From Erudition to Academic Competence

by Lieteke VAN VUCHT TIJSSEN and Egbert DE WEERT
University of Twente

1. Introduction

Universities belong together with the British Parliament and the Catholic Church to the few institutions that are more than three hundred years old. Instead of a proof of rigidity this survival capacity should be seen as a proof of flexibility, a capacity for self reflection and subsequent adaptations to the requirements of the long term changes in society without losing out of sight their main objectives and characteristics [1]. That is not to say that, in the course of history, they have not been subject to discussions and changes that also had consequences for the institutional structures and ways of working. On the contrary, until today universities have periodically been subject to intensive debates that involved outsiders as well as insiders, teachers and researchers as well as students and politicians as well as citizens. And often these debates have resulted in subsequent changes in the ways of functioning of these institutions. In this article we will focus on the universities. We will discuss core developments regarding the functions of universities with respect to society in the last decades and the consequences thereof on the one hand for the academic curricula and the teaching and on the other for the preparation of students for the labour market culminating in the Bologna declaration (1999) and the Lisbon objective (2000). We will focus on the debate and developments in the Netherlands, but we will place these in an international context. Because they form the background of the present discussion on intellectual and academic competences, we will relate the recent developments to two major historical transformations in western society which influence the idea of the university and its functioning substantially: *modernization* and *globalization*.

In paragraph 2 we will discuss the main lines of the debate on the role of universities in the Netherlands and internationally until the Bologna declaration in 2000 and the subsequent

changes in the debate. We will show that the emphasis shifted from the question whether the universities have to produce intellectuals or professionally trained academics who are useful for the labour market to the question which kind of competences the university should teach to the students in order to prepare them in such a way that they will contribute to the achievement of the Lisbon objectives and the ways to teach these. In paragraph 3 we will elaborate on the ongoing processes of modernization and globalization and how these affect the demands for academic competencies. In paragraph 4 we will focus on the current discourse on competencies and possible ways to transfer these competencies to the students. In the context of the Lisbon declaration it is a relevant question whether a focus on academic competences in the curriculum will contribute to reach its objectives. Paragraph 5 discusses these kinds of competences on the labour market and the value attached to different kinds of competencies in terms of acquired and required competencies. Paragraph 6 extends this view and academic competence as the overarching educational concept, distinguishing three major competency areas for curriculum design. The last paragraph draws some conclusions, particularly in the context of the current change towards the bachelor-master structure in European systems of higher education.

2. The transformation of the European universities: the dilemma's of the nineties

Higher education systems core institutions of modern society. They are, as Talcott Parsons and Gerald Platt show in their still relevant analysis of the American University, both the carriers and the producers of the cognitive basis and the corresponding rationality on which our society rests [2]. They treat the higher education system fundamentally as a social structure specialising in implementing the cultural patterns of cognitive rationality. As an 'ideal-type' characterisation they distinguish the following four main functions of the university:

(1) to produce advanced specialised scientific knowledge (as the core with cognitive primacy) and to train young people to become good researchers,

(2) to provide general education for 'educated citizenship' (particularly undergraduate students as generalists),

(3) to generate insight in and knowledge of human and social problems as well as to develop in students the capacity for critical judgement (intellectuals and generalists),

(4) to prepare students for practical academic professions (specialists).

The first two functions are derived primarily from the nature of universities themselves and the latter two from the additional requirements from the side of society with respect to universities. That

sociologists point these out as the main functions is not to say that all four are considered always and by everyone as equally important. Although Parsons and Platt state that such an ideal-typical characterisation should not obscure the fact that, as a social system, «it is permeated with tensions that have on occasion erupted into open conflict», they maintain the value-normative pattern which underlies their scheme. The higher education system is treated fundamentally as a social structure specialising in implementing the cultural patterns of cognitive rationality.

In his reaction to this functional system, Smelser has pointed out that various kinds of tensions and conflicts arise both from the institutionalisation of a variety of value and normative patterns, and from rapid changes in the social structure of higher education and its environment [3]. For Smelser the university system stands continuously in a state of precarious balance and potential conflict over different priorities. As he puts it: «to what extent should it be permitted to maximise its own values of cognitive rationality (generating knowledge, searching for truths, teaching and learning in the broadest sense), and to what extent should it be required to 'service' the values and needs of other sectors of society?» [4]. In other words, the institutionalisation of the values of cognitive rationality contains inherent competition and conflict. The main sources of tensions are between in the intrinsic values of universities and the external demands on higher education being an asset for the national economy.

Smelser's critique reflects very well the dilemmas with which the universities and governments have been confronted since the beginning of the nineteenth century. Since that time there has been a recurrent debate on the role of the universities in education and in- or explicitly also on the importance of each of these four functions in the curriculum [5]. In Europe this debate has centred around two models: the continental model that considers academic erudition as the core business of universities and the Anglo-Saxon model that focuses on the training of academic professionals. In terms of Parsons' functional typology, the continental model, originally designed by Alexander von Humboldt, stresses the importance of the training of independent researchers for the development of critical awareness among students as the royal way, forming them as adequate citizens. The primary mission of the Anglo-Saxon model is liberal education and the training of specialised researchers and scientific professionals. Worth mentioning in this context are the views of Ortega y Gasset who argues that the basic functions of the university (transmittance of culture, occupational training and science) should not be mixed up because this will negatively affect the performance of each of these functions [6].

The developments in Dutch higher education policy illustrate very well the dilemmas and contradictions inherent in the different functions of the universities. At the end of the seventies of the last century Dutch policy with respect to higher education launched the slogan 'higher education for the many' and gave

a high priority to the education of competent citizens [7]. However, because of budget restrictions and the pressure from industries already in the beginning of the eighties, the Dutch Government switches the emphasis to the adequate training of professionals for the labour market while at the same time encouraging more high school students to enter the polytechnics instead of the universities [8].

We quote: '... higher education therefore has to see to it that the kind and amount of academics that they deliver for the labour market will match qualitatively and quantitatively with the demand on the labour market' [9].

