Using the past to predict the future: what futures are documented for higher education?

Purpose – As we again consider what the future holds for higher education, this paper provides a review of the futures documented for higher education. Authors including (McNay 1992; Schuller 1995; Bourner *et al*. 2000; Abeles 2006; Avila and Ledger 2007; Tynan and Lee 2009; and Melville-Ross 2010) have scoped the future for higher education. This paper considers the structure of these predictions and explores the changes that have been proposed.

Design/methodology/approach – The analysis of literature in this paper refers to documents produced by: governments and their agencies; books; and academic articles. This categorisation is based on the framework used by Tight (2003). Two additional constraints are placed on the literature to keep it focused and manageable. First, the literature is restricted to publications in the English language. Second, the literature is limited to material published in the last twenty years. The rationale for this restriction is that the majority of futures research is produced with a twenty year horizon.

Findings – Numerous ideas on the future of higher education have been proposed over the last twenty years. Authors have proposed ideas under a range of themes. Although no significant pattern emerges, repeatedly authors have proposed change in relation to: access, teaching, institutional design, funding, ICT/virtual delivery, the student experience and the needs of the economy/labour market.

Originality/value - The value of this article is to help create some order, providing an overview of previous writing on the future of higher education.

Keywords – Higher education, futures, previous research, university

Paper type – literature review

Introduction

Tight (2004) explains that higher education research has grown substantially in importance over the last two decades. This growth has paralleled the significant change in higher education provision during this period. Change continues as a result of the evolution of the post-secondary education landscape and the changing demands of societies and economies. Therefore, Vincent-Lancrin (2004, p. 245) proposes that it is timely, possibly urgent, to consider the future of higher education. Arima (2002, p. 1) highlights the need to re-think the purpose of higher education, taking into account the needs of a changing society. In contrast CAUDIT (2010, p. 1) explain that the purpose of higher education has remained constant for centuries: that is to equip students for success in life in; the workplace; in communities; and in their lives. Arima and CAUDIT share the view that: the world around universities is undergoing significant change. Higher education is being challenged to meet inflated expectations and that creating the future requires collaboration across organizational and national boundaries.

Why do we write about the future of higher education?

There is no such thing as a science of the future. For the future the only science is science fiction (de Boer and Westerheijden 2005, p. 1). Research and writing about the future of higher education could stop before it starts. It could acknowledge the belief (Popper, 1961) that it is impossible to say anything scientifically valid about the future. However, Bell (2003) proposes that images of the future shape human behaviour and that they help to produce what will in fact, become the actual future. Dator (2002, p. 5) reports that, futurists are drawn into futures studies in the hope – indeed, often in the belief that it is possible to predict the future if we have the correct theory, methods, data and funding. However, Harty *et al*. (2007) criticise future-oriented methodologies because they fail to imagine a radically transformed future and instead extrapolate current trends forward through time. The outcome is a preoccupation with an almost standard set of themes. This highlights

a paradox within futures studies; they are intended to address the problem of understanding and dealing with a rapidly changing world, but do so with reference to past and current trends and ideas (Harty et al. 2007). However, there are two functions of research and writing about the future. First, it is about ideas, positions, practices and actions in the present. Human action is future-orientated to the extent that it is goal-orientated. For that reason Masini (1993) tells us that our expectations and visions of the future are relevant to our current thinking, understanding and decision making. Abeles (2006, p. 41) tells us that universities change continually. Therefore, we must look at changes in the context of a changing environment; thus making it difficult to predict reaction change. It is the aim of this paper to stimulate discussion and debate about the future of higher education. The review of futures from the literature is an aid to ongoing discussion, debate and strategic visioning within higher education. This is a legitimate research goal and the method has validity in this context (Harty et. al. 2007), and even sceptics such as de Boer and Westerheijden (2005) acknowledge that the function of science fiction is not always to predict the future but sometimes just to think about it.

Method

This paper follows the approach of (Acsente, 2010) and shares findings from documentary analysis conducted during ongoing research on the study of the future of higher education. The analysis of literature in this paper refers to documents produced by governments and their agencies, books and academic articles. This categorisation is based on the framework used by Tight (2003). In addition two constraints were placed on the literature collection to ensure a manageable quantity. First, the literature is restricted to publications in the English language. Second, the literature is limited to material published in the last twenty years. The rationale for this timeframe is that the majority of futures research is produced with a maximum twenty year horizon. The literature presented in this review was collected in three phases: first, the catalogues of thirteen publishers of higher education books were searched. The publishers were: Ashgate, Cassell, Continuum, Elsevier, Jessica Kingsley,

Jossey-Bass, Kogan Page, Open University Press, Oxford University Press, Pearson, Routledge, Sage, Taylor Francis, and Wiley-Blackwell. Second an internet search was undertaken of reports/strategies on the future of higher education for each of the thirty four OECD nations. Third, journal articles and conference papers were sourced using Google Scholar, Emerald, ScienceDirect and informaworld.

