

**AC 2007-727: MIGRATING FROM UNITED KINGDOM TO UNITED STATES AS  
A NEW FACULTY MEMBER**

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# MIGRATING FROM UNITED KINGDOM TO UNITED STATES AS A NEW FACULTY MEMBER

## 1. Introduction

Immigration is a well known process and for various reasons, people move from one part of the world to another. The United States (US) is known as the country of immigrants and every year a large number of people are migrating to the US through different means. According to the Department of Homeland Security statistics, around 1.12 million foreign nationals were granted lawful permanent residence to the US during 2005 <sup>1</sup>.

In 2001, the lead author migrated from the United Kingdom (UK) with a faculty position at a US University. He has completed his BSc and MSc from Bangladesh and obtained his PhD (control and systems engineering) from the University of Sheffield (UK). He lived in the UK for around thirteen years and was involved with educational and research activities. The co-author obtained his BSc from Kabul University (Afghanistan) and PhD from Heriot-Watt University (UK) in 1988. He worked at various academic and industrial establishments since graduation in 1978 and is currently employed as a Reader in the Department of Automatic Control and Systems Engineering, The University of Sheffield (UK).

The UK and US have a special relationship considering the warm political, diplomatic, historical, and cultural ties and the US being a member nation of the Commonwealth of Nations. Although the US maintains close relationships with other countries, the level of cooperation in military planning, execution of military operations, nuclear weapon technology sharing, and intelligence sharing between the US and UK are unparalleled <sup>2</sup>. Even having this warm relationship, these two countries differ in many ways. Obviously, the educational systems and research infrastructure are also different; with each having its merits and demerits.

The paper presents the migration experience, while highlighting the differences between the two countries. In addition to identifying the differences, the paper will discuss their relative merits and demerits. The next section describes the contrast between the UK and US in terms of demography and weather, social welfare, transportation, law and order, social practices, and political systems. Section three illustrates the UK education system with an emphasis on higher education highlighting the qualifications, quality control measures, and funding arrangement. Section four illustrates research evaluation, funding sources, and manpower. Section five presents the faculty progression and practices. Section six describes the lead author's personal experience through the migration and related discussions. These are followed by the conclusions and references.

## 2. Contrast between UK and US

In a World War II movie, General Patton was commenting that the US and UK are two nations divided by a common language. His comment is almost correct, as one can find lots of differences between these two countries. To highlight these differences this section will provide a discussion on demography and weather, social welfare and related matters, transportation, law and order, social practices, and political systems.

*Demography and weather:* A comparative demographic picture of the UK and US is provided in Table 1<sup>3, 4, 5</sup>. Some of the information within the table is approximate. In comparison, society in the UK is white (coucation) dominated; 45% of the minorities are living in London, while the remaining are living in or around major cities of England (such as Birmingham, Leeds, Sheffield, and Bradford)<sup>6</sup>. It is important to mention here that the UK is made up of England, Scotland, Wales, and Northern Ireland, where 84% of the population lives in England. Figure 1 shows the geographical location of the UK. The UK has relatively mild climate and overcast winter times. However, summer evenings are longer due to the northerly latitude. The weather can vary greatly from day to day, but generally summer (June-August) is a hot 57 to 86°F, and winter (December-February) is a cool 33 to 40°F. There is quite a difference in temperature between Scotland and Southern England. Generally, the further south, the warmer it is likely to be<sup>7, 8</sup>.

Table 1: Comparative demographic data.

Country	Population (million)	Area (sq km)	Population density(sq km)	White	Others	Unemployment rate	Per capita income (\$)
UK	60.2	247,193	240	92%	8%	5.5%	27,650
USA	283.2	9,210,755	31	75%	25%	4.5%	37,500



Figure 1: Geographical location of UK.

*Social welfare and related matters:* Although, both the UK and US are capitalist countries, there are a number of differences in terms of social welfare and related matters.

As a society, the UK is much more homogeneous and restful with long standing values to look back on. People usually hold stable employments, backed up with a state sponsored healthcare system, reasonable social welfare benefits, and subsidized higher education system (for the first degree). In certain circumstances, the unemployment benefits can continue for an unlimited period of time. Regulations for social welfare benefits are getting stricter, but in case of an unemployment situation, still one can rely on this. To facilitate all these benefits, the income tax rate is relatively higher than in the US.

In contrast, the US has an economy of *capitalist at its best*. Relatively, there are very little social welfare benefits for the poor and under achievers. One needs to manage his/her health care provision and higher education expenses. People at the lower earning band need to work long hours to manage their livelihood. On the other hand, the US is still in the growing phase, and one can have success with hard work and smart thinking. As it appears, the US is still considered as the land of opportunity and that also reflects through the current number of incoming immigrants.

In the US, everything is customer satisfaction driven. After a visit to a doctor or a hospital you may receive a customer survey questionnaire to monitor the quality of the provided healthcare. Students will complete a course evaluation survey at the end of each course to express their level of satisfaction. Outcomes of these surveys are considered seriously to ensure customer satisfaction. Some of these arrangements are beneficial (provide some indication of level of service), while others may ensure customer satisfaction but do not necessarily ensure the quality of the service. To elaborate one can think of the healthcare related (medicine) advertisements targeting the general public (through radio and television). The language of these advertisements is to encourage general public to influence their doctors' decision. A medical doctor is educated and trained for long years to practice medicine. In addition, to maintain professional standards they need to attend periodic training and board certification. Now an advertisement influenced patient may dictate a doctor's decision, as the patient is a customer and a doctor knows that an unhappy customer will not go well with his/her employer.

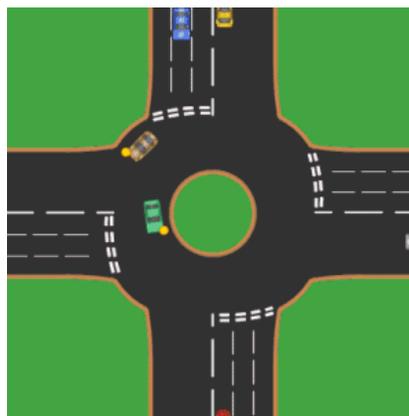


Figure 2: A sketch of a roundabout that one can find in UK.