Although the training of scientist, intellectuals and competent citizens is relegated to the background and the higher education institutes instead are charged with a rather one sided and difficult task, Dutch universities do not protest. Instead they start a fierce competition about who is the most innovative who is the most enterprising while each of them tries try to profile itself as the most dynamic and market oriented. Nevertheless because of alarming signals from the universities with respect to the declining quality of researchers, two years later in the next policy document of the Dutch government HOOP '90 the training of researchers already is mentioned as a policy objective. The other two: the education of students as intellectuals and competent citizens still are left out [10]. These developments are not unique for the Netherlands. Many European countries governments at that time are emphasising the economic importance of the universities over their cultural and democratic functions. Even in the British higher education system - traditionally characterised by its relative freedom to determine the nature, content and modes of transmission in the curriculum - government sought since the 1980s to encourage universities to make the curriculum more responsive to social and economic agendas. Not only should students in higher education receive academic, professional or vocational 'training', they should also emerge into the real world of work with the competencies, attitudes and values which will contribute to the economy. This 'employability function' of higher education seems to dominate in British higher education policy over the years [11].

Due to these developments both academics and public intellectuals internationally are worrying about the erosion of university curricula and the lack of erudition and intellectual ambition of today's academics. They signal that nearly no one of them aspires to become a (public) intellectual. They prefer the safety of a career as civil servant, university professor or manager in industry above the uncertain existence of a free lance intellectual. As consequence round 1990 these authors forecast the death of the classic intellectual modelled on Voltaire, Zola, Sartre, de Beauvoir in France, Ortega y Gasset in Spain, or for example Bell, Wright Mills and Sennet in the United States and not to forget on the German intellectuals such as Arendt, Adorno, or Habermas [12].

That independent public intellectuals at that time seem to disappear - and since the beginning of the nineties indeed not have re-entered the public space in great numbers- does not mean that the need for the critical function of intellectuals as such has vanished with them. In our opinion precisely the contrary is the case. More and more people and in particular even in core positions in society feel the need to reflect critically themselves on the problems of men and society today and in the consequences thereof for their own actions [13].

In the Netherlands in the summer of 1990 the Dutch Journal *Comenius* publishes an issue called 'Universities and intellectuals' to which contribute also internationally well known authors like Bryan Turner, Jacques Derrida and Jürgen Habermas [14]. One of the topics of this issue is the question how the university system could be organised in such a way that it would fulfil each of its functions equally well. One of the solutions proposed is inspired by the English and American Bachelor Masters structure with the bachelor program as a broad (liberals arts) program that would provide the students with the necessary academic, professional and civil competences, and the master program, as the specialised one that would train for research and specific jobs [15]. The issue is part of a larger debate that at that time is going on in Dutch journals and in various national and international conferences, but it then hardly influences Dutch policymakers. What worries them more is another phenomenon typical of western universities today: the diminishing interest of students for the natural and the technical sciences. That these developments are in some way related and that students are no longer willing to take a very specialist programme, in particular when this has little or no relation with social and psychological elements of daily life, escapes their attention.

A report by the Scientific Advisory Council for the Dutch Government of 1995 brings both elements together. This report proposes to restructure the curriculum of the Dutch Universities according to an undergraduate and a graduate structure and to redesign the undergraduate curriculum as a broad liberal arts program in which students follow a major in one of the three main areas humanities, sciences or social sciences while at the same time choosing their minors in the two other areas. The report indeed defines the masters as the specialisation phase of professional specialisation and research training [16]. According to the council this restructuring is needed because the three objectives of university education – academic development, preparation for the professions and the training of academic and research staff – cannot readily be achieved simultaneously within the existing structure and the time available. Moreover, given the growing massification and heterogeneity of the study population, the different functions of the universities should be teased out. In the view of the council this should be institutionalised in the second stage of university education by establishing the research school (scientific research

training) as distinct from the professional school (emphasis on vocational training).

Although the report provides a very solid argument in favour of the Anglo-Saxon model, it apparently appears too early. The Dutch Government at that time is cutting the budgets of the universities and fears that the new structure would make university education more expensive. Dutch Universities on the other hand, are afraid that the minister of education can use it to cut back the costs of the universities even more than already is foreseen. As a result the report remains without political consequences.

But the first author of the report Prof. Hans Adriaansens does not stick with this. He persuades his own university, Utrecht University, to start a so-called University College. This University College is intended for talented students from the Netherlands and abroad, who are interested in a broad range of subjects. It offers a genuine liberal arts program taught by best professors of Utrecht University and if necessary of other universities. Its teaching methods are inspired by the traditional master-pupil (mate) system. Teachers and students work together in small groups and students get regular individual assignments. Frontal teaching for a huge number of students is out of the question. The concept does not limit itself to the didactics as such, but also is based on the ideas on the way student life as a whole should be organised. Students should not be distracted from their work by such trivial things as doing their own laundry or cooking their own dinner, but should be able to dedicate as much of their time as possible to their study. Besides University College values highly the involvement of the students in a broad range of cultural activities such as music and theatre. Therefore, the students are supposed to live on campus where they are taken care of as far as their daily life is concerned [17]. As a consequence the College is able to offer a very intensive program to its students.

In January 2004 Utrecht University College celebrated its first anniversary. It is too early for an evaluation of intended effects of the program, both with respect to the access of its alumni to the labour market (the first cohort is entering the labour market this year) as with respect to the academic and professional competencies they acquired. But anyway after obtaining their bachelors diploma most of the students found readily access to subsequent programs of the university, to masters elsewhere in Europe or find easily their way on the labour market. It will be interesting to follow them and their employers and interview them as cohort about their career and the way in which the University college program helped them prepare for it.

Nevertheless although concrete results are not yet available, during the first five years of its existence Utrecht University College has become a kind of model for other universities. Some even establish their own university college (Maastricht, Zeeland). Besides its curricula served in particular as a source of inspiration for new broad bachelors

programs during the implementation of the bachelor masters structure in the Netherlands.

