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Preparing for Academic Ranking Reports in the Kurdistan Regional Government Higher Education

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Abstract

This paper explains the development of a system of academic ranking across the Kurdistan Regional Government (KRG) colleges and universities. The Ministry of Higher Education and Scientific Research (MHE) at KRG has embarked on a project to develop a system for ranking the universities under their jurisdiction. The MHE wanted their ranking system to be modeled on other established university ranking systems. They studied other systems of academic rankings, considered the factors that goes into them systems and tried to create a similar system of providing data in order to issue such ranking reports.

However, dissimilarities between the established academic system and that of the KRG necessitated modifying to the ranking system in order to provide a reliable and relevant ranking report. This study explains the steps involved in establishing a system for ranking academic performance of Kurdistan universities. It begins by reviewing literature about the established systems of academic ranking, and the factors that are included in their ranking systems. It then details the factors that typically considered into completing such ranking system and how the MHE attempted to modify some of them in order to produce a reliable ranking system of higher education in Kurdistan universities.

Keywords: Academic Ranking System, Kurdistan Academic Ranking System, Kurdistan University Ranking

Introduction

"Despite its critics and inherent difficulties, it seems very likely that university rankings are here to stay. Higher education markets are becoming more open and competitive, with increasing calls for information about quality and effectiveness. Government, business, potential students, the general public and institutions themselves want more relevant and hence, better information to help differentiate varying levels of quality and performance. It is critical, as such, that re-

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> searchers develop pragmatic, educationally sensitive and methodologically informed approaches for managing this increasingly prominent aspect of higher education" (Coates, 2007, p.70)

Academic ranking reports are the reports that are generated periodically (i.e., yearly) and are intended to list in ranked order the academic performance of colleges and universities (Dill & Soo, 2005, Hazelkorn, 2007, Liu & Cheng, 2005). The final result of the reports is the production of "one easy-to-digest number" (Clarke, 2002, p. 446) for each university that represents the ranking of the university enrolled in the system. Academic ranking reports started to be published in the USA in 1983. Similar reports are generated by other countries like the United Kingdom, Canada, France, China and many other countries (Coates, 2007). Additional countries and regions are looking to develop similar reports for their own colleges and universities (Salmi & Saroyan, 2007).

Among the regions that have started working on a system to produce such reports is the Kurdistan Regional Government (KRG) in Iraq. The KRG ministry of higher education (MHE) has started a project to produce annual reports to rank the performance of the colleges and universities under their jurisdiction. The KRG-MHE want to have their reports be similar to the ranking reports issued in more established countries. As an illustration of ranking reports in established countries, we present below in Tables 1 and 2 the ranking reports published by US News and World reports for the top 25 ranked universities in the USA for years 2013 and 2014 respectively.

Table 1 – Best US National Universities	**Table 2 – Best US National Universities**
Best National Universities (2014)	**Best National Universities (2013)**
Rank School (State) Overall Score	Rank School (State) Overall Score
1. Princeton University (NJ) 100	1. Princeton University (NJ) 100
2. Harvard University (MA) 99	2. Harvard University (MA) 99
3. Yale University (CT) 98	3. Yale University (CT) 97
4. Columbia University (NY) 95	4. Columbia University (NY) 95
4. Stanford University (CA) 95	5. Stanford University (CA) 94
4. University of Chicago 95	5. University of Chicago 94
7. Massachusetts Inst. of Technology 93	7. Duke University (NC) 92
8. Duke University (NC) 92	7. Massachusetts Inst. of Technology 92
8. University of Pennsylvania 92	7. University of Pennsylvania 92
10. California Institute of Technology 91	10 California Institute of Technology 91
11. Dartmouth College (NH) 90	10 Dartmouth College (NH) 91
12. Johns Hopkins University (MD) 89	12. Johns Hopkins University (MD) 89
13. Northwestern University (IL) 88	12 Northwestern University (IL) 89
14. Washington University in St. Louis 86	14 Brown University (RI) 87
15. Cornell University (NY) 85	14.Washington University in St. Louis 87
16. Brown University (RI) 84	16.Cornell University (NY) 85
16. University of Notre Dame (IN) 84	17.Vanderbilt University (TN) 84
16. Vanderbilt University (TN) 84	18.Rice University (TX) 83
19. Rice University (TX) 82	18.University of Notre Dame (IN) 83
20. University of California-Berkeley* 79	20. Emory University (GA) 79
21. Emory University (GA) 77	20.Georgetown University (DC) 79
21. Georgetown University (DC) 77	20.University of California-Berkeley 79
23. Univ. of California-Los Angeles* 76	23.Carnegie Mellon University (PA) 76
23. University of Virginia 76	23.Univ. of California-Los Angeles 76
25. Carnegie Mellon University (PA) 75	23.Univ. of Southern California 76
25. Univ. of Southern California 75	23.University of Virginia 76
	23.Wake Forest University (NC)76

There is an involved methodology and prescribed procedure that goes into the development of the ranking reports. The academic ranking reports are generated based of a range of data that are collected, verified, tabulated and then ranked according to specified criteria (Avery et al., 2004, Van Dyke, 2005). Moreover, the reports need to accurately and validly represent the quality rankings of the universities listed (Margison & Wende, 2007). The validity of the reports are largely dependent on the data fed into them. As Coates (2007) noted, the data collected for "rankings are ultimately as valid as the data on which they are based (P. 72)." A primary consideration of the KRG-MHE is to develop a system that feeds valid data into the system in order to produce reliable ranking reports.

This paper reports on the steps and processes that the KRG-MHE has followed in order to establish such a system to produce academic ranking reports for their universities. In order to provide the reader a background on the meaning of academic ranking reports and the processes involved in establishing such a ranking system, we present a literature review of our chosen topic. We also provide background information on the KRG-MHE and the steps that led to their university ranking initiative.

