assessed by professional novices. The report aims at summarising this kind of research and provide an analysis of further needs for research in the field. We will, however, initially give a summary of some findings of the significantly more researched area of the impact of higher education.

2. The impact of higher education – Some examples from the research.

Early studies (Husén 1950; Härnquist, 1968), within a *psychometric perspective*, focused on the development of intelligence as an impact of education and showed the relation between the level of education and change in specific abilities. The results revealed that the higher the level of education, the greater extent of positive change in relation to the whole group. On the other hand, groups with low levels of education showed relative negative changes.

The *evaluative perspective* pertains basically to the American tradition of studying the impact of college on students in terms of change in attitudes, values, political orientation, acquisition of specific factual knowledge (Feldman & Newcomb, 1969; Pace, 1979; Pascarella & Terenzini, 1991). The methodological characteristics of this tradition constitute an emphasis on predefined dimensions, operationalized in questionnaires. In the case of studies of long-term effects on knowledge acquisition, the use of retrospective self-reports is common, graduates are typically asked to indicate the extent to which their undergraduate experience influenced a number of educational objectives, related to the content of the courses. The impact is described in quantitative terms. It is argued that this constitutes consistent evidence that the college experience increases both general and specific knowledge (Pascarella & Terenzini, 1991). Studies within a *developmental perspective* focus on the longitudinal development of structural as well as content-related aspects of thinking, e.g. concerning awareness of the nature of scientific knowledge such as in Perry's classical scheme of intellectual and ethical development in college students (1970). He described how a majority of undergraduate students during their studies appear to develop through three main stages regarding their notions of knowledge. This development proceeds from a *basic duality*, comprising a definite view of knowledge as the truth, via *relativism subordinate*, recognising the pluralistic nature and perspective dependence of knowledge. The third stage in Perry's scheme is that of *commitment*, where the students commit themselves to a certain perspective that becomes their personal view. Another example of impact studies within the developmental perspective is Hasselgren's (1981) study of the impact of formal education on pre-school student teachers' ways of apprehending children at play. The results showed that the students develop from either a *fragmentary* or *partialistic* to a *chronological* apprehension and from a chronological to an *abstracting* apprehension during their education. These changes were not found to the same extent in a control group of physiotherapy students.

Dahlgren (1989) interviewed students of business administration at the beginning and at the end of their education about their conceptions of economic phenomena such as the most prominent contemporary economic problem and the cause of famine in the underdeveloped countries. He found that the students to a large extent change from an initially held political, *distribution-oriented* perspective to a more depoliticised *efficiency-oriented* perspective. In a comparison group of students of medicine there was rather a slight tendency in the opposite direction.

Bendz (1995) interviewed nursing students at the beginning of their education, three times during their practical training and once after two and a half years of professional experience. Bendz found four different ways of identifying clinical situations among the students and a characteristic pattern of development. Initially, the students I) observe the clinical situation without direct participation, II) take part in the clinical work without relating to the specific needs of the patient in question, or III) identify a specific task they want to learn or carry out. In these three categories, the students do not conceive of the patient as a unique individual. In the fourth category, the students instead focus on the patient and identify the situations from the point of view of the patient. The characteristic pattern of development was from the categories I-III at the beginning of the study to category IV at the end.

Characteristic features of studies within the developmental perspective, according to Alexandersson (1985), is that the patterns of the results show systematic, stable and slow changes. This depicts a result not influenced by temporary fluctuations in knowledge acquisition, but instead a result of the subjects' confrontation and processing of the educational content. Methodological characteristics are also that the impact is described in qualitative terms and that the result patterns are described in categories not *a priori* defined, but generated by the qualitative analysis.

The phenomenographic approach pertains to studies of impact within a *learning perspective*, which focus on learning in terms of the conceived content of the education, i.e. how basic phenomena within the educational programmes are understood by the students. The phenomenon of learning is viewed as qualitative changes in conceptions of the content. This approach differs from the evaluative in that the basic assumption is that meaningful learning has to be studied in terms of what the students actually learn from the educational programmes and not in quantitative terms of how much the students learn.

A recent example is the study by Abrandt (1997), describing and analysing the impact of formal education and professional experience on physiotherapy students' ways of experiencing the interaction within a patient encounter. Two groups of physiotherapy students were interviewed on two occasions; during the second and last term of the formal programme and during the last term and after 18 months of professional experience respectively. Data were subjected to a qualitative analysis. Changes in conceptions between the two interview occasions were described quantitatively.

The subjects' ways of experiencing the interaction within a patient encounter could be described in four main categories; *Mutuality*, *Technicalism*, *Authority* and *Juxtaposition*. Mutuality and technicalism denoted an integration of the communicative and problem-solving processes involved in the encounter, the former category from a patient-centred and the latter from a physiotherapist-centred perspective. Authority and juxtaposition denoted a separation of the processes, the former from a physiotherapist-centred perspective and the latter from a patient-centred perspective.

The results show a trend as regards direction of change in conceptions from separated to integrated perspectives on the communicative and problem-solving processes after the formal educational programme. After 18 months of professional practice, the mutuality *category* dominated.

Other studies within the phenomenographic perspective have shown that the impact of higher education on students as regards the understanding of basic concepts in different disciplines such as e.g. biology (Brumby, 1979), economics (Dahlgren, 1978) or physics (Johansson, Marton & Svensson 1985; Svensson 1989) is less impressive than indicated by the results pertaining to the evaluative perspective.

Beside the studies described above there are also some classical studies within the learning perspective. All of them have pointed out the impact of the educational context on students' strategies in social and academic life and shown that the framework of both the campus and the formal and hidden curriculum affect the ways they go about their learning activities (Becker, Geer, & Hughes, 1968; Miller & Parlett, 1974; Snyder, 1971).

3. The specific impact of student-centred education (SCE). The example of problem-based learning (PBL).

In the last decade, there have been some attempts at collating the research on impact of problem-based learning through extensive literature reviews and metaanalyses. (Albanese & Mitchell 1993; Vernon & Blake 1993; Saarinen-Rahiika & Binkley, 1998, Colliver, 2000). These reviews comprise mostly evaluations of medical programmes and are often comparisons with traditional curricula. It should be emphasised, as also some of the authors point out, that the results should be interpreted in the light of the weaknesses in study designs and criteria as regards assessing the outcomes of PBL as well as the methodological difficulties in obtaining generalisable findings across programmes.

Learning outcomes

In general, the differences in outcome between traditional and PBL programmes are small. Albanese & Mitchell (ibid.) carried out a review of research literature on PBL from 1972-1992. In addition, they compared results on national exams and found that PBL students performed as well, or sometimes better, on clinical examination as did their counterparts in conventional programmes. The PBL students, however, scored lower on multiple choice assessments in basic sciences, but this difference was not discernible at re-tests after 6 weeks and after 12 months, indicating better long-term retention for the PBL students. There were also some studies showing that PBL graduates tended to engage in backward reasoning rather than forward reasoning, indicating less effective clinical performance.

Backward or hypothetico-deductive reasoning means deducing from a hypothesised solution to explain observable data, and has been found characteristic of novices with an inadequate knowledge base. Clinical experts engage more in forward reasoning, meaning that inferences are made from a strong knowledge base forward from the data, towards hypotheses and the diagnosis (Patel 1991).

Vernon & Blake (1993) concluded in another review and meta-analysis of literature on PBL from 1970-1992, however, that PBL was found to be significantly superior with respect to measures of students' clinical performance. Vernon & Blake found no differences between PBL and traditional methods, either in miscellaneous tests of factual knowledge or in tests of clinical knowledge. Despite this, their conclusion was that the findings generally support the superiority of the PBL approach over more traditional methods. Several of the studies included reported that students' attitudes towards their education were positive. Albanese & Mitchell concluded that, compared to conventional instruction, PBL is more nurturing and enjoyable for both students and faculty.

Vernon & Blake (ibid.) also supported these findings in the study of students' program evaluations, i.e. their attitudes and opinions about their programmes. The results of these two evaluations have been critiqued in a recent literature review (Colliver 2000), analysing eight studies from 1992-1998 comparing medical education in PBL programmes and traditional approaches to education. Colliver found no convincing evidence that PBL improves knowledge base or clinical performance. The conclusions are based on statistical calculations of effect size for the results in the articles included. This means that the means of the compared groups, in this case PBL curricula and traditional curricula, are divided by their pooled standard deviations. The magnitude of differences between PBL curricula and traditional curricula is so small, Colliver argues, that it is questionable whether it is worth the extensive resources required for the operation of a PBL curriculum. He concludes his review by stating that although PBL may provide a more challenging, motivating and enjoyable approach to medical education, the effectiveness compared with traditional educational approaches remains to be proved.

