



Urban Planning Education and Climate Change: A Brief Survey of Curriculum Adaptation in Malaysian Universities

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1.0 INTRODUCTION

Climate change is real but arguments on the validity of the issue are not the focused of this paper. Climate change has been going on since the earth first existed but had been accelerated by human activities starting from the industrial revolution until now (Donaghy, 2007). The industrial revolution started a phenomenon that we now know as urbanisation which constantly needs minding from city planners or urban managers to overcome it ever changing issues. One of the most critical issues of urbanisation challenging urban planners now is how to mitigate the impact of urban activities and development on the climate.

Recognising the importance of the issue and realising the potentials of the profession, many urban planning schools worldwide have reviewed their curricula to introduce climate-change-related subjects and have also been focusing their research activities on climate change. According to the Global Report on Human Settlements 2009 by UN-Habitat, one third of planning schools worldwide has taught climate change in their curricula. It is however rather unfortunate that most of these planning schools are from developed countries while their counterparts less developed countries are still lagging behind. For those planning schools that are treating planning as strictly design or policy practice, the report recommends them to broaden their approach to include climate change issues. In light of this recommendation in the UN-Habitat report, it is rather timely that Malaysian planning schools take a good look at their curricula to see if they are doing enough to educate future Malaysian urban planners to keep track with the complex current urbanisation issues, especially the climate change issue.

2.0 GOAL AND OBJECTIVES

The goal of the study is to assess the incorporation of climate change education in the curricula of planning schools in Malaysia. Incorporation here is loosely translated as either teaching a specific course concerning climate change or including climate change as part of the syllabus of a course. For example, a course in environmental planning might include climate change in its syllabus. In order to achieve its goal, the study focuses on the following three objectives, namely: 1) to identify the number of planning schools in Malaysia that has adopted climate change syllabus or components; 2) to identify the qualifications and research interests of the academic staff members to support the climate change syllabi; and 3) to explore the possibilities of embedding climate change education in planning curricula.

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3.0 METHOD OF STUDY

This study takes the approach of a rather simple content survey of existing urban planning or urban studies programmes offered by Malaysian universities. The desktop survey was only conducted on public universities since almost none of the private universities in Malaysia offer an urban planning programme. A total of seven public universities had been identified as subjects where four of them offered a bachelor degree in urban and regional planning accredited by Malaysian Board of Town Planners (Table 1.0).

Table 1.0: Urban Planning/Urban Studies Programmes in Malaysia

No	University	Course / Programme	Accredited*
1	Universiti Teknologi Malaysia (UTM)	Bachelor of Urban and Regional Planning	/
2	Universiti Teknologi Mara (UiTM)	Bachelor of Urban and Regional Planning	/
3	International Islamic University Malaysia (IIUM)	Bachelor of Urban and Regional Planning	/
4	Universiti Sains Malaysia (USM)	Bachelor of Urban and Regional Planning	/
5	Universiti Malaya (UM)	Bachelor of Arts (Township and Urban Planning Studies)	X
6	Universiti Kebangsaan Malaysia (UKM)	Bachelor of Social Science (Development Science)	X
7	Universiti Utara Malaysia (UUM)	Bachelor of Development Management	X

* Graduates from programmes accredited by Malaysian Board of Town Planners are qualified for registration as professional urban planners after meeting certain professional requirements.

After identifying the universities and programmes, a survey was conducted to determine which universities offered any subjects related to climate change. The online desktop survey was conducted by browsing each programme's website to gather information on the range of subjects offered by each programme. Subjects on climate change or are related to climate change were particularly looked for. When necessary, telephone interviews were carried out for further clarification or for information not available on the websites. A survey on the academic staff qualifications and research interests was also conducted through the same method. For further details, the course outline of the subjects of interest was also requested to study the contents of the subject and how the subjects were conducted.