Study Outline

The remainder of this study is divided into the following sections:

- The paper first provides a literature review of academic ranking systems and reports.
- The second section investigates the steps involved in developing the academic ranking reports and the underlying process for producing such reports.
- The third section explains about the KRG-MHE and the processes they followed to create such a system of ranking reports. It also explain about the issues they had to deal with that necessitated some modifications and customization of the initial system.
- The last section presents the conclusion of this study and lists the ranking report for the KRG-MHE universities.

Literature Review - Academic Ranking Systems

This section provides a literature review about academic ranking systems. It begins by defining the term "Ranking Systems", and then discusses the history of academic ranking and factors that lead to the development of effective ranking systems. Such information contributes to understand the background information and stimulates better discussion and recognition as we present in this paper the development of a system for such academic ranking by the KRG MHE.

Ranking Systems – Definition

Different terms have been introduced to describe academic ranking and various definitions have been presented for them. Webster (1986), for example, used the term "Academic Quality Ranking" and described that it:

> [M]ust be arranged according to some criterion or set of criteria which the compiler(s) of the list believed measured or reflected academic quality[; and] it must be a list of the best colleges, universities, or departments in a field of study, in numerical order according to their supposed quality, with each school or department having its own individual rank, not just lumped together with other schools into a handful of quality classes, groups, or levels (p. 5).

Webster's definition of academic ranking touches different characteristics involved in the process. However, Clarke (2002) noted two special characteristics about the definition: first the selection of quality criteria with the people doing the ranking. Second, the quality criteria need to be

combined together either into categories or into one lump sum metric that indicates the quality of the university or the program being ranked.

Hazelkorn (2008) used the term "University League Tables Ranking System" and gave it the acronym LTRS. Hazelkorn explained that LTRS are "contemporary form, type are published by, inter alia, government and accreditation agencies, higher education, research and commercial organizations, and popular media, as a consumer information tool" (p. 193). The interesting description by Hazelkorn's description is that it considered LTRS as a "consumer information tool". This in turn likened academic ranking to many other rankings that are published periodically in consumer magazines, automobile comparisons, the rating of movies, and other similar ratings publications.

Salmi and Saroyan (2007) called it "institutional ranking" and used the term "report cards" to describe academic ranking reports. Salmi and Saroyan described the "reports cards" as

> Constructed by using objective and/or subjective data obtained from institutions or from the public domain, resulting in a "quality measure" assigned to the unit of comparison relative to its competitors. For the most part, the unit consists of tertiary education institutions, primarily universities. However, rankings are also done of colleges or specific subject areas or programs across all institutions (p. 33).

Ranking Systems – Brief History

Van Dyke (2005) noted that the first ranking report of universities in the US was published in 1983 when the US News and World Reports issued their first annual report ranking universities in the USA. The report contained several pages but the magazine listed only the first 25 universities on their printed magazine. The report, which contains the rankings of more than 1000 universities, was saved in digital format and distributed to other participants.

Salmi and Saroyan (2007) have a different recollection of the start of academic ranking. They listed a chronology of ranking activities that started in 1870 and continued until 1982. They acknowledged that some ranking activities started before 1982, but the activities did not continue for long so to be characterized a system. Instead, the efforts were initiated by governmental agencies and local schools, but none were as comprehensive as the one being discussed here. Salmi and Saroyan verified that 1982 is considered the year that academic ranking started—followed by the issuance of the US News and World Report university ranking in 1983.

Although the ranking system may have started in the 1980s, they did not gain familiarity with the public and the general academia until years later. Hazelkron (2008) called it league tables and noted the following development about it.

> While university league tables and ranking systems (LTRS) have been part of the US higher education landscape for decades, they have only reached the level of intense interest, popularity and notoriety around the world since the late 1990s (p. 193).

Numerus factors led to the development of these reports and then producing them on a regular yearly basis. Some of the factors are related to increasing competition among universities and the increased claims of "education quality" among universities (Avery et al, 2004). This led to the need of a system that verifies these claims and to rank them for comparison and verification (Batesdo & Bowman, 2010). Additionally is the concept of having the students as "intelligent consumers" that look for factors that compares performance similar to the ranking of consumer guides and others (Johnson, 1994).

The ranking system has prevailed in the US for a number of years. Other countries followed suit and developed their own rankings. The notable point about all rankings is that they were specific to a country, and, as a result, they did not compare university performance beyond one or a few countries. This was the case until the development of the "Global ranking" that is the ranking of all the universities around the world regardless of their country started (Mohrman, Ma & Baker, 2008, Deem, 2008). Hazelkorn (2012) noted the following about global ranking: "The emergence of global rankings in 2003 has had a revolutionizing effects on perceptions of the world order. While different rankings purport to measure different aspects of higher education" (p.1). The notable point in Hazelkorn's description is the "revolutionizing effects" that is generated from the world as one large academic system of universities that establishing a ranking system for it deemed very helpful.

