

A Service-Oriented Perspective in Higher-Education Curriculum Evaluation

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Abstract

The work done on evaluating higher education curriculum covers a wide area, but this study will focus on the service perspective in which higher education organizations evaluate the important holistic factors in higher education curriculum evaluation. The aim of this paper is to highlight the gap between the traditional knowledge, skills and abilities (theoretical and academic), work done on evaluating higher education curriculum and the service oriented experiences proven to add value in other industries. The idea is to build a case for a service oriented framework for evaluating higher-education curriculum, and see how curriculum evaluation in higher education from a service orientation perspective could possibly change the nature of academic work in higher-education.

The need to understand and assess curriculum evaluation decisions has never been greater. Public and private academic institutions and organizations expect an environment where curriculum decision making processes for education and training are based on well-defined and accounted for practices which delivers justification and value to the decisions. At the same time, academic faculty are operating in a constantly changing and new, competitive market where demand for higher education curriculum changes and proactive evaluation processes and systems can no longer be taken for granted. With traditional evaluation system being utilized in higher education, the challenge imposed by the environment on these academic institutions is to be flexible and responsive. They must have in place systems and management processes that ensure that the needs and expectations of their stakeholders are met and that promote value generation.

This aim of this paper is to evaluate and review literature sources relating to the concept of education as a service and the frameworks that can be used to offer a framework for quality evaluation.

Keywords: Service management, curriculum evaluation, value generation in education

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Background

To improve something in a quantifiable manner, be it a service or a product, there must be a means for measuring it. Higher-education, just like in the service sector, has struggled with the challenge of measuring quality of service. Units in higher-education can be required to have zero defects, just like in manufacturing and then be measured using methods like process control or statistical methods. At departmental level, the quality of education can be measured and evaluated through testing as is done using formal exams. Professional examination bodies do test students on their grasp of subject knowledge; however, given these tests are geared towards the student and not the institution as a whole, the quality of education at the institution cannot therefore be evaluated. Tests and examinations undertaken within the institution also test students, and are incapable for being used in evaluating departments since skills are subjective and are therefore difficult to measure. However, though skills can be said to be subjective, it depends on what is being considered. When the focus is on behaviors and observable attributes as opposed to knowledge and understanding, the issue of skills being subjective may not arise. This is because an instructor may employ diagnostic probes to ascertain the background knowledge; they can also ask questions in the classroom context to verify the students' understanding. However, they have to interpret the learners' behavior to check on what they currently know and understand. Knowledge and understanding cannot always be directly observed. Moreover, tests are constrained by curriculum, which creates circularity to using test results to evaluate the quality of the course, since they are framed within the course as designed and delivered. In addition, test scores are fallible indicators of the quality of education and higher-education institutions' effectiveness, because they are primarily administered to test the students and not meaningful learning which remains the goal of schooling. According to Blewitt and Cullingford, (2013); and Tsinidou, Gerogiannis, and Fitsilis, (2010) test scores are not a good yardstick to test meaningful learning, even though they are seen as the chief indicator used by many communities to evaluate the success of staff of higher-education institutions. Tests cannot reliably, fairly and validly be used to measure the quality of an instructor or meaningful learning largely because knowledge of inaccurate consequences after poor performance of students will deter good and experienced educators from working in the highest need intuitions. Effective higher-education institutions need to go beyond test scores and move towards curriculum-based assessment. Such an approach will make it easier when it comes to understanding students' journey (Foley et al, 2010). This literature review emphasizes that assessing the curriculum is critical in ensuring that higher-education institutions function at an adequate level. Indeed, curriculum is a fundamental issue in the effectiveness and well-being of higher-education. However, there are many challenges currently facing curriculum evaluation in higher-education. These challenges include the lack of defined and legal programs to guide curriculum evaluation as well as the failure to use professionals from both inside and outside the universities to help in developing the correct performance of evaluation.

