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Education for sustainable development and quality assurance in universities in China and the Nordic countries: a comparative study

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ABSTRACT

The global goal for education for sustainable development (ESD) is to integrate it at all levels of education. For ensuring it the change has to be put in practice, by transforming universities. The Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) strive to be among the regions that lead the way in enhancing ESD, and want to increase cooperation with China. It is therefore interesting to compare the region with China. We compared ESD and quality assurance between these areas at both policy and implementation levels. The former was based on literature, and the latter was studied with specific surveys in academia in both regions; in two provinces in China and in the Nordic countries. We investigated the possibilities to improve ESD in these regions by benefiting from quality assurance requirements. We found that both regions enhance ESD. The rather similar quality assurance requirements do not include ESD. In China, the respondents viewed quality assurance as sustainable development.

1. Introduction

Competition among higher education institutions, which we call universities hereafter, is increasing globally. At the same time universities have a greater autonomy, which makes different evaluation methods and ranking lists even more important (Federkeil, 2008). Such rankings are important in regions where competition for study places is high, such as in China (Li, 2010). Lukman et al. (2010) evaluated the research, educational and environmental performance of universities and noted that highly ranked universities are also in the forefront from environmental and sustainability perspective.

All policies for enhancing education for sustainable development, ESD, share the objective of integrating ESD into all levels of education (Baltic 21 E, 2002; Grindsted and Holm, 2012; Holm et al., 2012; Nordic Council of Ministers, 2009, 2011; Renmin University of China UNDP, 2010; UN DESD, 2011). The aim for ESD in universities is that graduates in their later professional life could take social, environmental and economic costs and benefits into consideration in a balanced way in their decision-making (Lozano et al., 2013; Svanström et al., 2008). Mader et al. (2013) identified that there is a need to ensure the change, or in other words to put in practice what should change. This means that university management is expected to presume a response from faculty in universities concerning their actions for daily routines for sustainable development in education, research and collaboration. According to Mader (2013) these actions drive transformation.

The global aim of quality assurance in universities is to secure and develop quality of education (Pratasavitskaya and Stensaker, 2010). Research concerning quality assurance in universities has been reported and evaluated for a wide range of countries with varying economic status by Harvey and Williams (2010) and Pratasavitskaya and Stensaker (2010). Certifiable quality, environmental and integrated management systems, used in industry can be applied for quality assurance in universities even though it is not yet very common (Disterheft et al., 2012; Federkeil, 2008). Quality management can be viewed as a link connecting management theory and environmental sustainability (Rusinko, 2005). According to Fadeeva and Galkute (2012) ESD could bring a new insight to development of quality assurance. So far, no certifiable tools exist for sustainable management that could help environmental managements to provide solutions for consideration of environmental aspects. It is thus up to the universities to modify the existing tools for enhancing ESD.

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China is increasingly competing globally for education and high-skilled employees. China maintains the highest enrolment in universities, when it passed USA with over 20 million students in 2007 (Brown et al., 2008). The number is still small (about 1.5 per cent) compared to the total population in China. The Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) share a common of history, values and knowledge (Nordic Council of Ministers, 2010), and are therefore regarded as one region in this study. According to the Nordic Council of Ministers (2010) the Nordic countries are an innovative and competitive region and well placed for cooperation with China, particularly in the field of climate change and energy. This results in a need for new models for cooperation at both national and university level. Since government policies in the Nordic countries strive to enhance the UN Decade of Education for Sustainable Development, DESD, 2005–2014 (Nordic Council of Ministers, 2009, 2011), it is interesting to compare the region with China, in order to find possibilities for cooperation.

Here, we aim at 1) studying differences and similarities in quality assurance and ESD in universities in China, Finland and to a lesser extent, the other Nordic countries, and 2) investigating the possibility to improve ESD in these regions by benefiting from the quality assurance requirements. The research was conducted both at policy level by a literature study and at the implementation level by comparative surveys in academia in two provinces in China and in the Nordic countries with focus on ESD and not campus management.

2. Theoretical framework

We introduce the theoretical framework for ESD in universities and quality, environmental and integrated management systems, as tools for quality assurance.

