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Vocational and Higher Education: Issues, Concerns and Prospects

Paper Presentation¹ by:

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Abstract

Historically, vocational education (TVET) and higher education (HE) emerged from opposing traditions, with the university producing systematic scientific knowledge and vocational education providing training for specific occupations. That relationship developed over time with socio-economic development influencing the process. Mass higher education, elite higher education, polytechnics, and different levels of vocational institutions have been developing complex relationships within countries around the globe. Even European Union countries such as Germany and the UK, with capitalist economies, have different approaches towards higher and vocational education.

To understand the complexity of the relationships between vocational and higher education, different theories can be used. In this presentation we will apply Luhman's theory of society to explain the relationships between higher education, industry and vocational education. These relationships can be analysed in terms of a self-organizing ("*autopoietic*") system that was introduced into theorizing about society by Luhmann in 1984. In accordance with that view, the satisfaction of industry needs through the development of personal skills by means of university training will be harmonised through the function of stabilisation in the time dimension. The dynamics of this system in terms of functional differentiation, reflexivity, and self-organization is developed through communication. Luhmann (1984) specified that the relations between the social communication system and what he called "individual consciousness systems" (i.e. actors) are 'structurally coupled': the social communication system cannot operate without individuals who communicate, but only the message (i.e. the action) and not the actor is communicated. The action will thus have different meanings for the sending actor, for the receiving actor, *and* for the social communication system, since they are

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different systems of reference. However, through this interaction, systems exchange information through interpretation, i.e. by means of action. The social system then has its own dynamics and gradually, universities could thus be harmonised with the market economy.

This presentation refers to the current discourses on vocation and higher education relationships that can be viewed on four levels – political, economic, epistemological and human development. It identifies a number of trends that put vocational and higher education systems together. These relate to structural change, the requirements of the knowledge economy and interpretation of knowledge, and repositioning of the individual and his/her actions into the centre of the educational process. The application of Luhmann's theory is used to understand the complexity of that environment and to explain why the established equilibrium would be different for particular contexts.

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1. Introduction

Historically, vocational education and higher education emerged from opposing traditions, with the university producing systematic scientific knowledge, and vocational education training for specific occupations. As a result, university outputs were evaluated on the basis of their contributions to the respective scientific discipline (Klüver 1995) while vocational education outputs were concerned with the ability to undertake useful work. Those relationships have been established over time with socio-economic development influencing the process. Mass higher education, elite higher education, polytechnics, and different levels of vocational institutions including higher vocational education established to train doctors, teachers and lawyers, have been developing complex relationships within countries around the globe. Even countries within the European Union such as Germany and the UK, with capitalist economies, have different approaches towards higher and vocational education. As stated by Hoelscher (2005) in Germany higher education is more vocationally oriented than in the UK and vocationalisation is more related to the development of specific skills that are tied closely to a particular occupation. In the UK particular higher degrees do not lead into specific occupational fields since it is considered reasonable for individuals to invest in the development of general and transferable skills. At the same time there is a wide range of extremely specialised, short-term programs offering vocational qualifications.

This presentation explores the reasons for establishing close links between vocational and higher education and argues that in an era where knowledge

has become a commodity and both systems are placing individual learners in the centre of their attention, vocational and higher education are moving closer together and the established equilibrium is appropriate to the particular context (and one that will be different for different countries and economies).

2. Competition state

The shrinking of the Welfare State, and the expansion of the Competition State in the West, due to the processes of globalization, when viewed politically (Cerny, 1997) requires educational systems to be re-oriented. The required re-orientation is from education for socialisation into the national culture, with the aim being the development of a common polity, to the preparation of learners to live and work in a market-oriented or 'competition' state. The 'authority' no longer follows the 'domestic' pattern of the 'welfare' state, but rather is altered to comply with the 'market' pattern of the 'competition' state. The terms of reference in the 'Competition State' are not viewed as 'ends in themselves', but rather as 'means' for competition in the global market. The 'Competition State' seeks talent and requires new skills, in particular, skills of employability. Thus, the process of vocationalisation is backed up by the changing nature of the state. By vocationalisation we mean a way of empowering individuals through the development of their capabilities and through providing them with an opportunity to orient and adapt for the work environment. The main goal of vocationalisation is to improve the vocational relevance of education. Usually, vocationalisation means the introduction of practical and/or vocational subjects, industry visits, vocational guidance, and more applied ways of teaching general education subjects.

Due to the changing nature of the state, the role of the university in the current economic situation has become the topic of wide-ranging discussions, particularly in terms of the usefulness of the model that can be characterised as 'humanitarian university education'. The major point of criticism of this model is that it does not serve the demand for instrumental knowledge and specialisation, formulated by the so called 'knowledge society'.