Study strategies and learning processes

The question of the impact of PBL also needs to be related to what is known from the literature about the impact of higher education in general. During the last two decades, comprehensive research on learning in higher education has been carried out (see Marton & Booth 1997; Bowden & Marton 1998 for an extensive overview).

The results of this research conducted in a large variety of areas within higher education have shown that students take on different approaches in their studying that are more or less successful for learning. Differences between approaches to learning are, as Bowden and Marton (ibid.) put it, differences in what the learners are focusing on, what they are trying to achieve and how they are going about it. These approaches have been labelled as a *deep* or *surface approach* to learning.

When adopting a surface approach to learning, the learners focus on surface characteristics of the situation, on the very wording of a text being read, of the argument put forward, on figures in a problem, on formulas to be used for solving the problem. /.../ When adopting a deep approach to learning, the learners focus on the object of learning, they are trying to get hold of the phenomenon dealt with in the text they are reading or in the presentation they are listening to. In problem solving they are initially trying to grasp the problem (ibid. p. 8).

The approach to learning has also been shown to be associated with how the learners organise the learning material when learning from texts. The surface approach is associated with an atomistic organisation, or a reproductive approach, meaning that the learning material is fragmentarily organised, with the learner focusing on memorising separate parts of the text. The deep approach is associated with a holistic organisation of the learning material or a comprehension approach, viewing the text as a coherent whole. In several studies (see Bowden & Marton, *ibid.*), the deep and holistic approach has also proved to be the most fruitful for understanding and retention of knowledge.

There are very few studies of PBL that have focused on the student learning perspective in this sense, but one example is Rahimi's (1995) comparative study of students' learning in a PBL programme versus students' learning in a conventional medical programme. Rahimi investigated the students' experience of medical education, approach to learning and reading comprehension and showed that the PBL students were more inclined to take on comprehension approaches. Their counterparts in a traditional medical programme had a propensity to take on reproductive strategies. The results also showed that the PBL students appeared to have experienced a more flexible, more meaningful and enjoyable education compared with their counterparts in a traditional programme. However, Rahimi could not show any differences in the students' comprehension of the learning task; the results indicated that students from both programmes performed more or less equally.

The author found these results somewhat paradoxical, since it was hypothesised that using a comprehension approach would yield a better understanding. Since the results indicated poor comprehension for both groups, the author speculates that part of the explanation was to be found in the fact that a too difficult learning task was chosen for the investigation. The propensity of students to take on comprehension approaches in PBL programmes is to some extent supported by the results of a study by Abrandt Dahlgren & Öberg (2001). This study focuses on how the scenarios used in a ten-week introductory course of a new PBL programme in environmental science functioned in terms of the structure and content of the questions they evoked.

Data were gathered through diary notes from nine groups of students, comprising 5-8 students per group, as well as from written group reports focusing on the learning process. The data were subjected to a qualitative analysis aiming at describing the structure and content of the questions generated by the groups to direct the learning process. Five different kinds of questions were identified and labelled; *A. Encyclopaedic, B. Meaning-oriented, C. Relational, D. Value-oriented and E. Solution-oriented.*

The encyclopaedic questions were mainly uni-dimensional, focusing on the lexical criteria for a certain term or phenomenon. The meaning-oriented questions were designed to find the meaning of a certain concept that was often problematised. Relational questions contained more than one aspect and focused on the relationship between these. Typically, they aimed at explaining causes or understanding consequences of a certain phenomenon. The value-oriented questions were comparative in nature. Their aim was to evaluate environmental consequences in terms of better or worse. The focus of the solution-oriented questions was the management of environmental issues rather than searching the meaning of varying aspects of these problems.

All scenarios generated questions pertaining to all five categories in all groups, but the emphasis varied. The typical questioning pattern was a dynamic process, searching for understanding and explanation, thus indicating a comprehension approach. Further research in this area is, however, needed to conclude whether PBL students achieve a better understanding of the learning task than their counterparts in conventional programmes.

Emotional experiences

Findings from previous research indicate that PBL in different ways creates psychological dilemmas or disjunctions in students' experiences of the learning context and in their lives (Stiwne, Abrandt & Holmqvist 1996; Savin-Baden 1996, 2000; Silén, 2000).

In an evaluation of psychology students' experiences of the first semester in a PBL programme, Stiwne et al (1996) found that the educational approach appeared to evoke a number of psychological dilemmas that the students had to resolve in the learning process. These dilemmas typically concerned a wish for involvement in the tutorial group contra the wish for preservation of autonomy and the familiar previous experiences of studying contra the new and unfamiliar procedures of PBL. Furthermore, the educational approach appeared to challenge the students' self-esteem, on the one hand the ascribed capability of students to contribute to the discussions and understanding in the group and on the other, the experience of situations of failure and frustration. Furthermore, a dilemma involving freedom vis-à-vis dependence was discerned. This concerned the freedom to choose literature and find their way of working in the tutorial groups vis-à-vis their wish to have the faculty give directives regarding how to delimit the learning task and to provide procedural rules for how the group work should be conducted.

The results also showed that the students gradually learned to master the dilemmas during the course of the first semester. Savin-Baden (1996) suggests that PBL offers students opportunities to engage in their own learning and to develop independence in enquiry, and that these opportunities themselves create different and dynamic forms of disjunctions. According to Savin-Baden, the catalysts of disjunctions could be the students' encounter with learning experiences that are new and different to their previous experiences. It could also be related to the encounter with the demands of certain epistemological frameworks, priorities and resources within the context in which the problem-based learning is placed.

The occurrence of disjunction is often viewed as a prerequisite of learning. Dewey (1933) described this as the state of hesitation in the mind of the learner, which is the incentive to enquire into a situation. Savin-Baden claims that the disjunctions created by PBL could be both enabling and disabling for the student. The author emphasises that it is crucial that the students learn how to manage these disjunctions in ways that avoids either reproducing approaches or strategic approaches to learning. Instead, students should engage in the disjunctions in ways that are beneficial to their learning in a genuine sense and lead to a greater sense of integrity (Savin-Baden, 2000).

Silén (2000) also discerned emotional features of the learning process in a thesis focusing on responsibility and independence in learning in a problem-based nursing programme. The students' experiences of learning were studied applying an ethnographic approach. Data comprised documents, field observations, conversations, and interviews with student nurses collected over a period of one semester.

The process of learning was described as a dialectic driving force emerging from frustration and stimulation or, as the author phrases it, a process between chaos and cosmos. In this process, questions about what to learn and how to act were evoked.

Two aspects stood out as important as regards the students' discerned structure of relevance; the experienced relevance to their future profession, and the experienced requests from the educational system in terms of assessment demands.

"Boldly solving the world": some critical standpoints

Although the idea of PBL has spread widely and attracted educators in many fields of knowledge, there has also been criticism of its procedure and underlying theoretical and philosophical assumptions. Fenwick & Parsons (1998) claim that PBL conveys a conception of the world and human life as problem-governed and of professional practice as problem-solving, that is ontologically narrow and epistemologically inconsistent with the lived nature of professional practice.

The authors argue that problem-based professional practice supports the professional role as the rightful epistemic authority, and thus perpetuates a class of professional elite who dominate social order and knowledge. They mean that critical questions to ask when scrutinising PBL are how the problems are constituted and whose epistemic authority they reinforce and what consequences result from a notion of professional life as problem solving. When faculties pre-shape problems from which students are supposed to construct their learning needs and knowledge, the authority to control what is to be entitled

problematic remains with the teachers, the authors claim. In this way, future practice has been made normative, but the norms utilised are based on a historical past, that resides in the teachers' own experiences. The authors raise some noteworthy concerns when they claim that pre-determined cases conceal the process of their own construction and instead appear to the students as fixed and self-evident. Furthermore, it is not clear how these problems help students to frame experience for themselves or if a problem case actually can authentically represent human experience.

After the concluding words about PBL it could be interesting to introduce another perspective, WBL, Work Based Learning. In an article Reeve and Gallacher (2000), aim to explore a framework with work-based learning particularly in the context of higher education. The design and its approach "provide an opportunity to identify the complexity of the new practices of WBL (ibid. p.376)

Nowadays WBL is increasingly advocated in policy literature, which will in all likelihood establish new relationships between higher education and the world of work.

The development of WBL is best understood in the light of changes related to the development of mass higher education. A number of analysts drawing on the works of Foucault argue that these changes can be understood through the perspectives of discourses. One of these discourses is partnership - the institutions within higher education should develop partnerships with employers. Another point that is being put forward is the problem of categorising or defining the context of research - the messiness of practice or hybrid practices. The interest in the research lie within these lines " ... we are interested in using the different dimensions to identify spaces in which developers and learners may be able to... "work the discourses" drawing on local practices to shape knowledge and identity" (Reeve & Gallacher 2000 p. 374)

4. Higher Education and Work Life

Theoretical frameworks

In their introductory chapter Brennan, Kogan and Teichler (1996), present research on dimensions of work relevant to higher education, dimensions of higher education relevant to work and linkages between higher education and work as well as future challenges for research. According to the authors, most research on higher education and work has been founded on assumptions related to where graduated students work and the analyses have mostly been in the interest of the economists.

