Introduction

Interdisciplinarity by now is a much widely discussed, debated and also acclaimed concept, in terms of research, teaching and practice. Even while there is scepticism with regard to combination of various epistemologies, it is being argued for on grounds of practical problem solving on the one hand and quests for a unified knowledge base on the other, both incorporating moral overtones indicating why and how interdisciplinarity is not only inevitable but also essential. Education policy by and large has accepted the need for interdisciplinarity and has responded both at school level and in higher education. The UK government is also pursuing ‘interdisciplinarity’ seriously within higher education through the Higher Education Academy and the Research Councils. In pedagogical terms however, the concept remains intriguing. It embodies a paradox. For it is through pedagogy that disciplinary identities are primarily encouraged and forged in higher education. Yet, concomitant with this, is the expansionist trend of knowledge, which attempts to transcend disciplinary boundaries as a result of academic ‘enterprise’ (Clarke 1983) both within and between disciplines, also taking place in higher education institutions. Open as universities are to socio-political and economic imperatives, more and more interdisciplinary zones are now being taught in universities. How are these realms then handled in terms of pedagogy, by the disciplines, if one were to acknowledge that ‘[e]ach department will build, and rebuild, its own configuration of the discipline,

1 A study conducted by OECD in 1972 revealed that in UK professional education was the leading field for interdisciplinarity while in US, it was general education. In France and West Germany interdisciplinarity was found more in social sciences while as in Japan it was in the sciences. In Canada, the distribution was found as being fairly even (OECD, 1972).
through the specialisations of individual members, their values and interests and how they collaborate with each other’ (Henkel, 2000, 19)? To what extent and how is interdisciplinarity achieved in pedagogy within organisational settings that promote disciplinarity? To investigate this, and relate it to higher education policy, a small postgraduate research project was undertaken supported by the Subject Centre for Sociology, Anthropology and Politics (C-SAP), itself funded by the Higher Education Academy (HEA). This paper reports on findings of this research.

**The Research Process**

The study aimed to unpack the process of disciplinary induction and interdisciplinary achievement through pedagogy in higher education at the undergraduate level from two disciplinary perspectives, while handling an interdisciplinary subject. The undergraduate level was chosen as it was thought that this would be the level at which the student would be most encouraged (through pedagogy) to become a member of a particular discipline (as opposed to post graduate study where the student might be encouraged to broaden out). The interdisciplinary subject chosen was ‘urban studies’ mainly on grounds of practicality in terms of familiarity for the researcher. The two disciplines studied were Sociology and Planning, the former being more theoretical than applied, in comparison with the latter. This dimension was thought to be significant as it provided a source of distinguishing between disciplinary identities in the two disciplines. Also, it is generally asserted that problems and practical life are inherently interdisciplinary² hypothetically making it more accessible for applied disciplines. This would enable a study of whether interdisciplinarity features

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² For example Popper’s much quoted statement that it is problems that exist not subjects (Gozzer, 1982) and the Organization for Economic Cooperation and Development’s claim ‘Communities Have Problems, Universities Have Departments’ which was a chapter heading in their publication *University and the Community* 1982 (quoted in Klein, 1996, 12).
differently in pedagogy between the two disciplines and if so how. Two different types of universities were chosen, to see whether and how the differences impacted on the pedagogical forging of disciplinariness/transdisciplinariness. The first university is an old university (U1) with a high reputation in research and teaching, including membership in the elite Russell group. The second university (U2) was formerly a polytechnic, having acquired university status with the abolishment of the binary system in 1992 (Source: websites of U1 and U2). Both universities have Schools/Departments of Planning and Sociology and both are delivering urban studies (under various names) at undergraduate level to students in Planning and Sociology.

In analysing pedagogical approaches, the research focused on policy background in higher education, university backgrounds, content and structure of courses, perceptions of faculty-in-charge, and method/s of student involvement and assessment as reported by faculty. Sources for the study included university websites, literature surveys, course details collected from departmental websites and faculty, and seven one-to-one semi structured interviews with involved faculty in both institutions, conducted within a period of one month. The findings of the research are discussed separately first, bringing out commonalities and differences between the disciplines in U1, and then in comparison with U2. The study then concludes on how boundary work is accomplished differently in the disciplines and how different forms of interdisciplinarity are forged in the two universities.

