

Assessing Environmental Educational Needs of Urban Co-councils of Tehran, Iran

Hadi VEISI¹ and Ardavan ZARANDIAN²

Abstract

Enhancing environmental perception, awareness and knowledge through education cause to environmentally-friendly behavior. For this reason, assessment of need as a part of educational process is critical for improving urban environmental planning. Therefore, an educational need assessment of co-councils who are local community representatives is vital towards a sustainable urban management. In this way, the purpose of this descriptive research study was to provide information on the knowledge of the environmental concepts and dimensions, environmental tools and environmental management methods by co-councils in Tehran. Results showed that although they have an average knowledge about the structure and functions of environment, they did not have qualified level of capabilities on understanding how to use some environmental tools e.g. social impact assessment and environmental auditing. Finally, results revealed that the majority of respondents preferred and perceived events, television and publications as important sources of the environmental knowledge.

Key Words: Environment, need assessment, co-council, education, knowledge, Tehran

Introduction

Agenda 21, which resulted from the United Nation Earth Summit in Rio in 1992 and the recommendations from the UN City Summit in 1996, recommend that urban authorities develop innovative partnerships in urban environmental management with researchers and civil society (Wacker et al., 1999). In recent years, many countries have decentralized responsibility and authority for handling environmental and social problems relating to development to the local level. While being empowered through such a move, local authorities often lack the means and knowledge of tackling the social and ecological problems relating to development that they inherit. Thus, education programs for these local partners are considered as an essential component of planning for capacity building and empowering in order to be able to develop solutions to urban environmental

¹ Environmental Sciences Research Institute, Shahid Beheshti University, G.C., Evin, Tehran, Iran: 19839, Email: hveisi@gmail.com

²Department of environment – Iran. Email:zarandian@gmail.com

problems. In this regards, local government has designed an educational plan for the co-councils as one of the local partners of urban management in Tehran to enhance their knowledge and awareness of environment. Since educational needs assessment is a crucial stage in the educational process (Grant, 2002), this study was conducted to assess educational needs of the co-councils as one of the local partners of urban management in Tehran.

Theoretical Background

Why Needs Assessment?

The implicit and explicit definitions of the term need in adult education literature may be shifted into four major categories: basic human needs, felt and expressed needs, normative needs, comparative needs and variant uses of the term (Monette, 1997). This typology of need is identified by various experts based on certain criteria in the society. 'Need' is also measured by comparing the characteristics of those in receipt of a service with others who are not. If the latter exhibit the same characteristics and are not receiving the service, they are said to be in need (Zarafshani et al., 2008). Needs assessment is an important part of the program development process (Seevers et al., 1997), so that it helps educators improve planning, implementation and evaluation of programs by:

- Improving accessibility of programs to a variety of people,
- Learning more about present conditions in a community,
- Learning more about specific needs of people in a community,
- Identifying possibilities to develop new programs or expand existing ones
- Assessing public opinion about goals and priorities, and
- Building people's interest in community programs or public decisions

Need assessment is the systematic process of analyzing gaps between what learners know and can do and what they should know and do. Given this definition in this study, as type of expressed needs, training needs are related directly to the knowledge and awareness

that underpins behavior. The term “awareness” can be used to imply a level of knowledge gained empirically through one’s perceptions, but it can also be considered synonymous with “cognizance,” which is the recognition of something sensed or felt (Ziadat, 2010). Therefore, concerning environment, assessment of environmental awareness is the first step in understanding the level of knowledge that different groups of people possess concerning the severity of environmental problems, and the way they respond to or interact with their environment (Ziadat, 2010). Environmental awareness means that a person shows a heightened perception as well as an understanding and appreciation of the environment.

Knowledge and Awareness of Environment

Environment is the habitat for all living things, including human, animal as well as plant. For this reason, it is very important to know and appreciate the existence of this nature, and realize its existence that is closely related to human’s life (Hassan et al., 2009). In this regards, to be environmentally aware, people must acquire the requisite knowledge and understanding of the structure of the environment and the way it functions. Basically, environmental awareness recognises all facts, concepts, and relationships concerning the natural environment and its major ecosystems (Fryxell, 2003) surrounding us, namely the atmosphere, the hydrosphere, the lithosphere and the biosphere, in all its diversity. It requires that we understand the interrelationships between these spheres and their components, and the way they function, and the fact that interaction between the biophysical and socio-cultural components of the environment could cause environmental problems. To be environmentally aware, people must have some knowledge of the environmental laws and structures (e.g. the National Environmental Management Act, ISO 9000, ISO 14000) together with the skills and tools, such as environmental risk assessment and social impact assessment, necessary to apply this knowledge for the protection of the environment (Matthews, 2004).