4.0 FINDINGS: CLIMATE CHANGE ADAPTATION IN MALAYSIAN PLANNING CURRICULA

Almost all of the schools surveyed had not formally adapted their planning curricula to climate change. There were no specific subjects that address climate change issues except for one elective subject named Low Carbon Society (LCS) offered by one of the programmes. Further discussions on the case study of the subject will be discussed in the next section. For other programmes, the closest that it gets to acknowledging climate change is only some informal mentioning in related subjects (i.e. studio, environmental planning, etc) of the emerging issue of climate change and the needs for urban planning to respond to it. Still missing is a proper education in terms of equipping students with the required wisdom in tackling climate change, encompassing sustainability thinking, skills, ideas and best practices for climate-change-sensitive planning. The curricula surveyed gave an indication that Malaysian planning education, like in many other developing countries, is still emphasising on the physical design aspects and policy formulation which focus more on methods of planning analysis and physical plan drawing. The emphasis is still on human comfort rather than sustainability. This is typical of developing countries which need to prepare their planners to cater for the rapid growth of the country especially in responding to the high growth of population in urban areas (UN-Habitat, 2009).

Table 2.0: Summary of Malaysian Planning Schools Characteristics

No	University	Type of University			Course / Programme	Accredited	Climate-Change Subjects	Availability of External Expertise
		CU	NCU	RU				
1	Universiti Teknologi Malaysia (UTM)		*	*	Bachelor of Urban and Regional Planning	/	Low-carbon Society Option & Elective	/
2	Universiti Teknologi Mara (UiTM)		*		Bachelor of Town and Regional Planning	/	X	X
3	International Islamic University Malaysia (IIUM)		*		Bachelor of Urban and Regional Planning	/	X	X
4	Universiti Sains Malaysia (USM)	*		*	Bachelor of Urban and Regional Planning	/	X	X
5	Universiti Malaya (UM)	*		*	Bachelor of Arts (Township and Urban Planning Studies)	X	X	/
6	Universiti Kebangsaan Malaysia (UKM)	*		*	Bachelor of Social Science (Development Science)	X	X	/
7	Universiti Utara Malaysia (UUM)		*		Bachelor of Development Management	X	X	X

CU – Comprehensive University; NCU – Non-comprehensive University; RU – Research University

It is suspected that one of the factors, a major one, which contributes to lack of climate change syllabus adaptation in these planning schools is the qualification or capacity of the academic staff themselves. A desktop review on the academic qualifications and research interests of academic staff in Malaysian planning schools revealed only a small number of teaching staff which posses the required academic background or research interests, which might explain the almost non-existence of climate change related subjects in Malaysian planning education. The survey on the other hand revealed that many lecturers somehow do specialise in environmental planning or sustainable development but only few did specialise in climate change which can be considered as a distinct discipline that requires its own set of knowledge. We could imagine that there are some attempts by lecturers to incorporate climate change education for planning students in their classes, the lack of in-depth knowledge and experience on the subject matter however hampers these efforts. Nevertheless it shows that the awareness on the importance of urban planning to solve climate change has penetrated into planning schools here. However it has been hampered by the readiness of its current academic staff to teach the subject.

Due to the vagueness of climate change education in the current curricula, several problems has arisen that need to be dealt with. Firstly, students are expected and required to figure out for themselves on the details of climate change including how urban planning works in mitigating climate change. At the same time, lecturers do little to explain or elaborate extensively due to lack of in-depth knowledge on the subject, which is deemed new in Malaysian planning schools. Freidmann (1996) as in White and Mayo (2004) has mentioned this so-called planning specialisation in universities which are poorly structured and taught thus leaving the students to piece together their elective subject that leads to their specialisation with only some advices from the lecturers. This situation to some extent may promote student's self-learning skill and encourage more creative and innovative solutions for the urgent climate change solutions; but at the same time, lack of check and balance by experienced lecturers may lead to ideas gone wild and incompatibility with the local context.

4.1 Case Study: Low Carbon Society Elective Subject at Universiti Teknologi Malaysia

As shown in Figure 1.0 below, the subject focuses more on self-centered and self directed learning which attributed to 40 hours and 103 hours student learning time respectively. Lecturers input and direct involvement in the subject are only attributed to 16 hours out of the total 160 hours (10%) of student learning time. The first five weeks of the class is focusing on lectures and theoretical inputs by lecturers and class discussions. Students will later be required to translate what was learned in the class to a design project on a regeneration of public housing. Fieldworks and site visits are also being conducted where students visits the Malaysian Green Technology Corporation for briefings other than conducting on-ground survey at their study area.

