

## INDICATORS FOR QUALITY IN HIGHER EDUCATION: COMPARISON BETWEEN PAKISTAN AND GERMANY

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### ABSTRACT

There is a strong relationship between knowledge management, quality practice, indicators and quality in the higher educational system. It would help to create the learning environment which would enhance the qualified graduates, skilled persons, who facilitate their countries in its progress. It is needed to realize the importance of knowledge management of quality indicators in Higher Education and its impact on the quality of Higher Education. Knowledge management of quality indicators can be between institutes at national level and also between the international institutions of developed and developing countries. Nevertheless, using only a few indicators to evaluate universities in different countries and cultures seems not to be adequate, as not only the institutions and cultures are diverse but so are the interests and demands of students, too. It will be a central challenge for university rankings in the future to judge more differentiated and to respect different cultures and traditions as well as local demands and different kinds of research.

### INTRODUCTION

International rankings in higher education compare universities all over the world with respect to their performance in research and teaching. Meanwhile, rankings are a central and often criticized instrument for developing images of universities, while their initial idea to provide information for international students to choose the best university is still alive. This idea assumes that the quality of higher education can be compared across countries and cultures without looking closer on national educational systems, local history and culture. It is obvious that these background variables have a strong impact on teaching and research in universities but the central question is, if it is possible to evaluate all universities all over the world with the same set of indicators. To put it in other words: Are there indicators which seem to be relevant for all universities, no matter where they are located?

### HIGHER EDUCATIONAL SYSTEM OF DEVELOPED AND DEVELOPING COUNTRIES

To explore this question by comparing two quite different higher education systems. Germany stands here for a highly developed educational system with a long tradition in higher education as some of the oldest universities of the world can be found here. Currently at least two or three German universities can be found regularly among the top 100 universities in international rankings and Germany seems to be attractive for students from abroad, even if there are more outgoings than incomes. Pakistan in contrast stands for a quite young higher education system that has been expanded seriously during the last decades but is still on the way to find its place in the global competition of higher education. In some respects the higher education system in Pakistan is comparable to developing countries, in some respects it has evolved significantly.

Different aspects of quality of higher educational systems of Germany and Pakistan will be described in a comparative perspective.

### HIGHER EDUCATION OF PAKISTAN

Pakistan is an independent country since 1947. At the time of independence the condition of Higher Education of Pakistan was very precarious. There was only one university, the Punjab University in 1947 (Khawaja, 1996). At that time an institution "University Grants Commission (UGC)" had been established, which accredited the universities in Pakistan. This institution was revised in 1974. It came in its modern form as "Higher Education Commission (HEC)" in 2002. HEC is an independent, autonomous and constitutionally established institution of primary funding, overseeing, regulating and accrediting the Higher Education efforts in Pakistan. HEC played a vital role to enhance the standard of Higher Education.

Furthermore, in Pakistan only 3 per cent of the age cohort of 17-23 years was enrolled in colleges and universities. This is one of the lowest ratios anywhere in the world. Therefore, the deficiency in quality of Higher Education has been noticed, which was/is alarming for the survival of the quality of Higher Education. Thus, for the significant improvement and to enhance the quality of Higher Education, Higher Education Commission (HEC) of Pakistan has established "Quality Enhancement Cells (QECs)" at ten public sector universities in 2006. In 2007-08 twenty more QECs were established in the public sector universities for improvement of their academic, teaching and learning standards. These cells were extended to other fifteen public sector and seventeen private sector universities in 2009-10. To establish the QEC's in the remaining universities is in process (HEC, 2010).

### **QUALITY OF HIGHER EDUCATION OF PAKISTAN**

A lot of efforts have been done for the enhancement in the quality of Higher Education of Pakistan, such as quality of staff and faculty (Abedor, 1987). For the faculty development, the focus is on the knowledge, skills sensitivities of the candidates. Furthermore, the organizational developmental aspect has also been considered to seek the change in the structure of Higher Education. For the instructional development the focus is on systematic design. The beginning of teacher training programs such as pre-service training programs, in-service training programs seminars, conferences and workshops are also included in the quality of Higher Education of Pakistan.