Currently the speed of transformation is far more intense than in the past. As stated in the *Life Based Learning* report (Staron, Jasinski & Weatherley, 2006): "The knowledge Era is characterised by impermanence, turbulence,

multiple and competing agendas and priorities, diversity in ideologies, ambiguity, multiple roles, irritations, uncertainty and contradictions and a great amount of energy and creativity... The knowledge Era is an era of rapid movement. There is so much going on that we need new and meaningful ways to make sense of how to best work, learn and live effectively in these times” (p.23). *Thus, at the political level there is the basis for establishing close links between higher and vocational education.*

3. What is knowledge?

The arguments in the philosophical and sociological literature demonstrate how new forms of economic, political and cultural relations influence the production and dissemination of knowledge, and on understanding of the changing nature of it. Sharp disputes over what knowledge is (see for example, Connell, 1995; Dewey, 1933; Habermas, 1968/1994; Lyotard, 1979/1984; Stehr & Ericson, 1992; Toulmin, 1972, 1995; Young, 1971) are important standpoints for both modern and postmodern projects. Enlightenment as an historical starting point for modernism has knowledge at the heart of its project (Lyotard, 1979/1984). “The Enlightenment was a product of the expansion of knowledge. It was also a statement of faith in knowledge both as a way of understanding truth and as the essential instrument in ensuring human progress” (Coulby & Jones, 1995, p. 25).

When analysing modernist definitions of what constitutes knowledge Toulmin (1995) agreed that for the last 300 years a set of fundamental issues and ideas about knowledge was framed by the “Cartesian” program and attributed to the writings of Descartes. Connell (1995) identifies three defining characteristics taken from the legacy of Descartes: “(a) a quest for certainty; (b) a clear delineation between subject and object; and, (c) a view of progress that is always forward moving toward a unified system of knowledge” (Connell, 1995, p. 1). Modernist theories of knowledge aim to prevent interests, desires, and values from influencing the objective outcomes. Objectivity is obtained through carefully controlled scientific method, which leads to a unified system of knowledge. Thus, progress is generally viewed as “movement toward a single, absolute truth by revealing universal principles obtained by a unified method of science” (Connell, 1995, p. 2).

Postmodernity is not an alternative to modernism. It is rather a critique of it (Coulby & Jones, 1995; Green, 1994). The concept of postmodernity is

very diverse, eclectic and non-systematic. It is a body of ideas, which demonstrate their scepticism “towards the ‘Enlightenment metanarratives’ of universalism, unity, reason and progress”(Green, 1994, p. 68). One powerful aspect of a postmodernist critique concerns knowledge.

A challenge to modern epistemology has been articulated by a number of authors. Dewey was among the first ones. According to Connel (1995), Dewey radically changed the view of what constitutes knowledge by emphasizing uncertainty and a ‘transactional’ view of the relationship subject and object. “A transactional epistemological perspective influences conditions of inquiry by foregrounding: (a) the need for communication; (b) an interest in change and indeterminacy; (c) a consideration of context; (d) a recognition of the connection between theory and value; (e) a redefinition of subjectivity and objectivity that acknowledges values, interests, and beliefs; and (f) a focus on practice” (Connell, 1995, p. 3).

These critiques have shaken the faith of modernist knowledge. “No truth system is seen as being superior. Individual taste and discrimination are encouraged, eclecticism prized and all canons subjected to furious attack ... modernist knowledge ... no longer carries any widespread legitimacy” (Coulby & Jones, 1995, p. 37).

Lyotard distinguishes two main properties of scientific knowledge nowadays: “the flexibility of its mean, that is, the plurality of its languages; and its character as a pragmatic game - the acceptability of the ‘moves’ (new propositions) made in it depends on a contract drawn between the partners”(1979/1984, p. 43). So, the major shift has been made in replacement of the principle of a “universal metalanguage” by the principle of a “plurality of formal and axiomatic systems capable of arguing the truth of denotative statements; these systems are described by a metalanguage that is universal but not consistent” (Lyotard, 1979/1984, p. 43).

Thus, on the one hand, this discourse on what is knowledge, and what is worthwhile knowledge, has its influence on the concept of university knowledge. Some of the dichotomies presented in this discourse such as universal versus particular, formal versus experienced-based, value-neutral versus value-laden, bounded versus unbounded, search for truth versus utilitarian, context-free versus context-dependent position university knowledge much more closer to the individual than the discipline, to a person’s subjectivity, needs and experiences.