*Transportation:* In comparison to the US, the fuel/gasoline cost is almost three times higher in the UK, and this is due to higher government tax, mainly for pollution

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control. In the UK, a large portion of the population can still rely on public transportation. The combination of higher fuel costs, very good public transport system, and environmental awareness kept the use of car, to a minimum<sup>9</sup>. Most of the cars are manual (gear) with relatively smaller engine sizes. Recently, the London inner city has introduced a pollution tax to control traffic jam within the city. The system appears to be extending to other bigger cities. Through a survey in 2003, it has been reported that 27% of households in the UK do not own a car, when the number of one, two, and three or more car owners is 44%, 23%, and 6%, respectively<sup>10</sup>.

Urban and city roads are narrower with frequent bands and turns, and within the inner cities, sometimes road signs are difficult to follow. Obtaining a driving license in the UK is a time consuming process. Even if you are totally prepared for the test, it could take couple of months (varies from one area to another) before you can pass through the written and road tests and are issued a driving license<sup>10</sup>. A US driving license is valid in the UK for twelve months, so it may be a good idea to start the UK license obtaining process once you arrive there for a longer stay<sup>11</sup>. Since December 2003, use of handheld cell phones by drivers has been an offence in the UK, and carries a fixed penalty of \$60 rising to \$1,900 if convicted in court. Use of hands-free cell is permitted.

One of the difficult road arrangements for the city and urban areas of the UK is the roundabout. A roundabout is a road junction at which traffic moves in one direction around a central island to reach one of the roads converging on it. Figure 2 shows a roundabout in a cross road. Passing a roundabout requires understanding of the proper lane use, judgment of speed, following the intention of other drivers, and use of proper indicator. One can use Google Earth to view the urban and city road layouts<sup>12</sup>.

On the other hand, the motorways (US equivalent of Interstate) are much better in quality with very good signs and clearly marked lanes and exit arrangements. The quality of motorways is uniform throughout the country, and it is difficult to find any hole or bump on them. Orange color SOS call boxes are spaced at 1-mile (1.6-km) intervals on all motorways as well as on some major Class-A roads, with roadside markers indicating the nearest phone<sup>13</sup>. The majority of motorways and dual carriageways have a maximum speed limit of 70 mph (113 km/h) for cars. Unlike in the US, hard shoulder is available only on one side of the road (with the slower lane) and most of the time drivers overtake only through the higher speed lane (right side lane).

Rail transportation is also popular in the UK, with an extensive rail network. Statistically, there are 18,874 km of railroad, 392,931 km of roadways, 3,200 km waterways, and 8 major airports in the UK.

Airport security in the UK is always a higher priority issue. Security staffs are highly trained and hold a permanent position with the Federal Aviation Administration (FAA). All along, other than passengers, no one is allowed to enter the passenger lounge after the checking area. While in the US, before the 9/11 of 2001, anybody could have gone up to the final boarding area and the security system was poorly managed. So after

9/11, there were not many apparent changes in the UK airports' security system that we have seen in the US airports.



Figure 3: A police office on foot patrol.



Figure 4: Armed police offices.

*Law and order:* Another remarkable contrast is that in the UK police on routine patrol (either by car or foot) do not carry any firearm, whereas in the US even some security guards carry fire arms in public <sup>14</sup>. A picture of a UK police on foot patrol is shown in Figure 3. If there is a firearm related incident in the UK, there are well trained armed police who can be deployed within a very short time. Figure 4 shows the picture of an armed police officer. Apart from hunting, the general public is not allowed to carry any firearms. There is very little armed gang violence in the UK's cities and towns, which are commonplace in major cities and towns of the US. The UK has organized and well trained police forces throughout the country, and the police have a very high standing in society.

The UK is to introduce a compulsory national identity card scheme to help tackle organized crimes, prevent terrorist attacks, and protect the identities of their citizens. Using cutting-edge technology, the cards will link individuals' unique biometric data, to a secure national database. This is an ambitious, controversial, and long-term project. The trial for the system has already being launched in Scotland.

Due to the gun ownership provision, the outside world views US as still passing through primitive stages of social evolution. The second amendment (1791) of the US Constitution that interpreted as a basis for gun ownership states that “*A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.*”

President Bush once commented, “I believe law-abiding citizens should be allowed to own guns to hunt and to protect themselves.” <sup>15</sup>. John Kerry, Senator (MA) and Democratic nominee for Presidential election of 2004, believes that law-abiding American adults have the right to own guns <sup>16</sup>. In 2005, in an interview on CNN's Larry King Live, current Secretary of State Condoleezza Rice said, the Founding Fathers understood “there might be circumstances that people like my father experienced in Birmingham, Ala., when, in fact, the police weren't going to protect you” <sup>17</sup>. Current gun related regulation also reflects these views, and people can carry fire arms for their protection. However, gun control law varies from state to state, and in some states, people can carry firearms more

overtly than others. There is no indication that any major political parties have an intention or means to bring a significant change on this issue of “right to carry fire arms.”

Considering the situation, one can portray the US as a country where authority can't provide an acceptable protection for its citizens. So they have to take charge of their own security. This was also demonstrated through the 1992 Los Angeles riots, where citizens used fire arms to protect themselves and their properties. For this reason, general population of the UK think the US as a nation that is still a little short of totally civilized.

*Social makeup:* In general, the people in the UK are relatively conservative in expressing their feelings (happiness or unhappiness) and are careful in choosing words and expressions. Even in the middle of a disaster, people try to follow rules and stay calm. Unlike the US, general population in the UK is much more informed and thoughtful in terms of future implications of their actions as a society and as a nation. Whereas in the US, people are much more involved with day-to-day activities and do not think much about the long term effect of their actions. In the UK, people usually read books or newspapers while traveling on a bus, train, or underground (US equivalent of metro), and it is rare that one will try to have conversation with you <sup>18</sup>.

In public, the UK people are polite and soft spoken. People like to maintain a personal space around them and closest contact one can have with another is a handshake. A pat on the back or a social hug is not common. In general, the Welsh and Scottish are friendlier than the English. Again, within England, people in the north are friendlier than the people from the south. Compared to the US, the general population of the UK is modestly honest. Even until the summer of 1998 there were no photographs on driving licenses and still now there is no need to carry a driver's license while you are driving <sup>19</sup>. In case of a traffic accident, the police will collect the drivers' details (and the vehicle's). To verify the details, the driver needs to display the driver's license to any police station within a given period of time.

Most of the town and urban shops (apart from corner shops) open at 9am and closes at 5/6pm. There are some departmental stores in larger cities and US style malls are kept open longer hours, with only a few 24 hour departmental stores. Shops are usually closed on Sundays, although some shops are starting to open for part of Sundays. In terms of food, the UK does not have many traditional items. One can think of *Fish and Chips* as one of their popular foods. Oriental foods such as Indian, Italian, and Mexican are on the lead for their popularity.