Purpose and Objectives

The purpose of this study was to identify and describe educational needs of the co-councils of urban management in Tehran. The following objectives for the study were to:

- Identify the level of urban co-councils awareness of fundamentals of environment.
- Identify the level of urban co-councils awareness of environmental perspectives.
- Identify the level of urban co-councils awareness of Environmental management skills and tools.
- Identify the sources environmental information that co-councils preferred and trusted.

Methods

A needs assessment is the process of collecting information about an expressed or implied organizational need that could be met by conducting training (Barbazette, 2006). There are many methods for conducting needs assessments such as describe five categories of needs assessment methods: survey methods, social indicators, group processes, futuring methods, and causal analysis (Witkin & Alschuld, 1995). This study adapted a survey research design to assess educational needs concerning environment among co-councils in Tehran as capital of Iran. The population of the study was all co-councils in the 12 urban district in Tehran, Iran. A simple random technique was used to select 70 co-councils. The research tool was a questionnaire containing four sections. Section A measures the co-councils' level of understanding of environmental fundamentals; Section B measures co-councils' awareness of the environment perspectives; Section C measures co-councils' level of knowledge of environmental tools and skills; Section D includes questions for finding out the co-councils' perception of their source of environmental knowledge. A five-point scale (0 = know nothing, 1 = know a little, 2 = know some, 3 = know a lot, 4 = aware) was used as a self-assessment of environmental awareness for 25 items commonly advanced and developed by Matthews (2004) and Veisi & Zarandian (2009). The

questionnaire was pilot tested on a total of 25 co-councils. The reliability of the instrument was assessed by deriving the Cronbach alpha; the reliability coefficients of Sections A, B, C and D are 0.87, 0.73, 0.81 and 0.77 respectively. The data were analyzed, using the Statistical Package for the Social Science (SPSS 18). Descriptive statistics (frequencies, means and standard deviations) were used to analyze data.

Findings

The research findings are divided into two groups. Personal information regarding respondents is included in the first section. The second section includes results regarding the knowledge level of co-councils about environmental.

Demographic Information

Information was received from 70 co-councils. The respondents were asked to provide basic demographic information, including age, years worked, education level, and gender. The median age category for the respondents was 25-40 years of age (45.9%). A majority of the respondents (90%) had not a university degree. The data on the gender co-councils indicated that 70.3 percent were male and 29.7 percent were female

Co-councils' Environmental Knowledge

The findings in figure 1 revealed that co-councils have additional things to learn about the 7 selected fundamentals of environment. In this context, a majority of co-councils assessed themselves as "know a little" about items including: "understand water, air, noise and light pollution and their influence on biodiversity (41% had a little knowledge); and "perceive the relationship between the bio-physical and the socio-cultural parts of the environment (38% had a little knowledge)". The mean scores for these items were 1.87 and 1.93 below 2.0 on a five-point, which there are a need for co-councils to learn about environmental fundamentals. A majority of the respondents also rated themselves as "know some" regarding the items of the function of environment (42%) and waste management (36%). The composite mean (2.78) for respondents was above midpoint (2.50)

on the five-point scale. Regarding the remainder of the items including the structure of environment (40 %) and the interaction between the bio-physical and the socio-cultural components (32 %), a majority of co-councils rated themselves as "know a lot".