Ranking Institutions

Different institutions issue various ranking reports for countries around the world. In addition to the institutions that publish country specific reports, there are organizations that provide world-wide or global ranking of colleges and universities. Hazelkorn (2012) listed the most important global rankings institutions:

- Academic Ranking of World Universities (ARWU) (Shanghai Jiao Tong University)
- Webometrics (Spanish National Research Council, 2003)
- World University Ranking (Times Higher Education/QS)
- Performance Ranking of Scientific Papers for Research Universities (HEEACT)
- Leiden Ranking (Centre for Science & Technology Studies, U Leiden)
- SCImago Institutional Rankings
- Top University Rankings (QS)
- World University Ranking (Times Higher Education/Thomson Reuters [THE-TR])
- U-Multirank (European Commission)

The list above is a microcosm of the different organizations that perform rankings worldwide. This indicates that academic ranking is not limited to government agencies or magazine publications; instead, the range of ranking institutions is broader. Salmi and Saryoan (2007) listed the following five groups of institutions that work on and produce ranking reports:

1- Government agencies
2- Independent organizations
3- Newspapers or magazines
4- Accrediting agencies
5- International ranking organizations

Salmi and Saryon added that in most of the developing countries that adopt ranking systems are government agencies that oversee the development of ranking reports. Salmi and Saryon noted further that there are at least 30 reports produced annually which rank universities in the US. They also added that there are "countless" numbers of program ranking reports – like the ranking reports for the MBA (Master of Business Administration) programs. An important point to note is that many reports are being generated with dissimilar ranking (Hazelkorn, 2008). Having that many ranking reports may question the validity and reliability of all the ranking reports (Osterloh & Frey, 2015, Bhattacharjee, 2011). Both these points may need to be addressed in the creation of a system for ranking higher education.

Validity and Reliability Considerations for Ranking Reports

Validity is operationally defined as the reliability of the data being fed into the system of ranking. Also, in question is the reliability of the system that generates the ranking reports. Coates (2007) suggested three factors for developing a ranking system for higher education institutions that address these points:

- Pragmatic
- Educationally sensitive
- Methodologically informed approaches

In pragmatic, it is suggested that the report considers factors that realistically reflect the performance quality of the institutions. Hazelkorn (2008) suggested that global ranking institutions (institutions that rank universities globally) mainly emphasize research production as the prime factor for ranking. This puts the universities that receive research funding at an advantage because they can pursue research and publication with greater rigor. Other universities that do not receive similar funding may be able to focus on other quality factors. As result, it can be argued that emphasizing one factor (like research production) may not reflect quality accurately.

Educational sensitivity explains that it does not violate the academic norm of the universities being ranked. Collecting published data about past performance of the university may help mitigate this concern but other methods of data collection may be used that addresses the point of educational sensitivity as well.

Methodologically informed refer to the steps involved in the production of the report that will be known to both the participants as well as the public. Salmi and Saroyan (2007) explained that one of the problems that faced universities is the change in the methods of calculating quality. They added that occasionally the ranking methodology changed without informing the participating universities and provoked wide spread criticisms for changing the methodology.

Additional factors are cited regarding the accuracy of the generated reports. Clarke (2002) suggested three factors that are typically taken into consideration when the ranking reports are compiled:

- Validity – how valid the data that are gathered
- Reliability – how reliable the methods of calculating quality
- Comparability – how comparable the data that are provided for each category

The Process of Development Ranking Reports

Although different procedures are suggested to develop academic ranking reports, most ranking stakeholders agree on six prescribed steps (Dill & Soo, 2005, Hazelkorn, 2008) that are followed in order to produce the ranking reports:

- Quality categories are established
- Quality indicators are set and denoted to as reputation indicators
- Quality indicators are quantified
- Data are gathered about each indictor for the colleges and universities
- Different indicators are calculated and combined into one easy to understand number
- Produce an overall score on which to rank the academic institution

Figure 1 depicts the steps involved in the production of academic ranking reports.

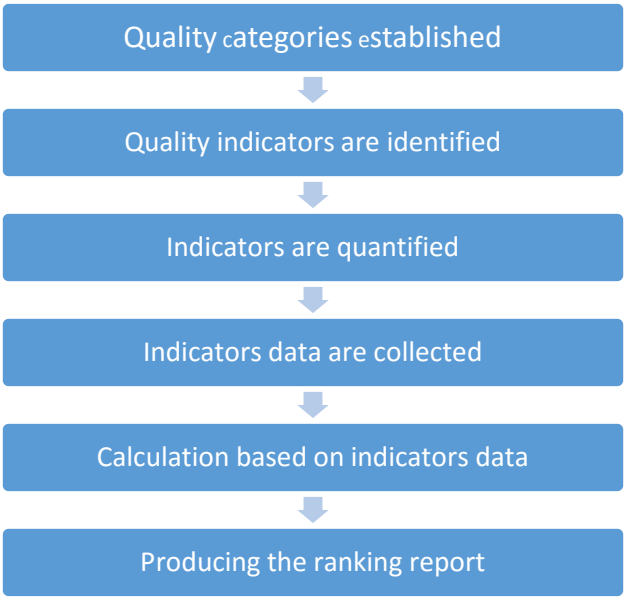

Figure 1 - Ranking Development Steps

The remainder of this section explains each of the steps listed above.

Establishing Quality Categories

The quality categories are general categories established to group other factors that are deemed representative of quality performance. Although there is a general agreement that quality categories need be established as a first step in the ranking systems (Webster, 2001), there is disagreement on what categories to include. Clarke (2002) suggested three categories of academic quality, faculty accomplishments, student achievements and institutional academic resources. Dill and Soo (2005) on the other hand suggested the following three categories for the academic quality:

- Input, that is data of students, staff and faculty as they enter the university
- Process, that is what each institution does to achieve the goals specified
- Output, the production of the university, what the university produced

Establishing general categories for quality is beneficial for two reasons. First, it explains the general natures of the process and does not get into the smaller details factors when sparking a debate of quality. Second, it provides additional justifications for developing the ranking system because it because the categories are modeled into a format more understandable to the stakeholders (Webster, 2001).

Identifying Quality Indicators

Quality indicators are metrics used for each factor taken into consideration for the ranking report. They represent the specifics of the academic quality and are supposed to provide various measures of quality (Clarke, 2002). For example, graduation rates, or student grade averages before entering the university are often used as quality indicators.

Although the indicators of grade point average and graduation rate may be widely accepted indicators of quality in higher education, but more indicators need to be identified to assess the quality of the institution. The other point that need to be considered is to select indicators that are representative of all the work of the institution and not only part of it. That is the indicators need be aligned with the quality categories established in the previous step of establishing quality catego-

ries. So a search for an inclusive list of quality indicators may be deemed necessary for producing quality reports.