*Political system:* The UK system of government is the oldest parliamentary democracy in Europe. The UK parliament was formed in 1215 and has set up the base of democracy in the whole of Europe. The UK has a constitutional monarchy, and Queen Elizabeth II is the head of state. In practice she reigns, but does not rule. The country is governed, in her name, by the Government, a body of ministers, which is called the Cabinet (consists of 22 leading ministers) who are responsible to Parliament. The Parliament consists of the Sovereign, the House of Lords, and the House of Commons.

The Sovereign formally summons and dissolves Parliament and generally opens each new annual session with a speech from the throne. The House of Lords is made up of hereditary peers and peeresses, including the law lords appointed to undertake the judicial duties of the House, and the Lords Spiritual (the Archbishops of Canterbury and York and other 24 bishops). The House of Commons is elected by people and consists of 650 Members of Parliament (MPs). The chief officer of the House is the Speaker, elected by MPs to preside over the house. It is in the House of Commons that the ultimate authority for lawmaking resides.

A general election must be held every five years. The winning party forms the Government. Ministers are chosen by the Prime Minister (leader of the winning party). The second party becomes the official Opposition and forms the Shadow-Cabinet.

The UK constitution, unlike that of most of other countries, is not written as a single document. It is formed partly by statute, partly by common law, and partly by convention. It can be altered by an Act of Parliament or by general agreement.

One interesting feature of the UK system is the Prime Minister's Question Time. It is a constitutional convention in the UK, where every Wednesday when the House of Commons is sitting, the Prime Minister spends half an hour answering questions from MPs. Details about the UK political system can be found in these references <sup>20, 21</sup>.

### **3. Education System**

In the UK, full-time education is compulsory up to the age of 16 and is provided both by state-funded and independent (fee-charging) schools. State-funded schools must follow the National Curriculum. Independent schools follow a similar curriculum as well as developing their own special expertise. The system can be divided into four stages: *Primary*, *Secondary*, *Post-16*, and *Post-18*. Primary and secondary educations are free, while post -16 is also free if a student is under 19 years or from a low income family. While for the Post-18 education, students need to share the cost, depending upon their family's income.

#### **3.1 Primary, Secondary, and Post-16**

There are various kinds of schools in the UK where students can have their primary, secondary, and post-16 education <sup>22</sup>. A layout of these schools with students' age and school year are shown in Figure 3. The primary education is from the age of three to ten/eleven years and provides basic instruction across a range of subjects. The secondary education is from eleven to sixteen years, where students continue with general education across a range of subjects until the age of fourteen. At this point, they continue with English, Math, and Science and choose four or five additional subjects. These courses usually take two years and finish with examinations at the age of fifteen or sixteen. This is the end of compulsory education, and students have the choice of either leaving education to begin work or moving on to post-16 education.

Age on the 1st of September														
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Foundation Stage		Key Stage 1			Key Stage 2				Key Stage 3			Key Stage 4		Post-16
Nursery	Reception	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13
Nursery	Primary School						Secondary School				Sixth Form			
	Infant School			Junior School			Secondary School with Sixth Form							
Nursery	First School				Middle School			High School			Sixth Form			
	Combined School							High School			Sixth Form			
	First School				Middle School			High School with Sixth Form						

Figure 3: Structure of school system in UK.

In terms of assessment and evaluation, before 1988, there was no formal test for the students during their primary and secondary education. However, a class teacher monitors the overall progress of each student and checks whether the student achieved the required level of skills and shares this information with the parents. The Education reform act of 1988 requires all students to take a series of standardized tests at some specific points in their primary and secondary education. These are known as Key Stage National Curriculum Tests and are often referred to as SATs (Standard Assessment Tests). These tests are numbered 1 to 4 as follows:

- Key Stage 1 — during Year 2 (ages 6/7)
- Key Stage 2 — towards the end of Year 6 (ages 10/11)
- Key Stage 3 — towards the end of Year 9 (ages 13/14)
- Key Stage 4 — during both Year 10 and 11, mostly at the end of Year 11 (ages 14-16)

Apart from these Key Stage examinations, there are no other formal tests or year end examinations, where in the US, along with standardized test, students are faced with quizzes, mid-terms, course finals, and other forms of assessment tools. In the UK, primary and secondary students move from one class to another according their age.

Class format is also different there; usually a teacher divides a class into smaller groups according to their ability level. According to their ability, each group is given problems of varying difficulty. If a student is doing very well within a group, he/she will then move to the next higher ability group. In the same way, if a student is struggling to cope with the group, then he/she will be moved to the next lower ability group. Students are not informed about this teaching arrangement and do not know how well they are doing relative to their peer group. The philosophy behind this arrangement is that at this age, students can perform/develop well without any pressure for performance.

Throughout the course delivery process, parents are kept informed about their child's performance and any movement between the ability groups. Same as in the US, there are regular parent evenings; in addition, a course teacher or a parent may request a meeting if necessary.

Post-16 education usually consists of two years of study. Students usually complete A-levels (or SCE Higher-grades in Scotland) in three or more subjects. The institutions that offer this education are:

- Sixth-form colleges
- Colleges of further education (FE)
- Tertiary colleges
- Specialist colleges
- Colleges of further and higher education.

### 3.2 Post-18 and Higher Education

There are over 180 universities and colleges of higher education in the UK. All of these are autonomous or self-governing<sup>23</sup>. Approximately 1.8 million students currently are in the higher education system; about one third of young people go on to higher education at age 18, and an increasing number of mature students are studying either full-time or part-time for university degrees. Higher education is a priority for the current government, with a target set to attract 50 percent of 18- to 30-year-olds to higher education.

The UK remains the most popular destination for US students studying abroad, more than 32,000 Americans enrolled in UK universities in 2006<sup>24</sup>. However, despite maintaining the top choice for US students, enrollments of 2006 were down by 0.5%, while enrollments at institutions in Italy were up by 13.4% and in Spain up by 3.6%.

Within the engineering and technology track, there are two tracks of education available to students over the age of 18. These are:

- Higher education
- Vocational qualifications

First degree and postgraduate studies are sometimes collectively called higher education (HE) and are offered by universities and some FE institutions. It is important to mention here that in the UK there is no division like 'Engineering' and 'Engineering Technology' as they are in the US. All engineering programs are a mixture of both the theory and practice.