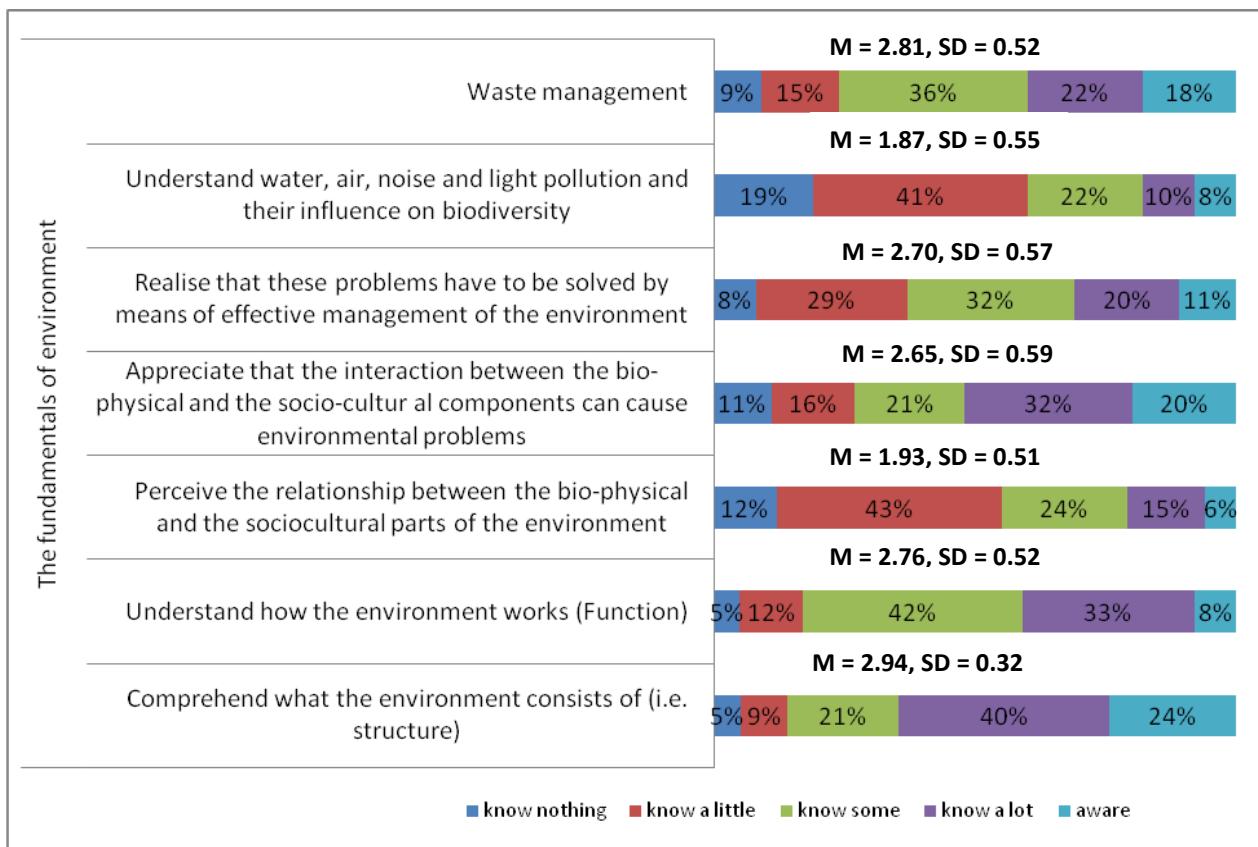


Figure 1. The level of co-councils awareness of fundamentals of environment

In regard to the respondents' awareness of environmental perspectives of the selected items, the data in figure 2 indicated that a majority of the respondents were known some. For instance, 48 %, and 42 % of the respondents, respectively, rated themselves as "know a lot" about environmental communication reporting, environmental economics and the role of co-councils in urban environmental management. The mean scores for these items were above midpoint (3.0) on a five-point scale. In relation to the items of the environmental law and triple bottom line ("people, planet, profit"), a relative majority of co-councils (50 % and 55 % respectively) perceived themselves as "no knowledge or know a little", so that they did not know how to expand the traditional reporting framework to take into account ecological and social performance in addition to financial performance and also relevance environmental law about triple bottom line in urban management.

Finally, regarding the remainder items, the most respondents were aware somehow, for example, 38% knew some about education as a mechanism for environmental protection.