The aim of this chapter is to suggest a broader conceptualisation of the topic with a diversity of themes and approaches. Discussing the relationship between higher education and work, they use the term 'work' as referring to both conditions and the substance of the working life. This implies labour market, intermediary agencies and transitions process, the regulatory system shaping the relation between higher education and work (which includes the political priorities) and the perspective of 'life-long learning'. To limit our focus to the main purpose in our project, we leave the life-long perspective and concentrate on the two first linkages.

The dominating methodological characteristics are a use of basic employment statistics, large- scale surveys, information from institutions of higher education and some annual surveys after graduation and questionnaire surveys among graduates. The information, originated in studies in different European countries, reveals that completion of higher education has become more and more a necessary prerequisite, but also a less sufficient prerequisite of high-level occupations and careers.

The growing number of graduates from institutions of higher education and the lack of stable forecast about the labour market have changed the traditional picture of the 'graduate' occupations. More graduates are entering the middle-level occupations and semi-professional areas. Even though studies which address only 'objective' employment measures rate the changing nature of graduate employment quite negatively, the increasing complexity of work tasks, revealed through analysis of work roles and in the perceptions of the workers, seems to 'compensate' for the losses of status advantages of graduates or the increasingly inappropriate employment. The graduates rate the relationship between study and work, and their job satisfaction more positively than the 'objective' measures indicate.

Traditionally, institutions of higher education have been accustomed to the control from government as their main employer. Recent studies indicate the increasing importance of graduate employment in the

private sector in most European countries and how institutions of higher education are challenged by the debate about legitimacy, and the desirable limits of influence of private employers on higher education.

Graduate surveys also reveal signs of increased difficulties in entering into regular career trails and there is tendency showing an increase in job seeking period. Many surveys suggest a protracted transition period. The authors also claim, with reference to recent years' research, that the relatively simple data sets that provide information about job opportunities,

“ fail to reveal the different subject and institutional patterns in the success with which different types of student are prepared for employment. More sophisticated studies have indicated that students who most easily find jobs are not necessarily the ones who are best prepared for them, at least according to the perceptions of the students themselves” (Brennan et al 1996, p. 6).

Employment is used in three different ways; 1) Describing the quantitative and structural development of graduate positions in the occupation system, 2) The process of hiring staff or becoming employed, 3) Employment conditions. Employment in the first sense is the most widespread area of research.

Career refers to typical or actual sequences of employment and work tasks within occupational life-period. According to the authors, there is much scarcer information on graduate careers and career mobility than the transition from study to work. They also indicate methodological weakness that the 'career cohorts' of people have been professional for a long while. Thus the results are of limited interest to the effects of recent changes in higher education.

Work tasks refer to the specific activities frequently undertaken in individual jobs. Requirements direct to the implications of job tasks for abilities and relevant training of the people undertaking them. Assumingly, there is a close linkage between educational fields and work categories at relatively high levels of education and work tasks. Nevertheless, there has been little systematic analysis of graduate work tasks and essential requirements, and corresponding changes to training. Some reasons might be the character of the high-level jobs; the tasks are hardly accessible to direct observation, they are intertwined to other tasks, and take long time to complete. In a high-level job, the graduate is also expected to shape, innovate and reshape the job tasks as well.

Due to the 'production cycles' of high competence, it is relatively hard to make prediction and planning.

Sociological approaches most frequently ask persons about the linkage between higher education and work tasks, the extent to which they make use of their competence (acquired in the higher education course) in their jobs. This approach implies the assumption that knowledge regarding the respective disciplines and job tasks is more important than understanding the character of learning, competence and work in general for identifying the most significant relationship between higher education and work. Results of this kind of research suggest that the respondents' statements are biased. One important reason is that it is easy to favour the visible features. But other research has shown that the less obvious 'matches' between competence and work might be more important to the relationship between higher education and work.

Profession refers to certain configurations of work tasks and careers which tend to be relatively stable, based on relatively rare competence which cannot easily be substituted. They shape the respective person's social conditions and create a sense of pride and identity, and tend to be linked to certain kinds of education and training. In Anglo-Saxon countries the term 'profession' is often shaped as 'liberal' meaning self-controlled employment, training and job-performance. In continental European the notion of profession more or less equalises the 'liberal professions' and government-related and supervised professions. Then we might define the third notion of professions within the 'academic' sphere. Professions as economy and business, incorporated into universities in later historical stages than for example medicine and law, tend to be rated inferior. A forth category, which underscores the level of professionalism, the length of a study, is the 'semi-professional' such as social work and teaching.

Sociological and psychological studies of quality of work and employment reveal, as a rule, that highly educated persons tend to put stronger emphasis on autonomy and disposition and on interesting and demanding work than on status and income.

Quantitative and structural developments: After the Second World War there has been an expansion of higher education. In most European countries, this expansion has been accompanied by efforts at restructuring higher education as well.

About 1970, diversification of higher education, to protect traditional high level education and to provide suitable learning environments for the rising number of students, became generally viewed as desirable or indispensable. The controversial matter, how to structure and diversify, remained unsolved.

Thus the tension between the 'academic' and 'professional' interests led to periods of foundation of non-university higher education and shifting back to periods of minimal structural change. Based on research findings within the different European countries, it is not possible to infer clearly about the institutional diversity. A study from England and Germany, reveal the institutional diversity appears to have operated differently in relation to graduate employment in the two countries.

Curricula, additional job-related training and socialisation; There has been studies on higher education curricula and their impact on graduate work than on structural links between higher education and employment. Still, there have been some studies on curricula revisions, which reflect changing employment conditions of graduates. Research on employers' recruitment processes and criteria, shows that employers pay less attention to curricular questions than the academics do. While academics tend to believe that there are certain courses that are indispensable for qualification of a specific profession, the employers seem to stress three dimensions of higher education; 1) The reputation of certain institutions and departments. 2) Ensure direct professional experiences during the course (visits or internship), coaching in professional problem solving (learning in projects for example) or by systematically confronting academic and professionals problem solving in seminars and lectures. 3) Personality development, communication skills/ability to cooperate with others.

Various studies on educational provisions and the students' options among the characteristics of certain programmes and the impact of programme characteristics on the graduates options, lack, according to the authors, a significant comparison with other study programmes. These studies take for granted that the institutions and the programmes are crucial in shaping students' learning and competence. While quantitative approaches to measuring impacts of study conditions and provisions are rather scarce in Europe, they from a large area in USA. And most research in USA,

“suggests that competence acquired and subsequent professional successes are less shaped by institutional conditions and provisions than by the students' use of the institutional conditions and provisions” (Brennan et al 1996, p. 15)

Studies on the linkage between higher education and graduate labour market in Europe show that in most countries income is a weaker factor than would have been expected on the basis of the model of economic behaviour. Students' choices of field of study have also changed less dramatically than respective job prospects. This might be explained partly by market imperfections and partly by the strong impact of intrinsic motivations in higher education and a specific profession. Gender is clearly also an important reason in the process of choosing field of study and work.

The interest of research on *the transition from higher education to employment*, increased in Europe in the 1970's at the same time, as this transition process became more complicated. Awareness grew that the intermediary institutions to a large extent followed their own logic and dynamics. Thus the employers' expectations and recruitment criteria became an important area for research. To a certain extent this provided useful information as help in setting priorities in higher education. Nevertheless, these efforts never became a regular feedback for adjustments between higher education and work life. Reasons like uncertainties about recruitment criteria and the lack of routines, imperfections in identifying applicants' competencies, tactical games between higher education and work, and fluctuations in the labour market itself, indicate the impediments in elaborating a well-functioning feed back system.

Steering of the relationship between higher education and work is an important factor concerning the research area. The research primarily focuses on policies in individual countries. OECD-studies, however, have undertaken some comparison of policies in the Western European countries. These show that the political steering was quite similar in the 1960's and 1970's. Planning was widespread in the 1960's, and the economic and social needs rationale was not considered as conflicting. In the 1970's though, pessimism of planning and discouraging of expansion of higher education took over. In the 1980's and

the early 1990's studies reveal greater diversity in higher education between the European countries. In those with the greatest expansion of education, it seems as if social demand factors have been just as important as the labour market factors in determining the steering policy.