3. From intellectuals to academics: from erudition to competencies

The simultaneous decline of the intellectuals and the democratisation and also fragmentation of the role of the independent public intellectual is to a great extent due to the processes of modernization and subsequent globalization that in the future will continue for quite a long time. One of the main characteristics of modernization is the rationalization of our culture. The past centuries universities themselves have contributed substantially to that process by profiling themselves as the seed beds of and guardians for one of the essential elements of western: the culture of critical discussion [18]. Western science is a democratic knowledge system; the development, spreading and acceptance of scientific theories is based on rational theories, rational proof and rational testing, in short on persuasions by argument. Everywhere where the culture of critical discussion dominates, the knowledge system in principle is accessible to everyone regardless rank or status, be it worldly or religious. Although this culture of critical discussion is one of the main pillars of our civilisation, already at the end of the nineteenth century German sociologists like Weber, Scheler and Mannheim argue that the rationalization of culture results in a process of transformation in which rationality is narrowed to the rational choice of the means to achieve a goal, while the goals themselves disappear into the background. In the words of Karl Mannheim: substantial rationality yields to functional rationality. But functional rationality only delivers instrumental knowledge, knowledge about the way in which things work. It teaches us nothing about the objectives for which this knowledge is used. In other words functional-rational knowledge is value-free. It only answers the question how we can do something and not whether we should do it. Where functional rationality dominates, the technical possibilities it provides, become objectives in themselves. This applies from biogenetics and-technical knowledge to nanotechnology and from social sciences to nuclear physics. The reflection on the question what we will do and what not in other words which objectives to choose to which this knowledge will be applied, belongs to the realm of substantial rationality, to the capacity to choose critically between objectives based on an intelligent understanding of the ways in which social and individual developments are intertwined. This faculty enables people to weight several contradictory objectives against each other and to make an argued choice between them. The fear that intellectuals will disappear and that no one will take over their role is in other words a fear that there will be no carriers of substantial or value rationality in the future to help us to choose critically in the many value laden choices we have to make.

The process of globalization that accelerated substantially due to all the new means of communications and

transportation the last decades, adds some new dimensions to the separation of functional and substantial rationality and the need to restore substantial rationality. Globalization generates complex and often contradictory cultural developments. On the one hand we see, and complain about homogenisations and the so-called McDonaldisation or Americanisation of cultures together with a worldwide hegemony of the English language and the spread of commercial culture. On the other hand globalization together with modernization, stimulates cultural differentiation and segregation such as fundamentalism of various kinds (including new nationalism), regressive tendencies, intolerance and a general feeling of loss of identity. Besides in a huge number of countries globalization increases the cultural diversity. For universities it means 'that in their new role as 'knowledge centres' they have to stretch out to other functions than science and research. Universities are called upon to take up responsibilities in society and culture at large, to act as mediators in conflicts, to deepen democracy, to invigorate cultures, to function as centres for critical debate and ethical conscience' [19]. In short to act as a resource of substantial rational knowledge and of alumni trained not only to be researchers, but also to reflect in a substantial rational way on human and social development. Not only the intellectuals themselves have disappeared to a great extent from the public space; the debate of the beginning of the nineties on this decline also has lowered down substantially.

Nevertheless one of the core issues of the debate - who will be the carriers of the highly needed substantial or value-rationality in our societies - is still very much alive, albeit in another jacket. What in the nineties was called 'the capacity for critical judgement' appears now under the title of academic competencies. During the debates on the question whether the universities had to focus on the training of professionals or on the education of real academics, some people students as well as professors started to ask themselves what exactly was meant by an academic education that would enable the students to develop their ability to judge also in a substantial or value-rational way. As a consequence of the masses of students entering the universities in the last decades, the system in which students learned how to be researchers by active participation in the research of their teachers has broken down. Universities are exploring new ways to include so-called academic competencies adequately in the curriculum in order to enable students to develop the desired attitudes and competencies needed in their further professional life.

4. The quest for competencies – the new discourse

The term competence has a prominent place in the current university discourse. The concept plays an important role in designing contemporary curricula and educational objectives are increasingly defined in terms of competencies that students should master in order to prepare them for the labour market and to

carry them through the demands of the professional environment. Accreditation bodies are searching for a list of competencies on the basis of which the quality of educational programmes can be assessed.

Also the Bologna declaration and the Lisbon objectives also gave impulse in that direction with the aim to arrive at an international equivalence between degrees. In the context of the Joint Quality Initiative competencies have been defined at the bachelor and master level (the so-called Dublin Descriptors). The level of descriptors is minimum qualifications which every graduate should at least possess, independent of disciplinary areas. A follow-up is the project 'Tuning Educational Structures in Europe', which aims at formulating a set of competencies for a number of disciplinary areas in order to arrive at international benchmarking standards.

Despite all this attention, considerable dispute exists about the meaning of competence and its place in higher education. Clearly, competencies are what make people competent and universities have a task in educating competent doctors, lawyers, teachers, and engineers. Less clarity exists on what precisely are the competencies which these university graduates have to possess. There are quite different approaches to competencies, varying from the emphasis on input, that is the features of a person (combination of knowledge, attitudes and skills that have to be acquired) and approaches that emphasise the outcomes, that is the performance of a person. Moreover, competencies are often used interchangeable with qualifications and these varying meanings lead to much confusion, particularly when it comes to apply the principle of competency-based curriculum format within the values and procedures of university education.

Most descriptions consider competencies as a feature of the workplace as a social system, and not just features of individuals or jobs. Whereas qualifications are the demands from the labour market in terms of the requirements as set by particular occupations and functions, the term competency refers to the abilities of people to attain goals in concrete task situations.

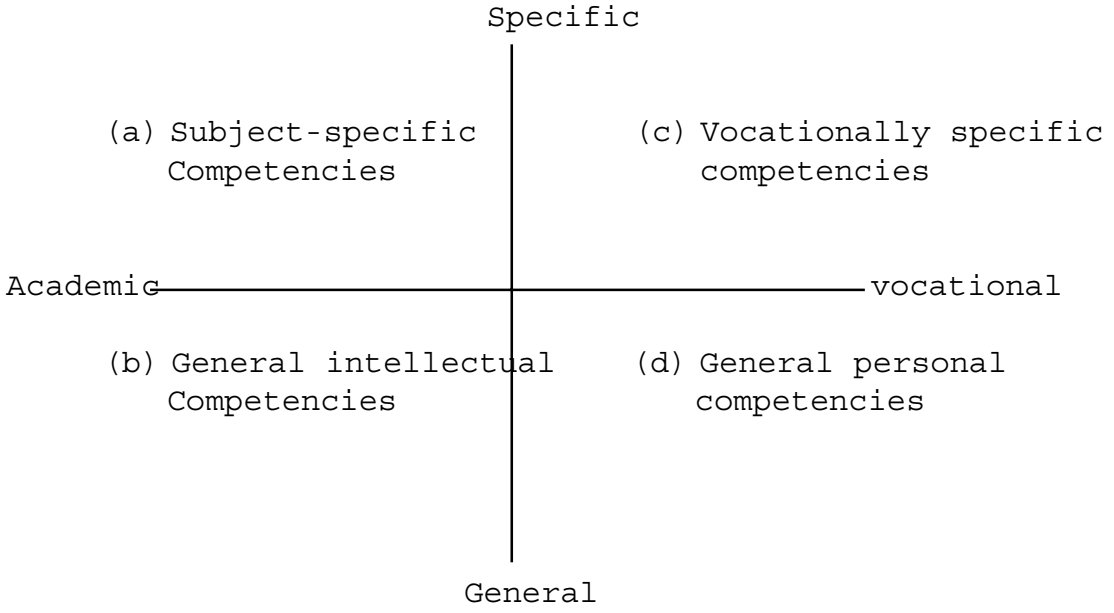
These abilities encompass cognitive aspects as well as attitudes and skills. Pilot & Nedermeijer, two Dutch educational specialists on higher education, emphasise in their recent book on academic competencies 'the totality of the qualities and skills which a person can use to function successfully in a specific situation' (...) 'competencies are usually derived from (future) work and professional situations of the students' [20]. In other words, these authors take the working situation of graduates as the cornerstone for defining competencies. The expression 'in a specific situation' seems to suggest that competencies tend to be considered and are becoming meaningful solely within particular occupational ranges.