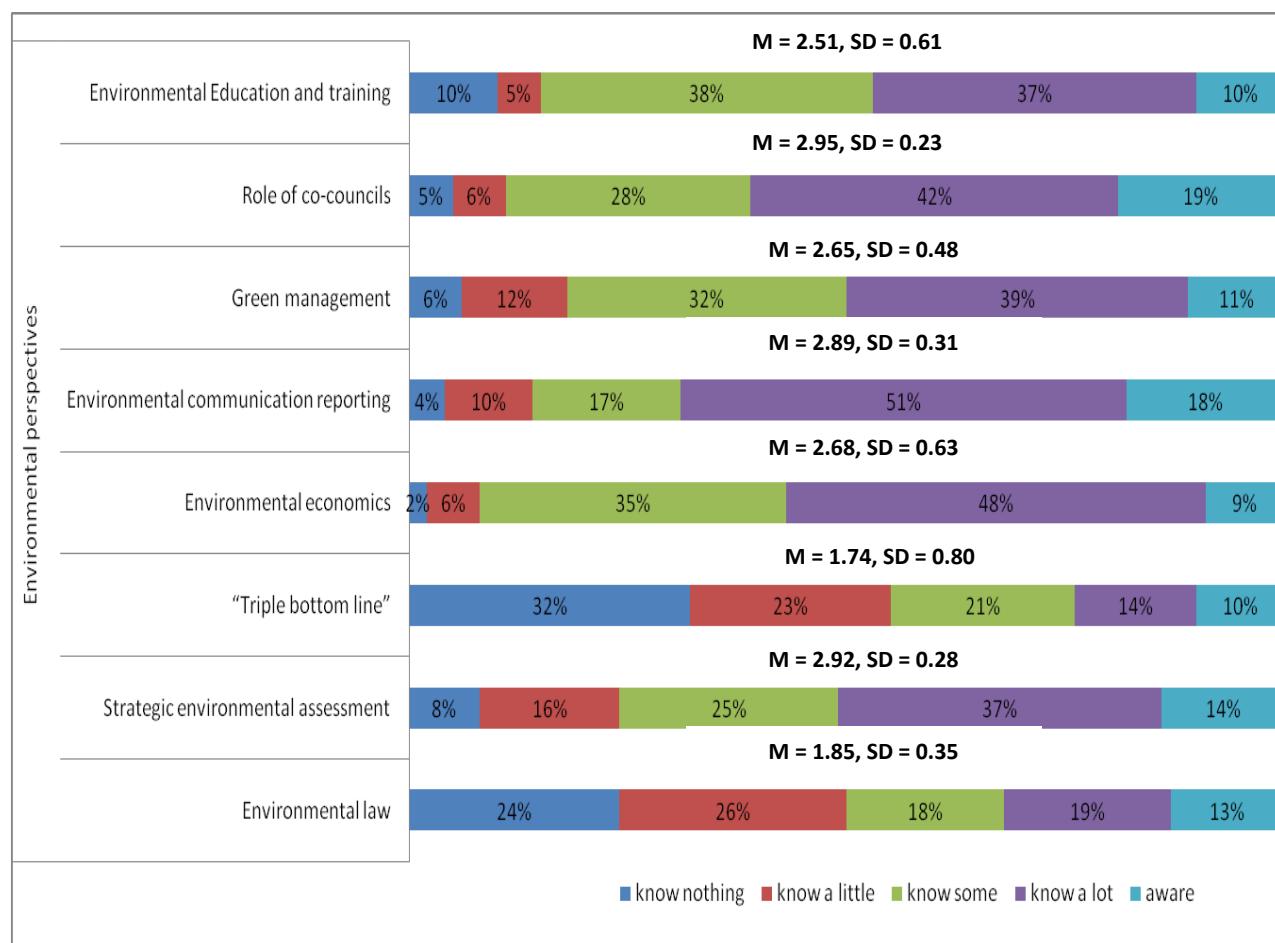


Figure 2. Environmental perspectives of co-councils

Concerning the level of co-councils awareness of environmental management skills and tools, Figure 3 reports the means, standard deviation, and percentages for each of the statements. Approximately one-third of the respondents indicated that they are aware of environmental rehabilitation (31%), environmental monitoring (32%), and environmental management systems (32%). Between 50% and 58% of the respondents also asserted that they know some about environmental risk management and strategic impact assessment. Co-councils assessed themselves as "no knowledge" or "know a little" of environmental auditing and social impact assessment with mean scores below 2.0 on a five-point scale. They stated that they don't know about the processes of analysing, monitoring and managing the positive and negative social consequences (Burdge, 2004), and also

controlling the environmental impacts of its activities, projects and services of urban projects based on standards e.g. ISO 14001 and ISO 1000 (Mattsson & Olsson 2001).