The typical first degree offered is the bachelor's degree (typically three years). Many institutions now offer an undergraduate master's degree as a first degree, typically lasting for four years. During a first degree, students are known as undergraduates. The difference in fees between undergraduate and traditional postgraduate master's degrees (and the possibility of securing Local Education Authority funding for the former) makes the undergraduate master's degree as a first degree a more attractive option. Some universities offer a Foundation degree, typically between one and two years in length for those students who hope to continue to take a first degree but are not academically strong enough.

Students who have completed a first degree are eligible to undertake a postgraduate degree, which includes, a master's degree (typically taken in one year, two years by

research only) and doctorate degree (typically taken in three years, only by research). All the universities in the UK offer postgraduate degrees (masters and PhD) and are involved in research activities. Postgraduate education is not automatically financed by the state, so the admission is highly competitive. Postgraduate education typically costs \$5,900 per annum for the European Union (EU) students, and these can be twice as high for the non-EU students.

Vocational qualifications are offered by the FE institutions. The qualifications according to their levels are:

- Level 1: BTEC Introductory Diploma and Foundation General National Vocational Qualification (GNVQ)
- Level 2: BTEC First Diploma and Intermediate GNVQ
- Level 3: Ordinary National Certificate (ONC), Ordinary National Diploma (OND) or BTEC National Diploma, and Advanced Vocational Certificate of Education (AVCE)
- Level 4: Higher National Certificate (HNC)
- Level 5: Higher National Diploma (HND)
- Level 6: the Licentiate of the City and Guilds (LCGI)
- Level 7: the Graduateship of the City and Guilds (GCGI)

In contrast with the US, there is no two year program in the UK. These two year programs in the US allow one to enter into the job market if necessary or to proceed with universities for another two years to complete a four year undergraduate degree. This is a major drawback for the UK system, where a student can't get any credit if he/she drops out at the last stage of his/her undergraduate degree. However, in the UK, one can take the vocational qualification route and proceed through various levels (level 1 through level 7) of qualifications. Vocational qualification is composed of hands-on courses and prepares one for the technical job market. This workforce mainly employed for operation and maintenance activities; however, students with the highest level of qualification (level 7) can analyze and modify some basic designs.

### **3.2.1 How institutions are funded**

Nearly all UK universities and higher education colleges are publicly-funded by the central government via funding councils. Funding levels are contingent on enrollment figures for a given institution. Institutions also receive funding from student tuition or via Local Education Authorities. In the past, there was no fee for the UK students' towards their first degree. On top of it, they were supported by a maintenance grant from the government, towards other necessities, such as food and accommodation. The last Conservative government replaced this system with a student loan to be paid back after the student graduated and reached a set income. Tony Blair's Labor government kept this loan but added in a tuition fee for each student (currently \$2,300 per year- depending upon the parents' income) to go towards the cost of their further education, which can be paid after the education, if necessary, in the same way as the loan. The introduction of tuition fees sparked a huge backlash, with many students refusing to pay them on principle. International students or non-EU students, as well as students not resident in the UK, pay

different tuition rates, and it is almost twice that of the home student. Details of evolution of the UK education system in terms of financial matter are described in references <sup>25, 26</sup>.

The UK government is currently increasing spending on higher education. Between 2002/03 to 2005/06 it will raise from around \$14.7 billion a year to almost \$19.6 billion – a real terms increase of over 6 per cent each year. The extent to which this is needed is reflected in the fact that in 2000, the UK spent the equivalent of \$9,657 per student in tertiary education. This is below the Organization for Economic Co-operation and Development (OECD) mean average and under half of what the US spent (\$20,358) <sup>27</sup>.

### 3.3.2 Quality assurance

In order to ensure the quality of education and consequently the standards of achievement, the UK operates a unique system of quality assurance that is open to public scrutiny. The main components of the quality assurance system and the bodies who undertake these responsibilities are <sup>28</sup>

Process	Undertaken by
Internal quality assurance process	University or college - including external examiners
Institutional quality review	Quality Assurance Agency for Higher Education
Subject quality review	Quality Assurance Agency for Higher Education
Professional accreditation	Professional and statutory bodies

#### *Institutions' internal quality assurance processes*

The UK HE institutions address their responsibilities for standards and quality through the assessment of students and their procedures for the design, approval and the monitoring and review of programs. Most institutions carry out both regular monitoring and periodic review of programs. Regular monitoring considers how effectively a program achieves its stated aims and the success of students in attaining the intended learning outcomes. It is usually undertaken by the academic department providing the program and often involves a program team appraising its own performance at the end of an academic year. The process may take into account reports from external examiners, staff and student feedback, reports from any professional body that accredits the program, and feedback from former students and their employers. It may result in adjustments to the curriculum or to student assessment to ensure continued effectiveness. Periodic review is carried out, typically, every five years and normally involves external experts. It looks at whether the aims and intended learning outcomes set for a program are still valid and are being achieved. Institutions also have in place, arrangements for the periodic review of the various services they provide to their students.

In addition to regular monitoring and periodic review, institutions follow a strict course implementation and assessment protocol to ensure the overall quality of a program. To provide an idea, a closed observation for a course administration has been provided.

Course implementation: Unlike in the US, a course is owned by the institute not by an individual faculty. Each course should have a standardized course outline with prescribed assessment methods and mark distribution for each method. There is no need for an individual faculty to develop their own course outline/syllabus. Apart from certain courses (such as Senior Design Project), all courses should have a standard mid-term and course final (comprehensive). All the course finals have to be administrated on pre-determined dates, usually as a part of mass examinations, and these examinations carry around 40% of the total marks for a course. The mid-term and other assessment tools are administrated by the course faculty (who is delivering the course), when the course finals are much more strictly controlled.

Course final examination: Usually a course faculty prepares a draft of the course final examination paper a couple of weeks before the final. This draft paper is then passed for review to a faculty within the department and also to an external examiner (from a different university). The reviewers evaluate the draft examination paper in terms of: covering the course outline, implementation time, and appropriate presentation of the questions. The comments are then passed to the course faculty. The course faculty then needs to address the issues that have been raised in an appropriate manner. The question papers are then finalized, printed, and stored in a safe room until the examination date.

Grading of final examination paper: In some universities, course final examination papers carry a personal identification code instead of a student name. This is to remove any conscious or unconscious favor or disfavor to a particular student. The papers will be graded independently by the course faculty as well as another faculty from the same department/subject area. On any paper, if the difference of marks from the two faculties is higher than 30%, then the specific paper will be examined by a third faculty from the same department/subject area. An external examiner then visits the university and sample checks the examination papers. All the marks/grades for a given program are then tabulated and discussed within a faculty meeting to review the grade profile throughout the program. Once passed, the grades are then ready to publish for the students.