The paper by McIntyre and Solomon (2000), develops a knowledge production perspective on research as contextualised practice – how research is shaped in contexts. The authors claim that the paradigm theory and the 'philosophical' discourse serve our understanding of research very poorly. They also point at the neglect of social theoretical perspectives (for instance by denying the social theoretical account of paradigm associated with Kuhn). Furthermore, there is neglect of the variety of contexts, which include the fields, and shape research within them, and the lack of understanding of the way the researchers are constructed by their engagement with the context of research. They do instead argue in favour of research as a practical and political process,

“in which the researchers define and pursue problems, influenced by power and relationships with others, of ethics and negotiation with participants, of naming and theorising concepts, of design and method, project management, writing up and not least, all the textual practices that go into manifesting research” (ibid. p.261)

Researchers must look to their guiding assumptions, values and interests as part of the framework for inquiry.

Marginson (2000), researches and analyses factors affecting the crisis in traditional practices of the Australian academic profession in the context of globalisation. The author criticises that the academic profession seemed to be protected by its traditions, tenure, peer review and autonomy in curriculum matters and by a certain self-imposed inertia, so it needs a profound transformation. Four overlapping crises are discerned in higher education, which have contributed to changing the environment of academic work:

- Lack of strategic responses to rework curricula and pedagogies in relation to international education (in research development, academic profession, staff and student exchange, in high-cost technological systems, in flexible delivery and virtual courses, should universities work alone or in partnership with universities in other countries, transform the academic function of the university into its corporate identity, etc.).
- The decline of governmental commitment to, and funding of, higher education, expressed in the falling percentage of total university costs that are government financed (e.g. from 87% in 1986 to 57% in 1997) as a function of the particular Australian reading of neoliberalism (government has lost its own past nation-building project. and now see universities as cost not as an investment. The problem is that the new international activities are added on the old functions and to step up of it, average academic workloads must increase.)
- The clash of values of university identity versus corporate reform. (The author refers a research project - "Management practices in higher education" conducted 1995-1997, focused on relation of power, system of decision making, and the ordering of authority and resources.) The research found that business practices were entrenched in universities which have habitually taken features of the organisations outside them, reworking their academic mission in a new hybrid forms, mix: the emergence of a new kind of executive leadership – increasingly the role (with isolated responsibility) of the vice-chancellor as a strategic director and change agent (passing of the collegial era); the partial transformation of governing councils into corporate boards; partial breakdown of traditional disciplinary structures. Australian universities are losing distinctive aspects of its mission – the primary orientation to the production, circulation and transmission of knowledge, the pastoral approach to the formation of personality, long-term and critical view of social developments and an explicit role in building national institutions and national identity.

- Tendencies to the destruction of academic professions through entailing a partial loss of autonomous academic control over program development, the growing use of casual and part-time work, the development and deployment of new instructional and delivery technologies, by professional staff (not academic), the growing role of professional administrators and managers and technical personnel, the partial weakening of disciplinary identity through research centres and school in place of the traditional discipline-based departmental form of organisation.

A concluding remark is that the healthy development of universities depends on the achievement of a new internal culture that is based on an organisational synthesis between academic labour, and administrative and managerial labour which not dominates any partners and requires each to respect the contribution, norms and requirements of the other. There is also the need of significant increase in public funding, targeted to augmentation, renewal and creating of key academic groupings.

Some empirical contributions

In the empirical parts of his text Plumb (2000), investigates the Implications of postmodernity for the moral sensibilities of adult educators. The assumption is that moral sensibilities are emergent and historically configured flows of human potential that are in the process of becoming. The object of the study is to achieve an understanding of the process of becoming moral sensibilities of adult educators and find ways to foster their potential.

The research methods for accomplishing this aim are (a) conversation with two small groups of adult educators (Nova Scotians, Jamaicans), and (b) an exploration of complex traces of the “passage” that are deposited in people’s memories and in textual and cultural artifacts (mamos, institutions, manuals, etc.).

The results indicate that while students in both groups have a sense of vast social changes currently transfiguring the world, they were undecided about the fate of adult education. Furthermore, some of them, especially the Jamaicans, still believed deeply in adult education potential to foster a well-trained work-force. Moreover, most of them believed that adult education offers more than just work training. Some of them, mostly Nova Scotians, saw adult education as a way to provide people with exciting, enlightening and fun experiences. Finally, a small group of students took the notion of adult education as a culture and social practice consistent with the emerging values of consumer society. The conclusions drawn are that changes in world influence the ways we learn, things we learn and our motives for learning. These changes create a very different landscape of morality within which adult educators must act. The author expresses hope, that adult education can retain its emancipatory potential in postmodern times.

Another empirical study that is interesting in relation to The Journeymen projects aim is the one conducted by Hagström & Kjellberg (2000). The authors claim that knowledge of what goals that are considered as valuable and worth striving for in relation to work is interesting in planning for the school system and in working life. It is also interesting to analyse the socialisation process of value system in the development for childhood into adult life. They argue: the stability of work values in the transition to working life needs to be clarified.

Two different groups were identified as research objects, nurses and engineers. The study was a co-ordinated longitudinal study. The groups were selected to represent contrasting gender influenced occupational choices. However, both groups contained subgroups representing gender typical and atypical occupational choices. The main issues was:

- What work values did male and female nurses and engineers declare at the end of their occupational training?
- How did these values change in the transition into working life?
- Did their work experience differ characteristically between male and female nurses and engineers?
- What were the relations between work experiences and value change?

The study of nurses started in 1993 and the study of engineers started in 1995. Both groups answered a questionnaire twice, when their where to leave school and about one and a half year later. The result

where statistically analysed with a 2*2 two way analysis of variance, three- way of analyses, multiple regression. In all the analyses, age was entered, as a covariate since the nurses was seven year older than the engineers.

Hagström's & Kjellberg's results show that the nursing students in contrast to engineers had a more post-materialistic value orientation, regarded work as a somewhat less central part of their lives and put more emphasis on self- realisation and altruism in their description of the ideal job. Among nurses social relations benefits had become more important at the second measurement occasion. The gender differences were more striking then the differences between the two occupational groups. In most cases, the differences conformed to the gender stereotypes. The male engineers seem to have internalised a traditionally "male-oriented" and materialistic value structure. Work values such as altruism and self-realisation were rated as about equally important by both sexes within each occupation group.

The basic question in a study by van der Veen (2000) is whether there is a shift in late modernity from traditional reproductive learning towards communicative learning. The author defines some central concepts in the analysis:

Reproductive learning; Acquisition of 'secure' knowledge but with a more complex and dynamic process where the body of knowledge raises questions and controversies.

Communicative learning; the sharing and construction with others of knowledge.

Idiosyncratic learning; not only cognitive learning. The quest for more personal expressions of ideas, intuitions and feelings. The carrier of the radical individualisation and aesthetization of the late modern world. Stresses autonomy, creativity and self-realisation.

Institutionalised individualisation Globalisation in the domain of economics leads paradoxically to an internal structure in corporations, which in its turn brings about collaborative management at the workplace. Globalisation in the domain of politics leads to horizontal global political structures, which results in increasing complicated networks of new institutions, treaties and regulations.

Traditional hierarchical national political structures decentralise and are broken down in public-private partnerships i.e. citizens involve in communicative learning through new sorts of participatory systems. Horizontalisation leads to idiosyncratic learning replacing the role of ideologies by personal interests and personal commitments. The result is an increasing globalisation in the cultural domain.

The growing of mass culture facilitating communicative learning is modelling life styles as quasi-communities, which are replacing traditional communities as neighbourhood and family. The idiosyncratic learning is dominated by aesthetically expressive individualism.

A shift from objectivism to constructivism and pragmatism. The main reasons pointed out are that the world is more complex, with more fragmented information, causing a need to deconstruct and re-construct knowledge-in action-oriented constructions that helps us to solve concrete and situated problems. Reproductive learning is not an absolute phenomenon and communicative learning is often not a replacement, but an elaboration of reproductive learning may facilitate both social construction of knowledge and processes of deconstruction and reconstruction; a mix of divergent and convergent thinking.

Divergent thinking denotes the competence to assimilate a rich variety of facts and arguments. *Convergent thinking* means the competence to accommodate different and paradoxical facts in a new coherent framework, which is crucial in building a (ideally; temporary) consensus.

Learning climate. There is a tendency in group work to oppress critical thinking. Important factors are (a) If there is a climate limiting what meanings are allowed which causes 'small narratives' to replace the great narratives, which in its turn leads to reproductive learning. (b) If the climate is characterised by competition, this is easier with simpler tasks, but harder with complicated issues.

Community and identity Communicative learning leads to more intrusion of society in individuals than reproductive learning (Foucault, 1980). Individuals feel threatened and thereby develop personal strategies to hold a grip on their own life. The search for communities gives rise to mass cultures with similar life-styles. In a way these are quasi-communities based on closeness in style and taste (different from the traditional closeness in space). Much of this is reproductive learning, but also a stimulus for idiosyncratic learning developing a personal style, for instance identities as professionals.