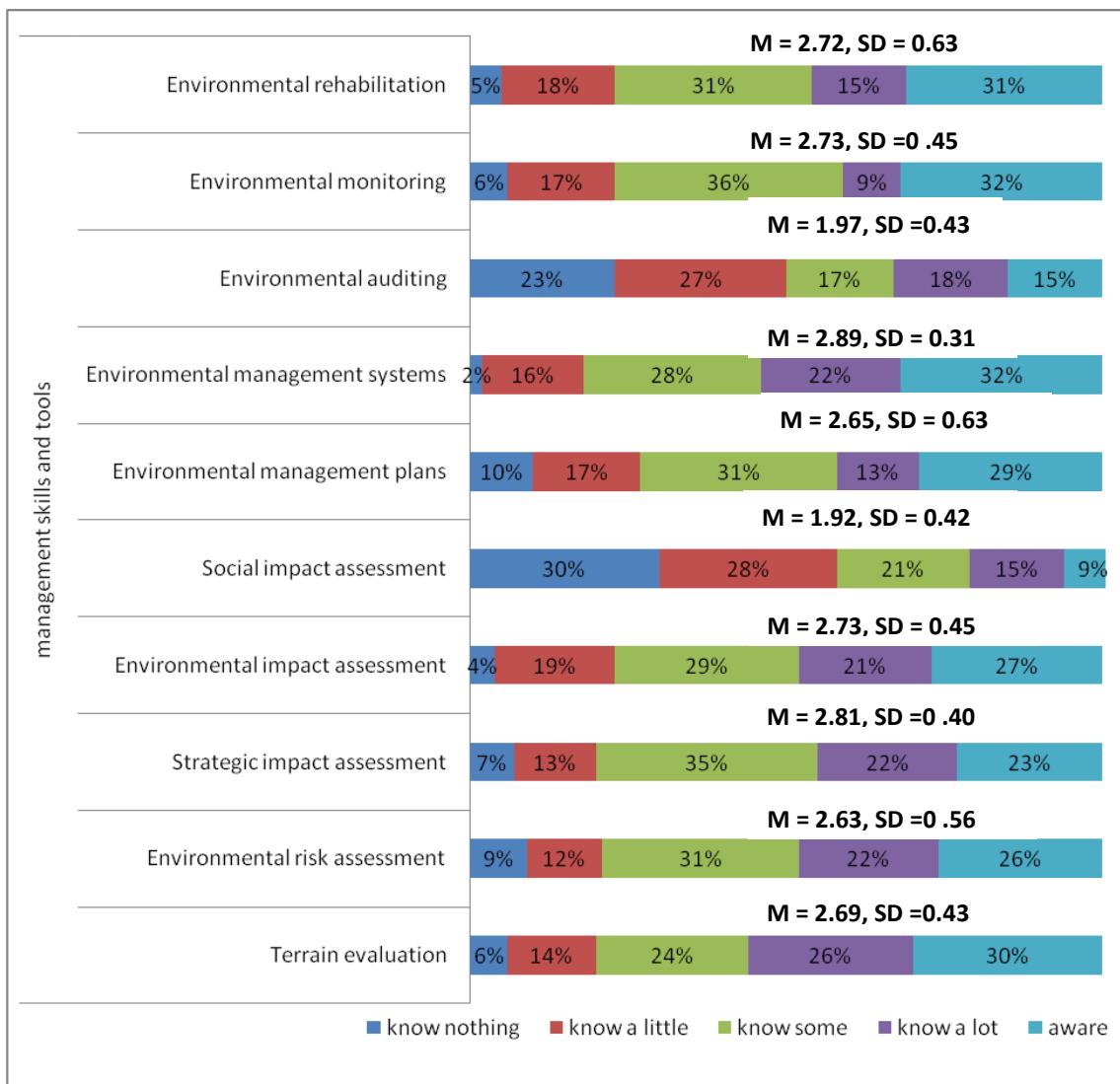


Figure 3. The level of co-councils awareness of Environmental management skills and tools

Sources of Information: Preferred and Trusted Sources

Figure 4 shows the main sources of environmental information that co-councils preferred and trusted. Co-councils were asked to list three main sources of information about the environment. According to the survey data, events e.g. conferences, fairs\ exhibitions, festivals, etc accounted for the highest response (87.14 %) followed by television (75.71 %) and publications (65.71 %). Over 50% of the respondents preferred other sources e.g. the radio and newspapers, scientific publications, and conferences as the trusted sources of

information on environment. The internet, books and magazines ranked far below in importance, so that, they appeared as the main source of information for only 7.14 %, 14.29 % and 21.43 % of the individuals respectively. The results provided a good indication of the importance of the events and the media as sources of environmental knowledge.