Dill and Soo (2005) surveyed quality indicators in four countries (Australia, Canada, UK and US) and noted that the indicators listed below are used as measure of educational quality in the four counties:

- Student/Staff ratio
- Faculty Salary
- Percentage PhDs
- Full-time Faculty
- Student Entrance Score
- Acceptance Rate
- Enrollment Rate
- Per Student Spending
- Class Size
- Alumni Giving Rate
- Graduation Rate
- Freshman Retention
- Adjusted Graduation
- Reputation – Survey
- Producing the Ranking Report

Dill and Soo also selected different indicators and placed them under one of three categories that represent framework for the work of the university: Input, process and output. Clarke (2002) on the other hand, selected a different set of categories and indicators. Table 3 below shows a sample of the indicators under each category as suggested by Clarke (2002):

Table 3 – Suggested Quality Categories/Indicators

Quality Category	Suggested Quality Indicator
Faculty accomplishments	Rating of faculty, counts of faculty awards, count of faculty citation in citation indexes
Student achievements	distinguish alumni and achievements after graduation, standardizes scores of incoming students
Institutional resources	Educational expenditure per students, student ratios, library resources

Quantifying the Quality Indicators

Measuring the quality of something is referred to as quantifying it – assigning a numeric value to indicate the performance (Clarke, 2002). Quantifying is used in different ranking reports like consumer reports, auto ranking, measuring athletic performance and other similar reports. They are also used to measure performance for different colleges and universities, such as showing rate of completion of students or total exam scores.

Reports of university performance in different categories (such as number of students admitted, percentage of graduation) are routinely produced to the media, legislators and other stakeholders. The numbers in the reports are tabulated differently and are often accompanied with charts to make it easier to measure performance. Quantifying indicators are also helpful in the comparison

between the institutions and in observing the trend of performance over a period of time (Clarke, 2002).

Some quality indicators can be easily quantified. For example, the indicator of class size can be calculated by adding the number of students enrolled in each class and then dividing the total by the number of classes. Other indicators are not so easily quantized and may need to agree on a methodology for quantifying them (Coates, 2007). For example, the indicator of faculty reputation and student reputation cannot be easily measured. In order to find a number representative of faculty reputation, some review citation indexes as one measure to quantify the reputation of faculty (Bhattacharjee, 2011). Other distribute surveys asking students or alumni for their involvement as a measure for quantifying student reputation. The point here is that institutions have to find ways to quantify quality indicators to incorporate them in the report (Johnston, 1994).

Data Collection from Universities

Clarke (2002) linked data collection with quality indicators and noted that there is a need to establish "standardized procedures should be used to collect, store, analyze, and present the information (p. 446)". That is, in order to have reliable data, consistent procedures need to apply to all universities participating in the ranking system. Putting this into clearer perspective, the following rules may need be established about collecting data and that feed into producing the ranking reports (Clarke, 2002, Hazelkorn, 2012):

- Same procedures are followed for all universities when collecting data and producing the reports
- Same set of data are collected from all universities
- Source of data can be verified to be reliable and valid
- Methodology followed for ranking need be consistent and public

Doing the Calculation

In this step, the reviewers or reporters arrive at one score (number) that is supposed to represent the academic quality or the performance of the institutor. The score is achieved after completing the following steps:

- Data are collected from each university according to the quality indicators metrics
- Quality indicator are quantified – converted to unique score for each indicator
- Scores of quality indicators are combined to produce the one score that represents the quality performance for the university

Different methods are suggested to produce (calculate) the university quality score. The weight-and-sum approach is often referenced for this purpose (Van Dyke, 2005) that is, each indicator is given a weight and then is calculated to give the final number. The weight for each indicator is not given arbitrarily; instead, the selection is based on the value that each ranking methodology gives to the indicators. Some methodologies place greater value on research, thus they may assign a higher weight on the indicator.

In addition to the weight-and-sum method, other methods are suggested for combining the quality indicator scores for university performance (Avery et al, 2004, Coates, 2007):

- Aggregate institutional performance
- Institutional change over time
- Performance within fields of education

Producing the Ranking Report

The final step is the production of the ranking report. Typical reports include three columns, first, the ranking in ascending order, second column is the name of university and third column list the calculated score for the university. For example, refer to the US News and World reposts listing that we presented earlier in tables 1 and 2.

A note to be emphasized here is that these reports are never without controversy. The ranking reports are always subjected to criticism about the methodology involved in the process of ranking and skepticism of the published report (Batesdo & Bowman, 2009, Frey & Osterloh, 2011, Osteloh & Frey, 2015). Nevertheless, these reports continue to be produced at various countries because (in our opinion) they serve a purpose and also there is no viable alternative for measuring performance. To illustrate this dichotomy, we thought it will be helpful to quote a statement that adequately represent this contrast and draws parallelism between academic ranking reports and democratic government:

> Nonetheless, just as democracy, according to Winston Churchill, is the worst form of government except for all the others, so quality rankings are the worst device for comparing the quality of … colleges and universities, except for all the others (Webster, 1986, p. 6).

Academic Quality Ranking for Kurdistan Regional Government System of Higher Education

This section explains about the development of a ranking system (and hence ranking repot) for the Kurdistan Regional Government (KRG) Higher education. It first gives a background information of KRG, it further explains about the ministry of higher education (MHE) and then delves into the steps followed by KRG-MHE to produce the system and finally produce the report. The steps of developing the ranking report will be grouped and discussed under the following three categories:

- The data collection process
- Quality indicators and calculations
- Considerations for the KRG-MHE to modify the format for the ranking reports

KRG – Background Information

The Kurdistan Regional Government refers to a geographical area located in northern Iraq. The KRG is a semi-autonomous region where most of the government affairs is administered by the KRG. The KRG started to govern this area in 1991 following the first Golf War when the U.S. and allies enforced the no-fly zone. However, the Kurdistan region gained more autonomy following the 2003 invasion of Iraq, the subsequent toppling of the government of Saddam Hussein and then establishing the KRG officially as an autonomous region. Most of the affairs of government is handled by the KRG; among them is the ministry of higher education.