Several questions emerging from this

need further attention. Does the term competence imply a sell-out of what is valuable, unique, in the university tradition? Will important dimensions which relate to the personal development, to the acquisition and transmission of cultural and social values - which belong generally to the substantial elements in university education - be pushed into the background?

Another important question points to the extent to which competencies are context-specific or are transferable from one occupational context to another. This transferability (or generalisation) is a prevailing viewpoint in the Anglo-Saxon literature on competencies. In the aforementioned Enterprise in Education in the United Kingdom, for example, it is assumed that equipping graduates for the world of work can be achieved through the possession of 'core' or personal skills transferable competencies, such as the ability to cooperate, communicate, and solve problems, skills which are assumed to transfer readily across a range of contexts.

The discourse on competencies and its significance for educational purposes is instructive by further model-building. One of the few analyses available is from the British scholar Ronald Barnett. By developing his model, Barnett does not refer to Parsons and Platt, although the functions distinguished by them can easily be recognised. Barnett argues that the modern university curriculum can be understood in terms of two superimposed axes: the educational (academic) and vocational dimension, and the specific and general competencies. This is represented in the following figure, adapted from Barnett [21].



One axis is formed by curricula characterised by whether they derive from the internal agendas of the academic community and intrinsic educational motivations or the external agendas from the world of work (vocationalism). The other axis is formed at one pole by curricula that are specific to definite epistemic interests, usually discrete disciplines, and at the other pole by general aims transcending discipline-specific interests. Barnett states that in contemporary society, university curricula are liable to spread out in one or several directions indicated by the quadrants. In a way these axes reflect the discussion in the previous section on the varying policies regarding the functions of universities. The dominant influence has in the past been the academic community, although the curriculum for certain areas (e.g. teaching, engineering, accountancy, medical professions) was constituted primarily in the professional practice. The practical elements are so important that students are required to demonstrate their practical competence in order to qualify for the degree award. For the United Kingdom, Barnett notes a dominant movement from (a) to (d), as curricula are influenced increasingly by an interest in promoting transferable skills with a value in the labour market. In the UK terms like 'generic or transferable skills have become the prevailing jargon on competencies. These competencies, such as the ability to cooperate, to communicate, problem-solving capabilities, are assumed to transfer readily across a range of contexts.

Although Barnett's scheme has an important heuristic value, in practice such a division tends to consider these four types of competencies as opposites or at least as derived from different worlds. In a way, as Barnett states, vocational competencies are inseparable from their accompanying cognitive elements. But at the same time he argues that the efforts to give prominence to occupationally specific skills, hinders genuine educational development with its cognitive elements. Typical of the general intellectual competencies (b) that are involved are for example analytical skills and being able to form critical evaluations of the claims to knowledge encountered. Furthermore, as Bennet and others have noted, this model fails to differentiate substantive and syntactic knowledge in a discipline, and sets general skills outside the discipline framework [22]. Disciplines are often the contexts through which these skills are learned and developed.

Like the participants in the debate on the decline of the intellectuals, Barnett describes in a later essay two forms of knowing as 'rival versions of competence' namely academic competence and operational competence [23]. Operational competence deals with the everyday world of commerce and life activities. Examples are: 'physical', 'action', 'problem-solving', 'knowledge as product', 'information task-based', 'experiential learning', 'instrumental orientation'. For Barnett academic competence is characterised by competencies such as 'personal', 'intellectual', 'pure', 'intrinsic', 'knowledge as process'. Such a schematic

list of competencies, which boils down to a description of two different kinds of competencies, is quite debatable. For example, Barnett assigns 'knowledge as process' to academic competence and 'knowledge as product' in operational competence. In practice it is rather the other way around. Although in higher education a shift to the process of learning can be noted, the emphasis is predominantly on products, namely a strong focus on making exams and writing papers. On the other hand, operational competence is competence about processes. Contemporary workplaces are variable and changeable, and the knowledge needed to function in them is evolving. Being 'knowledgeable in such workplaces is more the ongoing participation in a process than the acquiring of a product. Apart from the fact that also other dimensions in this scheme are contentious, for our argument it is more important to note that these rival conceptions of competence are considered as opposites, i.e. cognitive culture versus economic performance. In his words: 'The central argument is that one ideology, that of academic competence, is being displaced with another ideology, that of operational competence' (Ibid. p.1). Elsewhere he speaks of the changing definitions of competence as a microcosm of the changing definitions of the university [24]. With these ideas he finds himself at the heart of the continuing debate on the increasing dominance of functional rationality over substantive rationality.

It can be questioned whether the rival conceptions of competence are as contradictory as Barnett - and earlier Scheler, Weber or Mannheim - want us to believe. Do functional rational competencies in practice indeed exist separately from the substantial ones? Would it not be more appropriate to adopt an approach that involves reconciling different dichotomies of competencies and to conceptualise different elements from a coherent and integrative perspective? In order to answer this question developments on the graduate labour market should be considered and particularly the demands for graduate competencies.