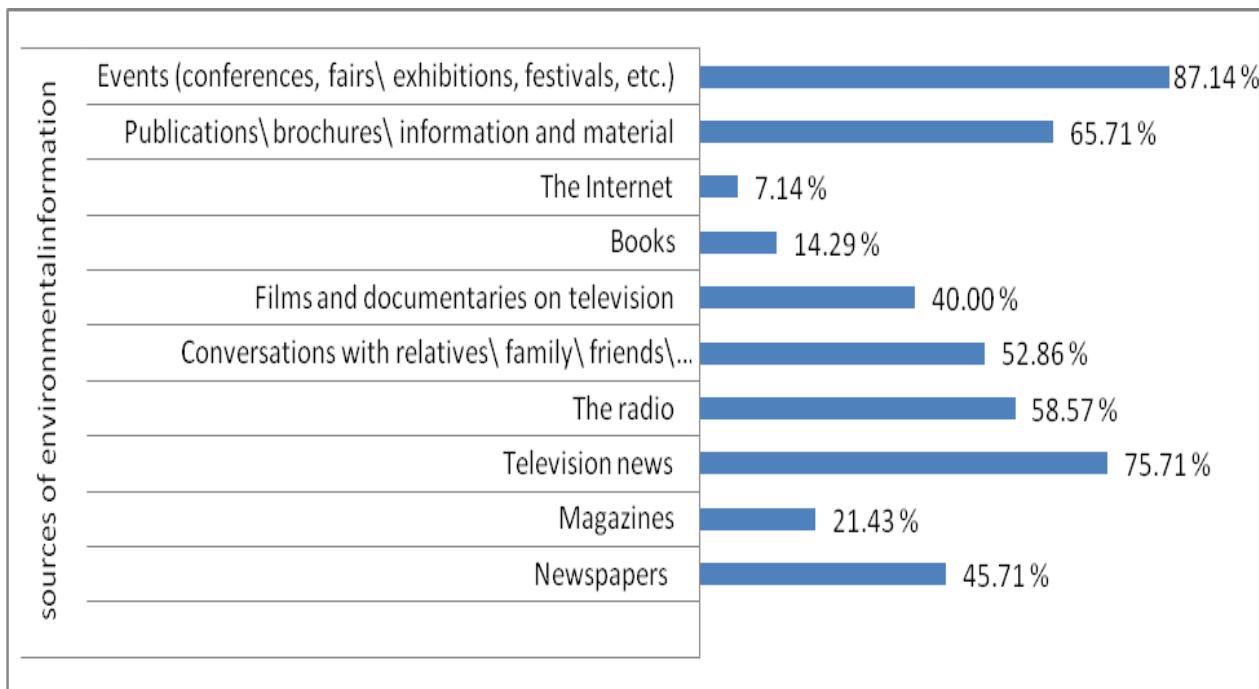


Figure 4. Main sources of information about environment

Discussion and Conclusions

The purpose of this study was to determine environmental training needs of co-councils in Tehran-Iran and preferred information sources, and it is expected to help development of a baseline database that will allow effective planning of environmental education. Therefore, the findings in the present study may be of interest to educators and have implications for curriculum development in environmental education in Iran. The study suggests that although, the co-councils sampled had high environmental knowledge scores, there are certain areas in which they were not adequately informed. This is perhaps because of the inappropriate content of the curriculum. These areas and related ones thus should be especially addressed in the curriculum. Particular attention should be placed on

developing the co-councils' level of factual environmental knowledge which is relatively lower than their understanding of concepts and generalizations including:

- Environmental impacts of resources pollution;
- The interrelationships between environmental spheres and components;
- Triple bottom line;
- Environmental laws;
- Social impact assessment, and
- Environmental auditing

Therefore, these themes should be embedded in curriculum. Accurate consideration of results revealed that although, as Murphy (2004) addressed, respondents had at least an average knowledge about the structure and functions of environment, they did not have qualified level of capabilities on understanding how to put their environmental knowledge into practices using some environmental tools e.g. social impact assessment and environmental auditing.