2.1. Education for sustainable development, ESD, in universities

Since the 1970s, at least 26 different declarations have been prepared for enhancing sustainability in universities until 2010, all of them emphasizing ESD (Grindsted and Holm, 2012). The UN launched the UN DESD, 2005–2014 in 2002 (UN DESD, 2011). The objective for the DESD is for all levels of education to “help people to develop the attitudes, skills and knowledge to make informed decisions for the benefit of themselves and others, now and in the future, and to act upon these decisions” (UN DESD, 2011, para. 1). In 2009 Gross and Nakayama (2010) conducted a questionnaire to international experts with a focus on drivers and barriers for UNESCO's action goals for the second half of the DESD. The situation was classified as satisfactory for less than half of the action goals. In 2012 UN decided that ESD should be promoted more actively beyond the DESD (UN, 2012). A concrete need for transformation has also been identified by Mader et al. (2013).

Universities have an essential function in local, regional and national development in education of future experts and leaders. ESD works to strengthen this essential function (Svanström et al., 2008). Systematic and critical thinking and understanding of complexity are vital competences for ESD in universities, according to experts in both Europe and Latin America (Rieckmann, 2012).

The Higher Education Sustainability Initiative and the Rio+20 Treaty on Higher Education which was prepared for the Rio+20 Conference, are the latest declarations universities can commit themselves to. They differ from the earlier declarations because the signatory party of these initiatives is committed to actions for ESD. By November 2012, 272 universities had signed the Higher Education Sustainability initiative, including five universities from China and 12 universities from the Nordic countries. The Rio+20 Treaty on Higher Education had 83 signatories by 2013, among others The China Green University Network and several International and European networks (Copernicus Alliance, 2013; UNCSD, 2012). It emphasizes strengthening of cooperation with communities and development of tools for quality assurance needs (Dlouhá et al., 2013). Yarime and Tanaka (2012) concluded, after having reviewed 16 assessment tools for sustainability in universities, such as the Global Reporting Initiative (GRI) and the Auditing Instrument for Sustainability in Higher Education (AISHE), that very few indicators exist that take into account which competencies graduates achieve. However, some universities have developed tools for monitoring the prevalence of sustainability aspects in their curricula and courses. These universities include University of Gävle in Sweden, certified according to ISO 14001, and Novia University of Applied Sciences in Finland, certified according to both ISO 9001 and 14001 (Holm et al., 2012).

2.2. Quality, environmental and integrated management systems in universities

Quality and environmental management is maintenance and constant improvement of all tasks with the goal to exceed customer requirements (Molina-Azorín et al., 2009). A management system can be certified according to a management system standard. The standards that the International Standardization Organization, ISO, publishes are applicable for both production and service companies. The most popular standards globally are those for quality management systems, ISO 9001 and for environmental management systems ISO 14001 (Jørgensen et al., 2006). These standards have a total quality management approach, defined by ISO as a “management approach of an organization, centred on quality, based on participation of all its members and aiming at long term success through customer satisfaction and benefits to all members of the organization and to society” (Finnish Standard Association, 1995, p. 25). The definition indicates that the responsibility for relations to stakeholders is taken into account.

By December 2008 ISO 9001 certificates had been issued in 176 and ISO 14001 certificates in 155 countries. Certified management systems are uncommon for the educational sector. During the period from 2004 to 2008, the amount of certifications in the Nordic countries had not changed much, but in China the amount of ISO 9001 certifications almost doubled during the period, and the amount of ISO 14001 certificates increased over three-fold. In 2008, China had more ISO 9001 and ISO 14001 certificates than any other country in the world, about a fifth of the global total. However, adjusted to population sizes, certified management systems are still three times more common in the Nordic countries than in China (ISO, 2011).

According to Fisher and Nair (2009) tools for measuring quality in universities are continuously improved. A reason to that quality management has not developed at the same pace in universities as in industry is because faculty has not seen the relevance of it (Pratasaviskaya and Stensaker, 2010). According to Bagaoutdinova et al. (2012) and Rabee (2012) quality management that is based on total quality management can improve the educational process.

Some universities are trying to follow society trends and companies as regards to sustainability (Lozano et al., 2013). According to Crawford and Shutler (1999), applying total quality management in universities helps students to be involved in problem solving training and co-operative work, which can further develop critical and creative thinking among graduates, undoubtedly an important aim for ESD in universities. Clarke and Kouri (2009) studied which environmental management system is best suited for the needs of universities by studying both international and national frameworks. They found that different management systems are best