Tight (2004) found difficulty in identifying an appropriate scale of *theoretical explicitness*. This study also encounters a challenge when indentifying articles which explicitly write about the future of higher education. A further challenge is that even literature that are classified as being explicitly about the future of higher education vary in the extent of their discussion and engagement. It is not possible to review every text on education to identify ideas on the future of higher education. When conducting my search I selected literature which has *future* in the title. The result is thirty nine documents. Of course during my reading and research activity I have encountered literature which explores and discusses the future of higher education but does not include *future* in the title or keywords. Literature which may be relevant but which was omitted includes literature with the following words in the title: transformation; development; change; implications; new; and direction. A further omission occurs, purely as a result of timing. There will be publications which will emerge subsequently. For obvious reasons these sources are not included in this review. However, readers may wish to consider (Neubauer, 2011 and Moravec and Cobo 2011) as future compliments to the literature reviewed in this paper. I have included three studies which are exceptions to my criteria. When reviewing the literature I conducted citation analysis as a means for indentifying additional literature. Based on this analysis, three articles (Mc Nay 1992; Enders 2005; and Snyder 2006) are included in table 1. The three studies are repeatedly referenced by other future studies. Therefore, I decided to include them in my review on the basis that they are seminal studies on the future of higher education and as such are essential reading for those interested in the future of higher education. Furthermore, the three studies utilise sophisticated data collection and idea generation approaches and are written in a style that challenges the reader to consider a comprehensive range

of futures. I acknowledge that my approach (and I would argue any approach) is not exhaustive and that I may have omitted literature from this paper. Despite the aforementioned limitations I am confident that the review presented in this paper is valuable to those who have an interest in the future of higher education.

How do we write about the future of higher education?

In this section I follow the advice of Tight (2003) and divide my analysis by type of publication. The result is three groups: policy reports, books and academic articles. Two additional categories are used in table 1. The categories are method and themes. This categorisation helps to capture the diversity of methods and themes within literature on the future of higher education. The key characteristics of the studies (n = 39) are presented in table 1.

Author	Format	Method	Themes
Schuller (1991)	Book	Conceptual	Access, governance and quality.
McNay (1992)	Book	Scenarios	Diversity and equity, individual and collective identity, freedom and trust, collaboration and community commitment.
McNair (1994)	Article	Conceptual	Funding, quality, accreditation and adult education.
Melville (1998)	Article	Conceptual	Access, diversity, institutional type, funding, fees and flexibility.
Johnston (1999)	Article	Conceptual	Mission, learning outcomes, delivery and resource management.
Bridges (2000)	Report	Conceptual	Access, virtual learning, student experience and curriculum design.
Swogger (2000)	Article	Conceptual	Student enrolment, distance education and staff recruitment.
Guri-Rosenbilt (2001)	Article	Conceptual	Student constituencies, role of academic faculty, knowledge generation and delivery, organisational infrastructure and globalisation.
Hyland (2001)	Article	Conceptual	Knowledge society, institutional structure and globalisation.
Arima (2002)	Conference	Conceptual	Scale, mission and independence of universities.
Peters and Humes (2003)	Article	Conceptual	European integration, globalisation and R&D
Miller (2003)	Report	Scenarios	Lifelong learning, networking, diversity, tradition and entrepreneurship.
Teichler (2003)	Article	Conceptual	Expansion, structural diversity, Institutional management and professionalisation.
Newman *et al.* (2004)	Book	Conceptual	Competition, expansion, virtual institutions, technology and globalisation.