5. Competencies and labour market outcomes

A line of thought to arrive at such an integrative perspective is by conceiving competencies not merely in terms of the present capabilities of an individual but also of their development and growth. Contrary to a rather narrow instrumentalist approach, the capability to action requires the capability to be knowledge productive. This involves 'the capability to search relevant information, to process this and generate new knowledge, and to apply to the improvement and innovation of work processes, products and services' [25]. Especially at the higher levels of qualification work practices embody complex and potentially non-routine aspects along with a wide range of associated knowledge. The capacity to act in the changing circumstances that occur in many knowledge-based economies requires not just further knowledge and skills, but also the capacity to deploy and combine selections that are sensitive to

the needs and characteristics of particular contexts.

Several labour market researches reveal that employers want adaptive, adaptable, transformable people to help them maintain, develop and ultimately transform their organisations in response to, and preferably in anticipation of, change. They show an increased demand for flexible employees with a high degree of employability that can be employed in a range of work settings. Graduates of a given subject field often work in a wide range of jobs, and many academic jobs are carried out by graduates from a variety of different subjects.

These viewpoints find much support in the European survey held among higher education graduates in ten European countries and Japan, the so-called CHEERS survey [26]. In the questionnaire a list of altogether 36 competences was presented and respondents were asked to score for each of these the extent to which they had acquired these competences in the course of study and to what extent they are required in their current work. These 36 competencies can be split in to three main sets: theoretical- cognitive, generic and behavioural skills. Cognitive aspects involve competencies like 'broad general knowledge', 'field-specific theoretical knowledge' and 'cross-disciplinary thinking. Generic skills refer to 'learning abilities', analytical competencies, 'reflective and critical thinking', and 'creativity'. Behavioural skills include 'problem-solving abilities', working in teams, 'planning, co-ordinating and organising. A comparison of the perceived individual job requirements and acquired competencies suggests that graduates considered themselves fully qualified or even overqualified only in five of the 36 competencies addressed. This holds for 'field-specific theoretical knowledge', 'broad general knowledge', 'language proficiency', and 'learning abilities'. On the other hand, they seem to feel deficiencies in the majority of areas.

It is not the purpose here to present the outcomes of this survey in detail, outcomes which vary among countries and among disciplinary subject fields, but to focus our discussion on academic competencies. The most frequently required competencies (in their current work) relate to broad generic skills rather than to items of field-specific knowledge. Broad generic skills such as problem-solving ability, analytical competencies, communication skills, taking responsibility, working in a team and adaptability, were considered to be highly required by at least 80 per cent of the graduates, well above the proportion of 60 per cent for field-specific knowledge. Another important finding is that graduates seem to feel deficiencies (the difference between acquired competencies at the time of graduation and the competencies required in their current work) mostly regarding behavioural skills. Graduates often note deficiencies as far as the transfer of knowledge to job tasks is concerned. The same holds true for socio-communicative skills as well as for values and orientations relevant for the world of work.

The importance attached to generic and behavioural skills suggest that competencies that are valuable in several jobs and which have a more generic nature are higher assessed than specific competencies which respond very quickly to continuously changing labour market needs and we have labelled the instrumentalist view on higher education. The data suggest that there is some variance across countries in this respect. In England and Scandinavian countries more importance is attached to these generic skills than in other European countries. It may well be that graduates in these countries are expected to acquire competencies to a substantial degree during the first few years on the job and employers seem to take a much greater share of the responsibility for education and training than is common elsewhere. But nevertheless, in most of the other countries a trend towards the importance of generic and behavioural skills can be noted. Referring to the aforementioned scheme by Barnett, most required competencies are in quadrant c (general intellectual competencies) and particularly quadrant d (general personal competencies). In other words, the importance of competences for the labour market does not imply a strict match between a specific subject field and a specific occupation. The data indicate a growing number of job roles in which the traditional boundaries between areas of expertise are blurring.

Do these findings imply that field-specific knowledge (in Barnett's scheme in quadrant a ('subject-specific competencies') and the academic competences would matter to a lesser extent and for some jobs would not be a requirement at all and that these generic competencies can be acquired independent of its cognitive content? This would be a too simple conclusion to follow. The CHEERS data allow us to relate competencies to modes of teaching and learning as well as the experience of a university course. It appears that some modes of teaching and learning and experiences of study are more effective in the development of the competencies required by knowledge-based economies. It turns out that as opposed to the classical 'frontal' or 'cathedral' way of teaching, project and problem-based learning, independent learning, a practical emphasis in teaching and learning and teaching quality are all features which are conducive to the development of generic skills and support the development of behavioural competencies. Countries differ in the extent to which new modes of teaching and learning have been adopted and their effect on competency-acquisition [27]. Also graduates who during their study were exposed to other disciplinary areas (for example in a major-minor model of learning) had the opportunity to learn form other disciplines, be reflective and critical about their own field and generally learned to speak the 'language' of graduates from other disciplines with whom they have to work on a joint basis.

Other research supports these findings about a relation between teaching modes and labour market success. Students who during their studies were exposed to 'active' learning

methods like project-based learning and were stimulated to apply their knowledge to real problems, were better prepared for the professional practice than students who had less stimulation in this respect [28].

The conclusion must be that the types of competencies that students acquire during their academic career and later on are apparently much more varied and sophisticated than Barnett and the participants in the debates on intellectuals and the decline of erudition as a core objective of the universities suppose. Nevertheless we are left with the question what happens with the normative dimension included in Mannheim's concept of substantial rationality and Gouldner's capacity of critical discussion. Do students really acquire these in contemporary curricula and is the complaint of many educational scientists and sociologists in fact superfluous? Or is there indeed something missing in today's university curricula?

6. Academic competence as an overarching educational concept

In order to get to grips with these questions we consider academic competence as a key concept for curriculum development. In the last few years some large-scale research and development projects have been launched at several Dutch universities on what has been called 'academic formation'. Most of these projects start from the view that the question of the 'what' and 'how' of the academic formation can only be answered when the whole education system in relation to the functioning in society and professional practice is taken into account. Academic formation is not a goal in itself (such as a material conception of the transmittance of knowledge and values, or intellectual habits as such), but gets a meaning in the context in which this is used. It encompasses the ability to develop on the basis of a broad scientific orientation a creative level of abstraction that is suitable for developing initiatives and professional action in new and unknown situations. It is 'the initiation into the academic profession' [29]. From this academic competencies emanate conceived as the ability of students to utilise both in their study as in their future work to recognise and solve new problems by utilising their knowledge and skills in a versatile way.

In order to design a competency-based curriculum the following questions are central:

(1) which academic competencies have to be included in the learning process?