In other factors of quality of Higher Education of Pakistan the quality of students such as admission on merit, control of student progress in the class etc., quality of curriculum, like updated learning material, quality of infrastructure, well equipped laboratories, classrooms, libraries etc., quality of management and governance: Decision making, organizing, staffing, planning, controlling, communicating, directing (Hawkins, 1993; Drucker, 1974), quality of accountability (Massey, 1992), are included. But the question is how far it is implemented in the Higher Education system of Pakistan. Few researches have been done on that.

Conclusions of these researches criticize the quality of Higher Education, while the governmental reports show a positive and satisfactory picture of Higher Education. Ground realities are totally others. So it can be said that the assessment of the quality of education is quite a new subject on Pakistan, though all the universities are subject to financial audit annually; however, traditions of academic audit in many universities are non-existent. There is now a realization that the quality of students, teachers and flawed institutional framework are the main contributing factors in determining the quality of Higher Education of Pakistan. The quest for quality has become a watchword all over the world: this aspect too has recently received an urgent attention in Pakistan. Also due to this aspect other important steps such as the internationalization of Higher Education, marketing of Higher Education by foreign universities, proliferation of Higher Education institutions, competition from the private sector institutions, diminishing financial public resources, expanding size of middle class population and the ability of the people to pay for their education, and the greater accountability have been taken in the meanwhile by Higher Education Commission (HEC).

### **PROBLEMS IN THE QUALITY OF HIGHER EDUCATION OF PAKISTAN**

The importance of Higher Education is also a political agenda but not in top political priorities in Pakistan. Pakistan spends only 2.7% of its GNP instead of 4 % recommended by UNESCO for all developing countries (UNDP, 2002). That means Pakistan paid dearly for neglecting education. That's why Pakistan unfortunately even after 67 years of its existence does not find itself in an enviable position. Even Pakistani Higher Education is struggling through Higher Education Commission (HEC) to improve its quality, but it is still a common perception that the quality of education in Pakistani universities is not according to the international standard and that's why it has deteriorated rapidly. A main reason can be that the system is not responding to a large number of in-puts (which are mentioned above) made for raising the quality.

In some obvious and other reasons, education is not one of top priority of the government. Further, the level of competence and dedication of the teachers stemming from poor remuneration and lack of social status, poor standard of students selection or intake from the schools and colleges. Outdated curricula and learning material, old teaching methods and lack of teaching aids, quipped laboratories and libraries, lack of discipline amongst the student, the teachers and the subordinate staff. According to Iqbal, ineffective governance and management structures and practices, inefficient use of available resources, inadequate funding, poor recruitment practices and inadequate development of faculty and staff, inadequate support for research, politicization of faculty, staff and students, strong skepticism about the realization of reform are other important issues of the quality of Higher Education in Pakistan. (Iqbal, 2003).

University teachers are main factor in the quality of Higher Education of Pakistan (HEC, 2002). Because university teachers accepted challenges and extra workload if they received extra financial reward (Arshad, 2003), but his research showed that there is no system of training for university teachers in Pakistan. Here it can be said that the original research is the neglected field at Pakistani Universities. That's why only 26% of the faculty possesses Ph.D. (UGC, 1987), which is fundamental factor to conduct the research at university. But in the meanwhile HEC has started from 2002 scholarship schemes to send the academics and students abroad for PhD. According to a statistic from the independency of Pakistan 1947 till 2002, in 50 years there were only about approx. 4000 PhD holders, after the establishment of HEC in 2002, from 2002 to 2012 the numbers of PhD holders went only in 10 years double to approx. 8000 (HEC, 2012). But there is again the question of its effect on the quality of Higher Education of Pakistan. This significant quick raising in numbers of PhD holders in Pakistan is due to HEC Scholarship scheme. But how relevant and applicable are the researches of these scholars in Pakistani Higher Education, who did their PhD abroad? A pilot study showed that the academics, who did

their research from abroad cannot apply their research at Pakistani Universities on their returning, because of the significant gap between the research level of Pakistan and the international institutes (Anonymous, 2014). There is missing some communication between inter-institutes and institutes of developing and developed countries, and also culture fit research etc.