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3 When the department/school is referred to the word Planning and Sociology starts in capitals.
4 Courses that had the word ‘urban’ or ‘city’ in the title were included.
Comparisons between the disciplines in U1

In U1, both in Planning and Sociology, the module is an undergraduate 3rd year 20-credit module. The Planning department offers two undergraduate courses, one in planning alone and the other in planning and geography. The module that was researched was offered as an optional module, at first to both streams of students, and then only to the planning and geography students. At the time of research, the module was offered as an optional module only to the planning and geography students. In Sociology the module was offered as an optional module to the sociology students.

Similarities and differences between the two disciplines could be observed. Pedagogical approaches were largely similar. However there were subtle differences too. These are discussed below with respect to four aspects, i) the pool of disciplines that contributed to the course, ii) relative differences in emphasis in terms of content, iii) the influence of faculty research in determining course content, and iv) the predominant pedagogical modes employed.

i. Disciplinary Domain: Multiple aspects of the urban were emphasised in the content, in both disciplines, even though the specific aspects that were emphasised differed between the disciplines. In Sociology, the module drew from other disciplines, but predominantly from human geography emphasising space and place. The interface between sociology and geography was perceived as blurred ever since geographers and sociologists ‘began speaking to each other’ in the 1990s. Still when presented to students, it was presented not as a multidisciplinary course, but a sociology course.

“…the way we present the course to students is as a sociological course. We don’t …. say it is a multi disciplinary course. We present it to students as a module that is very much located within sociology” (Int-U1S1)
The ‘urban’ here was approached through a cultural angle emphasising theories of consumption and consumer culture and its relation to place and space. It was a medium for developing essential sociological skills and knowledge. The aims stated in the module description are

“To develop student’s awareness and critical understanding of the city, both as an object of sociological attention and as the site for significant sociological explorations; and in this context, to develop student’s awareness and critical understanding of consumer and postmodern culture(s) and urban lifestyles (added emphasis)”

In Planning, the disciplinary focus was on human geography again, especially political geography, economic geography and socio-cultural geography including issues of social justice, ethnicity and diversity. Thus both human geography and sociology contributed to the studies of the urban in both cases substantiating Rich and Warren’s (1980, 59 quoted in Klein, 1996, 91) observation that ‘urban affairs’ tends to be more of an importer of theories and concepts rather than an exporter.

The disciplines that informed the module were however closely related, enabling a categorisation of the modules as ‘pluridisciplinary’ or ‘interdisciplinary’. A pluridisciplinary module is one in which there is a juxtaposition of disciplines that are assumed to be more or less related, as opposed to a multidisciplinary module which has a juxtaposition of various disciplines which do not seem to have an apparent connection or a transdisciplinary module which aims to establish a common system of axioms for a set of disciplines. An ‘interdisciplinary’ module denotes an interaction between disciplines, that may be a simple communication of ideas or an integration of concepts, methodology, procedures, epistemology, terminology or data (OECD, 1972).
ii. **Content Emphasis:** Even though the disciplinary domains from which they borrowed were essentially the same, the two disciplines differed in terms of the emphasis they placed on different aspects. This can be understood along two dimensions, the realm of knowledge that each thought was necessary for their students to develop and the prime focus of attention in each discipline. In sociology, an understanding of relevant theories and concepts, the ways in which human experience within space and place was influenced and could in turn instantiate larger forces differently was the focus for delivery. Though urban space was the medium, the focus was on human life and experiences.

“We are talking all the time about human experiences in the city..... We are not talking about space, in and for itself, .....we are talking about......how people use and experience these transforming spaces and how those transforming spaces themselves limit and shape what kind of …the emphasis is always on the social, the emphasis is always on people, so that’s what we want them to end up with an idea of how social life, social life is quite powerfully affected by questions of space and place” (IntU1 S1).

The skills demanded of the students were in areas of understanding, connecting and critiquing so as to identify the presence of various structural forces even when their instantiation maybe spatially different. In planning however, the theories and concepts were important, but so was the policy side of it too.