This literature review deals with Information Technology Infrastructure Library (ITIL) framework in curriculum evaluation in higher-education as a viable and credible approach to address the aforementioned challenges. It seeks to evaluate the practical and principled issues associated with the ITIL framework. Moreover, it assesses the prospects of ITIL, a service oriented approach, to curriculum evaluation in higher-education. Therefore, the focus is to ascertain if the principles that have

been developed and tested around service oriented architecture can provide tools needed to address the current challenges facing curriculum evaluation. Many times the emphasis is placed only on one particular aspect; a practice does not help much in terms of modifying education (Spiel, Schober and Reimann, 2006). And ITIL is a tool that is both viable and effective in solving the issues currently facing curriculum evaluation in higher-education. As mentioned above, ITIL is a service oriented approach, and in the context of ITIL body of knowledge, service is defined as a means of delivering value to customers by enhancing and facilitating the outcomes of the customers. The higher-education system has a siloed and rigid system, and just like systems characterizing other industries, breaking it up into flexible and deliverable services under a unitary governance umbrella could just be what the higher education sector needs. A service oriented approach, and service design principles and uniformity provided by the ITIL framework can help to streamline the process of curriculum evaluation and enable better targeted more responsive and more flexible education programs.

A Snapshot of the Higher-education Sector Today

Changes in technology in the present generation have resulted in a radical shift in how education, especially higher-education, is perceived. The millennial generation, for instance, no longer view higher-education as a privileged service or a right; they view higher-education as a commodity which can be acquired through a variety of means using several systems of delivery (Tempelaar, Rienties and Giesbers, 2009). The perception of education as a product presents several challenges, the main one being that stakeholders lack a good discernment of the outcome-product-service being offered and those being offered by other institutions. Technology has developed in such a way that higher-education can be delivered online or on a mobile device anywhere and the learner will never have to step inside a classroom (Fennell and Miller, 2013).

The issue of communication of education is being driven by competition, where higher-education institutions are spending huge portions of their budgets on attracting new students through activities like marketing and advertising. The commoditization of education is best enumerated by Heber, et al. (2003) whose explanation of what entails a commodity has been adopted by many of today's researchers such as (Soomro and Hesson, 2012 and Blewitt and Cullingford, 2013). Heber's definition states that a commodity is "...something created, produced, grown or manufactured for exchange in the market." (pp. 45). However, since its advent, education was not meant to be a saleable item. In regards to the perception of education as a commodity or saleable product, Heber, et al. (2003), view education as a '...Fictitious commodity'.

Nevertheless, the concept of higher-education becoming a commodity is gaining momentum and courses are being advertised the way electronics and other market products are being promoted. The higher-education institutions are therefore increasing marketing and selling higher-educational courses like commodities. When these courses are being marketed, they come with the guarantee of instant recognition, prestige and that the students will complete them in a few years' time (four or less) and even within a year for Masters Courses. Because of tough economic times, many students rush for these courses, since many of them are offered through online

platforms which never require a student to step inside a classroom. Students want to take the best possible available course from a reputable institution which mean that several higher institutions are offering franchised courses in conjunction with other higher learning institutions of great reputation. Because they pay money for these courses, seldom are there failures, creating questions concerning the quality of the courses offered (Fennell and Miller, 2013).

Curriculum Evaluation in Higher-Education – A historical overview

The interest in the quality of education has significantly increased in recent times, with parents requiring accountability for the education their children were getting. The authorities and higher-education accreditation boards also require that tertiary institutions maintain certain standards to achieve accreditation and maintain their accreditation (New York University, n.d). To better understand the issue of evaluation of higher-education, it is important to appreciate that the American education system is recognized for its academic freedom and flexibility (Devlin and Samarawickrema, 2010).

It is important to also recognize that evaluation of higher-education plays a critical role in establishing the quality of education in the country and the career paths of the students. But evaluation against other courses or institutions is hindered because of the lack of a common curriculum for all disciplines that is implemented across the country and adhered to by all graduate and undergraduate institutions (Astin, 2013). For instance it is rare for there to be course content discrepancy given in a class by two professors teaching the same course, or topic, at different institutions. At times, the discrepancy even happens when it is the case of two professors, who are in the same department and teaching the same course. In addition, the mechanism for evaluating university instructors in the country (USA) has only served to aggravate the situation by amplifying the discrepancy. The common practice for evaluating America's university instructors has been based on students' evaluations (Tsinidou, et al., 2010). In other words, test results of their students are used to evaluate these instructors. Additionally, some higher-education institutions also use evaluations conducted by peers within the department. While the two types of evaluations have been useful, they can result in bias in the process of evaluation. This is because some instructors can decide to make their courses easy for the students to pass, or use other imprudent methods to ensure that their students perform well. If instructors make it effortless for students to pass, it will not challenge them intellectually. This will have an impact on the quality of students that the system is producing. Indeed, producing competent students has at times been compromised by the need for instructors to maintain their "teaching records" in their teaching evaluations. Inevitably, this can have a negative impact on an effective instructor's teaching evaluations, especially when they try to foster critical thinking and make the students to think outside the box.