Another indication from Malik is that the students, parents and even teachers are not satisfied with teaching standard, physical and research facilities, poor library support, and ill equipped laboratories. (Malik, 2002). According to Moosa & Saeed, there is also the deficiency of the appropriate framework for quality assurance and use of proper quality tools in universities (Moosa & Saeed, 2003), while Kalam (2003) indicated the absence of periodic meetings of all statutory bodies, which he found a basic quality principle. (Kalam, 2003).

#### **INDICATORS FOR THE QUALITY IN HIGHER EDUCATION OF PAKISTAN**

Higher educational policy making is a very important aspect for the quality of Higher Education, because all the planning, implications, controls, results etc. are included in this policy making discussion and indicators can be effectively used for policy decisions (Cohen, 1980). In Pakistan National Educational Policy in 1979 had been decided that the universities would be facilitated with adequate educational scientific equipment and laboratories facilities, libraries with update equipment. A national System for admission in a university has been developed and launched (Read Pakistan, 2015). Pre- and In-service teacher training programs had been organized by the national academy of Higher Education. And the standard amendment in university act has been made for the betterment of the university management.

According to the factors/indicators which had been decided in the national education policy 1979, the first university in the private sector, the Agha Khan University was established in 1983, then Lahore university of management science (LUMS) in 1985. This has set the trend for establishment of other private universities in the private sector according to these standard indicators. Factors like the administration management, quality of teachers, accreditation, student clubs, and 80% attendance strict call have also been included in policy in 1992. 1998-2010 policy brought additional to upgrade the quality of Higher Education by bringing teaching, learning and research process in line with international standards. Furthermore quality of students like standard of student intake and infrastructure e.g. curricula are considered as the major quality factors of Higher Education. For all these things policy making and its implementation is a very important issue. It can also assumed that there is no uniform implementation criteria of HEC for universities. Although the universities are passing through a transition period e.g. due to lack of enough financial resources, the proper yardstick of HEC to assess the quality of the universities is violated badly by the institutes. For example private universities violate the standard criteria for selection of the appropriate faculty members and for the admission of students. Public universities have competitive faculty compared to private institutes but the infrastructure of public universities is not so standard. So both public and the private universities have strengths and weaknesses. It is responsibility of HEC to develop and maintain the standard uniform quality criteria. This is to ensure the provision of quality education at Pakistani Universities. Nevertheless it is now quite interesting to know about the quality of a higher educational system of Germany.<sup>1</sup>

