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# Learners of Geography Today – skills and competences for today and tomorrow

Sayantan Mandal

Geography is now more dynamic in both academic and professional domain. Therefore the learners are expected to meet the requirements of the academic and professional communities in local, national and international scale and wherever they can contribute. Worldwide, in higher education, geography programs seek to promote a number of subject-specific skills and competences directly related to the outcomes and achievement of geography, its graduates and geographers in their profession (Donert, 2007). This trend has been further strengthened in the wake of institutional overhaul to meet the international standards. The issue of skill development has got even more important these days as students are to compete for a wide array of jobs and roles in their post-student life. Therefore efforts are being made by the universities and their concerned departments to focus on skills and competences to manage it in a nationally realistic yet globally viable way. All these have been addressed in detail in this article.

## Introduction

Looking at the issue form a learners' perspective, it is found that many of them come to the university for reasons of employability, rather than a burning desire for knowledge or even the drive to excel in a particular profession (Biggs, 2003). Thus, this paper argues that geography as a promising field of higher education has to move forward and effectively implement skill development initiatives to prepare learners for tomorrow. Without this, the learners might face difficulties with employability and the importance of the particular department and the institution as a whole, may not improve significantly. Looking at the issue of skills and competences needed for geography, to be prepared for today and tomorrow, this paper tries to highlight some of the issues and concerns by attempting to answer the following questions;

## Objectives

The main objective of this paper is to clearly point out the necessity of skills in contemporary world with a focus on geography, as a field of higher education. The paper also aspires to produce a clear framework of skills needed for geography, necessary for a dynamic and complex world. By doing this, it takes the help of the internationally renowned frameworks and reports. This paper is therefore significant for several reasons: first, it could provide an overall picture of the skill development and a lead the discussion to a more specific and practically viable skill development framework for geography in Indian higher education institutions; second, at a micro level, it could be important for the development of the departments of geography (and its learners) of a university which aspires to achieve a global standard; finally, it could also prove significant in kindling further discussion and new areas of study.

## Setting the Scene: skill development

There are several frameworks available (Gallimore, 2007; Gedye & Chalkley, 2006; Birnie, 1999; Hall 1999) depending on several factors like demand of the market, academic quality, learners' need and so on. However, the generic or core skills are almost similar in all frameworks. The main generic skills and competences are divided into three main sections, viz., instrumental, interpersonal and, systematic. In this regard, the skill framework of Washer (2007) can be mentioned. He divided the major skills into seven major sub-sections, viz., communication skills, working with others, problem solving, numeracy, the use of information technology, learning to learn, and personal and professional development. The TUNING framework in Europe has gone a step further and explicitly described the generic skills and competences need for geography today (Table 1).

Not all of these have equal priority to academics, learners and employers. Survey shows that in most cases entrepreneurship, uncertainty, multiculturality and international aspects were

Table 1: Different Skills and Competences (after TUNING 2007)

| Type | Skills and competences |
|---|---|
| Instrumental skills and competences | Capacity for analysis and synthesis |
| | Planning and time management |
| | General knowledge in the field of study |
| | Knowledge of the profession in practice |
| | Oral and written communication in the national language(s) |
| | Knowledge of other languages |
| | Use of information and communications technology |
| | Information management skills |
| | Problem solving |
| | Decision-making |
| Interpersonal skills and competences | Critical and self-critical abilities |
| | Teamwork |
| | Interpersonal skills |
| | Ability to work in an interdisciplinary team |
| | Ability to communicate effectively with non-experts (in the field) |
| | Appreciation of diversity and multiculturality |
| | Ability to work in an international context |
| | Commitment to work related ethics |
| Systemic skills and competences | Capacity for applying knowledge in practice |
| | Research skills |
| | Capacity to adapt to new situations |
| | Capacity for generating new ideas (creativity) |
| | Leadership |
| | Ability to work on own initiative |
| | Project design and management |
| | Ability to work on their own |
| | Responsibility |
| | Entrepreneurial spirit |
| | Concern for quality |
| | A systematic approach to accuracy and precision |
| | Dealing with uncertainty |

ranked lowest. However, it can perhaps be easily understood that these skills alone cannot fully enable a learner of geography in higher education to be properly ready for today and tomorrow. Nonetheless, the success of the skill development initiative depends on the active support from all sections and stakeholders of the higher educational system ranging from ministry to the academics of a particular faculty. From the students' perspective, it depends on how they see the value in what they are learning and effectively transfer the basic skills from one context to another (Washer 2007). This transfer of skills is a very crucial element of success in the subject specific skills needed (here Geography). In addition to that, today geography has fully entered into the land of physics, technology, business, and so on in today's market and knowledge dominated economy.