Experts in the art of quality and total quality management believe that the greatest challenge educators may be facing is how to measure customers' satisfaction in an educational establishment (Heber, et al., 2003). It has not been done before, save for testing and grading which does not directly measure the quality of education. Students' evaluation of teaching is a reliable and stable way of measuring customer (student) satisfaction. Nevertheless, students' evaluation of teaching should only be a

piece of a much comprehensive and richer assessment of teaching, as opposed to the focal point. The lack of comprehensive quality improvement schemes, coupled with increased students expectations and state and federal demands for rising completion rates have driven the need for significant improvement in the quality assessment of higher-education. Given the current environment in which the higher-education sector operates, it has become substantially difficult to achieve total quality improvement, and it is clear that the higher-education sector must import quality improvement and/or measurement methods from elsewhere.

Market Forces Influencing the Quality of Education

Current challenges and needs of the economy and those of students require that there are changes made in higher-education. As Waterman (2014) points out, the pressures to educational providers to continue churning out graduates and the pressure on students to acquire higher-education has resulted in the concept of EaaS (Education as a Service). Many people remember buying software such as MS Office; purchasing enterprise software was a big ticket item that required further customization and implementation. And then after a given time period, the user was required to download upgrade packs from the software maker to bring their system up to date and get greater functionality from their software. The courses presently offered by tertiary institutions can be compared to enterprise software; they take years to finish and are bulky and students must pay for all components, regardless of what they exactly need. However, there has been a failure to shift towards an *a la carte* pricing model where student pay only for what they need, not everything. Customers prefer taking courses and units that relate to their ambitions and professional goals and this need will ultimately compel the universities to shift to the EaaS model from what has been described as expensive and bloated degree programs (Craig 2014).

This may not happen soon, but already signs exist that there is a strong desire for this mode of education and arguably it's just a matter of time before the EaaS is adopted by mainstream tertiary institutions (Soomro and Henson, 2012). Marginson (2004) points to social competition in higher-education as a key force affecting higher-education. His study also found out that inter-university competition is on a national and global scale. Globalization and markets are collectively changing the competition for status goods in higher-education (Marginson, 2004). Tertiary learning institutions will therefore, through such market forces, be required to have such people in mind and offer more flexible, market oriented courses that meet the needs and convenience of the learner while being affordable and generating significant revenue for the course provider.

A driving factor behind this line of thinking is the increasingly business model that tertiary education should take sparingly. Today, there is an increasing focus on patents, profits, using market competition and commercial investments (Altbach, et al., 2011). If this approach is allowed in fee-paying courses, they could have some adverse consequences. It should be noted that in conventional learning and teaching institutions, students should be seen as clients and have a sense of entitlement. Conventional learning and teaching institutions should not adopt the business model approach to education of breaking down of tenured positions, over-stressing the effectiveness and institutionalization and, what's more, the advertising of education as a thing to "student-customers" who just want a degree, not education. This objective

has drastically changed the sphere of higher-education. Students want education that helps to advance their career, set them up to earn more money and get benefits in light of the high cost of education.