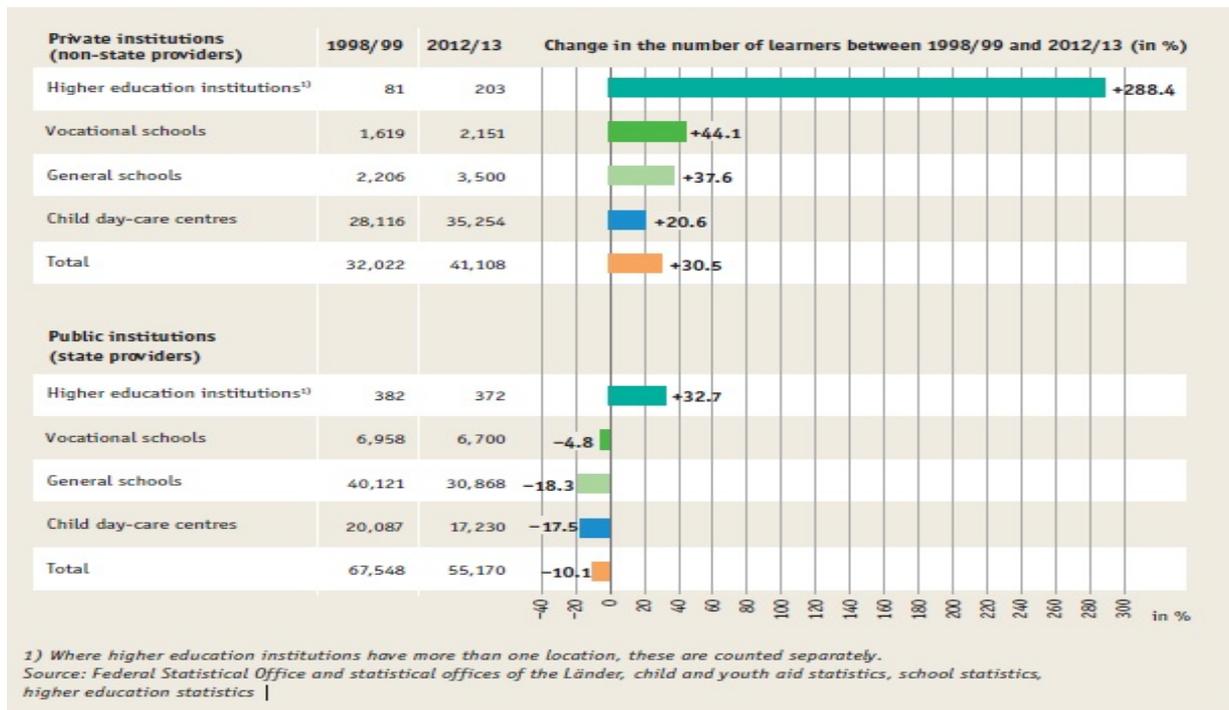
#### **SHORT INTRODUCTION OF HIGHER EDUCATION OF GERMANY**

There are different higher educational institutes with equivalent status in Germany, which provide the different types of Higher Education. The higher educational institutes are based on universities, universities of applied sciences and colleges of art and music. These institutes are accredited and are private, state higher educational institutions and financed and run by state, recognized private institutions, the protestant and catholic churches. Some universities are area specific such as Medicine, Art, and Technology. Whereas the practical work contained area of Engineering, Business and Social Sciences have been offered by applied sciences universities which are mostly private higher educational institutes of this country. However, the overall educational institutes have been decreased, but the Higher Educational institutes in Germany have risen to 24% from 1996/7 (Bildungsbericht, 2014). Due the founding of in the meanwhile large number of applied universities, but with less number of students the number of higher educational institutions becomes more and more. Students are mostly being registered in state universities. One reason can be the significant rising number of study courses on offer, which are approximately 9500 Bachelor and 7000 Master programs (Autorengruppe Bildungsberichterstattung (2014), Bildung in Deutschland 2014). And the rising number of students is shown in following figure:

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<sup>1</sup> Why Germany, and Pakistan the reasons has been described above.