## Skills for Geography in Higher Education

Moving form generic to specific skills, several frameworks are available for geography; however,

the TUNING framework is one of the most influential one. Though prepared in Europe, it has already become popular across the world including many Latin American countries and some Asian countries as well. HERODOT is a specific network under TUNING that researches on the skills and competencies on geography in higher education by providing us some important insights useful to upgrade the standards of the department and as well as the standard of the university. It defines two main sets of skills and competences for geography. The first one is termed as 'Geographical Literacy' (Donert 2007), that includes images and map sketches etc., visual communication, spatial statistical organisational skills, information numerical communication, personal-social and cultural communication, awareness, attitudes, citizenship, empathy and responsibility. These basic skills are important for all graduates and are further divided through twelve statements. Those are – (1) comprehend the reciprocal relationships between physical and human environments, (2) comprehend the significance of spatial relationships at various scales, (3) understand and explain the diversity and interdependence of regions, places and locations, (4) draw knowledge, understanding and diversity of approaches from other disciplines and apply them in a geographical context, (5) apply an understanding of geographical concepts, (6) interpret landscapes, (7) collect, compare, analyse and present geographical information, (8) appropriately use geographical terminology, (9) communicate geographical ideas, principles and theories effectively and fluently by written, oral and visual means, (10) use diverse, specialised techniques and approaches in Geography, (11) comprehend the nature of change, and (12) appreciate representations of geographical space and different geographical representations (HERODOT 2007).

To understand the importance of the skill and competence needed for geography and to break it into further classification and rank it; the said framework collects data from nearly a 1000 samples from over 12 countries and people from different sectors such as higher education institutions, professional bodies, NGOs and private companies (Gonzales and Wagener, 2003). Overall, comprehending the significance of spatial relationships at various scales (No.2) and understand and explain the diversity and interdependence of regions, places and locations (No.3) get highest importance in total whereas interpret landscapes (No. 6), comprehend the nature of change (No.11), appreciate representations of geographical space and different geographical representations (No. 12) stand among the least important once. However, there are differences among undergraduate and postgraduate levels. At undergraduate level competence 1 and 7 were most important whereas geographical information and communicate ideas, geographical techniques and application in other disciplines get increased importance in postgraduate study. There are also disparities among academics and employer to some extends. They agreed that competence 4 and 10 are more important in post-graduate courses. In addition, employers also suggested that competence 12 and 9 are much more important which is somewhat contradictory to academics' idea which opts for competence 5 in postgraduate study.

Further analyses brought out that to the academics interpersonal skills are needed to be developed more; but employers clearly identify that there is a lack of instrumental competences among the learners of geography. Graduates, on the other hand think that more interaction, innovation and communication skills are needed for the betterment. The following Table 2 shows the important generic competences which are, according to the survey, not well developed during the course of study.

Interestingly, it appears that the instrumental competences are the most important among the least developed ones followed by the interpersonal ones. There are significant correlations between the academics and employers; however at some points, it shows different points of view where employers stress more on instrumental competences and academics put least emphasis. On the other hand, surveys on graduates' show an urge to acquire the skills to adopt with the changing world outside the universities. It also shows that the present higher education system (based on selected samples) cannot properly provide learners' the ability to be prepared for the uncertainty. The following table (Table 3) shows the top 5 generic competences based on the survey among academics, employers and graduates. It also carries a similar trend like that of the previous table.