Although time consuming, the process is very much transparent and removes all the ambiguity in grade allocation. This is a major difference with the US system. In the US, a course faculty is doing everything, starting from syllabus development, text book selection, course preparation and delivery, choosing suitable assessment methods, implementing assessment tools, and final grade allocation. This makes a faculty in a position of judge, jury, and police, and due to this reason, course standards vary a lot, even sometime within the same program. Considering the strong component of the human factor, quite frequently the grade allocation becomes subjective. Frequently, students try to influence (during and after the course) a faculty for a better grade, as they know this is a one person show. It is also observed that sometime students try to avoid courses of certain faculties as they appear to be difficult to pass or obtain better grades.

Student makeup: In comparison to the US, students in the UK are much more independent, responsible, and are open to explore subject areas on their own. In this respect, US students are spoon fed and tend to keep their activities with the text book(s). It

is a common practice for the faculty in the US, to mention the text book page numbers that have been covered for a specific class.

Course end student evaluation: Course end student evaluation is also a part of internal quality assurance measures in the UK. These evaluation outcomes are not considered that seriously to assess the teaching quality. However, in the US, in the absence of any other continuous monitoring mechanisms, student evaluation is a major factor towards measuring one's teaching quality. Sometimes, these evaluations are identified as one of the reasons for grade inflation. Although the student evaluation system and its effectiveness are controversial, they are frequently used as an input towards faculty tenure and promotion.

### *External Examiners*

Each higher education institution appoints external examiners (one for each program) who report to the head of the institution. External examiners are independent academic experts drawn from other institutions or from areas of relevant professional practice. They provide impartial advice on performance in relation to particular programs. Institutions require their external examiners, in their expert judgment, to report on:

- Whether the standards set are appropriate for the awards or award elements, by referring to subject benchmark statements, the frameworks for higher education qualifications, institutional program specifications and other relevant matters;
- The standards of student performance and the comparability of the standards with those of students following similar programs in other UK higher education institutions;
- The extent to which the processes for assessment, examination and the determination of awards are sound and have been fairly conducted.

### *Quality Assurance Agency*

In the UK, the mission of the Quality Assurance Agency (QAA) is to safeguard the public interest in sound standards of higher education qualifications and to inform and encourage continuous improvement in the management of the quality of higher education in the UK <sup>29</sup>. Established in 1997, QAA is an independent body funded by subscriptions from UK universities and colleges of higher education and through contracts with the main the UK higher education funding bodies. QAA also advises the government on applications for the granting of degree awarding powers, university title, or designation as a higher education institution. QAA is also involved in international quality assurance initiatives. This includes membership of the International Network of Quality Assurance Agencies in Higher Education and the European Network for Quality Assurance. QAA performs two major activities: review standards and quality and define clear and explicit standards.

Review standards and quality is a way of describing the level of achievement that a student has to reach to gain an academic award (for example, a degree). It is about making sure that appropriate and effective teaching, support, assessment and learning opportunities are provided for them. QAA uses peer review processes, where teams of academics and professionals conduct audits and reviews. Universities and colleges of higher education are

reviewed through an institutional audit. Further education colleges that provide higher education programs are reviewed through an academic review at the subject level. Institutional audits aims to ensure that institutions are providing higher education, awards and qualifications of an acceptable quality, and an appropriate academic standard, and exercising their legal powers to award degrees in a proper manner.

Define clear and explicit standards for public information and as reference points for review activities. QAA works with the higher education sector and other stakeholders on the following initiatives:

- The frameworks for higher education qualifications promote a clearer understanding of the achievements and attributes represented by the main qualification titles, such as bachelor's degree with honors, or master's degree;
- Subject benchmark statements set out expectations about the standards of degrees in a range of subject areas;
- Program specifications are the sets of information that each institution provides about its programs.

As a guideline on good practice for universities and colleges, relating to the management of academic standards and quality, the QAA provides a Code of Practice for the assurance of academic quality and standards in higher education. The *Code of Practice* has 10 sections:

- Postgraduate research programs
- Collaborative provision and flexible and distributed learning (including e-learning)
- Students with disabilities
- External examining
- Academic appeals and student complaints on academic matters
- Assessment of students
- Program approval, monitoring and review
- Career education, information and guidance
- Placement learning
- Recruitment and admissions

The QAA can be compared with the ABET (Accreditation Board for Engineering and Engineering Technology) of the US<sup>30</sup>. There are a number of differences between the ABET and QAA: a) ABET only deals with engineering and engineering technology, where QAA manages all branches of higher education; b) QAA deals with both the undergraduate and postgraduate programs, when ABET deals only with the undergraduate programs; c) All UK higher qualifications must be accredited by the QAA, while ABET's accreditation is optional; d) ABET now practices outcome based accreditation, while QAA looks in depth into a program, and e) QAA advises the government on applications for the grant of degree awarding powers, university title, or designation as a higher education institution, while ABET does not have any such responsibility.

### *Professional Accreditation*

Along with these quality control activities, professional and statutory bodies also evaluate programs of higher education. For the engineering and technology area, the organization that performs this task is the Institution of Engineering and Technology (IET)

<sup>31</sup>. The IET evaluates a program through visitation and interview and issues an accredited status. Students obtaining their first degree from such an accredited program can identify themselves as a Chartered Engineer, which is same as Professional Engineer status in the US.

### 3.2.3 Laboratory management and maintenance

In universities and further education colleges, laboratory equipment is managed and maintained by full time technical staffs and is directed by the departmental administration. Unlike in the US, it is not the responsibility of an individual faculty to maintain a laboratory. However, in the UK, faculty is still involved with new laboratory development activities along with producing laboratory teaching materials. There is no provision of teaching assistant or graduate assistant who can assist an academic staff towards teaching or laboratory activities. With some additional pay, often PhD students help faculty in conducting laboratory classes. If necessary, sometime the technical staffs are also involved in conducting laboratory classes.