KRG Ministry of Higher Education

The ministry of higher education at the Kurdistan Regional Government (MHE-KRG) oversee sthe public and private universities in three provinces in Iraq: Erbil, Sulaimani and Dihouk. Prior to 2003, there were only public universities in Iraq (similarly in KRG). However, following the 2003 war, private universities started to emerge in KRG. Some of the private universities started quickly but then did not continue for long. Most of the newly developed universities followed the western style of universities and so named after them, like the American Unviersity in Sulaimani,

the British system (like Cihan University) and a third that follow other international system (like Lebanese-French University).

In regards to the number of universities in KRG, Khghed and Dezaye (2009) reported that there are 39 universities in KRG. The KRG-MHE web site (http://www.mhe-krg.org/node/23) lists only 28 universities. The difference is attributed to the fact that a number of private universities started in KRG but did not continue to perform. Table 4 below lists the private and public universities in the KRG region.

Table 4 – Universities under KRG-MHE Jurisdiction

Public Universities	Private Universities
University of Sulaimani	American University in Sulaimani
Salahaddin University	Cihan-Sulaimani university
Koya University	Human Development University
Soran University	Cihan-Hawler university
Zakho University	Komar University
Duhok University	Ishik University
Garmyan University	Newroz University
Hawler Medical University	Bayan University
Raparin University	Cihan-Duhok University
Charmo University	Lebanese-French University
Duhok Polytechnic University	SABIS University
Erbil Polytechnic University	Hayat University
Halabja University	American University in Duhok
Sulaimani Polytechnic University	Ishik University-Sulamaniya Branch

There are a number of differences between public and private universities. Public universities are free - students do not pay tuition for attending public universities. Students pay tuition for attending private tuition. Also, admission to the public universities is handled centrally by the MHE. In other words, students graduating from high school who want to apply to public universities but their admission into the specific college/university is contingent upon quota established by the MHE. The MHE quota admission into colleges takes into considerations factors like the high school scores, their preference of program and the number of applicants to the program/college/university.

The criteria for admission at the private universities are different. Private universities are KRG can set their own criteria for admission subject to approval of the MHE. Similar to admission at public universities, private universities take into considerations the high school grades. They can also require applicants to take standard exams (like TOFEL and SAT) but these universities have not yet started to administer such criteria for exam inclusion in admission.

Data Collection

The KRG-MHE has attempted to collect reliable data as much as possible in the reports they produce yearly about the colleges and universities in the KRG region. The KRG-MHE has a Quality

Assurance department that oversees the collection and verification of various performance categories from all colleges/universities that fall under their jurisdiction. The quality assurance department routinely request information from the different universities and each university has to provide a report about their performance data.

For the purpose of establishing the academic ranking report for the KRG, the MHE has followed the procedures listed below:

- A committee is established to oversee the collection of data from the universities
- The committee has representative from different universities and also from the KRG-MHE quality assurance department.
- The committee established quality categories and identified quality indicators.
- They also created forms to collect data for each quality indicator.
- All the forms are sent by the committee to all the universities asking them to complete and return to the committee.
- The committee reviews the data on the forms.
- The committee has the right to inquire for verification about any of the data reported on the forms.
- If any inconsistency is noted in the collected data, the committee then can send the form back and ask for correctness and verification.

Quality Indicators and Quantifying

The committee in the KRG-MHE identified quality indicators that are consistent with the indicators listed in the literature review this paper. The committee also created input forms to collect indicators data from each university. Appendices A1 through A7 shows the forms that each university has to complete and submit to the ministry of higher education to complete the data collection. Data about the following indicators were collected from all universities in KRG-MHE:

- Academic Staff
- Scientific Research
- International Activities
- Alumni Employment Rate
- Curriculum Quality
- Cultural and Community Activities
- Library and lab resources

The academic staff indicator is used to collect data for academic ranking of the faculty in each university. The form for collection this data is listed in appendix A1. It solicits data about number of faculty for each rank (professor, assistant professor and lecturer). It also examines the achievement for the faculty/staff for the university. It asks them to list the awards they received, the name of granting university, date of award and whether the award is local and national.

The scientific research indicators measures the research and scholarly growth for each university. The form (listed in appendix A2), asks for data about name of journal where the research was published, the impact factor of the journal, list of co-authors and the date of the publication. It also asks about number of publication at reputable journals as indicated by the journal impact factor and supported by evidence to show that.

The international activities from is listed in appendix A3 and collects data about activities that faculty participated in internationally such as conference presentations, workshop attended, training programs participated in and others. It asks for name of partner collaboration, nature of each activity and country and date for the event.

The alumni employment rate indictor form is listed in appendix A4and measures how quickly that graduates started working after graduation. The form asks for data about the name of the graduating student, the name of the company where the graduate is employed, and whether the graduate is employed in the public or private sector.

The curriculum quality indicator measures the extent at which the university remained up-to-date in updating their curriculum. The form is shown in Appendix A5 and asks for data about the level of continuous development, the incorporation of concepts of democracy and the usage of second language. Both of these last features (Democracy and language) are encouraged throughout the KRG and thus included her in this indicator.

Cultural and community activity indicator is intended to measure the extent at which the university staff (faculty, staff and students) are involved in community activities. The form for collecting data bout this indicator is listed in appendix A6 and solicits data about projects involved in the community, objectives of each project, name of some of the participants and whether funds are generated from the project (like fundraising projects).