The Norwegian scene

For the Norwegian scene, there is a study by Aamodt and Arnesen (1995) on the expansion of higher education and the labour market. The purpose of the study is to investigate the relation between economic trends in the Norwegian economy and the growth/decrease of HE institutions. (HE = university and non-university sectors). From 1960 - mid 70's the main increase took place in universities, in the 1970's - 1980's the increase of HE mainly took place in regional institutions.

From 1987 - 1994 the growth was once again higher in universities. The authors focus on the political basis for expanding HE capacity by studying the transition from higher education to the labour market. The demand for higher education (HE) is increasing in most countries. The development in Norway is more or less in line with other European countries. Two obvious reasons for educational expansion; A strong individual demand for education, and the strong political will to allocate money (to reduce youth unemployment) to HE.

There is a political rhetoric putting forward that knowledge, education and research are key factors in the future development of economy. The study is designed as an annual follow-up survey of graduates; six months after graduation, 1989, and a survey carried out in 1992 of social workers, child welfare workers and business administrators.

The main results are that the labour market has worsened since 1987 and the situation varies between different educational groups. Students graduated from professional programmes (medicine, dentistry, veterinary medicine) had no unemployment from 1987-1993. The number of graduates from business administration doubled in same period, parallel to the emerging problems within banking and finance.

However, there was only an increase from 2 per cent unemployment in 1987 to 9 percent in 1993. One explanation put forward is that business administration is a flexible education (but those with only two and three years education got serious labour market problems). The growth of unemployment in studies like law and different groups of social science and sociology increased from between 2-6 per cent in 1987 to between 11-14 per cent in 1993. The data also showed that the transition period is a critical phase, It takes time to get a job, but the unemployment period is temporary and gradually most of the graduates succeeded in getting jobs relevant to their education.

The authors compare their results with the international tendency that graduates from fields like social work, health care and teaching have more troubles than those from business administration and engineering. They conclude that in Norway the picture is different. A plausible reason put forward is that the public sector is more protected in Norway. The distinction between the *public* and the *private* labour market is also referred to. The former is more dominated by professional demarcation than the latter, and the public sector depends on political priorities, whereas the private sector is more sensitive to changes in the economy. There is always a risk of mismatch between educational capacity and the needs of the labour market.

The German scene

Of all European countries Germany is in all likelihood the country that has produced most research in the area of higher education and work life. The area of higher education has since long been an independent theme of research and has attracted researchers from several disciplines such as education, psychology, sociology, economics, political science, law and history. There are also several large centres of excellence in the field such as *Wissenschaftliche Zentrum für Berufs- und Hochschulforschung* (WZ I) in Kassel and *Arbeitsgruppe Hochschulforschung der Universität Konstanz*.

In Germany a distinction has been made between research on higher education in general and *Hochschuldidaktik*, which roughly corresponds to research on teaching and learning in higher education. The latter is sometimes referred to as a subcategory of the former. Furthermore, in quantitative terms the former is dominating.

The central themes of research on higher education in Germany have varied during the last 3-4 decades according to the following:

- 1960-70: Investment in education and economic development.
- 1965-75: Expansion of higher education, educational opportunity and diversification.
- Since 1970: Student-centred education, programme development, teaching and learning in higher education. Employment and professional identity among graduates.
- Since 1980: Control and management in higher education. Quality control.

The Kassel group describes their research profile by referring to four domains:

1. A quantitative-structural domain. (Admission and recruitment. Elite and mass education. Differentiation. Particularly economists and sociologists are involved in this domain).
2. A knowledge and discipline-related domain. (Interdisciplinary and disciplinary development of knowledge, General and disciplinary studies. Orientation towards science or practice. Quality. Qualification and profession. Researchers in education and philosophy of science dominate within this domain).
3. A domain related to teaching and learning. (Motivation. Approaches to learning. Teaching methods. Assessment. (Education, psychology and sociology are particularly important here).
4. A domain pertaining to organisation, policy and administration. (Management. Planning. Economy. Efficiency. Dominated by research in law, political science and administration).

Above all there are three principles that could be identified in the work of the Kassel Center and that are also characteristic of the German research efforts in the area as a whole.

Firstly, the research can not be properly described by referring to methods and theoretical frameworks from single disciplines, but is rather inter- and multi-disciplinary. (Teichler, 1998).

Secondly, as a rule there are attempts made in the individual projects to link different thematic fields within research on higher education. This is done not only to avoid the narrowing down that may go with a disciplinary perspective but also to be able to link to different areas of practical application.

Thirdly, the members of the Kassel-group aim at a balance between theoretical and empirical orientation. The Konstanz-group has a broad research approach to higher education ranging from personality development to the societal frames of higher education. The theoretical approach is that of social science, and the aim is to accomplish an analysis of the system of higher education as a subsystem in society with particular emphasis on structures in organisation, interaction and communication. (Webler, 1988). Accordingly the group operates with a number of dimensions in their research:

1. A societal dimension. (Relating processes in higher education to societal structures).
2. An organisation theoretical dimension. (Internal processes of higher education as processes of socialisation).
3. An interaction theoretical dimension. (Internal processes in higher education as processes of interaction and communication).

Much of the empirical research conducted in the group complies with the classical approaches in the area i.e. large scale surveys applying questionnaires. Since 1983 such studies have been carried out on request by the German government with intervals of 2-3 years.

Through these studies reliable information has been obtained about students' attitudes and their study situation. Today, the emphasis is foremost on empirical social research rather than on personality development. Theoretical issues are thereby subordinated the prevailing methodological paradigm, if not totally out-factored. These circumstances encapsulates univocally the weaknesses as well as the strength of the social science research on higher education in Germany. The critique towards the research within

higher education in general is thus concordant with the critique of the social science research in higher education.

Vocational attitudes and perspectives on the labour market are the themes of this study by Ramm and Bargel (1995). Its based on a comprehensive questionnaire in the new and old German states, comprising universities as well as polytechnics. The focus on motifs, values, perspectives and attitudes among students in the western and eastern states of Germany made possible a comparison of the development of students' conceptions about professions and the labour market. Some major findings of the study are: 1. More and more students have completed a vocational training before entering higher education in order to acquire a double qualification. 2. Insufficient professional preparation were claimed by all students in universities in both parts of Germany. 3. The professional values of the students have only slightly changed since the beginning of the 80ies. The focus is continuously on autonomy and and intrinsic professional values. Despite this, there is an unexpected increase of extrinsic-materialistic attitudes among the students. 4. The targeted business professions have since the beginning of the 1980ies adjusted to the labour market. For students in universities have private business professions come to play an evermore important role. 5. Like before, women can, according to the students, count on inferior possibilities on the labour market, both regarding income and career opportunities. 6. Most students react flexibly to the problems on the academic labour market. They are prepared for considerable adjustments and efforts. 7. The preparedness for professional mobility within the European community is greater among the west German students than among their east German colleagues. The findings of the study provide insights into important aspects regarding changes as well as similarities and differences between the eastern and western parts of Germany. This concerns problems regarding choice of profession and career.

The Polish scene

The analyses below are focused on significant tendencies in the process of transformation that – as we noticed - reshapes today's relationships between academic and work culture. In the light of literature reviewed we were able to distinguish tendencies that refer directly to each of the actors involved in their interdependency: the institutions of higher education and work, and *Journeyman* as a possible subject wandering in touch with both of them. Although these tendencies immediately apply to the actors mentioned above they are strongly plaited in mutual connections. Therefore our classification should be treated as a flexible frame rather than formal order.

Literature analysis endows us with some general observations. In the studies on the encounter of academic and work realities the R&D stream is easily recognized. *Research and Development* topic appears recently as very attractive and frequent motives of analysis that discovers productive connections between university, industry, and government. These studies emphasize institutional aspects, especially the process of transformation currently redesigning the functions and roles of the partners above. Thus a context is drawn in which we may seek characteristic *Journeymen* who should be described "in between" as well as their identities so created.

R&D texts by linking different approaches and ways of analysis resemble the issues on the theory of the university, anthropological, societal and political studies, and various demographic items. One could hardly say the bulk of the analyzed texts might be classified as the only R&D studies. However, we perceived all literature items that we read as a whole, keeping a priority of the project in our mind. In accordance to this we assumed that grasping the features of plaited lives of university and work is most important, more than distinguishing precise borders between fields of science and other dimensions of scientific purism.

Higher Education

Higher Education that is considered in a context of contemporary process of knowledge production brings many observations concerning its connections to the world of work. Two not opposite tendencies can be observed in that area. The first identifies heterogeneity as an important characteristic of the contemporary landscape of science production. Knowledge is no longer produced only in university settings but is also found increasingly in many different loci like government laboratories, industries, etc. As authors of that

concept (Gibbons et al.) predicted the universities will comprise only a small part of the knowledge producing sector (Godin & Gingras, 2000, p.273). The thesis of the diversification of the loci of scientific production is non-controversial in the light of the 1994-1996 studies (ibid. p.274).