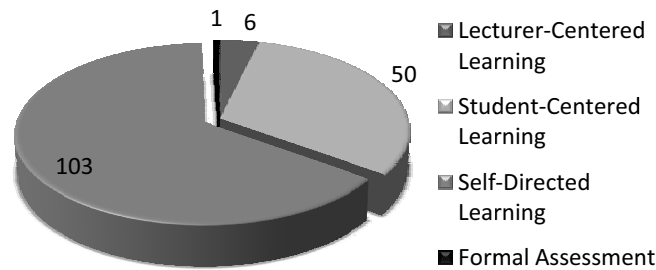


Figure 1.0: Student Learning Hours by Teaching and Learning Activities for the Low Carbon Society class

Unfortunately for the students, the elective subjects at the university come in various flavors with limited places for each class. Thus, the extent of the impact on planning students is limited among students who take the subjects only. It is worth noting that the LSC elective subject has only been offered only recently and the syllabus is still evolving. Another drawback is that an elective subject like this LCS subject is not a core subject and its availability depends very much on the schedule and workload of the lecturer teaching it. Unless it is made into a core subject, the number of students that could benefit from it will be limited and there will be no guarantee that it is offered every year.

4.2 Is interdisciplinary the answer?

As discussed earlier, the pace of climate change adaptation in Malaysian planning education can be described as very slow and lagging behind those planning schools in developed countries. Lack of qualified academic staff to teach the subject has been identified as one of the major factors. However, this should have not always been the case as some of the universities studied do have experts in climate change albeit at other departments than urban planning. Given the interdisciplinary nature of climate change issues, it is only natural that climate change subjects be taught in an interdisciplinary manner.

Referring back to Table 2.0, it can be observed that universities that are of comprehensive type which have numerous programmes from different disciplines (such as pure science, engineering, geography, architecture and planning, medical, etc.) are at an advantage since they are most likely to have more interdisciplinary experts on climate change. Such an advantage is lacking in non-comprehensive universities. Other than that, it can also be observed that universities which have climate change expertise are most likely universities with Research University status (Table 3.0). This is because they have more research funding allocation compared with non-research universities thus broadening the opportunities for them to expand and venture into new fields. For example, UKM has a specialised research group on climate change named Malaysian Network for Research on Climate, Environment, and Development (MyCLIMATE) while UTM has the Low Carbon Society (LCS) research group which is funded by the Japanese International Collaboration Agency (JICA). UM on the hand has the Environmental Research Group which includes three experts on climate change but none dedicated research group on climate change. The advantage of having these in-house experts within the university is it opens up the possibilities of using the experts to assist in training planning students in climate change related subjects.

Table 3.0: Malaysian Planning Schools with In-house Climate Change Experts

No	University	Type of University			Relevant In-house Expertise
		CU	NCU	RU	
1	Universiti Teknologi Malaysia (UTM)		*	*	Low Carbon Society (LCS) Research Group
2	Universiti Malaya (UM)	*		*	Environmental Research Group
3	Universiti Kebangsaan Malaysia (UKM)	*		*	Malaysian Network for Research on Climate, Environment, and Development (MyCLIMATE)

CU – Comprehensive University; NCU – Non-comprehensive University; RU – Research University

6.0 CONCLUSION

Adaptation of urban planning curricula to the demand of the current era of climate change is essential for the sustainability of our cities in particular and the world in general. Planning schools in Malaysia and other developing countries should be responsive to this issue by preparing their students with the needed skills and knowledge to mitigate climate change. Unfortunately as the case is now, planning schools in less developed countries are still lagging behind. Rather than adapting their curricula to address climate change, these planning schools are still focusing on the physical design or policy formulation aspect of planning. Partly due to priority conflicts, this lack of enthusiasm to adapt the curricula to climate change should be given a serious look. In order to encourage more climate change subjects being taught, planning schools should train their future academic staff in the field or hire existing experts in the field. Another way is to offer climate change subjects in an interdisciplinary manner such that students from planning department can take relevant classes from other departments.

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