The last indicator is about the library and lab resources for the university. The form doe this indicator is shown in appendix A7 and collects data about the resources the university made available to their students. This includes library resources and lab resources (such as computer labs, scientific labs and others).

Data about all seven quality-indicators were collected, verified and entered into a system to perform the final calculation for the academic quality. The weight-and-sum approach was used to calculate the quality score for each university. The result of the calculation produced one number in percentage that shows the quality performance of each university. The ranking report was about to be produced and make public, but some consideration emerged and necessitated making some modification to the format of the ranking report.

Consideration for Report Modification

As noted earlier, this was the first time the KRG-MHE has taken this initiative of producing their quality report. Thus, they were careful about the format in which they intended to release the report. After much deliberation by the committee that worked on the preparation for this academic ranking report, the committee suggested to make the following three modifications to the ranking report:

First, there will be two reports produced rather than one. The first is a ranking report for public universities in Kurdistan. The second is for the ranking of private universities. Two factors made this distinction in reporting necessary. First, the admission method and second the financing issue. Admission in public universities in Kurdistan (as explained earlier) is handled centrally by the KRG-MHE with no input from the universities. While private universities establish their own admission rules and procedures. The financing issue related to the tuition. Students attend public universities free of charge. All costs are paid-for by the KRG-MHE. Private universities charge tuition on students enrolled in their programs.

Second, the ranking reports are to be divided into four groups (A, B, C and D). Each group has a minimum and a maximum score to be ranked in the group. In other words, to be ranked in group A, the university has to score above the minimum score set for entry into group A. Universities listed in each group are not ranked, instead they are scored in the group. This was intended to minimize sensitivities about the universities that ranked low in each group.

Third, no score will be published in the reports. In other words, only rankings of the universities will be made public in the report. This is meant to minimize sensitivity to the process and cut down on the competitiveness among public and private universities. The score will remain confi-

dential between selected members of the committee. It will be published to the minister of higher education in the KRG. The minister of higher education will have the discretion to share the scores. But until that discretion is exercised by the minister, the scores of each university remained confidential.

Conclusion – The Ranking Report

After much work and calculation, the KRG-MHE has issued the final academic ranking report for year 2015. Table 5 and 6 below shows the final ranking of the reports produced by KRG-MHE divided by public and private universities respectively.

Table 5 - Ranking of Public Universities in Kurdistan

Group Name	University Name
Group A	No university scored for this group
Group B	Koya University Salahaddin University Soran University University of Sulaimani Zakho University
Group C	Duhok University Garmyan University Hawler Medical University Raparin University
Group D	Charmo University Duhok Politechnic University Erbil Politechnic University Halabja Univesity Sulaimani Polytechnic University

Table 6 - Ranking of Private Universities in Kurdistan

Group Name	University Name
Group A	No university scored for this group
Group B	American University in Sulaimani Cihan University in Sulaimani Human Development University
Group C	Cihan Erbil University Ishik University-Sulamaniya Branch Komar University Newroz University
Group D	Bayan University Cihan-Duhok University Hayat University Lebanese-French University SABIS University

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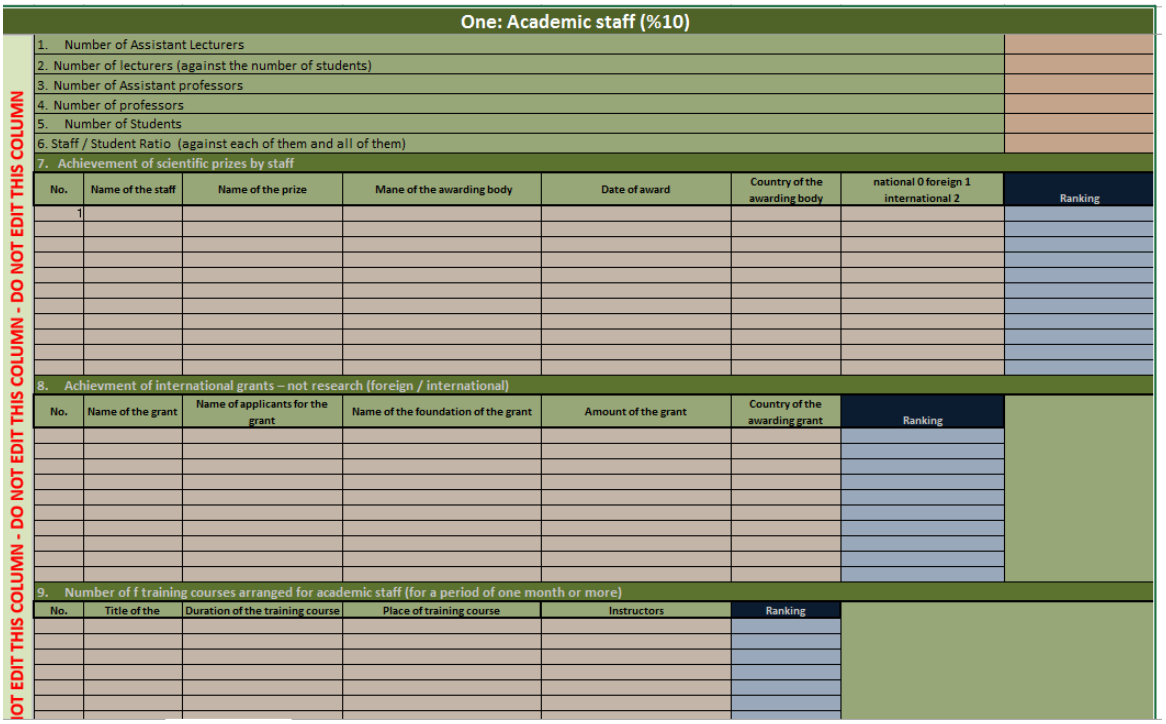
Appendix