Vincent-Lancrin (2004)	Article	Literature review of driving forces	Tradition, entrepreneurship, the market, lifelong learning, networks and diversity of learning.
Enders et al. (2005)	Report	Delphi panel	Structures, policy and learners.
Avila and Léger (2005)	Book	Policy review and think tank	Politics, the labour market, the value of education, social demands, and quality.
Hilton (2006)	Article	Conceptual	Learning outcomes and the needs of the labour market.
Hinchcliff (2006)	Article	Conceptual	Nanotechnology, biotechnology, computer science and robotology.
Kyong-Jee and Curtis (2006)	Article	Survey	eLearning, eTeaching and emerging technologies.
Mi-Hea and Kang (2006)	Article	Conceptual	Curriculum, business needs, labour market and quality.
Snyder (2006)	Article	Literature review/scenarios	Time in education, fuller education and further education.
US Dept. of Education (2006)	Report	Conceptual	Access, affordability, innovation, accountability and learning.
Young (2006)	Article	Conceptual	Post-secondary education, massification, mission drift and organisational design.
Economist (2008)	Report	Survey	Technology, online learning, global competition and corporate-university partnerships.
ESU (2008)	Report	Conceptual	Active citizenship, labour market, emancipation, personal development, academic socialisation and the educational environment.
Malandra (2008)	Article	Survey	Learner assessment and accreditation.
SARUA (2008)	Report	Conceptual	Strategic Vision, funding and university-firm interaction.
Sherren (2008)	Article	Conceptual	Liberal education, interdisciplinarity, cosmopolitanism, civics, and citizenship.
Davis (2009)	Article	Conceptual	Diversity, access and staff recruitment.
Stephens (2009)	Article	Scenarios	Access, curriculum, management, external environment and assessment.
Bell et al. (2009)	Book	Conceptual	Academic freedom, learning landscapes, quality, professional development, technology, mature learners and student experience.
Tynan and Lee (2009)	Article	Case Study	Innovation, sustainability, networked society and millennial learner.
Brown (2010)	Article	Conceptual	Access, funding, fees, collaboration, curriculum and organisational structure.
CAUDIT (2010)	Report	Conceptual	ICT, collaboration and governance.
Clawson (2010)	Book	Conceptual	Governance, access and funding.
Haigh (2010)	Book	Conceptual	Structure, growth, access, private provision, funding, governance, labour market and R&D.
Norzaini (2010)	Article	Conceptual	Economic drivers, democratisation of knowledge, corporate university and the learning environment.
Melville-Ross (2010)	Article	Conceptual	Leadership, institutional capacity, teaching, research and employer engagement.

Harty *et al.* (2007) offers a useful approach for categorising futures studies. Using an adapted version of this categorisation allows methods for futures studies to be classified into three approaches:

1. First, authors collate the views of *experts* regarding future concerns, often through workshops, interviews, or participation in some variation of a Delphi panel. These reports then present this information, often in the form of scenarios.

2. Second, authors (often recognised experts) will engage in speculation and provide their own opinions. Typically this approach will appear in academic journals as conceptual papers which aim to challenge the readers' expectations.

3. Third, the authors are government departments or agencies. These reports will draw on a range of secondary data and present an opinion aligned to a strategy for the development of a national higher education system.

Table 1 illustrates that methods for studying the future of higher education don't vary significantly. Indeed the literature reviewed for this paper are predominately conceptual papers. These fit with the second method identified by Harty *et al.* (2007). The work of McNay (1992); Enders (2005); Avila and Leger (2005) Snyder (2006) and Stephens (2009) map to the first method identified. And the studies conducted by US Department of Education (2006); ESU (2008); and CAUDIT (2010) map to method three. In addition there are future studies that don't fit within any of the three categories. In this research the studies are: Vincent-Lancrin (2004) who conducted a literature review. Tynan and Lee (2009) adopted a case study approach and Kong-See and Vurtis (2006); Economist (2008); and Malandra (2008) who completed a survey. Irrespective of the approach used in writing about the future, the literature will discuss the future in terms of a number of themes. Harty (2007) explains that the result will be a story presented in one of two forms: those which concentrate on the possible future effects of one particular theme at a time. An example is the Economist (2008, p. 4) who highlight the challenge posed by a single issue (technological innovation) which changes the way that universities teach and students learn. For academic institutions, charged with equipping

graduates to compete in a knowledge economy, the possibilities are great. But significant challenges loom. For its benefits, technology remains a disruptive and expensive innovation. Alternatively Enders *et al*. (2005) discuss a multitude of issues when exploring how higher education systems can pursue the major changes required by modern societies.The literature reviewed in this paper discusses a number of common themes although different terminology is frequently used to describe them. I have attempted to categorise each piece of literature in terms of the themes used to describe the future of higher education. In the majority of cases this was relatively straightforward, as the literature explicitly mentioned the themes. However, on occasion the themes were implicit and therefore, there may be some discrepancy between the themes listed in table 1 and the themes another reader may identify.