## 4. Research

In the UK, research is funded from three sources: a) research activity related funding, b) UK research agency funded grants, and c) EU grants. The amount for research activity related funding is determined through a Research Assessment Exercise (RAE). The RAE assesses the quality of research in universities and colleges in the UK. The main purpose of the RAE is to enable the higher education funding bodies to distribute public funds for research selectively on the basis of quality <sup>32,33</sup>. The RAE is usually conducted every four to five years by the Higher Education Funding Councils for England, Scotland, Wales, and Northern Ireland. Institutions conducting the best research receive a larger proportion of the available grant so that the infrastructure for the top level of research in the UK is protected and developed. The last RAE assessment was done in 2001, and around \$9.72 billion of research funds were distributed based on that exercise. The next one is scheduled for 2008 <sup>34</sup>.

The RAE provides quality ratings for research across all disciplines. Panels use a standard scale to award a rating for each participating institution. Ratings range from 1 to 5\*, according to how much of the work is judged to reach national or international levels of excellence. Higher education institutions that take part in the exercise receive grants from one of the four higher education funding bodies in England, Scotland, Wales, and Northern Ireland. The assessment process is based on a peer review and is not mechanistic. Panels uses their professional judgment to form a view about the overall quality of activity described in each submission in the round, taking into account all the evidence presented. Panel members are appointed from the list of nominations of experienced and well-regarded members of the research community, including the users of the research.

The RAE outcomes are published to provide public information on the quality of research in universities and colleges throughout the UK. This information clearly has a much wider value than its immediate purpose. For example, it can be helpful in guiding

funding decisions in industry and commerce, charities and other organizations that sponsor research. It also gives an indication of the relative quality and standing of the UK academic research. Furthermore, the RAE provides benchmarks that are used by institutions in developing and managing their research strategies. Across the UK, as a whole, research quality as measured by the RAE has improved dramatically over the last decade.

In the UK, research projects are also funded by eight individual government agencies and are organized as an umbrella organization known as the Research Councils of UK<sup>35</sup>. The Engineering and Physical Sciences Research Council (EPSRC) is the main UK government agency for funding research and training in engineering and the physical sciences, investing about \$1 billion a year in a broad range of subjects – from mathematics to materials science, and from information technology to structural engineering<sup>36</sup>. The activity of this organization can be compared with the National Science Foundation of the US<sup>37</sup>. However, spending of EPSRC grant money is much stricter and should be spent for the specific purposes as proposed in the project budget. At the same time, the investigators can't be paid any salary from a project budget; however, EU grants allow an investigator to be employed through a project.

The EPSRC operates to meet the needs of industry and society by working in partnership with universities to invest in people and scientific discovery and innovation. The knowledge and expertise gained maintains a technological leading edge, builds a strong economy, and improves people's quality of life. EPSRC's work is complementary to other research investors, including other research councils, government agencies, industries and the European Union. EPSRC actively engages in and encourages partnerships and collaborations across disciplines, boundaries, and the world. EPSRC also actively promote public engagement in science, engineering and technology, and international collaboration. Both the NSF and EPSRC encourage the submission of bilateral projects between the US and UK.

Another source of funding for UK research is the EU's framework programs, and this is EU Commission's main instrument for funding European research for technological development. The 6th Framework Program (FP6) will run until the end of 2006 and the 7<sup>th</sup> Framework (FP7) is currently under adoption<sup>38,39</sup>. The duration of FP7 is for the 7 year period 2007-2013, with a budget of around \$62.7 billion. FP7 will be organized into four specific programs, corresponding to four major objectives of European research policy:

1. *Co-operation (\$41.7 billion)*: refers to gaining leadership in key scientific and technology areas by supporting co-operation between universities, industry, research centers and public authorities across the EU and with the rest of the world. Trans-national cooperation will remain the main instrument for carrying out research activities.
2. *Ideas (\$9.7 billion)*: refers to the establishment of an autonomous European Research Council, which will support and stimulate basic research carried out by individual teams competing at European level. The ERC has already been established and it has published its draft work program.
3. *People (\$6.1 billion)*: refers to the so called Marie Curie actions, which strengthen training, the career prospects and mobility of European researchers. Special focus will be given to skills and career development, increasing mobility between university and industry, and strengthening links with national systems.

4. *Capacities (\$5.2 billion)*: refers to developing and fully exploiting the EU's research capacities through large-scale research infrastructure, regional cooperation and innovating SMEs as well as increased international co-operation and bringing science and society closer together.

#### 4.2 Manpower for Research

Similar to the US, PhD students and post-doctoral staffs are the main manpower behind all the research activities. One important feature of PhD studies in the UK is that it is done through research only; there is no need for course work. So, they have much more time to focus on research. Recently some universities asked their PhD students to take a few research related courses from the masters program during their first year of PhD. In addition, one can attend additional courses if he/she likes to gather knowledge in research related subject areas. However, the amount of research work required for a PhD is still the same. With this arrangement, PhD students in UK need to have more responsibilities towards their research program<sup>40</sup>. Apart from international students, most of the PhD and some MS students are funded (tuition and maintenance) through various research grants. Almost all the post-doctoral positions are contract basis and are funded through research grants. Only a few universities offer periodic fixed term post-doctoral positions to boost their research profile.

#### 5. Faculty Recruitment and Progression

This section will discuss the faculty recruitment process in the UK along with their progression through the carrier ladder. Individual faculty is known as teachers or academics and as a group, they are known as the academic staff. During the recruitment of an academic staff, all the short listed candidates are invited for interviews on the same day, and there is an opportunity for the candidates to meet each other. The interview day usually starts with a short lecture from each candidate, followed by individual panel interviews. Only academic staffs are allowed to attend these lectures, and all the candidates take part in a tour of the department. An interview panel is usually headed by the Faculty Dean or by the Head of the Department. The panel is formed with other senior academics, program coordinator, and a representative from the administration. When recruiting non-EU Nationals, a university should obtain a work permit for the new recruit (similar to H1 status in the US) before the person can be issued a visa<sup>41</sup>.

All the academic staff positions are permanent in nature. Unlike nine month contracts for the US faculty, all these positions are twelve months of duration. With this arrangement, apart from external consultancy, there is no other scope for additional earning from the University. After satisfactory completion of a one year probationary period, a position becomes permanent. Based on teaching effectiveness and other day-to-day activities the departmental head conduct the evaluation. The requirements are bare minimum in comparison to the tenure process in the US. This is an interesting difference between the US and the UK system. Considering the cost of living, salary for US universities are much better than in UK<sup>42</sup>. In addition, a US faculty can earn through summer activities and research grants.