Appendix A-1 – Academic Staff



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One: Academic staff (%10)

1. Number of Assistant Lecturers	
2. Number of lecturers (against the number of students)	
3. Number of Assistant professors	
4. Number of professors	
5. Number of Students	
6. Staff / Student Ratio (against each of them and all of them)	

7. Achievement of scientific prizes by staff

No.	Name of the staff	Name of the prize	Mane of the awarding body	Date of award	Country of the awarding body	national 0 foreign 1 international 2	Ranking
1							

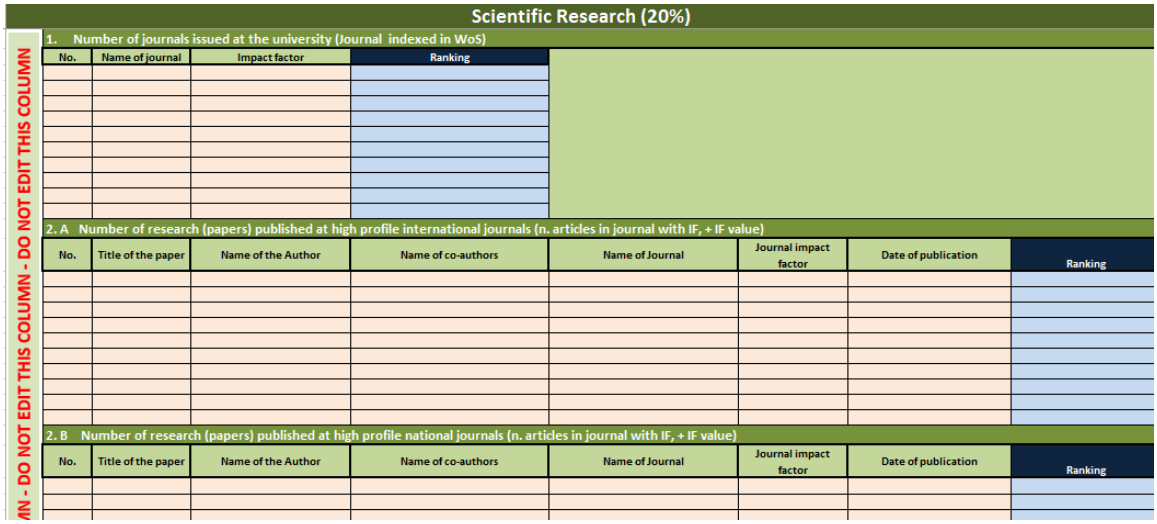
8. Achievment of international grants – not research (foreign / international)

No.	Name of the grant	Name of applicants for the grant	Name of the foundation of the grant	Amount of the grant	Country of the awarding grant	Ranking

9. Number of f training courses arranged for academic staff (for a period of one month or more)

No.	Title of the	Duration of the training course	Place of training course	Instructors	Ranking

Appendix A2 – Scientific Research



Scientific Research (20%)

1. Number of journals issued at the university (Journal indexed in WoS)

No.	Name of journal	Impact factor	Ranking

2. A Number of research (papers) published at high profile international journals (n. articles in journal with IF, + IF value)

No.	Title of the paper	Name of the Author	Name of co-authors	Name of Journal	Journal impact factor	Date of publication	Ranking

2. B Number of research (papers) published at high profile national journals (n. articles in journal with IF, + IF value)

No.	Title of the paper	Name of the Author	Name of co-authors	Name of Journal	Journal impact factor	Date of publication	Ranking

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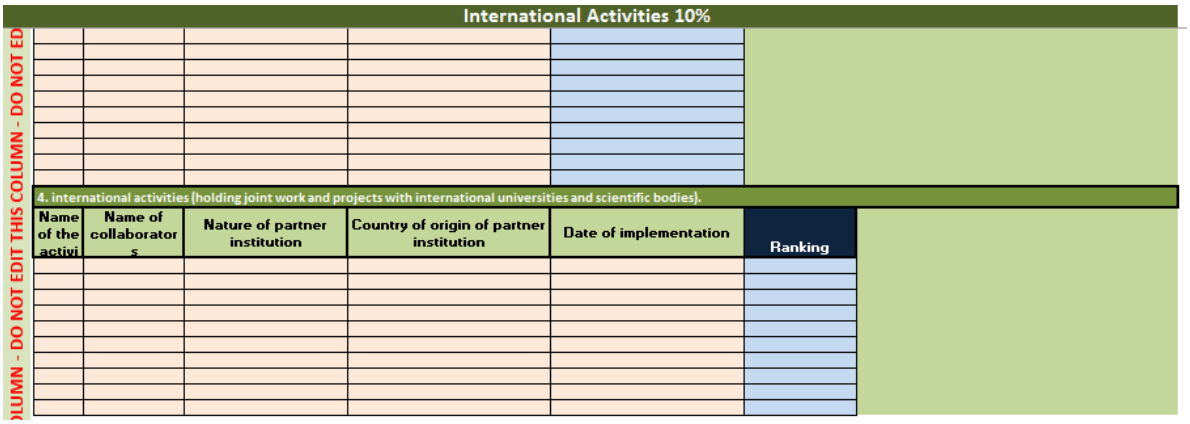
Appendix A3 – International Activities



International Activities 10%

4. international activities (holding joint work and projects with international universities and scientific bodies).