Authors propose ideas under a range of themes. Although no significant pattern emerges, repeatedly authors have proposed change in relation to seven themes: access, teaching, institutional design, funding, ICT/virtual delivery, the student experience and the needs of the economy/labour market. Other themes which are popular include: further education, globalisation, quality, culture, time spent in education, research and massification. Teichler (2003, p. 182) believes that using a standard set of themes to explore higher education futures can't work:

> *Higher education research activities addressing possible futures related to higher education […] have one element in common. They address thematic areas that are already viewed as very important today and they are assumed to remain a focus of concern, debate and search for improvement in the future. Future-conscious higher education research also could put an emphasis on thematic areas that are currently not in the limelight of public attention, but are likely to be in the near future. Therefore, higher education could try to identify phenomena already visible that have in common obvious potential of becoming sufficiently relevant and problematic.*

When reviewing literature it is useful to have categories which the reviewed literature can be *dropped* into. The majority of themes presented in table 1 can be mapped to the seven dominate themes. In some cases the themes can be matched to more than one theme (affordability could be

mapped to access and/or to funding). Thinking about the futures involves challenging ourselves. Therefore, it is useful to consider standard themes only if we acknowledge alternative themes for thinking about higher education. Different opinions on the same themes are useful. But they must be complimented by authors who explore the future in terms of alternative/new themes.

Vincent-Lancrin (2004, p. 247) explains that: today's stories about tomorrow inevitably face the fundamental constraints of language and uncertainty. The ideas and words that will be used in the future have not yet been invented or lived. Therefore, it is interesting to note the language used by various authors. Some authors use words including: potential and promise which infer an unknown future. There are also authors who use statements which *tick all the boxes* an example is 'it is virtually certain that the future will be different'. Such statements are not helpful in challenging the reader to consider the future of higher education. In contrast Melville (1998) is very definite in his predictions. Alternatively Snyder (2006, p. 53) uses radical language like: revolution, painful and traumatic to engage the reader.

Is there a story emerging about the future of higher education?

Is a story emerging? Across the thirty nine documents there is consensus on the challenges and opportunities facing higher education providers and those who help design and direct policy for higher education. However, there is little consensus on what higher education will look like in the future. As an example, we are told that ICT and virtual learning will have a significant impact but no common picture emerges of the virtual university, learner or educator. Why? Although a significant volume of research has been completed on the adoption of technology by universities and the impact of technology on the teaching and learning environment authors struggle to identify the technology that will be available to universities. The speed of technology development means that although authors are consistent in the view that traditional delivery and organisation structure will

be altered it is not clear from the literature how change will occur. Authors diverge in terms of the speed and scale of change they identify. On occasion we read about virtual universities with minimal traditional learning. But we also read about the slow pass of change as actors (particularly academics) resist. This leads to a frustrating outcome from the literature. Faced with the difficulty of identifying a *clear* future authors regularly propose a compromise where change (not just that driven by ICT) is proposed as complimentary to existing delivery. Of course this is a possible, perhaps even probable outcome but the result is that the literature provides a picture of the future that is at best *fuzzy*.

Perhaps in understanding the challenge of creating a coherent and possibly true picture of the future it may be useful to consider the accuracy of previous futures studies. For this I reviewed a small sample (the studies published in the 1990s: Schuller 1991; McNay 1992; McNair 1994; Melville 1998; Johnston 1999) to see if the *picture* the authors created had indeed been reflected in the development of higher education. It is interesting to note the themes that the authors wrote about: access; diversity; flexible learning; adult learners; mission; and accreditation. These themes reflect the start of massification. More recent publications (Young 2006) deal with the impact of these changes under the theme of massification. The authors (in the 1990s) discuss the need to widen participation, to increase diversity and to engage with non traditional learners. The authors paint a positive picture of a larger higher education system with increased diversity. The expected impacts are positive for the economy and society. The predicted increase in numbers has materialised. Teaching strategies have adapted to match the challenge of diversity. Flexible and blended learning are now accepted teaching strategies, higher education has altered its mission and the system of accreditation has changed dramatically. So yes there is value in conducting futures studies and yes authors can and do offer a valuable insight into the future direction of higher education.

Although it is challenging to summarize the ideas of thirty nine authors I will provide a short summary of writing to date on the seven dominate themes.

- **Access:** over the last twenty years authors have successfully captured the move from elite provision to mass higher education. In general authors underestimated the growth of higher education. Many authors cited cultural reasons for the slow uptake of places among non-traditional participants. Post 2004 authors have begun to explore the future for a higher education system characterised by massification. Some indicate a withdrawal as the aspiration of mass higher education is superseded by the need to fund (through increased fees) higher education. Others write about a transformed teaching and learning environment which has embraced and adapted to diversity and is moving away from the traditional model of higher education provision.