There are four ranks for university teaching staffs: Lecturer, Senior Lecturer, Reader, and Professor, whereas in the US, these are three ranks: Assistant Professor,

Associate Professor, and Professor. Publications, external grants, and recognition in the field are the major factors for progression through the ranks. Unlike the US system, the progression towards the higher rank is much more demanding in the UK. The distribution of the number of academic staff in various ranks is something like a pyramid, with the Lecturers at the bottom and Professors at the top. In the US, the situation is the opposite. According to a recent survey, in the US, there are 11,582 Professors, 6,092 Associate Professors, and 5,338 Assistant Professors, that counts 90% of all engineering tenured and tenure track faculty<sup>43</sup>. The retirement age for academics at most UK universities is 65, whereas in the US, there is no provision for mandatory retirement age.

## **6. Immigration Related Issues**

Becoming a new faculty member with a US higher educational institute itself is a great challenge. When this combines with migration-related issues, then it could be an involved social and academic undertaking. Immigration is a major change in a person's life. Although, it is a wonderful experience, one needs to learn and cope with various aspects of life along with a totally different education system.

As a first generation immigrant, one needs to learn about various things for the new country. This involves law and order, banking, road traffic, schooling, social practices, professional factors, and many other aspects of life. The list will be too long to discuss in this context. When a person is born and lives in the same country, they usually consider these as granted. Although, both the UK and US are considered as advanced countries, there are lots of differences one needs to observe and learn carefully to avoid any trouble. Major issues that can be identified are driving rules and practices, academic system, law and order, tax filing, and social practices.

When talking about driving rules and practices, this requires a major change in habit to master, as driving is an everyday need one has to work on from the very first day. However, city and urban roads in the US are mostly straight with clear traffic signs for cross roads (either traffic light or stop signs). So moving from the UK, it was relatively easier to master the driving habit. However, in the highways and interstate roads, the situation is better in the UK. In the US, it was a little difficult to adjust with vehicles overtaking from both sides and frequent lane changing habits of some drivers. Sometime it seems that driving pattern reflects the unrest full nature of the general population.

The academic system was totally shocking; there was no course outline and guidance for assessment and evaluation. The only thing available was few lines of course objectives from the university catalogue, a class schedule for the course, a teaching assistant and a vague tenure and promotion guideline. One has to devise a teaching and assessment mechanism to implement the few lines of official course objectives. It was difficult to know whether students were having all the materials for their next course in the series and also whether the incoming students had all the prerequisite materials from their previous course. In a conversation on this issue, one top administrator mentioned to the lead author that US is a country of academic freedom.

For the law and order, one needs to accustom to patrolling armed police and also to learn about danger zones within a city and how to avoid those areas or not to stop a car around there, even if you have a flat tire. Tax filing was a totally new thing to learn, and one needs to keep all the documentations involving the tax return. People in the US are much more vocal and pleasantly informal in communication; however, an unhappy person may come up with shocking vocabulary that is usually non-apparent in the UK society.

One of the important features of the US immigration policy is to try to enhance the numbers of population from the low profile ethnic groups. This has been done through the diversity lottery (DV). Since 1999, each year, the DV program issues 55,000 immigrant visas available to people who come from countries with low rates of immigration to the US<sup>44</sup>. This will lead the US towards a racially balanced multi-national country that is an ingredient of a stable society with sustained growth.

This paper noted only the issues that can affect a person immigrating between advanced countries, here from the UK to the US. There will be many more issues with greater extent if this immigration takes place from a developing or under developed nation to the US with different demographic, cultural, social, economic, and religious backgrounds. The authors have gone through a similar process when as a student, the lead and the co-author came to the UK from Bangladesh and Afghanistan, respectively. However, these issues are beyond the scope of this paper. Readers may consult a recent issue of a journal that presents classroom practices of various countries around the world<sup>45</sup>.

As we all know, globalization is in progress, and people in the US are afraid of losing their livelihood as more and more jobs are migrated to the developing and even under developed countries. It is time for the US population to recognize the rest of the world and seize the evolving opportunities to enhance the US economy and social values. It is the prime responsibility of the US faculty to train the students with knowledge and understanding about other parts of the world. As a starting point the US faculty and administrators can collaborate with other parts of the world through visits, sabbatical leaves, conferences, collaborative projects, and if possible try to recruit faculty with multi-national backgrounds. There are plenty of smart people around the world who can and are willing to work with the US, either from their own location or through relocation.

## **7. Conclusions**

This paper reports the difference between the UK and US in terms of issues involving everyday life, education and research systems, and practices along with the lead author's personal experience through the process of migration to the US. In terms of population the UK is relatively densely populated, with 84% living in England with a restful society. The weather is relatively mild in the UK with an overcast winter season and with a very nice summer period. The law and order situation is relatively better, with a firearm free society and a very well organized police force.

The education is compulsory and state sponsored up to the age of 16. There are various kinds of schools that can provide this education. During the primary and

secondary education, apart from Key Stage tests, students are not faced with any other formal tests and move through the classes according to their age group. There is a major difference in higher education in the UK and the US. There is no two year program in the UK. Students do their first degree (three or four years of duration) before going for postgraduate degrees (MSc or PhD). However, there are vocational qualifications that one can take in various stages. Currently, students need to contribute towards their higher education. Higher education in the UK is well organized, with strict quality control, thus allowing it to maintain a uniform standard across the country. PhD degrees are typically offered within three years and are conducted only through research. Faculty progression is easier at the lower ranks, while obtaining higher ranks requires a considerable amount of achievement and recognition.

Research funding can be obtained through three sources: through RAE, independent project grants from the EPSRC, or from the EU research commission. Relative to NSF grants, spending from EPSRC projects is much more closely monitored and project investigators can't financially benefit from and grant money; however, EU projects allows employment of project investigators through the grant.

This paper ended with the challenges that the lead author experienced through his immigration from the UK to the US. It is important to mention here that the US is still considered as a country of opportunity, at least for the economic opportunity, and this reflects through the number of incoming immigrants every year. This is a mixed feeling of knowing the unknown along with learning new things on a daily basis that others take for granted.

To face the downside of globalization, US academics need to prepare to train the students to seize the evolving global opportunities to enhance the US economy and social values. At the same time, the US should try to attract people from other parts of the world who are already trained and willing to contribute towards the US's advancement.

*Note:* Any opinions, findings, views, and conclusions or recommendations expressed through this paper are those of the authors and do not reflect the views of their respective institutions.