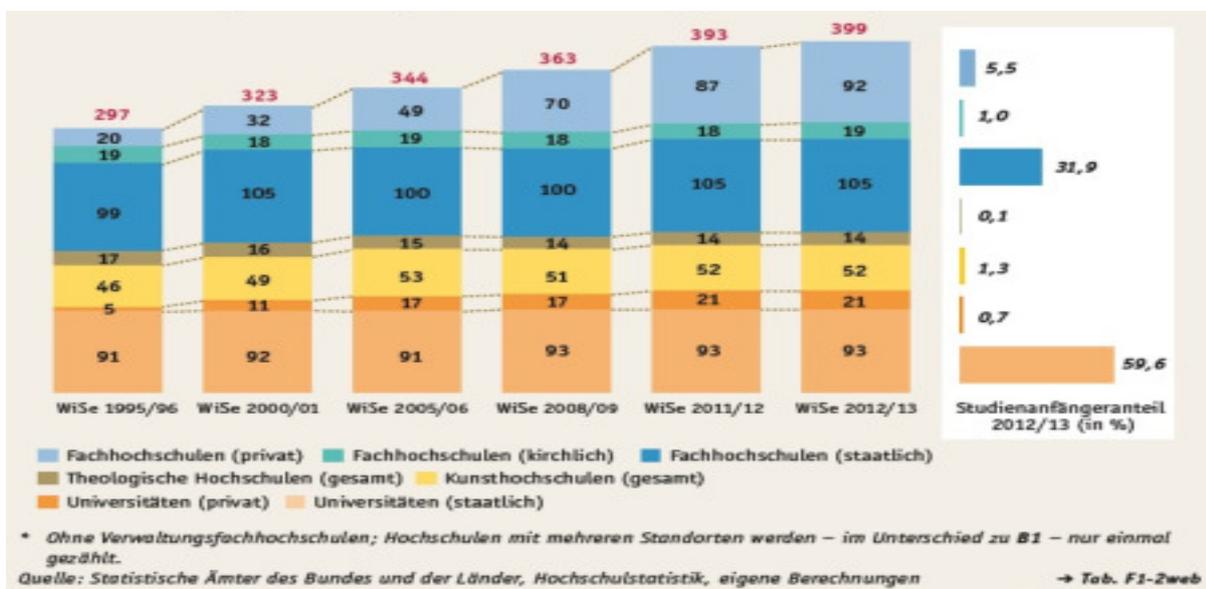
Figure 1: Changes in the number of education institutions and learners between 1998/99 and 2012/13



Source: Autorengruppe Bildungsberichterstattung (2014), Bildung in Deutschland 2014.

In addition, another figure shows the gradually rising number of higher educational institutes.

Figure 2: Number of higher educational institution rate of first-year students winter semester 1995 until 2012/13



Source: Autorengruppe Bildungsberichterstattung (2014), Bildung in Deutschland 2014.

It is a quick view of the rising number and types of higher educational institutes in Germany. Although in the meanwhile in Pakistan, the number of higher educational institutes and in it offered subjects are being raised, which has been mentioned above. However, these are much more less than in Germany. The number and types of higher educational institutes and in it offered subjects in Germany are much more than in Pakistan. There is also big difference between the qualities of higher educational institutes of both countries. Pakistani higher educational institutes are not as qualitative compared to Germany, among the basic reason can be the over flow

of population and very limited sources and insufficient budget for education (UNESCO, 2011; HEC, 2010). Indicators for the quality of Higher Education in Pakistan have been discussed above. In the following the indicators for the quality of Higher Education in Germany will be discussed.