(2) how can these competencies be incorporated in the curricula with the aim of enhancing the development of competencies among students?

(3) what teaching processes, mentoring and particularly what assessment methods and examinations are conducive for developing these competencies?

These questions are closely related and a view on any of them affects the outcomes of the others. Regarding the first question there is a tendency to conceive competencies as a quite heterogeneous collection of different abilities including cognitive as well as social and personal skills. Apart from the fact that such a collection provokes much dispute on what are the most essential ones, and its apparently descriptive nature may lead to narrowness in learning practices, there is the danger that these competencies are treated as pieces in isolation whereby the sight is lost on how these relate to each other.

Rather than drawing a collection of various competencies it is more appropriate to distinguish three major competency areas:

Specific competencies: these refer to clusters of cognitive prerequisites that an individual needs in order to be able to perform adequately in a particular area. These include field specific knowledge and skills as well as cross-disciplinary knowledge and skills that are required in complex problem situations.

Generic competencies: these enable students to adequately cope with changing professional and working situations and include basic competencies such as numerical and basic language skills, communication, argumentation, information-processing etc.

Reflexive competencies: ability to reflect on own functioning, to re-structure the intuitive understanding of the experienced phenomena, critical judgement.

Of all these areas reflectivity –a critical stance and reflective practice– can be identified as the required competence level to meet the multifaceted demands of modern life in a responsible way. Increasingly, employers seek individuals who are capable of managing ambiguity and contradiction, who can interpret non-linear information. Critical reflection is a key competence in problem situations whereby individuals are dealing with situations that cannot fully be understood within their own frame of reference. Especially in situational contexts where cognitive, instrumental knowledge and problem solving skills are lacking or are ambiguous, it is required to detach one's thinking and conceptual frame away from the context of one's own enculturation. In discussing these kinds of contexts, Piaget coined the term 'cognitive conflict'. With this term Piaget refers to situations whereby an individual is confronted with occasions, experiences or information that are contradictory to what fits within a person's own mental framework. Increasing awareness can in its turn lead to an active learning process and to 'conceptual change' [30]. This ability of critical reflection enables individuals to investigate the assumptions underlying their reasoning and behaviour. It is clear that the importance attached to critical reflection belongs to the realm of what we have called before substantial rationality.

The question how these three broad areas of competencies are to be

incorporated in the curriculum can only be sketched here briefly. There is much dispute among educational scientists about the question whether acquiring competencies can be taught separately or in separate units or not. An advantage of 'adds-on' courses is that these courses assure that the skills are covered and that there are competent teachers to teach them. However, it is undesirable to separate acquiring these competencies during the learning process, since these are commonly closely connected with carrying out tasks or performing certain roles. A much heard criticism is that many curricula are a piling up of different subjects and several practical exercises. Students complain that they don't understand the connections between the different parts, the responsibilities of which rest with individual teachers who are more focusing on the transmittance of disciplinary knowledge and skills. This tends to result in fragmentation with little attention paid to achieving coherence between the various parts.

For educational specialists it would be a challenge to design curricula in which the three areas of competency –specific, generic and reflexive competencies– can be are related and integrated throughout the curriculum. And to design assessment so that it works instrumentally for learning rather than using it primarily just to measure and record the learning that has taken place. Competency-based learning requires particular modes of teaching and learning as well as appropriate assessment procedures. If the emphasis is on a classical teaching style and examinations which require much memorising, students will adapt their learning style to that end, just cramming at the last moment to pass exams (and then forgetting...). Such a learning style is not conducive to meet the essential competencies and the corresponding educational objectives.

In the last few years there is a growing attention for a curriculum concept in which these competencies are becoming more intertwined. For example, educational and psychological theories of instruction have been designed to foster particular learning outcomes, such as situated learning theories, which emphasise that competencies are context-specific [31]. These theories stress the importance of coherence and context-relevance (e.g. real life experiments and cases, simulation, practical work experience, apprenticeships) in the design of the curricula in order to develop professional competencies. Proponents of theories of situated learning argue that the nature of the situation, and circumstances in which knowledge and skills are acquired, is likely to influence the subsequent deployment of that knowledge and skill in other settings [32]. Attempts within university courses to provide authentic or simulated learning settings emphasise learning as a process of enculturation whereby the ability to handle this knowledge adequately in various contexts has primacy over the objective of mastering knowledge as an objective in itself.

Other learning theories foster active learning styles through problem-based learning and project-oriented learning

which aim to foster the development of generic competencies, meta-cognitive abilities and information processing strategies. Also through multidisciplinary projects students become familiar with other subject fields and other styles of scientific reasoning and truth finding. Such an experience puts the student's own specialist subject field in perspective, it increases the ability to interact with people with different disciplinary backgrounds, and it stimulates critical reflection on their own conceptions and actions [33].

In the last few years the so-called major-minor model has increased in significance. According to this model students choose a major subject field and alongside a minor field as part of their curriculum. At the University of Twente this has become the dominant model, especially for engineers who are exposed to other disciplinary areas than their own. This can be an adjacent field, but also a more general course such as philosophy of technology. The aim is that students learn to make useful connections, to sharpen their understanding of technology and its impact in society, and to consider the ethical dimensions.

A strong plea for a combination of different studies can be found in the work of Martha Nussbaum who is fascinated by the combination of philosophy and literary studies, fields which for her being a student were taught completely apart. In her book *Cultivating Humanity*, she asks how universities can educate their students to become capable citizens of a democratic, multicultural society. Inspired by classical ideas, she formulates three features of good citizenship. First, citizens should be capable for critical appraisal of their own convictions, attitudes and customs through logical reasoning, argumentation and reflection. Second, by adopting a cosmopolitan attitude in the global village. Third empathy and imagination: not merely knowledge of other cultures and times, but the ability to put oneself in someone else's position. For Nussbaum philosophy and literary studies would constitute important components in the curriculum, subjects not as goal in itself but in their practical consequences. For example, she shows how literary studies (for example the work of Dickens or Wright) can support politicians and judges in their political or juridical judgement. University programmes that aim to enhance the critical and comparative perspective will contribute to the education of capable citizens for a multicultural society [34].

7. Epilogue

In this paper we have outlined the debate on the various functions of higher education, which centres around the two models of academic erudition on the one hand and the focus on the training of academic professionals on the other. The term 'academic competence' actually combines both functions; given the term competence is not treated in a narrow instrumental way, but includes generic and reflexive competencies. This conception approximates the notion of erudition in its classical sense: the ability

to reflect in a substantial rational way on human and social development.