“It’s trying to get them to think about the spatial dimensions of social processes. So in that sense, I suppose it is interdisciplinarity between geography and sociology, .... as much as anything else, but in addition try to get them to think about the implications of intervening in some of these processes” (IntU1P1).

Theoretical underpinnings and assumptions that influenced different urban policies were also thus brought out. The stress on the applied dimension in terms of intervention, was so much so that changes in policy were perceived to be a potential driver for changes in the course.
“I think it might change in terms of what...what kind of happens in policy, but also in terms of kind of how the things that I am moving into” (IntU1P2).

In addition even when space was dealt with in planning the relative emphasis deferred. ‘Space’ was the focus.

“The ‘urban’ not as a way of life, but as a space....... What we are after is a notion of …urban setting and the spatiality of that really..... So it would be perhaps ..., things to do with the density of particular layouts, ..., the way in which, ....... something like the setting of housing estates which is like a kind of jungle... and so the setting of it and the way in which the built environment has been developed is actually integral …” (IntU1P1)

Thus even while teaching an interdisciplinary domain drawing from a largely similar set of disciplines, the construction of disciplinary identities was taking place in prescribing the ambit of knowledge necessary for the student and the placement of relative emphasis. In sociology, it was on the lives of people and how this was affected, while in planning, it was on the intervention and the differences that particular urban spaces make. Clayton (1984, 1985 cited in Klein, 1996, 21) speculates that “interdisciplinary studies are probably flourishing most where not labelled as such”. This indeed seemed the case here, but within interdisciplinarity the disciplinary domain was still forged, more in terms of ways of thinking. When asked why intervention was not emphasised in the course in sociology, the response was

“it is not a common thing to do..... Concern of the course is with understanding and critiquing. No pressure to go beyond it. Not something I had thought about until you mentioned it” (IntU1S1).

iii. Influence of Faculty Research: In both Planning and Sociology, explanations for the content of the module and how it came about was primarily hinged on faculty research interests. Also in the course of the evolution of the module, though titles and course names had changed the faculty-in-charge largely remained the same.
In sociology, the incorporation of human geography, thus came through the research interest of the faculty, even if the primary identification was with the discipline.

“…although I am not a geographer, I am a sociologist. But I …over the years because of the direction that my interests have taken I think I have become much more interested in space and place”

Also in planning, faculty research was mentioned as a key driver in addition to policy changes. Thus as quoted earlier

“I think it might change in terms of what…what kind of happens in policy, but also in terms of kind of how the things that I am moving into” (Int U1P2).

The importance of faculty research interests in structuring the module might follow from the university policy of encouraging ‘research led teaching’. This in turn (along with other factors) had implications for the choice of pedagogical modes adopted.

iv. Pedagogical Modes: In both disciplines, there was an emphasis on medium level theories and concepts, which were explicitly covered in some depth. These formed the substance of lectures, which was the dominant pedagogical mode. Both disciplines however had an empirical component in the form of ‘project work’ that was assessed. In Sociology, (the module ran for two semesters5) this was covered in the second semester while in Planning (the module ran for one semester only), this was at the end of the course. In Sociology, the students (in groups), had to select a particular area in the city that they were studying in, an area that would allow a grounding of the theories that were discussed in the lectures. These spaces and places were to be observed and studied, leading to analysis and presentation of how the theories they had covered in the module

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5 The University runs a two semester system.
could be empirically observed. The students were encouraged to use and record visual images, do interviews, to interrogate these, and build it into the final report that they had to submit. This empirical grounding was an essential objective in the module.

“Applying the theory to practice and...The value of that is enormous. Because instead of just understanding the literature in abstract terms, in conceptual and theoretical terms of its own, .....they are having to think about those concepts in relation to a natural place. So it is forcing them to come to terms with those theories in quite a different way than they would have to if they just did the reading” (IntU1S1)

Also, it was adopted to

“……..make sure that they [students] know the value of the theory because they have seen how they can actually use the insights of that theory to inform their own analysis....”

The project was assessed to see how far students could actually connect theory with empirical situations and develop a critique of the same.