### **INDICATORS FOR QUALITY OF HIGHER EDUCATION IN GERMANY WITH A GLIMPSE OF COMPARISON WITH PAKISTAN**

In German Higher Education, research and teaching are being considered among others as main indicators for the quality of Higher Education, while in Pakistan although teaching is considered as an indicator for the quality of Higher education but research is unfortunately not a prominent indicator. Somehow these both indicators (research and teaching) in higher educational institutes are evaluated since the amendment of the framework act of Higher Education in 1998 (Lohmar & Eckhardt, 2012), but until the end of 1980s the process to evaluate and to improve the quality of teaching, learning and research has not been started in German Higher Education. However, there are two types of this evaluation, external and internal (Lohmar & Eckhardt, 2014; Hochschulrektorenkonferenz, HRK, 2015). Further in German educational system has been described that „In Germany a two-tiered system of evaluation is widely applied which combines internal and external evaluation. The internal evaluation consists of a systematic inventory and analysis of teaching and studying, taking account of research, performed by the individual department or the faculty and concludes with a written report. On this foundation, an assessment by external experts takes place who also lay down their findings and recommendations in a written final report“ (Lohmar & Eckhardt, 2012). In that sense evaluation can also be considered as the indicator for the quality of Higher Education in Germany. As mentioned above, the internal evaluation is very weak in Pakistani higher educational institutes, some institutes are not doing that, while German higher educational institutes practice this also themselves (Neave, 1988), Higher Education Commission of Pakistan has forced the institutes to do the evaluation. In external evaluation at Pakistani Institutes is teaching in main focus of Higher Education Commission (HEC, 2014), for that purpose learning innovation section of Higher Education Commission of Pakistan offers many courses to improve the teaching competence of university teachers and then evaluate teaching quality through professors and researchers of other institutes. It can be called external evaluation, but international evaluation is still missing as another indicator for the quality of Higher Education in Pakistan. In German Higher Education the international evaluation is also included in external evaluation. Furthermore, two more indicators for the quality of Higher Education in Germany are the higher educational policy, which focus on the student learning outcome and second students' learning outcomes (Brennan & Shah, 2000), one more indicator, students' criticism on teaching can be considered an indicator for the quality of Higher Education in Germany. These indicators play a vital role to improve or decrease the quality of Higher Education. In Pakistani Higher Education the deep and close relationship between policy and for which indicator is this policy, is not intensive as in German Higher Education. According to the policy for the student learning outcomes a specific level of knowledge, skills, which can be personal and interpersonal skills (Federal Ministry of Education & Research, 2015), and abilities in a particular educational program should be achieved by a student (Dill & Soo, 2005). Exactly at that point another indicator for the quality of Higher Education in Germany connects itself, which is the family background of the student. Either student has a migrant background, then he needs more time to learn than a native speaker. So that point is also being considered as indicator for the quality of Higher Education in Germany. More deep, specific and sub-indicator of learning outcome of a student with a migrant background can be the equity and quality for all students at all level of education in Germany. This indicator was/is helpful to improve the performance in all areas especially mathematics and socio-economic (PISA, 2012). In 2003, the percentage of low achiever in mathematics was 21.6 %, but in 2012 it decreased significantly to 17.7% (OECD, 2014).

Furthermore, educational monitoring, which can be considered as an indicator for the quality of Higher Education in Germany, had been introduced by standing educational conference in June 2006. This indicator consists of further four areas, which are participation of higher educational institutes in international comparative studies of pupil achievement, higher educational institutes review of achievement of educational standards in comparison between the countries, higher educational institutes comparative studies nationally and internationally to review the efficiency of institutes, joint education reporting of the federation and the countries (Kultusministerkonferenz – KMK, 2015). But in Pakistan as described above such kind of monitoring and on the basis of such kind of monitoring the betterment in the quality of Higher Education is still missing. International Standard accreditation of master and bachelor courses, its curriculum is also an indicator for the German Higher Education (Schwarz & Westerheijden, 2004). Unfortunately, in Pakistan accreditation of master's and bachelor's courses does not meet the international standard; the reasons for that have been reported in the Pakistani section above.

These mentioned indicators for the quality of Higher Education in Germany and Pakistan showed a significant difference between the higher educational systems and their quality of both countries, although many Pakistani scholars and students come to Germany every year for their study and research. Due to the big gap between research and higher educational system, they cannot find some suitable way to convert their learning's in

Pakistani higher educational system on their returning after the completion of their mission (Anonymous, 2013). Cultural difference, communication gap between institutes and inter institutes can also play a role in this regard. Research cooperation especially in social sciences fields between two countries will be helpful to fulfill these differences and may also be helpful to improve the quality of higher education at Pakistani side and help for Germany to review their policy to make research cooperation and to take the students and scholars with their research from developing countries.

#### **NEED OF KNOWLEDGE MANAGEMENT – QUALITY INDICATORS – HIGHER EDUCATIONAL SYSTEM OF DEVELOPED & DEVELOPING COUNTRIES**

In the meanwhile quality in Higher Education has become the most permanent issue in both developed and developing countries. For that it is needed to provide the higher educational policy making continuously support of knowledge dimensions. It can be helpful to achieve the betterment in the quality of higher Educational system. For that it is necessary to analyze the quality indicator in Higher Education (Ankomah & Koomson & Bosu & Oduro, 2005). Further these analyses would be discussed to manage the knowledge dimension framework. It can organize qualitative knowledge education which would strengthen the higher educational system of developed and developing countries.