Paradoxically, under the influence of the Bologna-process these two functions tend to be institutionalised separately in many European countries, especially on the graduate level. After the bachelor degree (undergraduate) students can continue on the graduate level whereby they can opt for a scientific master (preparing for researcher/teacher mainly in the university and research system) or for a professional master (preparing for a variety of professional functions outside the university system). The distinction between 'academic' and 'professional' has been re-established on the graduate level, which in a way can be seen as a unification of continental European and the Anglo-Saxon model. Both Von Humboldt and Cardinal Newman as the two proponents of these models would be pleased.

On the undergraduate level, however, the prevailing model is general academic education, in which students are exposed to a broad area of knowledge domains and in which it is attempted to enrich the habits of students with the generic competencies they need for their further learning career and the ability for reflection and responsible citizenship.

In addition, a broad undergraduate programme is particularly advantageous for those students who enter higher education on various but less pronounced motives. They are enabled to orient themselves broadly on the basis of which they can made better and flexible study choices in their further learning career. Presumably this will result in the decline of the high dropout rates we are witnessing in many study programmes. This undergraduate education comes close to the earlier described University College, although curricula may vary in the extent to which a genuine liberal arts programme is envisaged. Clearly under the present conditions of massification and stringent government policies with regard to (output) funding, quality and efficiency, the University College model, which is based on a small and selective group of students cannot be copied in all circumstances.

However, the Bologna process provides the opportunity to rediscover an academic curriculum based on the three competencies mentioned before as the core of all academic education. The current practice is still too often of providing students with a large amount of information and professors are eager to assure that their own subject is covered. In order to oppose these tendencies, it would be a challenge, on the basis of a throughout knowledge of a particular subject field, to design a well-balanced curriculum through which students can develop a professional habits. This means that students acquire competencies to integrate knowledge fields, to evaluate practical situations critically, to reflect on situations in which learned routines are deficient and to develop new knowledge and skills [35]. This broad undergraduate education is relevant to the European labour market as an appropriate level of qualification. It opens the way for various further

learning routes: graduates may enrol in a master programme directly after the bachelor degree, or after some period of work experience. Also taking a graduate course in a dual form, by alternating study and work is an attractive option.

Further research in this area should focus on the didactical experiences through which academic competencies are acquired. How can the different elements in the educational programme be connected in a meaningful way? In what phase of the curriculum should aspects of academic competency be emphasised? What teaching and didactical methods are most appropriate to achieve these and is the classroom setting throughout the most effective means of instruction? How should assessment procedures and evaluation methods be attuned? How can students monitor in a portfolio their study progress in terms of competencies acquired?

Finally, the monitoring of academic competencies and their value on the labour market is a continuous activity. Recently a follow-up of the European graduate Survey (see about CHEERS before) has started with the title *'The Flexible professional in the Knowledge Society' (REFLEX).* The research questions are (1) which competencies are required by higher education graduates in order to function adequately in the knowledge society, and (2) what role do higher education institutions play to help graduates in developing these competencies? The overall idea is not simply to trace the competencies that are needed to meet the labour market demands, but rather to focus on graduates who possess a high degree of innovative capacities, creativity, curiosity, a willingness and ability to question the status quo and so on. With these competencies graduates can directly contribute to the development of new knowledge and ideas for the employment organisation, in short 'academic competencies'. This is precisely the modern role universities will be playing in the Europe of knowledge.

Address: Lieteke Van Vucht Tijssen. Dean of the Bussiness Administration School University of Twente, Holland. luutijssen@cs.com

Received: 1.XII.2004.

Notes

[1] See the volumes by the STANDING CONFERENCE OF RECTORS OF THE EUROPEAN UNIVERSITIES (CRE) *A History of the University in Europe* (General editor Walter Rüegg) (Cambridge University Press).

[2] PARSONS, T. & PLATT, G.M. (1973) *The American University* (Cambridge, Harvard University Press). Recently GIBBONS et al. (1994) argued in *The New Production of Knowledge: the Dynamics of Sciences and Research in Contemporary Societies* (London, Sage) that universities no longer are the only producers of knowledge but that they experience competition form other organisations like industry. Nevertheless universities still are the training institutes for academics and major producers of research.

[3] SMELSER, N. (1973) Epilogue: Social-Structural Dimensions of Higher Education, pp. 389-422, in PARSONS, T. & PLATT, G.M. *The American University* (Cambridge, Harvard University Press).

[4] SMELSER, N., ibidem, p. 399.

[5] This debate is not limited to academics but involves politicians and captains of industry as well, each with their own interest and agendas.

[6] ORTEGA y GASSET, J. *La Misión de la Universidad* (Dutch translation 1959).

[7] VAN KEMENADE (1978) *'Hoger onderwijs voor velen'* ('Higher Education for the Many') (The Hague, SDU).

[8] It was elaborated for example in two policy documents by the DUTCH MINISTRY OF EDUCATION, titled '*Higher Education, Autonomy and Quality*' (1985) and *'Higher Education and Research Plan* (1988).

[9] *Higher Education and Research Plan* (1988), p. 63.

[10] RUPP, J. (Ed.) (1997) *Van oude en nieuwe universiteiten: de verdringing van Duitse door Amerikaanse invloeden op de wetenschapsbeoefening en het hoger onderwijs in Nederland, 1945-1995* (Den Haag, SDU).

[11] A clear example of this policy is the Enterprise in Higher Education Initiative as a significant attempt to encourage higher education institutions to incorporate the needs if industry, commerce and the public sector in the curriculum of undergraduate and postgraduate education. See JONES, S. (1996) Managing Curriculum Development, pp. 136-161, in BRENNAN, J.; KOGAN, M.; & TEICHLER, U. (Eds.) *Higher Education and Work* (London, Jessica Kingsley Publishers).

[12] He probably will prove to be the last German one. See also BLOOM, A. (1987) *The closing of the American Mind* (Middlesex); JACOBY, R. (1987) *The Last Intellectuals, American Culture in an Age of Academe* (New York); ORY, P. & SIRINELLI, J.F. (1987) *Les Intellectuals en France, de l'Affaire Dreyfus à nos yours* (Paris). Recently: POSSNER (2002) *Public Intellectuals a study of decline* (Harvard).