In Planning also, students were required to do a project. They were asked to view a film/read a novel and then write a short review by exploring it for the way in which it being an urban setting would make a difference to the film or story. In essence they had to bring out

“…does the fact that it uses the city or has an urban setting, how does that make a difference basically. So in fact what they are doing is showing how a distinctively spatial notion of the urban is constructed and used within this film or novel” (IntU1P1)(added emphasis)

This is because

“they would have to think…. about well, what is it that we mean, what is it that is distinctively geographical about a particular way of thinking of the city. .....When we think about the city as geographers or planners, but in spatial terms, what is it that makes that a different way of thinking about the city to the way in which a psychologist or a sociologist might think about it. So that, that is absolutely central really to this module and then they will .....also use, show they have understood particular kinds of ideas, that urban geographers use and ........ they will develop, and we give them some advice..... a capacity to think critically about another medium, a film or novel”.
Both the disciplines were looking for essentially the same set of skills - connecting and critiquing - though it is accomplished through different subject matters with different focus. These skills are by itself transdisciplinary, but are associated primarily (though not exclusively) with skills in preparation for an academic profession or one in which an academic way of thinking is essential.

**Comparison between the two Universities**

In general terms, the differences between the universities were more marked than differences within the first university. These are discussed with respect to i) the organisation of teaching and ii) content of modules and pedagogical approaches adopted in the delivery of the module. These variation had impacts for i) the extent to which a disciplinary identification was encouraged and could be forged through the modules and ii) the type of interdisciplinarity that was forged.

i. *Organisation of Teaching*: In U1, as discussed previously, the subject is taught as a module separately in sociology and planning, by separate teams of faculty members employed in the two schools. It is delivered as an optional module within each discipline, in both disciplines. Specific focus on urban studies was present in only one module each, in both disciplines, though it might be expected that perhaps other modules did overlap and cover aspects of urban studies in both disciplines. In contrast, in U2, the subject of urban studies was found to be present as a focus in four different modules, each concentrating on different aspects of the urban. Three of these modules were researched. Of these two were offered to first year students, one of which was also offered to students taking a foundation degree in the built environment. The third one was offered to final year students.
The modules were thus not strictly discipline bound in terms of overall organisation. Two of the modules were accessible to students from both disciplines, though faculty for these modules were largely from the planning discipline. The third module was accessible to many disciplines within the built environment faculty, but not to sociology students. The modules were prescribed as compulsory for some courses in the built environment and optional for others in both disciplines. Faculty in charge of the modules also seemed to change more frequently. Thus for one module, the faculty at the time of research had been teaching it for just one year and for another, it was for the last two years.

If it is accepted that forms of knowledge and their acquisition are influenced by social, organisational and historical factors (Kogan and Hanney, 2000), then the reasons for this difference in organisation of the delivery of the module is to be found in higher education policy changes. Mary Henkel (2000) traces the changes that took place in institutions following the policy change in higher education in the UK. She comments upon the traditional highly discipline based organisation in old universities when higher education was ‘[a]ccessible only to an intellectual elite…..mediated by strong internal control organised within a framework of disciplines…..’ (pg 16). In contrast the polytechnics were organised more in line with notions of public accountability with ‘a tradition of wide access and multiple modes of study’ (following Scott, 1995). They were committed to developing courses in which academic study was combined with vocational course. Thus in the polytechnics, interdisciplinary and modular degree schemes came to be submitted for validation as early as the 1970s (Henkel, 2000). The thrust for interdisciplinarity via structural organisation in U2 is thus historic and is a
response to problems that originated outside the university, arising from pressures for social accountability and economic rationalisation. In that sense it is exogenous (OECD, 1972) to the university. The organisation in U1 is also historic, but endogeneous to the university, in the sense that it is a result of university organisation according to what Clark (1983, 35) calls a ‘first principle’ which is shown to provide academics their primary source of identity (Henkel, 2000), upon which ‘all else is constructed’ (Clark,1983, 35).