Such issues have been at the forefront in promoting and enhancing the modern concept of education as a service. And while it may not be the most desirable and complete form of education, circumstances demand that the EaaS model is used. The rationale of adopting an EaaS model is because of the changing market and for it to become relevant to today's market, education needs to adapt to a changing market. Most higher-education institutions today provide education that is equivalent to enterprise software. Enterprise software is a big-ticket item that one has to customize and implement, and after every couple of years, it becomes necessary to upgrade to a new version. However, Software-as-a-Service (SaaS) companies moved to change all that. Today, it has become possible for businesses to simply "rent" software usage (on a monthly basis). Correspondingly, vendors have also unbundled their offerings to avail it in component parts, enabling customers to buy only what they need. Currently, higher-education institutions are offering training programs that are similar to big-ticket items – they are bulky (big) and will require students several years to complete. And students/customers are required to pay for the whole package irrespective of what they need. Just like with enterprise software companies, customer preferences are increasingly forcing higher-education institutions to shift from selling bloated and expensive degree programs to providing EaaS. ITIL framework can help higher-education institutions to prepare for EaaS because ITIL seeks to promote a service management culture in higher-education (Newman et al., 2010). ITIL should not be seen as a tool, but rather as a set of best practices pertaining IT service. Indeed, the overriding factor of ITIL is the reference to service and it has five core processes and functions which are service strategy, service transition, service design, service operation and continual service improvement. It has already been highlighted in this literature review that ITIL is a service oriented approach, being a means to deliver value to customers by enhancing and facilitating the outcomes of the customers.

The enormous expansion of affordable PCs, Internet broadband networks, and rich training media has made a worldwide transformation in education in which data and correspondence innovation (ICT) is being utilized to change instruction (Craig, 2014). Distributed computing is starting to assume a key part in this change. By making ICT more moderate in price to actualize and simpler to incorporate into classrooms around the world, training can be changed. Undergraduates over the globe can create the basic abilities they need to contend with and thrive in the today's data society. Instruction changes can rise above monetary and social obstructions, giving equivalent points of interest and chances to everybody who has entry to ICT.

As globalization continues unabated thanks to the explosion of information and communication technologies, education has not been left behind. Globalization has been driven from time immemorial by capitalism and the desire to create profits by taking or delivering commodities to or from far off lands (Altbach, 2013). Clearly, free enterprise (capitalism) has always been global, and all through the 20th century, organizations existed with workplaces in different nations. Globalization is different, with audiences appended to it. Amidst the competition, the role of government intervention should be highlighted. Competition is one of the key facets of capitalism. In capitalism there is free competition. In the context of higher-education institutions,

this means competition for status and resources, competition to attract students, competition in the market of international students, and other forms of competition including competition among higher-education institutions for ranking and prestige (King, Marginson and Naidoo, 2011). And much competition in higher-education is defined and regulated by the government. However, regulation of higher-education by the state is increasingly focusing on results, as opposed to processes; in addition, the regulation is on demand as opposed to supply. These new types of regulations have seen the adoption of concepts such as “governance” in the discussion on the administration and governance of higher-education. According to Dickhaus (2012), governance refers to arrangements, both formal and informal that allow higher-education institutions to make decisions and also take action, and is closely linked to education quality.

Globalization and the Quality of Higher-Education

Globalization has been instrumental in the reorganization and restructuring of policy and the world economy in a very complex context. Globalization also presents the issue of global awareness, enlarging our perception of time and space, which leads to a greater sense of community in the global environment. Spring (2014) describes globalization as a considerable loss of nation-state sovereignty, in other words, this definition points to globalization as an erosion of a state’s autonomy.

In the modern world, the place of globalization is immutable because of the growing interconnectedness and interdependence of the world today. There is increasing mobility in many forms, which, as already noted, is characterized by the flow of goods, capital, services, information and people. Globalization has been fueled by other factors, such as technology, which has significantly reduced the costs of international transactions, which is effectively spreading ideas and technology and increasing capita mobility. The major effects of globalization is that it impacts work organizations as well as how people do their jobs, with the world now becoming more flexible. This process orientation described in the interdependence and interconnection of the modern world is defined as internationalization, and higher-education is increasingly becoming internationalized. This higher-education internationalization has emerged as one of the ways in which a country responds to the forces and demands of globalization.