On the other hand, recent research on TVET (see for example, Staron, Jasinski & Weatherley, 2006) argues that life based learning is required for vocational education focusing on capability development and considering the learner as a whole person. "The emphasis is on personal responsibility for learning through the provision of rich learning environments with the learning benefits both the individual and the organisation. Life based learning is a model for performance, growth and opportunity. It is adaptive, self-facilitated, based on reflexive practice and uses any strategy appropriate to the task" (p.49). This broad interpretation of TVET training positions it closer to HE in the current era. TVET is seen as "a knowledge-based industry, where knowledge is its core business" (Staron, Jasinski & Weatherley, 2006, p. 24). *Thus, on the epistemological level there is the basis for developing close relationships between higher and vocational education.*

4. Self-organizing or "autopoietic" system

To understand the complexity, different theories can be employed. In this presentation we will apply Luhman's theory of society to explain the relationships between higher education, industry and vocational education. These relationships can be analysed in terms of a self-organizing ("*autopoietic*") system that was introduced into theorizing about society by Luhmann in 1984. In accord with that view, satisfaction of industry needs through the development of personal skills, by means of university training would be harmonised through the function of stabilisation in the time dimension. The dynamics of this system in terms of functional differentiation, reflexivity, and self-organization is developed through communication. Luhmann (1984) specified that the relations between the social communication system and what he called "individual consciousness systems" (i.e. actors) are 'structurally coupled': the social communication system cannot operate without individuals who communicate, but only the message (i.e. the action) and not the actor is communicated. The action will thus have different meanings for the sending actor, for the receiving actor, *and* for the social communication system, since they are different systems of reference. However, through this interaction, systems exchange information through interpretation, i.e. by means of action. The social system then has its own dynamics and gradually, universities could thus be harmonised with the market economy.

If we examine the relationships between vocational and higher education and apply Luhman's theory, there is evidence that historically, the balances achieved were appropriate for the particular social conditions. Requests from the aristocracy or public bureaucrats were met by higher education while vocational education dealt with the less prestigious occupations. The teaching profession has been an interesting example: in some countries students have been trained by both vocational education (primary teachers) and higher education (secondary teachers). Lack of practical experience were addressed by mentoring programs, especially in the first year of employment and then over the next couple of years. Thus, balanced relationships between vocational and higher education have been always there. Currently the socio-economic situation has changed, however, so that gradually a different and new balance will be achieved. Different interest groups such as employers, employees, TVET, HE and government all contribute towards the process of achieving a new dynamic equilibrium. The establishment of vocationally oriented higher education institutions in Japan (Goodman, Hatakenaka & Kim, 2005) is an example of this process.

The use of a learning ecologies metaphor can help to understand this process. Ecologies focus on living systems and their dynamic relationships. Adaptability is a key survival capability within ecology. When there is stability in the ecological environment there is equilibrium. However, when there is a disruption or disturbance to the equilibrium of an ecology, agents responding by adapting. Rather than a model or a set of procedures, ecology is orientation. "It offers a complex, diverse, dynamic and adaptive framework that gives us a fresh perspective on working and learning in contemporary environment" (Staron, Jasinski & Weatherley, 2006, p.27)

5. Trends, concerns and solutions

This section is based mainly on an analysis of papers presented at the International seminar: *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, held in Bonn, 8 – 10 September 2005. The aim of the seminar was to address the complex issue of the growing need for vocational content in mass higher education and to share experiences and to provide background information and illustrative examples. A number of trends, concerns and proposed solutions have been identified as a result of this analysis.

Current discourses on vocation and higher education relationships can be viewed at four levels – the political, economic, epistemological and human development. The trends identified below relate to structural change, requirements of the knowledge economy and the interpretation of knowledge, and repositioning of the individual and his/her actions in the centre of the educational process. The complexity of that environment can be understood through the application of Luhmann's theory that explains that the social system has its own dynamic and as a result, higher education will be gradually harmonised with the market economy.

In Pavlova's paper (2005) it is argued that at the political level, the ideology of detachment of university degrees and their academic curricula from the labour markets, can be regarded as a negative trend in university development. It overlooks one of the important elements composing a University: its students (Nikolaou & Papadakis, 2003). In this critique, academically detached education is regarded as providing insufficient skills for appropriate employability of university graduates.

The challenge is to link higher education with the constantly changing needs and opportunities of contemporary society and this is seen as an increasingly important issue by universities and politicians (European Commission 1995:21; Neave & van Vught, 1991). Creating a fruitful and dynamic partnership between higher education and society at large has become one of the basic missions (together with teaching and research) of universities (e.g. Griffith University, 2002; Dewar, 2005).