The relatively non-hierarchical mode of organisation followed by U2, is a structural move away from the disciplines and one would expect that it would tend to weaken the forging of disciplinary identities. If so, it would have effects for the forging of interdisciplinarity, for it is generally claimed that in order to have meaningful interdisciplinarity, a disciplinary grounding is a prerequisite (Haynes, 2002).

ii. Content Distribution and Pedagogical Approaches: In U2, all of the modules researched were described as aiming to provide basic knowledge for the students. This might also account for why it was possible to have changes in faculty handling the module more often. Though each module dealt with city processes, there was a clear focus for each. Thus one dealt with city processes and the built environment (only for built environment students), the other with city processes and city life, while the third dealt with diversity in the city and its implications for various sectors. The content of the modules tended to cover concepts and ideas related to the city, not actually touching upon theories. Thus

“we don’t put a great deal of …. theory into it. I mean we do refer …. loosely I suppose to …. the zonal theories of cities and we refer to I think
some of the kinds of ..... processes of ...social change in cities, concepts like gentrification and I think, maybe, .... it is more particularly concepts I would put it, rather than complete theories, ..... in a sense, it is perhaps just particular ideas that we would make use” (IntU2.1).

“I don’t go into any theory for theories sake. In a way that was the rationale at the beginning. I came to the conclusion that that was counter productive. ...... ..I think there are limitations on the amount that I can do that. Maybe in one way I would like to do that more. But I am very conscious of the fact and this is, I’ll tell you, one of the problems of ..... the way, the way in which we teach - and we teach in different groups of students different subjects - is that its like teaching a mixed ability class in a primary school or a secondary school and you know that in the audience, there are some students who can go only 1 or 2 steps on one word. But there are other students who can, ...... go 5 or 6 steps who can go a lot further and it is very difficult to get the balance in terms of, ..... really trying to pull out what you might call the more theoretical implications of the kinds of issues we’ve been dealing with” (IntU2.2).

Perhaps in view of the concerns surrounding ability, the learning process itself was very much less structured around lectures, making use of a variety of techniques, including, videos, films, historical materials, maps, project work and role play. The techniques were not only diverse but were also frequently used. Thus in one module as much as 8 films were used, in addition to two project works – one involving group presentation and formative assessment and the other involving individual work with summative assessment. Pedagogy tended to move from applied situations to concepts in a more dialectic manner than in the case of U1 where the applied domain was integrated through project work contributing more to summative assessment in terms of demonstrating abilities of understanding, connecting and critiquing.

In the module open to only built environment students, project work involved visiting two different areas that had developed in different times, in two different ways (and not undergone much of redevelopment), in groups, and observing
changes with the help of historic material collected by the faculty. The students applied the concepts that they had gained from class-based discussions of visual material. This was part of a formative assessment. The second project was individually executed and it involved choosing and studying areas that were undergoing change and identifying the ways through which different actors managed and influenced the change. This had to be compared and contrasted with the group project undertaken earlier. Here the non-disciplinary domain of practice provide the ‘neutral domain’ (Klein, 1996) from which students pulled out conceptual constructions. Knowledge is accomplished through ‘parceling’ (Klein, 1996, 60), whereby partial representations that isolate and clarify concepts are encouraged. The concepts were identifiable as being from the same set of disciplines that contributed to understanding in U1. In terms of skills particular professional skills such as map reading were also sought to be developed.

In the second module (third year), cognition was achieved through showing films that depicted changes and tensions that followed over time in particular portions of a city. With reference to happenings in the film, concepts that described what was going on were introduced. It aimed to encourage critical reflection on how the media depicted cities and how the concepts introduced could in fact help the students to understand what was happening. Assessment was formative, involving the maintenance of a module diary using which students had to reflect broadly on the module, connecting their learning with other concepts learned elsewhere in their course, their own experiences or the literature. This module was open to both disciplines (with sociology and social work students forming the majority). The concepts aimed at are more sociological, though shared with geography and
planning. Skills aimed included general academic skills of “how do you translate the ideas in your head and your response into a form of language that makes it comprehensible to other people”.