In addition, the idea of globalization of economics bolsters the opportunities for the mobility and flow of knowledge-workers as well as knowledge-seekers throughout the world in unprecedented volumes – more than any other time in history. This means that for a country that is unable to find certain professionals within its borders, it can source for talent overseas. Globalization means that it is now possible to look for prospective candidates for a certain job wherever they may be found. Professionals who cannot find job opportunities in their countries are now at a better position to look for job opportunities internationally. For higher-education students seeking the best education, they can now find placing in many universities anywhere in the world that offer the best education. However, globalization has resulted to the erosion of national policy and regulatory frameworks under which many higher-education institutions are embedded. To foster quality assurance, there is need for a more thorough international harmonization of higher education structures, policy frameworks, degree programs and even curricula.

Globalization forms the set of changes, such as the development of new and global forms of culture and technologies of communication that nations need to follow and accept for them to be in a good position to embrace global competition. In responding to the global competition, which is fueled by globalization, education is emerging as one of the key sectors. In addition, the restructuring of education policy, as well as the organization of educational achievement is now an imperative. Additionally, concerns about the effects of globalization on higher-education have risen. This has been particularly so on sensitive facets of education such as accreditation and quality, as well as the recognition of qualification, depending on the country of origin of a student being accepted in a foreign higher-education institution (Santiago, et al., 2006). One of the most visible attributes of globalization is the emergence of 'borderless' higher-education markets occasioned by the worldwide demand for higher-education.

Education is still a key pillar in the globalized economy. With globalization comes the inevitability of cross border trade; people will move across borders to seek higher-education. Further, educational institutions will set up satellite institutions across borders, either solely or in conjunction with other players to offer education (Morgan, 2010). Tertiary educational providers will also offer education and training, making use of the information super highway to offer content to anyone, anywhere, and even at any time in the world, so long as the person has an internet connection. Instructors will also move across borders to offer instruction, either on a short term or a long term basis (Popkewitz & Rizvi, 2009).

Because people believe that getting the right job skills and papers will offer them a better chance at professional, social and economic development, many people aspire to obtain higher-education. This has seen the demand for higher-education soar, with people in far flung places in the world seeking quality education from well-known institutions. A global trend in which states' investment in education (tertiary education especially) and support for learners in the face of rising tuition and educational costs will likely result in increased competition in the now universally traded commodity of tertiary education. Further, the higher-education sector as well as governments must be ready for an increased involvement in education by the private sector, the free enterprises whose driving force is profit. The last two decades has seen the developing world achieve impressive growth levels resulting in a larger middle class, people that want quality education, usually provided by prestigious institutions of education, mostly found in the Europe. As such, there is forecasted an increasing and sustained demand for higher-education across the world. This implies that higher-education will see greater investments by entrepreneurs and capitalists, and invariably, issues of quality are bound to arise (Morgan, 2010).

Trading in tertiary education is a billion-dollar industry, including enrollment of global students, foundation of college grounds abroad, franchised procurement and internet learning. The General Agreement on Trade in Services (GATS) is as of now being arranged under the sponsorship of the World Trade Organization (WTO). GATS is intended to expand trade liberalization universally, and incorporates "training and education" as a services segment. The interest for higher and adult instruction, particularly professionally related courses and non-customary conveyance modes, is expanding in many nations. This is because of the development of the

information economy, development to long-lasting learning, and evolving demographics (Spring, 2014).

Education and globalization have become interconnected in many ways. As noted earlier, higher-education is today an intrinsic factor of globalization. And the issue of quality of higher-education always emerges when one thinks about systems of ensuring quality assurance in the context of contemporary globalization.

Cross border education is a reality today and the direction of flow, as with all things innovative, is from the West and developed world towards the developing world. Cross-border tertiary / higher-education won't help creating nations unless it is open, moderate, accessible, applicable and of worthy quality. Likewise, key are the disagreeable issues of who grants the degree, who perceives the degree, and furthermore whether this is authorized or quality guaranteed. Numerous creating nations need quality confirmation components. Cross border education provision without taking into account the need for social justice and equity could, and has created a backlash that is manifested as punitive measures and restrictive practices. When talking of social justice, what is implied is that the quality of education provided to students in other countries, especially in the developing world, may be inferior and yet still cost a lot (Turner, 2012). However, major organizations such as UNESCO and OECD among others have a stated policy that relates to both quality and equity which are reflected in the global education policy making. These principles of quality and equity help higher-education institution to foster equity amongst member nations.