World Bank also emphasizes the importance of knowledge assessment between developed and developing countries. It helps the developed and developing countries to explore their talent and potential and contribute the knowledge revolution (Malhotra, 2003). Knowledge management positively revolutionizes the system of education of any country and inculcates awareness to explore innovative measures for implementation of beneficial educational system coupled with enhanced qualitative assurance for higher education.

Furthermore, Gyekye described that the categorizing the attained information, expertise and novel means of investigation are important to approach the institutional education of developed and developing countries according to their desire. (Gyekye, 2002). Furthermore, he emphasized the performance of these educational institutes which indicate their successes and its essentiality. And the performance of any institute can be assumed from the quality of its programs. UNICEF and UNESCO have mentioned five Dimensions to recognize the quality assurance in educational system, which are: 1. the environment, 2. the learners, 3. contents, 4. means and 5. Results. That finds the participation of youth and rights of their survival in practical life. (UNICEF, 2000; UNESCO, 2005).

According to Bishop the research activities, teaching and administration play a vital role in educational success and quality. (Bishop, 1992). Another aspect, the knowledge of subject of a teacher should be very high, it would be a good indicator for the learning and the success of students. (Darling & Hammond 2000). To access the high level of knowledge of respective subject and to understand is a problem of several developing countries, which directly impact on the quality of education. In the following table Dare has shown the indicators, their objectivity and formulation.

Figure 3: Formula for Determining Indicators of Education Quality

<b>Indicator</b>	<b>Objective</b>	<b>Formula</b>
1. Student-teacher ratio	To measure the quality of education	$\frac{\text{Number of students}}{\text{Number of teachers}}$
2. Class size	To measure quality of education	$\frac{\text{Number of students}}{\text{Number of classes}}$
3. Percentage of qualified teachers	To measure the quality of education	$\frac{\text{Number of qualified teachers}}{\text{Total number of teachers}}$
4. Survival rate	To evaluate educational efficiency	$\frac{\text{Number of a cohort of students that achieve Grade 12}}{\text{Number of a cohort of students enrolled in Grade 1}}$
5. Repetition rate	To measure the efficiency of the educational system	$\frac{\text{Number of repeating students}}{\text{Total number of students}}$
6. Percentage of educational expenditure in relation to GNP	To measure the efficiency of management system	$\frac{\text{Educational expenditure}}{\text{GNP}}$
7. Proportion of "Specialized education" teachers in the teaching staff	To evaluate the weight of "specialist" Teachers in the teaching staff	$\frac{\text{Number of specialist teacher}}{\text{Number of total teaching staff}}$
8. Proportion of expenditure on "specialized" education in the total expenditure	To measure the support of education policy on "specialized education"	$\frac{\text{Expenditure on specialized education}}{\text{Total expenditure on education}}$
9. Expenditure on education	To measure the importance of policy	$\frac{\text{Education expenditure}}{\text{Total expenditure}}$
10. Per capita cost	To measure the cost of education	$\frac{\text{Total expenditure}}{\text{Number of Students}}$

Source: (Ankomah & Koomson & Bosu & Oduro, 2005)

## CONCLUSIONS

There is a strong relationship between knowledge management, quality practice, indicators and quality in the higher educational system. It would help to create the learning environment which would enhance the qualified graduates, skilled persons, who facilitate their countries in its progress.

So it is needed to realize the importance of knowledge management of quality indicators in Higher Education and its impact on the quality of Higher Education. Knowledge management of quality indicators can be between institutes at national level and also between the international institutions of developed and developing countries. It would be helpful to learn from each other and to revisit the educational policies and make effective changes in it for the significant betterment in educational system.

Nevertheless, using only a few indicators to evaluate universities in different countries and cultures seems not to be adequate, as not only the institutions and cultures are diverse but so are the interests and demands of students, too. It will be a central challenge for university rankings in the future to judge more differentiated and to respect different cultures and traditions as well as local demands and different kinds of research.