In the third module (first year), students were introduced to urban models and diversity and how it interplayed with various sectors such as housing, transportation etc in the city. Assessment was through seminars (that touched on sectoral topics), essay and a simulation exercise where the students were given particular roles. Specific rules that generally influenced development in the city were assumed. Within the roles, and bound by rules, they were to negotiate with each other, and make decisions regarding how a particular plot of land in the city would develop. A reflexive report on the simulation exercise had to be handed in at the end. This module was also open to students in both sociology and planning, though planning students formed the majority. Concepts used were from sociology, geography and planning, and the applied domain tended to be more within governance and public policy. Skills aimed at included “the ability to cope with complexity and multiplicity in making decisions”. Having an explicit aim of retaining complexity, the module chose simulation and action with analysis of action as one of the major pedagogical tools.

The modules in this mode of organisation were thus specifically and tightly focused on specific themes of the urban which were delivered with innovative types of cognitive aids. Student numbers were high, as much as 80 or 100 as compared to a student strength of around 15-20 in U1. Faculty were also largely conscious of differences in the student population in terms of both disciplines and
abilities. Given this situation ensuring cognition of the subject matter was the prime concern rather than the forging of any disciplinary identity.

Conclusions

Dogan and Pahre (1990) show how the process of specialisation in research fragments a discipline, eventually leading to hybridization wherein combinations occur with similar inquiries in other disciplines focusing on the same subject. Birth of interdisciplinary realms follow, even if these are not formalised into new interdisciplinary subjects. They stress the importance of these ‘hybrid zones’ for creativity, putting forward the theses that innovation is most likely to be found in ‘academic pioneers’ working in these interdisciplinary zones. In U1, which announces its teaching policy as being ‘research led’ the particular types of cross-overs that have happened follow the research interest of faculty. In Sociology, human geography and sociology (mainly) were combined and in Planning and Geography, planning, geography and sociology were combined. This source of interdisciplinarity in research interest is reflected in the pedagogical mode followed, which is predominantly ‘lecture led’ a mode of pedagogy in which the teacher dominates. Imparting of knowledge through concepts is the main motivation in the lecture mode. However, inculcation in terms of skills, that are explicitly identified with particular disciplines were also stressed. This is by way of project work in which students must demonstrate generic academic skills which are in turn assessed. During the project, teachers are more or less in the role of teacher – guides (Martinello and Cook, 2000) were they have an active role in guiding students even as the students take their own initiative in terms of location, methods, and analysis. Interdisciplinarity here enters pedagogy through ideas and concepts and then percolates downwards dialectically.
through the generic skill of ‘application’ to inform the empirical object. The transfer of knowledge is thus more top down here, starting with concepts and moving to application or empirical situations.

In U2 in contrast, the pedagogical approach tended to be based upon the desire to ‘get a hold’ on the objects of study which present themselves through the neutral domain of real life at present. Teachers are mainly in the mode of teacher-director (Martinello and Cook, 2000) where considerable assistance in terms of learning resources and help is provided. Concepts that are relevant for achieving an understanding of the object of study are drawn out through directed thematic studies. The main difference with U1 was that the starting point was different. Here interdisciplinarity entered mainly through practice at the empirical level, and then percolated upwards dialectically through the generic skill of ‘understanding’ to form concepts. There was no conscious explicit attempt to forge a disciplinary identity or a characteristic perspective or ‘way of looking’ at the city. The pedagogical methods by way of which interdisciplinarity is achieved and imparted is thus different in terms of structure, main motivation, teacher roles and mode of pedagogy.

Heinz Heckhausen in the OECD report on interdisciplinarity published in 1972, distinguished between disciplinarity and interdisciplinarity and different types of interdisciplinarity. For him “disciplinarity is the specific scientific exploration of a given homogeneous subject matter producing new knowledge and making obsolete old knowledge (83)”. He identified seven criteria on which one discipline could be distinguished from the other. These are a) the material field, comprising ‘the set of objects….on common sense level” (83) that a discipline was concerned with, b) the
subject matter, comprising the point of view from which the discipline looks upon the material field, c) the level of theoretical integration, which for him was a very distinctive criterion, d) the methods that allow the discipline to get at observables and also transform them into data e) the analytical tools that the discipline uses – model construction, computer simulation etc, f) applications of the discipline and finally g) the historic contingencies of the discipline that formed it.