Table 2: Important Generic Competences that are perceived not well developed during a Geography degree (Based on survey on academics, employers and students by HERODOT.)

| Academics | Employers | Graduates | Whole sample |
|---|---|---|---|
| Planning and time management | Capacity for analysis and synthesis | Knowledge of the profession in practice | Knowledge of the profession in practice |
| Critical and self-critical abilities | Capacity for applying knowledge in practice | Capacity to adapt to new situations | Capacity to adapt to new situations |
| Capacity to adapt to new situations | General knowledge in the field of study | Decision-making | Capacity for generating new ideas (creativity) |
| Capacity for generating new ideas (creativity) | Research skills | Ability to work in an interdisciplinary team | Decision-making |
| Ability to communicate effectively with non-experts (in the field) | Capacity for generating new ideas (creativity) | Ability to communicate effectively with non-experts (in the field) | Ability to work in an interdisciplinary team |
| Ability to work on own initiative | Project design and management | Dealing with uncertainty | Ability to communicate effectively with non-experts (in the field) |

| Instrumental | Interpersonal | Systematic |
|---|---|---|

Table 3: Top 5 Generic Competences ranked in importance in a Geography degree

| Rank | Total Score | Academics | Employers | Graduates |
|---|---|---|---|---|
| 1 | Capacity for analysis and synthesis | Capacity for analysis and synthesis | Capacity for analysis and synthesis | Capacity for analysis and synthesis |
| 2 | Capacity for applying knowledge in practice | Capacity for applying knowledge in practice | Capacity for applying knowledge in practice | Capacity for applying knowledge in practice |
| 3 | Teamwork | Oral and written communication in the national language(s) | Knowledge of the profession in practice | Teamwork |
| 4 | Information management skills (ability to retrieve and analyse information from different sources) | General knowledge in the field of study | Information management skills (ability to retrieve and analyse information from different sources) | Problem solving |
| 5 | Problem solving | Problem solving | Teamwork | Knowledge of the profession in practice |

Some important implications can be drawn herewith. First, academics, employers and graduates are concerned about the dynamic nature of geography and about the world beyond university. However, academics, by their very nature are more concerned about developing analytical abilities whereas employers are more eager to see the applicability of the analytical skills into practice. For graduates, both appear as important, with an increased importance on working abilities. The increased importance on instrumental skills over interpersonal and systematic skills shows the same trend. Overall, this framework can provide us an opportunity to sketch a professional profile of Geography today which could enhance the employability of geographers (Donert 2007) and make them well prepared for the world beyond their educational life.

## Viewing Together – the big picture

All of the skills and competencies are necessary at different levels and stages for the higher education in geography and most importantly beyond the education life where learners are supposed to contribute effectively. However, the lack of necessary skills can make the learners unemployed or they may end up in some job where they have no or marginal connection with the subject studied. This concern can also be judged through students' opinion as they are the one going to face the life after their studies. For example, in an informal survey through a popular social networking site, learners' opinion have been asked about the necessary steps to up-grade the Dept. of Geography of Presidency University (formerly College, Kolkata) and, on their preferable orientation geography should have nowadays1. The result suggests that learners prefer to have more interactive sessions in the form of seminar, debate, group discussion and a better teacher-pupil relation. They also voted for a more practice, market and research oriented educational system contrary to theoretically directed one. Although this informal survey does not carry much empirical value, but it can be useful to know, roughly, what students think they need and in which direction they prefer the department should revamp. All of these indications somewhat represents a coherent picture with the previously mentioned HERODOT's survey, but at a smaller scale. Although it cannot produce any generalised result, but then, what else it can infer? Probably, it can raise a bigger issue with which Indian universities are dealing nowadays. It is how to make learning productive, coherent and compatible with the fast changing world? How to make the graduates employable effectively? Agarwal shows that graduate unemployment rate is much higher than overall level of unemployment. As a consequence, more often, higher education is blamed for not equipping students with skills required for the changing world of work (Agarwal 2011:168). As per the National Sample Survey on Employment and Unemployment (1993-94) only 10.1% of male workers and 6.3 % of female workers possessed specific marketable skills. The situation has not improved much and today, the graduates with more than 12 years of education are in the top of the list of unemployment (11.3 %). It clearly indicates that there is a mismatch between the labour market requirement and the education provided (Agarwal 2011) and also a serious lack of necessary skills.