The other tendency, far from suggesting any decline, notes on the contrary the “Enhanced role of the university” and suggest to study “Triple helix” of the relationships between university, industry, and government (Etzkowitz et al., 2000). As Etzkowitz et al. note “in a knowledge-based economy, the university becomes a key element of the innovation system both as human capital provider and seed-bed of new firms. Three institutional spheres (public, private and academic), that formerly operated at arms length in laissez faire societies, are increasingly interwoven with a spiral pattern of linkages emerging at various stages of the innovation and industrial policy-making process” (ibid. p.315).

Furthermore, authors distinguish four processes related to major changes in the production, exchange and use of knowledge that the triple helix model has identified:

1. Internal transformation in each of the helices (e.g. lateral ties among companies through strategic alliances or an assumption of an economic development mission by universities),

2. The influence of the institutional sphere upon another in bringing about transformation, e.g. government in Sweden and US respectively revising rules of intellectual property ownership to transfer rights from individuals or government to the universities;

3. The creation of a new overlay of trilateral linkages, networks, and organisations among the three helices, serving to institutionalise and reproduce interface as well as stimulate organisational creativity and regional cohesiveness (e.g. Knowledge Circle in Amsterdam, Joint Venture Silicon Valley)

4. The recursive effect of these inter-institutional networks representing academia, industry and government. For the first of them it has been to encourage the emergence of an *entrepreneurial culture* (paradigm) within academia (decentralization, market competition, institutional pluralism, and the educational and research missions of all of institutions of higher learning). To be active, rather than merely formal innovation agents, universities must undergo a second academic revolution. The incorporation of research as an academic mission - first, and secondly enter the assumption of a role in economic development through extensions of both their research and teaching missions. In that context authors talk about the entrepreneurial university that includes mechanisms and emergent structures which can be tied to the four processes noted above (e.g. traditional academic tasks are redefined according to newly emerging functions. “Teaching is currently expanded by students testing their academic knowledge in ‘real world situations’ and acting as intermediaries between the university and other institutional spheres” (ibid. p.316).

Etzkowitz et al. present characteristic “Triple helix” linkages in several countries, e.g. in Germany. These changes brought many positive effects, although,

“the German story is one of a mixture of redefining the university system to be both more active in regional development while being required to be prepared to generate higher levels of income through commercializing its teaching and research activity”; larger companies like Daimler-Chrysler or Bertelsmann are planning to set up their own universities in order to avoid a long and difficult innovation process in the co-operation with university administrators (ibid. p.323).

Canadian studies by Godin and Gingras (2000), confirm the above tendencies (heterogeneity and “Triple helix” as the important characteristic of the contemporary landscape of science production). As authors note universities still are at the heart of the system and that all other actors rely heavily on their expertise (Godin and Gingras, ibid.). Authors conclude that the diversification of research activities outside universities is done in relationship with them and thus contributes to their development. The participation of a sector to the total number of scientific papers published in Canada, despite a real diversification of loci of production, the presence of universities does not diminish in time. New actors in the system of scientific production produce a large proportion of their papers in collaboration with the universities (covering sometimes major costs of such a co-operation. (C.f. *Education-Business Partnerships* in Kubota, 1993). The model that is developed by the authors embeds the university in a center of a knowledge-production structure.

“Everything thus suggests that the study of the changing relationships between universities, industries and governments points towards stronger interactions between components of the system rather than toward the marginalization of any one of the actors involved in the knowledge production system” (ibid. p.277).

Geography seems to be important. The science-production process is – geographically – more regional than global. American studies on participation of the non-US universities in the development of new technologies and introducing new products show the linkages that appear mostly between local institutions. Within the US, universities located near many of the firms in the sample tend to be cited relatively often. (A study based on the analyses of citations by representatives of 70 firms from 7 major industries, about 5 academic researchers whose work in the 1970s and 1980s contributed most importantly to the firms’ new products and processes introduced in the 1980s.). In electronics and information processing, about 40 per cent of the universities cited are in the same state as the firm making the citations (Mansfield & Lee, 2000).

Remaining in a specific American environment, it is worth noticing that regionalism in the overlapping spheres of HE and work influence seems to be one of the goals of EU policy, also that concerning candidate countries (e.g. Poland). Foremost, it is assumed that universities help diminish the educational gap between region and the country as a whole. Furthermore, the universities can manage to meet the dual task of a regional university: establishing a traditional academic reputation and actively participating in regional development processes, mostly by a dialogue between a regional knowledge system and regional companies (Groth & Alvheim, 2001).

However, researchers analyzing the role of universities in developing the Baltic Sea Region note that although universities should be the key actors in this dialogue, so are new “Polytechnics”¹ belonging to a non-academic education system built up in the 1990s. While the universities are funded largely by national grants, the polytechnics are funded to a high degree (43 per cent) by local authorities (ibid.). Similarly, this processes is seen by the author writing about Portugal, where new “Polytechnics” grow with governmental support emphasizing political contradiction to pauperization and lack of educational chance concerning being a part of society. Thus, in the Baltic Sea Region, in Portugal, and other UE countries as well as in Poland, where many similarities are discernible, plenty of new regional schools are established. They all have strong links to a local business and world of work, but only some of them are involved in R&D activities. The status of these schools and their graduates is lower than the status of the universities and university diplomas (Swiatkiewicz, 1999). This could be a reason, it is argued, why the university lives under pressure and stays ambiguous in its reactions to the outer world.

According to the demands from the outer world universities - on the one hand - gives way and comply with requests from industry, government, etc. and - on the other - nourish their traditions. These mechanisms are obvious in the following observations:

European universities have to offer a two-stage structure of studies (BA degree + MA degree courses) in order to cut long-term studies and make it possible to prepare professionals in a shorter time period. It happened due to the unique EU obligation (1992) also turning universities into institutions of LL (lifelong learning) activities. Professional in-service training becomes more important than the pre-service counterparts. Basic rhetoric in these changes was taken from Jacques Delors’ idea of learning societies that are constantly obtaining experiences and using knowledge (Delors, 1996; Teichler and Kehm, 1996; Mrówka, 1999; Auleytner, 1998). Poland, as a EU candidate-country is recently very much involved in increasing the scholar indicators, especially on the HE level. This country has obtained 40,8 per cent scholar indicator value in 2000 (EU standard) mostly by the augmentation of the number of BA degree schools, of which a majority are private (Edukacja, 2001; Tadeusiewicz, 1997; Buchner-Jeziorska, 1996).

Universities redesigned their traditional concept of study organization based on the need to collaborate intensively with the workplaces. For example, some European universities (France, Hungary, and others) organize sandwich common courses including management and communication subjects. The purpose is to strengthen the co-operation of the university and enterprise in high level engineering education. The

¹ We suggest that American *multiuniversities* (well-organized, highly productive, and profit-oriented firms) might be compared with European new *polytechnics*, not rather with their status (in US much higher than in Europe) but strong co-operation with local business and authorities (see: Kerr, 1993).

university (educator) and industrial (engineer) tutors organize the work of sandwich students. They make recommendations in the selection of the subjects, follow the educational and practical work, provide continuous technical consultation, and evaluate the student's activities (Dunai, Hufnagl, Ivanyi, 1998). Many recent projects focus on the same value: university and work in powerful synergies, e.g.: Education & Business Partnerships (Denmark, US) designed to expose university teachers to new technologies in workplace, provide them with opportunities to interact with scientists and other technically trained professionals, and assist teachers in transferring work experiences into classrooms (Kubota, 1993); Workplace Literacy Program (US), in which worker is learner, learner is worker, employer meets educator, and all of them have opportunities for advantages through the linkage they provide (Inkster R., 1994). Some projects, especially in the US, are described in a context of the labor unions' performance. Labor education programs in co-operation with the universities have existed in the US since the 1960s. Recently, many universities have begun working with unions within their respective states to establish labor advisory boards to assist and advise labor unions and their labor centers (Naylor, 1985). On the one hand, universities undergo the outer pressure and become servant organizations in order to submit "practice-oriented model" created by EU policy determined through the labor market economy. On the other, as analyzers note, in the inner organization they keep traditional form of performance that are known from the past (Teichler and Kehm, op.cit., Czezowski, 1994; Denek, 1998). OECD report (1993) presents HE institutions that "prefer loose connection between education and work, stating that preparation to more complicated professional tasks is possible to get in other ways" (Teichler and Kehm, op.cit. p. 66). In that context the pressure concerning labor market appears futile. HE institutions still produce the mass of unemployed people. Ulrich Teichler suggests that if this pressure is inverted and labor market undergo universities goals, the consequences might be extremely good, e.g. universities could prepare innovative creators of new places of job. This seems more meaningful than self-employment issue (ibid. p. 77).