The main role of the information source as a part of environmental knowledge and information systems is to provide expert assistance at the decision making level for the urban co-councils as a component of environmental decision support Systems (Schimak ,2005).Regarding the study also provided a good indication of the importance attributed to the preferred sources of environmental knowledge as perceived by the co-councils. Results revealed that the majority of respondents preferred and perceived events, television and publications as important sources of the environmental knowledge, thus, the role of the events (Nelson. & Europe, 2008) and media (Lim, 1995 & Ivy et al., 1998) should not be overlooked in educational planning on the subject of the environment for the co-councils.

Recommendation

Since the main task of the co-councils is contribution to urban managers for making decision about urban issue, they should be aware about environmental management skills and tools. Given this fact, we dare to recommend that the determined training needs

about management tools such as social impact assessment, triple bottom line, and environmental auditing should be more preferred in developing curriculum for co-councils in compared with other themes.

References

Barbazette, J., (2006), *Training needs assessment: methods, tools, and techniques*, Business & Economics – 173.

Burdge, R. J. (2004). *The concepts, process and methods of SIA*. Middleton, WI: The Social Ecology Press.

Fryxell GE, Lo CWH. (2003). The influence of environmental knowledge and values on managerial behaviours on behalf of the environment: an empirical examination of managers in China. *Journal of Business Ethics*, 46(1), 48.

Grant, J. (2002). *Learning needs assessment: assessing the need*, Open University Centre for Education in Medicine, Milton Keynes MK7 6AA, 19; 324(7330): 156–159.

Hassan A., Juahir H. & Jamaludin, N. S. (2009). The Level of Environmental Awareness Among Students to Fulfill American. *Journal of Scientific Research*, 5, 50-58

Ivy, Tan Geok-Chin , Road, Kay Siang , Lee, Christine Kim-Eng & Chuan, Goh Kim(1998). 'A Survey of Environmental Knowledge, Attitudes and Behaviour of Students in Singapore', *International Research in Geographical and Environmental Education*, 7(3), 181 – 202

Mattsson, B. & P. Olsson (2001). "Environmental audits and life cycle assessment". in Dillon, M.; Griffith eds. *Auditing in the Food Industry - From Safety and Quality to Environmental and Other Audits*, Woodhead Publishing.

Matthews, J. (2004). *A Generic Environmental Awareness Course Framework for use by Business*, Mini dissertation Submitted in partial fulfilment of the requirements for the Degree Master of Arts in Environmental Management in the Faculty of Arts at the Rand Afrikaans University.

Monette, M.L. (1997). The Concept of Educational Need: An Analysis of Selected Literature. *Adult Education Quarterly*, 27(2), 116_127.

Murphy, T. P. (2004). *A survey of adult environmental knowledge, attitudes and behavior*, Second Minnesota Report Card on Environmental Literacy, Minnesota Office of Environmental Assistance.

Nelson S. T. & EOS Gallup Europe (2008). "Attitudes of European citizens towards the environment", Special Eurobarometer Directorate General Environment and coordinated by Directorate General Communication, European Commission.

Schimak G. (2005). Environmental Knowledge and Information Systems, *Environmental Modeling & Software*. 20,1457-1458.

Seevers, B., Graham, D., Gamon, J., & Conklin, N. (1997). *Education through Cooperative Extension*. Albany, NY. Delmar Publishers.

Veisi H. & Zarandian A. (2009). Determining Environmental Training Needs of Household Women, *Journal of Woman's study, Sociological and Psychological*, 7(2),7-23.

Wacker C., A. V. & M. Wolf (1999). Partnerships for urban environmental management: the roles of urban authorities, researchers and civil society, *Environment&Urbanization*, 11(2), 113.

Witkin, B.R., & Altschuld, J. R. (1995). *Planning and conducting needs assessments, a practical guide*. London, England: sage Publications.

Zarafshani, K. & AliBaygi, A. (2008). 'What Can a Borich Needs Assessment Model Tell us about In-Service Training Needs of Faculty in a College of Agriculture? The Case of Iran', *The Journal of Agricultural Education and Extension*, 14(4),347- 357.

Ziadat A. H. (2010). Major factors contributing to environmental awareness among people in a third world country/Jordan, *Environment, Development and Sustainability*, 12(1), 135-145.