[13] All the publicity round the scandals in industry of the past years almost make us forget that a substantial number of captains of industry, top managers and civil servants are interested in particular in the wider implications if their business/ work, sometimes out if their own interest (Anthony Burgmans CEO of Unilever), sometimes forced by their consumers or public. (f.e. The Board of Shell after the Brent Spar debate).

[14] RED RUPP, J. (1990) Comenius. Special Issue: Universiteit en Intellectuelen, *Comenius*, 38.

[15] VAN VUCHT TIJSSEN, L. (1990) Hoger Onderwijs voor wie en waartoe? (Higher Education for whom and for what?), *Comenius*, 38, pp. 258 - 270.

[16] NETHERLANDS SCIENTIFIC COUNCIL FOR GOVERNMENT POLICY (WRR) (1995) *Hoger Onderwijs in Fasen (Higher Education in Stages*) (The Hague, SDU).

[17] For more details on Utrecht University College, see the website: www.ucu.uu.nl

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[19] VAN DAMME, D. (2001) *Higher Education in the Age of Globalization. The Need for an New Regulatory Framework for Recognition, Quality Assurance and Accreditation.* Paper for UNESCO, p. 2 en 3, (Parijs).

[20] PILOT, A. & NEDERMEIJER, J. (2000) *Beroepscompetenties en academische vorming in het hoger onderwijs* (Groningen, Wolters-Noordhoff).

[21] BARNETT, R. (1994) *The limits of Competence* (Buckingham, Open University Press).

[22] BENNET, N.; DUNNE, E.; & CARRÉ, C. (1999) Patterns of core and generic skill provision in higher education, *Higher Education*, 37, pp. 71-93.

[23] BARNETT, R. (1997) Beyond competence, in COFFIELD, F & WILLIAMSON, B. (Eds.) *Repositioning Higher Education* (Buckingham, Open University Press).

[24] BARNETT, R. (1994), p. 159.

[25] KESSELS, J. (2000) Wat valt er aan competenties te managen?, pp. 29-37, in DE LA PARRA, B. et al. *Managen van competenties in organisaties* (Utrecht, Lemma).

[26] CHEERS concerns a research project *Higher Education and Graduate Employment in Europe*', a graduate survey. For an account of CHEERS from the Spanish context see GARCÍA-MONTALVO, J. & MORA, J. G. (2000) El Mercado laboral de los titulados superiores de España y Europa: transición, empleo y competencias, *Papeles de Economía Española*, 86, pp. 111-127; MORA, J. G. (2001) Competencias y empleo de los jóvenes graduados universitarios, the and CALERO, J. y BONALD, X. (Eds.) *La Educación en España* (Barcelona, Pomares) (Forthcoming).

[27] See PAUL, J. J. (2002) Are universities ready to face the knowledge economy?, pp. 207-220, in FULTON, O. & ENDERS, J. *Higher Education in a Globalising World* (Dordrecht, Kluwer).

[28] GLASER, R. (1991) The measuring of the relationship between science of learning and cognition and educational practice, pp. 129-14, *Learning and Instruction*, 1. See also VAATSTRA, R. & DE VRIES, R. (2003) De relatie tussen onderwijsvorm, competenties en arbeidsmarkt, *Tijdschrift voor Hoger Onderwijs*, 21, 3, pp. 144-159.

[29] This term is taken from P.W. VERHAGEN in his inaugu-

ral lecture as professor at the University of Twente, entitled '*Over het opleiden van onderwijskundige ontwerpers*' (2000).

[30] PIAGET, J. (1975) *L'Équilibration des Structures Cognitives* (Paris, Presses Universitaires de France).

[31] See GLASER, R. (1991), ibidem.

[32] See BENNETT, N.; DUNNE, E.; & CARRÉ, C. (1999) Patterns of core and generic skill provision in higher education, *Higher Education*, 37, pp. 71-93.

[33] See for an application of such an integrative conception for engineering education: PROCEE, H. (1997) *De nieuwe ingenieur: over techniekfilosofie en professioneel handelen* ('The New Engineer: about philosophy of technology and professional action') (Meppel, Boon).

[34] NUSSBAUM, M. C. (1997) *Cultivating Humanity. A Classical Defense of Reform in Liberal Education* (Cambridge, Mass.).

[35] At the Faculty of Business, Public Administration and Technology (BBT) of the University of Twente the term continuous learning paths is coined to stress that the major cluster of competencies – the conceptual, integrative and reflective ones – should be covered in all courses. See VAN WOERDEN, W. (Ed.) (2004), *Leerlijnen en competenties in het nieuwe bachelor programma van BBT* (Onderwijsdag, BBT, University of Twente).

Resumen:
De la erudición a la competencia académica

A través de su historia, las universidades se han visto sometidas a intensos debates sobre su función y papel en la sociedad. Lo que este artículo muestra es la forma en que los procesos de modernización y globalización han cambiado el énfasis desde una pregunta sobre si las universidades deberían producir intelectuales, investigadores o académicos con formación profesional para satisfacer las demandas del mercado de trabajo, a otra pregunta sobre la clase de competencias que la universidad debería enseñar a los estudiantes para cumplir con los objetivos trazados en la Cumbre de Lisboa. Basándose en el actual discurso sobre las competencias y el valor añadido a las distintas clases de competencias en el mercado de trabajo, la noción de competencia académica se desarrolla como un concepto educativo global. Además, se distinguen tres áreas principales de competencias para el diseño curricular: competencias específicas, genéricas y reflexivas. Y se argumenta, finalmente, que esas competencias, internamente conectadas, pueden reconciliar las diferentes funciones de la universidad.

Descriptores: erudición, competencia académica, mercado de trabajo, sociedad del conocimiento, empleabilidad.

Summary:
From Erudition to Academic Competence

Universities throughout their history have been subjected to intensive debates on their role and function in society. This article shows how under processes of modernization and globalization the emphasis has shifted from the question whether universities should produce intellectuals, researchers or professionally trained academics to meet labour market demands, to the question what kind of competencies the university should teach to students in order to meet the Lisbon objectives. On the basis of the current discourse on competencies and the value attached to the various kinds of competencies on the labour market, the notion of academic competence will

be developed as an overarching educational concept. Three major competency areas for curriculum design are distinguished, namely specific, generic and reflexive competencies. It is argued that these competencies in their connection can reconcile the different functions of the university.

Key Words: erudition, academic competence, labour market, society of knowledge, employability.