Summarizing the above tendencies and changes we could say that university everyday-life is turning into performance determined by the market economy rules. The following shows it:

- educational activities are directed on the preferred subjects,
- research activities are directed on the applied sciences,
- disproportion in the university funding with the R&D universities' advantages,
- two kinds of professors: 1/ academics-businessmen earning much better than academics-teoreticians;
- increasing immediate outer environment influence on the university aims and tasks;
- venturing the use of the university equipment for academics' private advantages;
- support of the opportunism between university staff by encouragement to act on the "less-value" scientific subjects, as applied sciences are called so (Denek.op.cit, p.52-53; see: Mansfield and Lee, op.cit. p.1057 – appeal of more intensive integration of fundamental and applied sciences)
- as was mentioned above universities become the educational-R&D centers (multiuniversities) that resemble well designed, profit-oriented enterprises (Kerr.op.cit.).

Work

Business needs university mediation in the acquirement of knowledge that is necessary in a built of reasonable complexes (instead of the isolated bites of experimental, experience knowledge). This need is increased in our changing world. The term *flexible specialization* connected with the other: *postfordism*) adequately express current striving of the business world to having staff that is easy-going in various adaptations aimed to produce changeable assortment applying to the consumers needs (Brown and Lauder 1991, after: Denek.op.cit, p.49). "Flexible worker" performance is highly appreciated by the employers nowadays, as Teichler noticed (Teichler and Kehm, op.cit., 78) and as local empirical study presented so (Poland: *Raport Kartuzy*, 2000).

Business and government spheres are very much involved in a process of the organizational, educational changes in the universities. They are ready to pay a lot for these changes. This is spectacularly shown in the highly expensive projects, such as *Education & Business Partnerships* (Kubota...op.cit.), in which major funding is going to the universities from the private sector under governmental policy umbrella.

The HE and work linkages emphasize the individual “human component of professional work” by new ways of management and increasing consciousness of human and cultural producing resources (*corporation cultures*) (Mrówka..op.cit.Teichler and Kehm..op.cit,p.76; OECD,1993 after: Denek..op.cit,p.49; Bauman, 2000).

The companies face the fact that education and training become essential components of business development and that the constant need for updating knowledge and skills of the workforce makes learning **at** or **near** the workplace a necessity (Geldermann, 1999). Thus the LL idea is plaited into both university and work reality that is confirmed in the common projects on new forms of training near the workplace (ibidem).

Journeyman

Journeyman is experienced by the reality, in which increasingly needed life-qualification is the ability to keeping a state of employment in a changing conditions. There is no longer one job in a whole life, a competition is more worth day by day. Therefore lifelong learning activities, especially in strong linkages between HE and work are highly appreciated (J.Delors op.cit. p.19; Mrowka..op.cit.; Geldermann, op.cit.p.782).

Local cultures, policies, and organizations differentiate the individual’s beliefs, values, and attitudes. Polish *Journeyman* are perhaps convinced that...

- individual success depends on the high professional qualifications, good comprehensive education, initiatives, enterprising and activity, solid and honest work (Swierzbowska-Kowalik, 1994);
- in the nearest future HE will be more meaningful in the common sense. Since 1990s the economic motif (higher salaries) may be taken in Poland into consideration due to positive correlation between university diploma and level of earnings (Buchner-Jeziorska, p.102);
- in a consequence of the university transformation turning it into profit-oriented organization (its “super- activity” that is not didactic) students are forgotten by professors, who are involved in other aspects of university life (Wnuk-Lipinska, 1996).

The last observation by Wnuk – Lipinska may refer all *Journeyman* wandering among the worlds that are changing in accordance to the above tendencies. However, Teichler argues that the university conditions and resources less indicate students’ achievement. The students’ attitudes and their individual activities during the studies play more important role. Furthermore, the connections between students’ abilities developed through the university studies and expectations in a workplace are not automatically created. They generate rather in dynamic processes of passing, entering the employment sphere (Teichler and Kehm...op.cit,p.74).

Journeyman belongs to the socio-economic elite. Besides the processes that redesign traditional universities making them mass and professional organizations, the graduates originate mostly from high-level income families (Tunnergmann, 1996; UNESCO Report, 1995; The World Bank Report, 1994).

Most of the graduates are satisfied about their work, although plenty of them do job that is strongly diverted from their professional qualifications (Teichler and Kehm, op.cit,p.75). Perhaps they have changed their expectations or system of the values? They might also start a process of making their workplace more valuable by the enhancing and enriching the range of the activities that might lead to the changes in their importance.

Teichler argues that in the highly educated societies social divisions between workplaces become foggy. This is an opportunity to leveling the professional hierarchies and to real democratization of social life (ibid. p.77).

Research in other countries

Edwards (2000), associates to national and trans-national trends towards greater flexibility in workplaces. Regarding labour relations, and learning opportunities within the work places, there has been an attempt to inscribe an *ethics of enterprise* into organisations and workers. Within such a framework, the self is

seen as a subjective meaning aspiring to autonomy and strives for a personal fulfilment, finding the meaning in existence through acts of choice.

The ethics are not formalised as moral codes, but construed as the practices, through which one evaluates and acts upon oneself, what Foucault refers to as 'technologies of the self'. Enterprise designates an array of rules for everyday experience; energy, initiative ambition, calculation, requirement to be flexible and to expose personal responsibility. Thus the enterprising self is both an active self and a calculating self.

“One needs to adopt an active learning approach to life and calculate the learning through which fulfilment or empowerment can be gained” (ibid. p.134).

The employees, like the workplace, are deemed to produce a circle of flexibility and enterprise supported by the constant reflexive process of change and development. Changing organisations implies changing persons' values and norms. The governance of the self as an enterprise is related to the increased role of contractualism in social relations (du Gay 1996). Workplaces are increasingly characterised by governmentality associated with an 'ethos of enterprise'. Discipline is immediate and everyday, the employees police themselves.

In the discussion the author puts forward critical comments on du Gays' perspectives claiming that du Gay may have over-generalised his findings in suggesting that the *ethos* of enterprise governs all aspects of life. Referring to other researchers (Casey 1995, Collinson & Collinson 1997, Heelas, 1991) Edward argues that the enterprising self may be only one among different selves. Workers may perform their roles as enterprising and flexible workers being perfectly conscious that this is a performance, which indicates that the performing self is not always the enterprising self. In other situations, the performance is not necessarily in line with the scripts of the organisation. So, even if the notion of an enterprising self provides a useful framework, the function as an ethos should be more restricted.

Organisational changes are complex processes. First; there are different ethics at play in organisational change. Second, managers may be as subject to an ethic of enterprise as other members of the labour force, requiring different positionings of their subjectivities and practices. Third, there is the question of the geographical locations of the ethics at play – geographically and organisationally” (p. 136). The ethics of enterprise is discursively 'worked' and re-worked in specific contexts. (referred to by Farrel 2000). Thus, Edwards (with reference to several theorists) argues that an *ethos of flexibility* may provide a more powerful alternative in exploring organisational changes than the calculating self-position.

Even if the rhetoric in the newer models of management tries to paint new pictures of the relations between managers and employees, for example by putting labels on the managers such as coach, teachers, mentor and 'servant' of the team, the traditional organisational /bureaucratic norms articulate other norms than the ethic of enterprise. Thus a professional ethic might draw upon another sense of the 'common good' beyond the ethic of enterprise. The ethic has to be directed to goals to the society, broader than oneself and the organisation.

Gunter (2001), in an essay reviews three other works: *Balancing Acts: women principals at work* (Smulyan 2000), *Subject to Identity: knowledge, sexuality, and academic practices in higher education*. (Talbert, 2000) and *Managing Equal Opportunities in Higher Education: a guide to understanding action* (Woodward, Ross, Bird & Upton, 2000). These texts are based on empirical data from ethnographic studies, case studies and life history approaches.

The author refers to reflections about herself meeting the university culture and the academic images of the working class, which did not fit in with her family and community, and her decisive actions directed towards academic credentials as an example of an agent's abilities to make choices and be responsible of her own 'destiny' as a professional. However, she also reflects upon how the endurance of class and gender in shaping how she positions herself and how others position her. Identity is not just about being (class, gender, family etc.) but about doing and how through interactions we do or do not make visible who we are.

The analysis has a three-fold aim; firstly how are women's experiences produced in the socio-cultural and institutional discourses in which they live and work? How do they adapt to or challenge these discourses? The second is about which tensions and contradictions are lived everyday by women principals, how they

juggle between personal and professional lives. How their actions are shaped by their personal and professional lives and the social and the cultural frameworks within which they work. The third is about equity issues and how through structuring organisational policies we might be *essentialising* the identities of those we are meant to be working with.