Achieving the right balance between the two concepts: *market oriented university* (satisfaction of industry needs only) and *university isolated? from social, economic and political environment* (the university that is not interacting sufficiently with society) is required to meet the needs of students. Or, as stated by Nikolaou and Papadakis (2003), the on-going revision of the relationship between education in general, and university education and the labour market, requires a "balanced holism between the *economy-oriented view* – OECD, E.U. – and the *human-oriented approach* – UNESCO – of the Knowledge Society and the role of Higher Education in it" (p.5). To achieve this, the development of regulatory mechanisms and frameworks that could shape particular policies need to be developed.

Some important trends identified in the seminar papers can be viewed as the basis for developing these frameworks. At the level of *structural change* the following three trends can be seen as important in that respect:

- The distinction between top universities (highly selective admission) and mass universities (open to all school leavers) might influence the scope of their responses to the trends discussed above.
- Improvement of the reputation of vocational education and training through developing it within the university sector is seen as one way of establishing close relationships between higher and vocational education. Higher vocational institutes in China are an example of this approach. They have been developed as an independent branch of the university sector.
- A common qualification framework for vocational and higher education that reflects the interrelationships between the structure of educational qualifications and the occupational structure of the labour force, and between education and social change, could provide possible synergies between higher education and vocational education.

Some trends that are related to the challenge of the knowledge economy are:

- Development of interdisciplinary links across traditional academic disciplines, blurring the boundaries and developing new approaches towards knowledge production.
- Development of employability skills required for all sectors of the economy which can be seen as a priority for both vocational and higher education. In Germany, for example, it is quite common that graduates with a Bachelor's degree undergo an apprenticeship in order to improve their employment opportunities (Rauner, 2005).
- Life long learning as a way of responding to rapid knowledge development, and market change, is considered as essential for both sectors.

In terms of human-oriented approaches and personal development, Life-Based Learning can contribute towards the development of policies and practices. This learning should be personalised in the following ways: self-directed; context based; work/life integration; holistic; learner as designer; adaptable and sustainable (Staron, Jasinski & Weatherley, 2006, p.50).

A number of concerns were identified the seminar organised by the UNESCO-UNEVOC International Centre, these being:

- Change in the nature of societies which relates to global economic competition and requests for graduates relevant to the economies.
- Quality and standards. The distinction should be considered between short and medium-term orientation in qualification demands that are met through vocational training, and long-term educational profiles for university qualifications. Thus, the goal of tertiary education must be sustainable and provide long-term usable professional education (Schulte, 2005).
- Vocational qualifications should provide access to university education.
- University education for vocation education teachers is required which should include occupational domains and pedagogical qualifications.
- There is no *one model approach* that fits all, because frameworks for the vocationalisation of higher education will be different in different contexts.

Participants at the seminar shared examples of practical solutions for vocationalisation of higher education. Some of them are summarised below:

- At the higher education level programs have been re-designed to incorporate a more vocationally-oriented content such as workplace problems being used as learning resources, professional placements (internships, work placement schemes, innovative provision of work-based learning/work experience through opportunities within, or external to, programs of study) are offered, individual students negotiate learning contracts, and complementary IT, language, and management skills are developed to equip graduates for future careers.
- Cross-faculty courses and interdisciplinary research centres have been established by the universities to overcome a segmented approach to knowledge development and acquisition.
- Higher education institutions are marketing new programs more oriented to market needs such as programs related to business, commerce and the human professions.
- Employability enhancing activities that are not related to content teaching, such as enhanced support (usually via career services) for undergraduates and graduates in their search for work; enabled

reflection on and recording of experience, attribute development and achievement, alongside academic abilities.

- Embedded attribute development within programs of study to make it explicit or to accommodate employer inputs by securing involvement of the industry representatives in higher education policy-making, strategies and implementation (e.g. China's Vocational Institutes).
- Post-graduate, on-the-job training and experience, both as a compulsory part of educational programs (e.g. medical professions) or, as a non-compulsory part of the program required by professional associations, as a prerequisite for joining the profession (e.g. lawyers).
- Recognition of prior learning for both vocational and higher education programs.

Trends, concerns and examples of vocationalisation of higher education represent the ways education is adjusting to changes in the socio-economic environment. These processes can be viewed as the way of self-organisation where economic, vocational and higher education systems exchange information by interpreting the actors' understanding of approaches and issues. This dynamic is viewed as a way of achieving harmonisation of universities with the market economy.

6. Conclusion

This presentation refers to some current discourses on vocation and higher education relationships that can be viewed on four levels – the political, economic, epistemological and human development. It identifies a number of trends that put vocational and higher education systems close together. They are related to structural change, requirements of the knowledge economy and interpretation of knowledge, and the repositioning of the individual and his/her actions in the centre of the educational process. The application of Luhmann's theory is used to understand the complexity of that environment and to explain why the established equilibrium would be different for particular contexts. Self-organising concepts are considered as a useful framework for policy and practice development.