The WTO regulations require that countries are bound by the GATS and other free trade protocols, which imply that the traditional national regulators of education quality are slowly being neutered (Altbach, et al., 2011). This is happening quietly in an unseen manner such that soon the national regulatory frameworks may become irrelevant in light of the increasing globalization and commercialization of higher-education. The concept has become global in that countries like Malaysia have become unexpected contenders for leading global exporters of higher-education. Higher learning institutions in Europe should have been early adopters of ITIL as one possible approach for standardization in a world that is increasingly becoming globalized. ITIL has the potential to make the continent and the world more efficient operating under a common framework.

Towards a Service Oriented Evaluation Framework

Higher-education institutions have the responsibility of equipping their students with skills and knowledge that can help them to generate value and be productive in their respective careers. This is because of the fact that qualifications are what demonstrate what a candidate has learnt. The adaptation of ITIL practices and processes are critical in the delivery of this value (Duarte and Martins, 2013). The essence of ITIL is that its learning outcomes are designed to take a candidate from the content knowledge of ITIL to its content application, and provide skills that are critical in the workplace in a distinct and tangible way (Soomo and Hesson, 2012).

ITIL has evolved from being merely a company standard to an international standard, and there is growing need for training and attention to the role of higher-education

institutions in providing students with IT service management certification. Considering that many modern organizations have tied their goals to improvement of their services to ITIL, then it is a tested and tried framework, which higher-education institutions can use to harness the broadest perspective and scope of service management skills. The motivation of using ITIL as an evaluation framework for higher-education curriculum comes from the need to align education to an industry reference point, or model, and as a tried and tested framework (Soomro and Hesson, 2012). ITIL is indeed, an obvious choice for that reference point. Previously, different higher-education institutions would choose to be different and have a long history of academic independence. With ITIL comes the idea of standardization which has made higher-education intuitions to be more efficient and to operate under a common framework; thus the industry has benefited from using the same tools. Through ITIL, the ways of responding and dealing with difficulties has become the same across all higher learning institutions. ITIL is indeed, a standard process for service.

Conclusion

The ability to conduct high-quality assessment has become an absolute necessity in higher-education (Devlin, M. and Samarawickrema, 2010). However, effective assessment requires mastering the skills and professional knowledge involved. And there are many important concepts, method and principles that have been developed in the field of assessment of higher-education. The most prominent concepts, methods and principles have been discussed in this literature review. As Turner (2012), noted, what is being evaluated and assessed dictates the most ideal type of assessment and evaluation. For purposes of planning, the desired outcomes, processes and inputs are enumerated in terms of goals and objectives (King et al, 2012). As such, it was possible for this literature review to distinguish among goals and objective of various concepts, methods and principles to understand the one that provides the best value-results for most of higher-education's stakeholders and critics. As such, it is important to emphasize on the importance of outcome assessment and evaluation (Spiel, et al., 2012). The literature review focused on the service perspective of evaluating higher-education curriculum. The rationale of using a service perspective is because it is an approach that provides a uniform means for offering, discovering and using capabilities that produce desired effects which are consistent with the desired requirements and preconditions (Blessinger and Anchan, 2015). ITIL helps organizations become more efficient in their service planning delivery and oversight elimination. It provides a reliable framework for many organizations for best practices and specifications enabling them to establish a mature and advanced IT service setup (Soomro and Hesson, 2012). This framework is particularly viable and valuable in academia because it introduces models into the Information Technology departments that usually get confounded in architectures characterized by loose processes. In addition, ITIL legitimacy in globalization should be underlined as providing standardization which has pressured higher-education institutions to be more efficient and to operate under a common framework (Cater-Steel, et al., 2008). In addition, as discussed, ITIL has several other noteworthy attributes as a structure in higher-education. It introduces procedural reliability, which is lacking in the curriculums of many higher-education institutions today. This is because ITIL identifies and clearly structures service management processes, by creating a framework which skilled workers can use as a yardstick and build upon (Soomro and Hesson, 2012). It also

eliminates the challenges presented by today's exceedingly personalized process architecture.