They seek to understand lived inequalities rather than accept the reification of staff as human resources to be effectively organised and the students as customers who have needs that a *commodified* education can satisfy.

All the studies show how structures do matters in the lived realities of agency. The two first studies provide the reflexivity about the self, visibility and identity. The third reveals the tensions and dilemmas that are being engaged with at a local level. The struggle for those working in higher education is whether equity is a moral and/or business issue. Are the two compatible? It seems as mass education is not only socially just, but also economically profitable. Even though the author doubts that there is the same political will to offer equal opportunities to start an intellectual journey the way she had the opportunity to. The studies also reveal how categories can totalise us. Thus it is important to develop and gain access to research,

“that enables us to challenge, in private and in public, who we are through what we do, do not do, and could do” (*ibid.* p.454).

How do such as the above mentioned findings impact the debate about the type of higher education we are creating when we are struggling to make all the ‘strategic choices’, competing about funding in the market place?

5. Concluding remarks

The interest of research on *the transition from higher education to employment*, increased in Europe in the 1970’s at the same time, as this transition process became more complicated. Experts agree on the need of complex research approaches. The lack of stable forecasts about the nature of future tasks in working-life and qualifications require more complex studies of the relationship between higher education and work.

According to the authors, a growing theoretical eclecticism and pragmatism have accompanied growing awareness of the complex transition process between higher education and work. They argue that theories adhered to in the old days, seen as too simplistic, are not replaced by convincing theoretical conceptual frameworks.

They ask if this is just a transitory stage, or if the research area combining several aspects in the relationship between higher education and work is bound to be pragmatic in drawing from the mix of conceptual frameworks? Studies must be provided about the substance of learning and the character of work tasks.

There is a need for more sophisticated research projects. One suggestion to cope with the problem is to encourage international comparative projects in spite of drawbacks such as language and cultural barriers, costs and different concepts of the tasks.

Policies of European Union emphasise the importance of mobility of professionals. These policies require, among many aspects, thorough research on diverse elements of competence cultivated in the institutions of higher education and of employment systems.

Beckett and Morris (2000), quote two different points of view on learners/workers:

- 'Fast capitalism requires workers who are creative and decisive (Beckett, 1996), yet compliant and mindful of the precarious and contingent nature of their employment' (Garrick, 1998; Usher et al, 1997).
- 'Lifelong learning requires self-directed and experientially-sensitive learners, across the age-range, and within and beyond work' (UNESCO, 1999; Edwards & Usher, 1998).

The authors present new expectations of work and learning. They describe two fieldwork projects to support a model of adults' learning. Beckett and Morris claim that constructing adult learners' and workers' identities emerge from their embodied actions. Researchers show how self-hood ('identity') grows out of certain adults' everyday enactments through a model of learning, which is based in practical, performative, material (embodied), actions-in-context. Authors analyse two different contexts: staff in Aged Care Facilities and students in Adult ESL Literacy.

Staff in Aged Care Facilities (mainly female nurses) learns from within a community of practice. They confront 'diversity, power and a variety of discourses but in ways that are dynamic - they enact these dimensions in the daily flow of their work - and they do so by thinking and doing (and by learning, when all this is shared) in a context'.

In the Adult ESL Literacy fieldwork researchers analyse the ways that identities are constructed and 'how these constructions provide the resources through which individuals' subjectivities and experiences are shaped'. The adult learners are 'active bodies' that construct and reconstruct their sense of self and resist 'others' construction of them. Different components of individuality can be understood as dimensions of existence expressed by the active body (bodily activities). The learners are not only subject to external agency but also they are simultaneously agents in their own social-construction of the world. According to researchers' conclusions human learning flows from 'attention' which starts with embodied consciousness. Adults' experiences suggest a model of adults' learning according to the following:

- a community of practice (that is authentic, embodied work),
- a dynamic (Aristotelian means-ends) engagement with diversity, power and a variety of discourses,
- a context which is well integrated with the wider environment.

Farrell (2000), discusses the role of discourse technologists (workplace educators) in knowledge - producing process. The main assumption is that knowledge is a local achievement engaging certain social practices across time and space (especially power and authority in local settings). However, on the ground knowledge (comes from the experiences of knowers with status) must be linked to global fields of exchange. This linkage is named: negotiations about what counts as knowledge on workplace and how it comes to count. Discourse technologists are intervening in the practices of work at local level disrupting established ways of knowledge production). Their job is successful when the power of local knowers is reduced and the power of anonymous experts located somewhere else increases. Legitimizing what counts as knowledge they train people to generate discursive practices according to demands of external institutions (material texts). However working knowledge is not fixed (is always contested and negotiated) its codification seems to be helpful in regard to interests of global level (normalisation of knowledge).

Plumb (2000), in the theoretical part of his paper departs from the hypothesis suggested by Baumann (2000) that the growing prevalence of new moral sensibilities is a central feature of postmodernity. Cultural transformations, that involve a shift from producer society to consumer society, influence moral sensibilities. For Bauman, the most distinctive difference between producer society and consumer society is the ways in which people construct their social identities. The shift between modernity and postmodernity causes a shift in human identity: from the *purveyor of goods* to *sensation gatherer*; that is the change that profoundly impacts our moral sensibilities

Modernity, with its panoptical strategies of centralization and regimentation, shapes suppressed, homogenic, regimented identities that reflex their social roles as goods producers. People rely on smooth-running and unproblematic systems of action coordination. They conform to pre-given norms. Producer's engagement with the Other is calculating and instrumental.

Postmodernity (which is mainly defined by presence of contemporary global capitalism) involves strategies for producing the ideal consumer. The main of those strategies is to maximize the volatility of

desire. Consumer society needs ungoverned and unrepressed people who *taste* the world rather than *handle* it. The individual is “freed” to create a unique and ever changing “consumer self”. Postmodern identity might form a reasonable basis for responsible morality. Though the Other appears as a potential source of pleasure, *sensation gatherer*, is likely to prize, value, even encourage what is unique in the Other.

Another suggestion about interesting research objects comes from Gardner (1994). In his article he tries to point out some important questions that aims to investigate the relationship between the freshmen year experience and the senior year experience. (The question emerged when Gardner's son was about to start the senior year).

Gardner argues that this transition is an interesting problem because it relates to the following questions and there is a reason for growing interests in The Senior Year experience - what is the purpose of college? - Why are there 3,500+ colleges and university in this country? - Why do we spend 165 billion dollar a year on post-secondary education? - Why have Americans been committed to higher education since shortly after the pilgrim's arrival?

He also tries to see the outcome of the answers to the questions above " Because college produces different kinds of leaders, graduate students, impact of the assessment movement... " (Gardner, 1994 p.1).

Hardly any research has been done on the institutional aspects of the links between higher education and work. Thus, Kogan's (1996) chapter is more inferential than based on empirical work. Even though he to some extent refers to some empirical works, mostly from the 1980's. The theoretical framework comprises two models of higher education institutions;

The classic model; Self-regulating higher education institution. High degrees of autonomy, accepts external influences only on its own terms (universities).

The dependent model; Higher degrees of dependency and sponsorship. Objectives can be set externally (military academies, teacher training)

Most higher education institutions are a mixture of the two models and the mix is variable over time. The increased pressure on institutions from societal interests, the economy and the need to give a public account, has led to a change in balance of power within the higher education institutions. More power is given to the managerial systems and there has been a move of power from the basic units to faculty or institutional leadership.

There has also been a shift in the thinking about knowledge and skills learning, partly because of a changing logic of the nature of knowledge, partly because of economy, and partly because of focusing learning skills adjusted to the employment market.

The reduction of funding to the classic model makes it necessary to insinuate the needs of employment into the previously autonomous working of the academic departments. But even if the influence from the labour market seems obvious, statements from students imply that demand for particular courses are not directly tied to movements in the labour market. (Boys et. al 1988, de Veert 1992, Teichler, 1988).

There is so far no evident conclusion to be drawn about the institutional linkages. Analyses leave it uncertain whether there are or can be mechanisms by which the triangle of needs, those of students, of employment and of the higher education practitioners can be articulated and brought into play. The shifting balance of values and of an academic practice is only partly reflected in institutional structuration.

As for the need for further research Kogan (1996) lists a number of topics as well as a suggested frame of reference for dealing with them;

Studies of curriculum: Not only the nature of knowledge, but also control and power related aspects.

Values: A comparison between the dominant values of the academics and of the employment world. A large issue for academic inquiry; Will the changing demands for ‘relevant’ higher education cause a movement in academic values?

“The final conclusion must be that we need fine-grained analyses of how far the curriculum and research has been affected by the emphasis on employment and the economy and how far this has led to morphogenesis, the structuration of institutional forms to make these movements the more secure installed”

(ibid.p.247)

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