- **Teaching:** twenty years ago authors didn't commit significant time to writing about future teaching techniques/strategies. Subsequently authors have written extensively as a reaction to diversity and the increased regulation/monitoring of teaching practices. Authors have identified the need for academics to engage with training to enhance their teaching approaches. Moving forward we are told that higher education institutions (HEIs) will be characterised by virtual educators and that traditional delivery (chalk and talk) will be reserved for large groups. Some of these predictions are obvious and can be gleaned from observing changes at innovative universities.

- **Institutional design:** higher education institutions although increasing in number over a sustained period of time had not changed substantially when the authors in this study started to write about the future. However, the last twenty years has seen a rapid change in the variety of institutions providing higher education. But authors have not engaged with describing new or different designs. Instead writing in this theme is dominated by identifying where new designs have emerged and speculating about how likely these designs are to become mainstream.

- **Funding:** the twenty years covered by this study have seen a shift in the discussion about funding, from a need to lower the cost of higher education to support the increased participation to the need to meet funding gaps. Was this shift predicted? Yes is the simple answer. Authors predicted that fees would drop as larger numbers entered higher education (economies of scale). And although subsequent writing focused on the impact of massification authors did identify that in the long-term economic realities and the need for high levels of investment in RD&I would result in an increase in the fees charged to students. Another change consistently discussed in the literature is the need to increase the proportion of funding available via competition.

- **ICT/virtual delivery:** this theme has been extensively explored and the implications for teaching and learning identified. Authors proposed a virtual learning environment that facilitates distance and independent learning. The scale of change is perhaps not identified but the direction is. Authors see the arrival of Information communication Technology (ICT) as challenging traditional delivery models, triggering a re-orientation of delivery with consequences for module and syllabi design. There is sufficient evidence that this course of change has and is occurring.

- **The student experience:** strangely this theme although central to higher education is discussed in what I would describe as an ad-hoc fashion. On some occasions the impact of other changes is discussed for students but without any mapping of the future for students. Other authors choose to describe the changed approach of students to engaging in higher education. But this tends to be about how students view the service that they receive rather than focusing on their experience while in higher education. In addition we read about the student as a graduate with new/different skills but we don't discover how the student experience is changed to acquire these skills.

- **The needs of the economy/labour market**: the futures studies reviewed in this article repeatedly propose that higher education will change to closer align its outputs with those

needed by governments and labour markets. This is happening and to a large extent as described. Modules have changed to include work skills, syllabi are changing to emphasise work-based skills, work-placements have increased in popularity and consultation with external groups is now a significant feature of new programme design. More recent studies have identified shorter more flexible training and qualifications as the next stage. One predicted outcome is that institutions will deal with internal resistance to these changes by supplementing rather than amending current delivery with new initiatives. This has implications for cost and the mission of HEIs.

In providing an insight into what has been written about higher education I have had to leave out themes including: further education, globalisation, quality, culture, time spent in education, research and massification. This is a limitation of this study, but within the constraints of a journal article I think my approach is appropriate. Perhaps a similar review would engage with additional themes when summarising the research into the future of higher education.

Conclusion

Thirty nine pieces of literature were reviewed in this study. Key themes were identified in each. There is evidence of a set of seven dominate themes. In addition a variety of other themes appear in the literature. Irrespective of the themes utilised the focus of the literature is captured by McNair (1994 p. 3) who suggests that the questions posed by futures writing touch on the whole higher education system: on what is taught and how it is taught, on how institutions are organized and how they relate to the world around them, and to our notion of higher education.

I have enjoyed immensely undertaking this study. I hope this article encourage others to write and that they use this paper as a framework. The frame which I have described allows us to capture the diversity of writing in the future of higher education. My overall assessment of the literature is that we have too many studies which assume broad changes as the context to writing questions which

challenge the reader to look forward. This is a useful approach to writing about the future but only if the right questions are asked. In other cases the reader is presented with an overview of the current context and not a projection forward. We are also presented with a snapshot of the change environment at the time of writing. The overview of broad changes and/or snapshots are presented as starting points for thinking about the future. But how many starting points do we need? Are we as the literature indicates constantly undergoing a re-examination and/or a re-conceptualisation? In adapting our writing I think it would be valuable to address the following weaknesses in the approaches used to date. The studies: seldom identify the scale of change; identify obvious changes; too often engage in looking back at a lack of change to indicate a future lack of change; don't predict the future but instead offer observations of what innovations are happening. I think if we address these weaknesses than we will engage in the challenge of conducting invaluable future studies. A starting point would be to accept the challenge of McNay (2006, p. 219) who proposes that: in trying to develop a picture of the future we should accept that there are, 'known knowns', 'known unknowns' and 'unknown unknowns' and a fourth category to complete the set – unknown knowns.

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