Name of the activi	Name of collaborators	Nature of partner institution	Country of origin of partner institution	Date of implementation	Ranking

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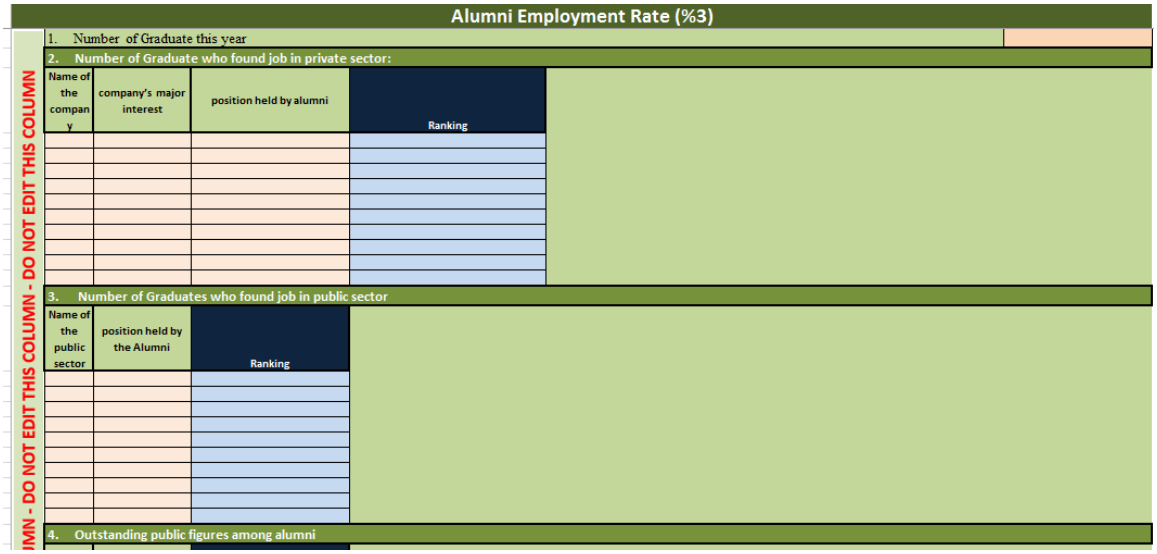
Appendix A4 – Alumni Employment Rate



Alumni Employment Rate (%3)

1. Number of Graduate this year

2. Number of Graduate who found job in private sector:

Name of the company	company's major interest	position held by alumni	Ranking

3. Number of Graduates who found job in public sector

Name of the public sector	position held by the Alumni	Ranking

4. Outstanding public figures among alumni

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Appendix A5 – Curriculum Quality

Quality	
e. Teachers portfolio	
f. Documentation and publication of QA data	
university webpage and portal (the content of the webpage and international visibility) (%4)	
Curriculum Development (Based on Peer Review of Quality assurance data) (%4)	
a. The level of continuous development of curriculum	
b. Updating curriculum	
c. Adapting with scientific development basics	
d. Incorporation of concepts of democracy, tolerance , and anti-violence in to education system	
e. The usage of second language in the education and learning process.	

Appendix A6 – Cultural and Community Activity

Cultural And Community Activity

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community- university partnership projects. %2

	Name of the project	Name of the community partner	Department, School, faculty, college involved	Start date of implementation	Level of study	Ranking
1	DSASD	DASASD				

number of scientific projects that serve the society and become financial income for the university. %3

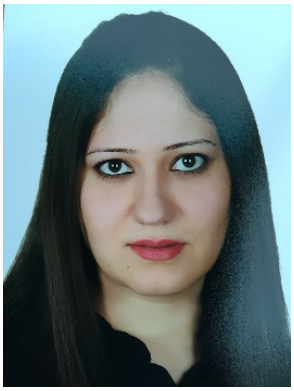
	Name of the project	Objective of the project	Amount of the income obtained from this project	Date of implementation	Name of participant from the university (Department, School, faculty, college involved)	Ranking
1	DSASD	DASASD				

Appendix A7 – Library and Labs Resources

	Library: 4	
1.	Number of books / eBooks at library.	
2.	Number of scientific journals subscribed by the University	
3.	The quality (IF) and the number of e-journals subscribed by the university.	
4.	Number of computer/ student.	
5.	Number of computer / faculty.	
6.	Academic space for each student (library space per student)	
7.	University campuses internet services (bandwidth per student)	
Laboratories: (Based on Peers Review report) 4%		
1.	The quality and level of laboratories (Size of investment in lab equipment)	

Biographies

Azad Ali, D.Sc., Professor of Information Technology at Eberly College of Business – Indiana University of Pennsylvania – has 30 years of combined experience in areas of financial and information systems. He holds a bachelor degree in Business Administration from the University of Baghdad, an MBA from Indiana University of Pennsylvania, an MPA from the University of Pittsburgh, and a Doctorate of Science in Communications and Information Systems from Robert Morris University. Dr. Ali's research interests include service learning projects, web design tools, dealing with isolation in doctoral programs, and curriculum.



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Frederick G. Kohun, Ph.D., University Professor of Computer and Information Systems at Robert Morris University in Pittsburgh, Pennsylvania has more than 39 years of experience as a professor and academic administrator (department head, associate dean, dean, and associate provost), and was the founding director of the doctoral program in Information Systems and Communication. He holds a bachelor degree in economics from Georgetown University, graduate degrees in economics and information science, from the University of Pittsburgh, and a Ph.D. in applied history in technology from Carnegie Mellon University. At Robert Morris University he led the design and implementation of eight technology based academic programs at the undergraduate and graduate level (including a doctoral program) as well as the attainment of ABET-CAC accreditation He is known both nationally and internationally from his numerous publications and presentations in economics, health informatics, decision support, technological impact, and culture—particularly with his research in the MUMPS programming language that began with his doctoral dissertation at Carnegie Mellon University. Currently, he is active internationally as an accreditation evaluator and team leader having participated in more than 22 accreditation visits. In 2007 he was named the International Computer Educator of the Year by the International Association of Computer Information Systems. In 2012 he received the honor of an endowed doctoral scholarship fund under his name.