The result of poor skills and competence development in Indian higher education is disappointing. Often, in spite of the lack in some specific skills, students also lacks in basic skills like 'problem solving' and 'team work'. The result is a skill gap that threatens the overall productivity and competitiveness (Stasz et al.1996). A geography graduate, for example, may end up working in an academic setting, as a researcher, in the civil service, in a technical enterprise and so on. It certainly needs a versatile set of skills. However, the trend shows that most of the new graduates opt for academia. Others go for general profession (clerical jobs) or get enrolled in specialised courses to acquire the necessary skills to be employable. The consequences are twofold. First, it is a loss of human resource to some extent as the graduates who work in non geography related sectors probably never use what they have learnt (subject specific). Secondly, it points towards the poor ability of the concerned department, the institution and their education system for not being able to prepare the learners even after a graduation or post graduation courses. There are other indirect consequences as well. In a globalised world, in the time of knowledge economy and in the fast changing educational landscape where the competition is also global, degree holders of geography are tend to be confined in limited number of sectors because of their lack of skills to prove themselves in versatile sectors. It is also because of the lack of institutional agility to modify learners' skills to meet practical needs, which they carry along. Whereas in many developed (e.g. USA) and other developing countries (e.g. China) the basic subject (here geography) is divided into many different separate fields in response to the changing time, the Indian system appears to be in some kind of time wrap (Agarwal 2011).

In this amalgamation of opportunities, intertwined with globalised market; some may argue that it is perhaps not possible for a particular department to educate the learners in all these versatile fields. On the contrary, skills provide the ability to learn, not merely the contents. However, it seems even more difficult to attain the goals in a sluggish and bureaucratic educational system where neither the teachers nor the learners have much

choice (Agarwal 2011). It is mostly top-down, less flexible and not yet fully student centric. In this scenario the successful implications of skills and competences could face many barriers both from theoretical and practical sides. On one hand, it could kindle a debate of whether a university should focus on the world of work where the debate relates itself more or less with neo-liberalism; or continues to focus on liberal education and creating complete human beings following the tradition. It could also spur another debate related to the necessity of a complete revamp of the system to respond mainly to the market, versus the importance of sticking to the so called elitist ideologies of the university culture. In this regard, many authors (Washer 2007, Hayward & Fernandez 2007 among others) have shown that change in the higher educational institutes to foster skills needed for today and tomorrow does not contradict with the idea of a holistic development of pupils. Rather they are complementary if infused properly. Moreover, it can also be argued that in developing countries, where graduates have to compete for jobs soon after (sometimes before or during) the completion of their higher education, probably does not allow them the luxury of such a debate. On the other hand the issue of implementation may emerge related to the selection of skills which could be important for geography in Indian higher education and how to implement them in the present structure which is, so far, manly theory based and outdated in many respect. These could be considered as some of the big issues to the departments of geography and to the universities today in the verge of restructuring.

## Conclusion

It was noted that geography is more dynamic today and throughout the discussion it can probably be understood that it desperately needs attention in skill and competence development. In Indian context, the challenge seems far greater. It is basically related with the entire traditional and general educational system. Whereas Universities cannot ignore the aberrations that are created by the market (Bhushan 2009), it neither can let go the egalitarian way of provision of educational service irrespective of the pressure form the world of work. Although the overall debate here is between idealism and realism; for geography, skills and competency development seems inevitable. The necessity of a refurbishment has practical reasons and related with learners' future as well as departmental and institutional success (and sometimes survival). However, as argued before, this seems a difficult task to perform as several elements of dilemmas and contradictions are already there with physical limitations. Those can mainly be grouped in two sections; demands and dilemmas, as follows:

***Demands:***

- A learner centric dynamic framework
- University – world or work linkage
- A need of competitive structure
- Effective and productive skills and competency development for learners
- Interdisciplinary network for proper dissemination and effective use of knowledge and skills

***Dilemmas:***

- Tension between old structure and new functions
- Tension between old functions and new functions
- Tension between old structure and new structure (after Bhushan 2009).

These dilemmas and demands depend on how the university and the concerned department are looking at the issues and changing themselves. Nonetheless, they seem need a skill and competence framework which is robust and dynamic; nationally realistic yet globally viable. The TUNING (by HERODOT) framework here could be considered as an example in this regard. Here it would be overambitious and probably less appropriate to consider this proposed framework perfectly suitable for the aspiring Indian universities. This paper does not, in any case, argue for copying from the said framework; rather it proposes it as a guideline to start with and to consider it with a discriminating approach. The paper suggest that a dynamic skill and competency oriented framework has to fit in Indian higher educational context with necessary flexibilities. For that, the selection and operational aspects need further research and analysis based on practical and outcome oriented standpoints. Only then the universities and its concerned departments

could build a system for its own which will be world-class in standard.

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