References

- Altbach, P. G., Gumport, P. J., & Berdahl, R. O. (2011). American higher education in the twenty-first century: Social, political, and economic challenges: JHU Press.
- Altbach, P.G., Advancing the National and Global Knowledge Economy: The Role of Research Universities in Developing Countries, *Studies in Higher Education* 38 (April, 2013), pp. 316-330.
- Astin , A. W. (2012). Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education: Rowman & Littlefield Publishers.
- Blessinger, P., & Anchan, J. P. (2015). Democratizing higher education: International comparative perspectives: Routledge.
- Blewitt, J., & Cullingford, C. (2013). The sustainability curriculum: the challenge for higher education: Earthscan.
- Cater-Steel, A., Toleman, M., & Toowoomba, Q. (2008). Education for IT service management standards. *Selected Readings on Information Technology Management: Contemporary Issues*, 293.
- Craig, R. (2014). Education as a Service: 5 ways higher education must adapt to a changing market New York: Venture Beat.
- Craig, R. M. (2014). Smarter incident management for higher education.
- Devlin, M., & Samarawickrema, G. (2010). The criteria of effective teaching in a changing higher education context. *Higher Education Research & Development*, 29(2), 111-124.
- Dickhaus, B., (2010), Transformative, but “Invisible” Power? Trade Liberalization of Higher Education Services, *Swiss Political science Review*, Volume 16, Issue 4, Winter 2010, Pages 827–830.
- Duarte, D., Martins, P. (2013). A maturity model for higher education institutions. *Journal of Spatial and Organizational Dynamics*, 1(1), 25-45.
- Fennell, M., Miller, S. D., & Howard, M. A. Responding to the Commoditization of Higher Education.
- Foley, E., Mishook, J., Thompson, J., Kubiak, M., Supovitz, J., & Rhude-Faust, M. K. (2008). Beyond Test Scores: Leading Indicators for Education. *Annenberg Institute for School Reform at Brown University* (NJ1).
- Herbert, N., de Salas, K., Lewis, I., Cameron-Jones, M., Chinthammit, W., Dermoudy, J., . . . Springer, M. (2013). Identifying career outcomes as the first step in ICT curricula development. *In Proceedings of the Fifteenth Australasian Computing Education Conference* -Volume 136 (31-40).
- King, R., Marginson, S., & Naidoo, R. (2011). Handbook on globalization and higher education: Edward Elgar Publishing.

- Marginson S., (2004), National and global competition in higher education, *The Australian Educational Researcher*, 31 (2), pp. 1-28.
- Morgan, J. (2010). Higher education becomes a globally traded commodity as demand soars (1st ed., p. 2). *London: Times Higher Education*. Retrieved from <http://www.timeshighereducation.co.uk/> on 01-Jun-2016
- Newman, F., Couturier, L., & Scurry, J. (2010). *The future of higher education: Rhetoric, reality, and the risks of the market*: John Wiley & Sons.
- Popkewitz, T. S., Rizvi, Fazal. (2009). Globalization and the Study of Education. *Yearbook of the National Society for the Study of Education*, 108(2), 1-3.
- Santiago, R., Carvalho, T., Amaral, A., & Meek, V. L. (2006). Changing patterns in the middle management of higher education institutions: The case of Portugal. *Higher Education*, 52(2), 215-250.
- Soomro, T. R., & Hesson, M. (2012). Supporting best practices and standards for information technology Infrastructure Library. *Journal of Computer Science*, 8(2), 272.
- Spiel, C., Schober, B., & Reimann, R. (2006). Evaluation of Curricula in Higher Education Challenges for Evaluators. *Evaluation Review*, 30(4), 430-450.
- Spring, J. (2014). *Globalization of education: An introduction*: Routledge.
- Tempelaar, D. T., Rienties, B., & Giesbers, B. (2009). Who profits most from blended learning? *Industry and Higher Education*, 23(4), 285-292.
- Tsinidou, M., Gerogiannis, V., & Fitsilis, P. (2010). Evaluation of the factors that determine quality in higher education: an empirical study. *Quality Assurance in Education*, 18(3), 227-244.
- Turner, D.A. (2012). *Quality in higher education*. Rotterdam, The Netherlands: Sense Publishers.
- Waterman, A. S. (2014). *Service-learning: Applications from the research*. Routledge.