## References:

1. Department of Homeland Security, <http://www.dhs.gov/ximgtn/statistics/>.
2. James, W. (2006). An Endangered Partnership: The Anglo-American Defense Relationship in the Early Twenty-first Century, *European Security* **15** (1), March: 47-65.
3. BBC News, <http://news.bbc.co.uk/1/hi/uk/5281360.stm>
4. National Statistics Online, <http://www.statistics.gov.uk/cci/nugget.asp?id=273>.
5. United States- Census Bureau, [http://factfinder.census.gov/servlet/DatasetMainPageServlet?\\_program=DEC&\\_submenuId=&\\_lang=en&\\_ts=](http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_submenuId=&_lang=en&_ts=)
6. City Mayors: Largest UK towns and cities, [http://www.citymayors.com/gratis/uk\\_topcities.html](http://www.citymayors.com/gratis/uk_topcities.html)
7. BBC Weather Center: UK, <http://www.bbc.co.uk/weather/ukweather/>
8. UK climate and weather statistics, <http://www.metoffice.gov.uk/climate/uk/>
9. Association for British Drivers, [http://en.wikipedia.org/wiki/Association\\_of\\_British\\_Drivers](http://en.wikipedia.org/wiki/Association_of_British_Drivers)
10. UK Department for Transport. "Transport Statistics for Great Britain 2005: Vehicles". [http://www.dft.gov.uk/stellent/groups/dft\\_transstats/documents/page/dft\\_transstats\\_041505.pdf](http://www.dft.gov.uk/stellent/groups/dft_transstats/documents/page/dft_transstats_041505.pdf)
11. Britain at your fingertips, [http://www.britainusa.com/sections/articles\\_show\\_nt1.asp?i=41118&L1=41011&L2=41121&a=28535&d=4](http://www.britainusa.com/sections/articles_show_nt1.asp?i=41118&L1=41011&L2=41121&a=28535&d=4)
12. Google Earth Showcase - Explore popular places <http://earth.google.com/tour/thanks-win4.html>
13. Motorway, <http://en.wikipedia.org/wiki/Motorway>.
14. Policing in United Kingdom, [http://en.wikipedia.org/wiki/British\\_Police](http://en.wikipedia.org/wiki/British_Police)
15. Bush, George W. and Hughes, K. (1999). "A Charge to Keep", p. 35-36, ISBN-10: 0688174418. Dec 9, 1999.
16. On the Issues, John Carry on gun Control, [http://www.ontheissues.org/Domestic/John\\_Kerry\\_Gun\\_Control.htm](http://www.ontheissues.org/Domestic/John_Kerry_Gun_Control.htm)
17. Associated Press, Barry Schweid, May 11, 2005 <http://www.signonsandiego.com/news/nation/20050511-1803-rice-guns.html>
18. Learnenglish UK: culture, <http://www.britishcouncil.org/learnenglish-central-culture-homepage.htm>
19. Driver and Vehicle Licensing Agency, UK. <http://www.dvla.gov.uk/drivers.aspx>
20. Birch, A. H. (1998). The British System of Government, Routledge, ISBN 0415183898.
21. Prime Minister's Questions- Wikipidia, [http://en.wikipedia.org/wiki/Prime\\_Minister's\\_Questions](http://en.wikipedia.org/wiki/Prime_Minister's_Questions)
22. UK higher education system, British Council, [http://www.sjp.ac.lk/careers/edreform/uk/uk\\_gen/britcouncil\\_he.htm](http://www.sjp.ac.lk/careers/edreform/uk/uk_gen/britcouncil_he.htm)
23. Universities UK, <http://www.universitiesuk.ac.uk/>
24. US students start to shun British universities, Guardian Unlimited, November 13<sup>th</sup> 2006.
25. ICHEFAP-Region- Europe-UK, [http://www.gse.buffalo.edu/org/inthigheredfinance/region\\_europe\\_UK.html](http://www.gse.buffalo.edu/org/inthigheredfinance/region_europe_UK.html)
26. Study in UK: Tuition Fee, Living, Expenses. <http://www.infozee.com/uk/expenses.htm>
27. D. Bruce Johnstone, Fear and Loathing of Tuition Fees: An American Perspective on Higher Education Finance in the UK, The International Comparative Higher Education Finance and Accessibility Project website at <http://www.gse.buffalo.edu/org/IntHigherEdFinance>
28. UK higher education system, British Council, [http://www.sjp.ac.lk/careers/edreform/uk/uk\\_gen/britcouncil\\_he.htm](http://www.sjp.ac.lk/careers/edreform/uk/uk_gen/britcouncil_he.htm).
29. The Quality Assurance Agency for Higher Education, <http://www.qaa.ac.uk/>
30. Accreditation Board for Engineering and Engineering Technology, <http://www.abet.org/>
31. The Institution of Engineering and Technology, <http://www.theiet.org/>

32. Elkin, J. (2002). The UK Research Assessment Exercise 2001, Presented at the IFLA Section on Education and Training Workshop, August 2002, Glasgow, Scotland.
33. Higher Education Research Opportunities in the UK, <http://www.hero.ac.uk/rae/>
34. Research Assessment Exercise 2008. <http://www.rae.ac.uk/>
35. Research Councils of UK <http://www.rcuk.ac.uk/default.htm>
36. FP7: the future of European Union research policy, [http://ec.europa.eu/research/fp7/home\\_en.html](http://ec.europa.eu/research/fp7/home_en.html)
37. National Science Foundation, <http://www.nsf.gov/>
38. Sixth framework program, [http://ec.europa.eu/research/fp6/index\\_en.cfm?p=0](http://ec.europa.eu/research/fp6/index_en.cfm?p=0)
39. European Research Council, [http://ec.europa.eu/research/fp7/home\\_en.html](http://ec.europa.eu/research/fp7/home_en.html)
40. Phillips, E.M. and Pugh, D.S. (1993). *How to Get a PhD*, Open University Press, Buckingham MK18 1XW.
41. Working in the UK – Work Permits, [http://www.workingintheuk.gov.uk/working\\_in\\_the\\_uk/en/homepage/work\\_permits0.html](http://www.workingintheuk.gov.uk/working_in_the_uk/en/homepage/work_permits0.html)
42. Association of Commonwealth Universities, 2004-05 Academic Staff Salary Survey, <http://www.acu.ac.uk/policyandresearch/chemsurveys/1106913384.pdf>
43. Michael, G. (Compiler), Faculty Figures, ASEE Prism, November 2006.
44. US State Department, [http://travel.state.gov/visa/immigrants/info/info\\_1339.html](http://travel.state.gov/visa/immigrants/info/info_1339.html)
45. The Global Learning Issue, *Edutopia*, 2(8), November/December 2006.