

Thematic Analysis

Three government documents were analysed using the six steps in Braun and Clarke's (2006) thematic analysis framework. These were the National Transformation Program 2020, National Communications and Information Technology Plan and the Ninth Development Plan (Vision 2030 2016, Ministry of Communications and Information Technology 2007, Ministry of Economy and Planning 2010). The aim of this analysis was to identify the core competencies that will be required by LIS professionals in academic libraries in Saudi Arabia by the Vision 2030 National Transformation Plan and the transition to a knowledge economy.

None of the three documents explicitly refers to library and information science, academic libraries or the LIS profession at any point. Therefore, the themes have been drawn from statements which refer to the planned changes to the education system and the proposed new requirements of the education system, as these changes will affect LIS professionals in academic contexts. Three overall themes were identified, which explicitly relate to LIS competencies as drawn from the ALA, CILIP, and ALIA professional competency frameworks and the Academic Librarians Competency Model (ALA 2009, ALIA 2014, CILIP 2014, Rubinowski et al. 2016). The diverse competencies in these frameworks were consolidated into broader groups. The themes, the codes they incorporate and the relevant LIS competencies are shown in table 1.

Theme	Codes incorporated	Relevant consolidated LIS competencies
Production of Knowledge	Research and Development Monetisation of knowledge Arabisation of knowledge Raising awareness	Knowledge production Strategy, leadership and management Continued professional development Information management
Education and Development	Continued professional development Expansion of education/training Standards and specifications Curriculum development	Continued professional development Information management Customer services
ICT	e-learning Digital library Digital curriculum development	ICT skills Continued professional development Accessing and using information Customer services

Table 1: Thematic Analysis Themes and Competences

Theme One: Production of Knowledge

The production of knowledge is core to the aims of the National Transformation Program 2020 (NTP2020) and the desire of the Saudi Arabian government to transition to a knowledge economy. The NTP2020 approaches this desire obliquely, by focusing on specific targets that will drive the Saudi economy away from its oil dependence and increase employment, GDP and revenues in knowledge based sectors. For example, the NTP2020 aims to increase the number of qualified Saudi nurses, ICT professionals and accredited professionals in vocational fields such as medicine and accounting (Vision 2030 2016: 29;32;55-57). These targets, and associated targets regarding continued professional development and human resources development, aim to increase knowledge content created in Saudi Arabia. The Ninth Development Plan (NDP) outlines the underlying strategy behind the specific aims laid out in the NTP2020. The NDP states that the long-term aims of the transition to a knowledge economy encompass the need to make Saudi citizens aware of and interested in knowledge and its sources, and to develop the education system so that it promotes analytical skills, self-directed learning and initiative (Ministry of Economy and Planning 2010: 94; 100; 102; 104). There is also a requirement to increase the numbers of postgraduate students pursuing research and producing new knowledge in Saudi Arabia (Ministry of Economy and Planning 2010: 89; 102, Ministry of Communications and Information Technology 2007: 46;). These objectives are also key to the National Communications and Information Technology Plan (NCITP) which contains both strategic objectives and specific aims. The NCITP notes that intellectual output is fundamental to the development of a knowledge based economy, and that an educational system which focuses on self-directed learning is vital for the improvement of intellectual output (Ministry of Communications and Information Technology 2007: 31; 55).

A corollary to this need for knowledge based content is the focus across all three documents on the Arabisation/indigenisation of knowledge. This includes both increasing Arabic language and culturally Saudi knowledge/intellectual content, and the adaptation of western knowledge/intellectual content to Saudi contexts so that it complements rather than distorts Saudi culture. Initial targets, however, focus on the need for more Arabic language intellectual outputs, primarily in the fields of science and technology (Ministry of Economy and Planning 2010: 4; 17; 19; 46;, Vision 2030 2016: 44; 73;)

The strategic objectives and precise aims relating to the production of knowledge will have significant impacts for LIS professionals in a variety of ways. First, LIS professionals are the exact type of professionals being targeted by the NTP2020 and the NDP, in that they are vocationally trained and, internationally, are professionally accredited. The NTP2020 aims to increase the number of employees in Saudi Arabia who are subject to professional accreditation, and the number of professional associations. There is, therefore, a clear opening for LIS professionals in academic contexts to develop the accreditation frameworks and a professional body within Saudi Arabia, thus advancing LIS as a valuable, knowledge producing profession. There will also be the opportunity to produce academic and professional research and therefore contribute actively to the knowledge economy. This will require the following professional competencies: knowledge production, strategy leadership and management, continued professional development.

Secondly, the expansion of the education system, increases in the number of postgraduate research and vocational students, and the need to increase the volume of Arabic language, Saudi produced peer-reviewed research will impact LIS professionals in universities. LIS professionals will see an increased demand for library services, and likely changing demands. Higher numbers of researchers in Saudi universities will require library services to provide research support. Higher numbers of undergraduate students pursuing vocational degrees or diplomas will result in higher numbers of library users who will potentially have different service expectations. The aims of the National Transformation Program and the Ninth Development Plan are explicitly neo-liberal in their desire to shape the education sector into a training ground for useful workers in the new economy by standardising and commodifying education (Sum and Jessop 2013, Koch 2014, Olssen and Peters 2005). This has, on the international stage, had the effect of directing the focus of academic libraries and LIS professionals towards student support and teaching roles, roles that are not currently common in Saudi Arabia, while increasing student concerns about ‘value for money’ (Beilin 2016, Nicholson 2015). It is likely that these changes will occur in Saudi Arabia. Therefore, LIS professionals will be required to engage with the following competencies: customer services, research and research support, teaching and learning.