On these criteria if planning is taken to be an applied profession concerned with space and people, it overlaps with sociology (along with many other disciplines including geography) along the material field. The subject matter of sociology influences planning which is distinguished from sociology by the level of theoretical integration as the discipline is more oriented to application, the applied domain per se being at a different level of theoretical integration. In terms of methods, analytical tools and application it is more eclectic than sociology with its own disciplinary story of historic contingency.

If one were to accept the above lines of integration/distinction between the disciplines then there must be different types of interdisciplinarity possible. Heckhausen identifies six types of ways in which interdisciplinarity can be forged in pedagogy. These are

a) ‘indiscriminate interdisciplinarity’, where there is more of a ‘curricular mix-up’. Here a number of disciplines are introduced in an ‘encyclopaedic fashion’. This is seen to be provided more for vocational training below university level. There is no potential for substantial research in this process.
b) ‘Pseudo interdisciplinarity’, where analytical tools such as models, or computer simulation (both of which are trans disciplinary) provide the logic of bringing together disciplines. Activities such as pattern recognition, models of social behaviour etc are classified in this.

c) ‘Auxiliary Interdisciplinarity’, where disciplines use methods that are generated in another field, like pedagogy making use of psychological testing.

d) ‘Composite Interdisciplinarity’, where issues form the main propelling force for integration. Thus issues like poverty, environmental degradation or war might form issues around which disciplines come together to providing their own expertise.

e) ‘Supplementary Interdisciplinarity’ where disciplines in the same material field develop a partial overlap. Here the overlap is at the same level of theoretical integration and generally these areas exist at the borderlands of the respective disciplines.

f) ‘Unifying Interdisciplinarity’, where there is an increased consistency between the subject matter of disciplines, which is then paralleled by a theoretical integration and methods. The example of biophysics is cited.

Within the above conceptual framework, disciplines can form different types of interdisciplinary relations with different disciplines, for different purposes and during different times. The pedagogical approach in terms of skills and content will then vary according to what type of interdisciplinarity is being forged. Planning, as a discipline already exists as a field of composite interdisciplinarity, where numerous disciplines contribute to an understanding of a planning issue. These disciplines need not be integrated, per se, but must contribute to a specific understanding of the issue at hand.
In this research project, the handling of pedagogy in planning did follow a model of composite interdisciplinarity, where in U1 various concepts were introduced eclectically for students to decide what they might agree with most. Thus

“This critical skills and the hope that they will develop… their own kind of perspective on these things. That they will find some of the arguments more persuasive than the others, and that they will be encouraged perhaps by being asked to do some work or perhaps simply an interest to pursue one or the other of these avenues and will develop a perspective and a standpoint of their own” (Int U1P1).

The mode of pedagogy in sociology on the other hand followed a model of ‘supplementary interdisciplinarity’ where almost no difference between human geography and sociology was perceived. Thus both aspects of space and human lives were equally stressed with the connection between them needing to be drawn out in the assessment.

“I really don’t feel there being a big distinction between human geography and sociology. I really don’t”.

In comparing the two types of university, while in U1 composite and supplementary interdisciplinarity was pursued, in U2, the type of interdisciplinarity pursued in urban studies if analysed together form a picture of composite interdisciplinarity with the different concepts drawn out in different modules possibly contributing towards a composite picture of the ‘urban’. This composite picture is not however consciously linked to pedagogical practices as such. If analysed at the module level, elements of indiscriminate interdisciplinarity dominate as for instance in the third module where exposure to various sectors in city growth is provided in a sort of encyclopaedic fashion. This difference in the preference for the type of interdisciplinarity achieved might be because of the historical vocational grounding of the university for it is in vocational subjects that ‘indiscriminate interdisciplinarity’ is most pursued.
This research thus reveals that the complex and multivariated phenomenon of interdisciplinarity is differently achieved through pedagogy, depending upon the nature of the discipline in which it is grounded and also the particular organisational structure and historic policy environment that hosts it. In policy terms, it also reveals that even with the ending of the binary system, there still exists a distinctive vocational leaning in the newer universities, revealed in the nature of interdisciplinarity that is forged through pedagogy.

References