References

- Cerny, P. G. (1997), Paradoxes of the competition state: The dynamics of political globalization. *Government and opposition* 32 (2), pp. 251-274.
- Connell, J. (1995). Reconstructing a modern definition of knowledge: A comparison of Toulmin and Dewey. *Philosophy of Education. Yearbook*, 1-6. Retrieved August 4, 1998, from the World Wide Web: http://www.ed.uiuc.edu/EPS/PES-Yearbook/95_docs/connell.html
- Coulby, D. & Jones, C. (1995). *Postmodernity and European education systems: Cultural diversity and centralist knowledge*. London: Trentham Books
- Dewar, J. (2005), E-mail to academic staff. Griffith University, June, 2005.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston : D. C. Heath and Company
- European Commission (1995:21), *White Paper: Teaching and Learning. Towards a Learning Society* (Brussels, ed. E.C./ Directorate General Education, Training and Young)
- Goodman, R., Hatakenaka, S. and Kim, T. (2005). The role of the market and the role of the state in vocational higher education in contemporary Japan and South Korea. Paper presented at the International seminar *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, Bonn, 8 – 10 September 2005
- Green, A. (1994). Postmodernism and state education. *Journal of Educational policy*, 9, 67-83.
- Griffith University (2002), *The Griffith Project*. Brisbane: Griffith University
- Habermas, J. (1994). *Knowledge and human interests* (J. J. Shapiro, Trans.). Cambridge: Polity Press. (Original work published 1968)
- Hoelscher (2005). Vocational programmes in German Higher Education and their role for the Economy. Some thoughts in European Comparative Perspective. Paper presented at the International seminar *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, Bonn, 8 – 10 September 2005

- Klüver, Jürgen (1995): Hochschule und Wissenschaftssystem. In: Ludwig Huber (Ed.): *Ausbildung und Sozialisation in der Hochschule*. Bd. 10, Enzyklopädie Erziehungswissenschaft. Herausgegeben von Dieter Lenzen. Stuttgart: Klett-Verlag, p. 78–91
- Lyotard, J - F. (1984). *The postmodern condition: A report on knowledge* (G. Bennington and Massumi, B., Trans.). Manchester: Manchester University Press. (Original work published 1979)
- Luhmann, N. (1984), *Soziale Systeme. Grundriß einer allgemeinen Theorie*. Frankfurt a.M.: Suhrkamp. Translated version printed in 1995.
- Nikolaou, C. & Papadakis, N. (2003), European Higher Education in the era of change: Context, values, politics and the stake of the new partnership between University and “Society at Large”. Proceeding of the 6th ESA Conference, University of Murcia, Spain, 23 – 26 September 2003. Research networks #21, Social Theory, (pp.1-9)
- Pavlova, M. (2005). Threats or Opportunities for university-TAFE collaboration in Australia: a case study of Technology Education. Keynote address presented at the International seminar *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, Bonn, 8 – 10 September 2005
- Rauner, F. (2005). Vocationalism in Higher Education: A Reflection on the Stigmatisation of Technical Vocational and Educational training. Paper presented at the International seminar *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, Bonn, 8 – 10 September 2005
- Schulte (2005). Changes of the employment market and the implications for vocational training in universities. Paper presented at the International seminar *Vocational Content in Mass Higher Education? Responses to the Challenges of the Labour Market and the Work-Place*, Bonn, 8 – 10 September 2005
- Staron, M., Jasinski, M and Weatherley, R. (2006). *Life Based Learning: A strength based approach for capability development in vocational and technical education*. A report on the research project “Designing professional Development for the Knowledge Era”. TAFE NSW: Darlinghurst, NSW.
- Stehr, N. & Ericson, R. V. (1992). The culture and power of knowledge in modern society. In N. Stehr & R. V. Ericson (Eds.), *The culture and the power of knowledge: Inquiries into contemporary societies* (pp. 3-19). Berlin; New York: Walter de Gruyter.

Toulmin, S. (1972). *Human understanding* (Vol.1). Oxford: Clarendon Press.

Toulmin, S. (1995). Foreword. In R. F. Goodman & W. R. Fisher (Eds.), *Rethinking knowledge: Reflection across the disciplines* (pp. ix-xv). Albany: State University of New York Press.

Young, M. F. D. (Ed.). (1971). *Knowledge and control : New directions for the sociology of education*. London: Collier-Macmillan.

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