Finally, the targets for the indigenisation of knowledge in Saudi Arabia include the production of more Arabic language research and publications and the development of indigenous database and knowledge management tools (Ministry of Economy and Planning 2010: 92, Vision 2030 2016: 44; 73;, Ministry of Communications and Information Technology 2007: 4; 19;). LIS professionals will be at the centre of such programs and will be expected to work with the new knowledge content and knowledge management tools. Therefore, the following competencies have been identified: continued professional development, knowledge production, knowledge management.

Theme Two: Education and Development

Broadly, this theme refers to the strong focus in all three documents on tying the education system closely to the future needs of the knowledge economy and the desire to transform the education system in Saudi Arabia into a process which is able to produce useful employees. This is epitomised in the National Transformation Plan’s strategic objective “Provide citizens with the knowledge and skills to meet the future needs of the labour market” (Vision 2030 2016: passim). This is broken down into the expansion of the education system to incorporate more vocational and professional training (Ministry of Economy and Planning 2010: 95; 101; 102; 104-105, Vision 2030 2016: 11–12; 55–57; 61; 71; 73, Ministry of Communications and Information Technology 2007: 5; 17; 46; 53), the need to develop the curriculum so that it meets the requirements of the modern Saudi economy (Ministry of Economy and Planning 2010: 94; 95; 102;, Ministry of Communications and Information Technology 2007: 5; 27; 34; 43; 47; 52; 55; 75), the development and application of standards and specifications at all levels (Vision 2030 2016: 12, Ministry of Economy and Planning 2010: 92; 99; 105, Ministry of

Communications and Information Technology 2007: 47;), and the focus on training educators and education related support staff to work within the new system (Ministry of Communications and Information Technology 2007: 5; 43; 47; 54; 76, Ministry of Economy and Planning 2010: 92; 102;, Vision 2030 2016: 57; 56).

This is an explicitly neo-liberal aim for the education system, and it will likely have the impacts outlined above, particularly regarding changing service requirements. It will also have significant impacts regarding information technology, while will be outlined in theme three below. Although the government documents only explicitly address university teachers, the changing curricula and the need to train staff within educational institutions to work effectively with the new processes and technologies will significantly affect LIS professionals in academic environments. They will be required to adapt their work to the new requirements of the education system which will involve training and continued professional development. In order to effectively adapt and develop academic libraries, and LIS professionals, for purpose within the new educational system, LIS professionals will need to have a clear understanding of the purpose and context of the changes. Therefore, the following competencies have been identified as being required: continued professional development, customer services, IT skills, information management.

Theme Three: Information and Communication Technology

ICT and digital technologies lie at the core of all three of the government documents analysed. A digital transformation is seen by the Saudi Government to be vital for the success of the transition to a knowledge economy (Vision 2030 2016: 11). Hence, a large number of the specific aims in all three documents were focused on the expansion of ICT and digital technologies and training in these areas. For LIS professionals in academic libraries, the issues that are most likely to impact them are the development and expansion of e-learning, through both distance/online courses and the incorporation of electronic content and online portals into traditional teaching; the development of digital libraries; increased demand for electronic resources.

The implementation of e-learning is a strong theme in all the documents. In particular, there are targets within the NICTP for the percentage of digital content in every class (30%) (Ministry of Communications and Information Technology 2007: 52; 75), the introduction of compulsory IT classes for all university students (Ministry of Communications and Information Technology 2007: 75), the establishment of a national agency for e-learning (Ministry of Communications and Information Technology 2007: 43). There are also broader objectives across the documents regarding the use of e-learning and ICT in education (Ministry of Economy and Planning 2010: 91; 102, Vision 2030 2016: 11).

The use of e-learning is already becoming established in Saudi Arabia as electronic resources are being introduced into classrooms, and online, distance learning courses are being implemented, including an entirely online university (Saudi Electronic University 2015).

However, the impacts of these developments on LIS professionals has not yet been explored and it is likely to be significant. It is likely that, as electronic resources are used more widely in the classroom, there will be an increased demand for them in libraries. Equally, higher numbers of distance learners will require access to online library resources. Although certain information technologies are well established in academic libraries, but these are primarily databases for staff use rather than electronic resources for students. Indeed, the changing requirements of students, and the lack of useful electronic resources in Saudi Arabian university libraries, has been highlighted in research (Al-Saleh 2004). The incorporation of such resources in curricula and in university provisions will change the nature of the LIS professional's role.

One of the electronic resources which are likely to become more common are digital libraries. These have also already been implemented in Saudi Arabia with the launch of the Saudi Digital Library. However, initial research has suggested that it is poorly received by students at this time (Alasem 2013). The expansion and refinement of such resources is outlined in the NCITP as a specific aim of the more general objectives in the NTP2020 and the NDP (Ministry of Communications and Information Technology 2007: 4; 43; 77, Vision 2030 2016: 11, Ministry of Economy and Planning 2010: 95; 99; 101; 103). It is likely to change the nature of the LIS professionals' role away from tangible resources and towards electronic research materials.

As these changes are implemented, the following competencies have been identified as being required: ICT skills, accessing and using information, continued professional development, customer services.