AN EMPIRICAL RESEARCH ON ENVIRONMENTAL AWARENESS: STUDENTS' PERCEPTIONS

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This research aims at clarifying the relation between students' personality types and their environmental awareness. Study was conducted on the departments of engineering students (N=137) at Istanbul Arel University. According to the research findings, there are strong relationships between students' personality types and their choices. In this study, the questionnaire for the academic students has been provided, applied and consequently, the conscience level of awareness of the subject has been researched and some statistical data have been added.

INTRODUCTION

Environmental concern has been studied by Schultz who proposed environmental concerns with three sub-dimensions.[1] Fritzsche and Dueher studied the effects of concern for the environment on the choice of deodorant container.[2] Kinnear and Taylor examined the effects of ecological concern on attitudes toward phosphates in laundry detergents.[3] Barr searched the recycled packaging and behavioural attitudes.[4] Many

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[1] Schultz, P., *Empathizing with Nature: The Effects of Perspective Taking on Concern for Environmental Issues*, 56 JOURNAL OF SOCIAL ISSUES, 391–406 (2000).

[2] Fritzsche, D., & Dueher, R., *The Effects of Ecological Concern on Product Attribute Utility*, American Marketing Association Proceedings 364–369 (Chicago 1982).

[3] Kinnear,T., & Taylor, J., *The Effect of Ecological Concern on Brand Perception*, 10 JOURNAL OF MARKETING RESEARCH 191–197 (1973).

[4] Barr, S., *Strategies for Sustainability: Citizens and responsible Environmental Behavior*, 35 AREA 227–240 (2003).

researches in the literature have focused specifically on the relationship between environmental attitudes and environmentally related behaviours.[5]

The research questionnaire includes four scales: (i) awareness of environmental problems (12 items), (ii) awareness of individual responsibility (13 items), (iii) perceived environmental knowledge scale (five items) and (iv) personality traits (25 adjectives).

The awareness environmental problems scale and the awareness of individual responsibility scales are built by Worsley and Skrzypiec. [6] Perceived environmental knowledge scale is adapted from Mostafa's research which was originally used to evaluate the gender differences in Egyptian consumers' green purchase behaviour.[7]

Personal traits (adjective checklist) dimension is structured by the author to depict the personality traits of the participants. A designed the fundamental dimensions of personality were given by Costa and McCrae.[8] A set of adjective checklist that constructed the personal traits of participants is a good correlation with personality dimensions given by Costa and McCrae. Personality and individual differences were studied by Wiseman & Bogner (2003).

Based on The Five Factor Model, inventory is an evaluation tool which is improved according to the Turkish culture. The results obtained from inventory were evaluated by using raw points and not norm points. In the short version of the inventory, only the five dimensions (openness to experience, conscientiousness, extravertness, compatibleness, agreeableness)

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[5] Kotchen, M., & Reiling, S., *Environmental Attitudes, Motivations, and Contingent Valuation of Nonuse Values: A Case Study Involving Endangered Species*, 32 ECOLOGICAL ECONOMICS 93–107 (2000). Mohai, P., *Black Environmentalism*, 7 SOCIAL SCIENCE QUARTERLY 744–765 (1990). Lansana, F., *Distinguishing Potential Recyclers from Non-recyclers: A Basis for Developing Recycling Strategies*, 23 JOURNAL OF ENVIRONMENTAL EDUCATION 16–23 (1992). Walsh, J., & McGuire, J., *An Examination of Environmental Attitudes among College Students*, Proceedings of the 1992 Northeastern Recreational Research Symposium, General Technical Report, NE-176 (1992). Balderjahn, I., *Personality Variables and Environmental Attitudes as Predictors of Ecologically Responsible Consumption Patterns*, 17 JOURNAL OF BUSINESS RESEARCH 51–56 (1988). Bamberg, S., *How Does Environmental Concern Influence Specific Environmentally Related Behaviors? A New Answer to an Old Question*, 23 JOURNAL OF ENVIRONMENTAL PSYCHOLOGY 21–32 (2003). Fryxell, G., & Lo, C., *The Influence of Environmental Knowledge and Values on Managerial Behaviors on Behalf of the Environment: An empirical Examination of Managers in China*, 46 JOURNAL OF BUSINESS ETHICS 45–59 (2003).
[6] Worsley, A. & Skrzypiec, G., *Environmental Attitudes of Senior Secondary School Students in South Australia*, 8(3) GLOBAL ENVIRONMENTAL CHANGE 209–225 (1998).
[7] Mostafa, M. M., *Gender Differences in Egyptian Consumers' Green Purchase Behaviour: The Effects of Environmental Knowledge, Concern and Attitude*, 31 INTERNATIONAL JOURNAL OF CONSUMER STUDIES 220–229 (2007).
[8] Costa, P., & McCrae, R., r/ie NEO Personality Inventory Manual, ODESSA (FL, Psychological Assessment Resources 1985).

of the character are evaluated using total 25 attributes. The answers for the attitudes are classified in Likert scale 5.

I. Methodology

A. Participants

Study was conducted on the departments of engineering students (N=137) at Istanbul Arel University.

B. Instrument Measures

All constructs used in this study were measured by various items on five point Likert-type scales (1=completely disagree; 5= completely agree).

Inventory is an evaluation tool and it is developed in terms of Turkish culture by considering five factors model which is commonly accepted in personality theory. Validity and reliability analysis related to the inventory show that inventory has strong psychometric features. Cronbach Alpha values related to the scale dimensions show the scale's internal consistency. (Alpha > 0.60)

In the short version of the inventory, it is evaluated only five major dimensions by considering adjective checklist (25 items). The answers for the adjectives in the inventory were arranged in Likert scale having in five parts.

C. Questionnaire

The research questionnaire includes four scales: (i) awareness of environmental problems (12 items), (ii) awareness of individual responsibility (13 items), (iii) perceived environmental knowledge scale (5 items) and (iv) personality traits (25 adjectives).

The awareness environmental problems scale and the awareness of individual responsibility scales are built by Worsley and Skrzypiec. Perceived environmental knowledge scale is adapted from Mostafa's research in the literature.

Personal traits (adjective checklist) dimension is structured by the author to depict the personality traits of the participants. A designed the fundamental dimensions of personality were given by Costa and McCrae.

Based on The Five Factor Model, Inventory is an evaluation tool which is improved according to the Turkish culture. In the short version of the Inventory only the five dimensions (Openness to Experience,

Conscientiousness, Extrovertness, Compatibleness, Agreeableness) of the character are evaluated using total 25 attributes.

Openness to Experience: This type is interested in intellectual debates and generates original ideas. He does not like to adhere to traditional values and the idea of any kind of queries.

Conscientiousness: This type of personality shows self-motivation, planning, and measures the level of effort. In other words, he is full of self-confidence and has the planned and programmed moves. He shows all efforts to achieve the objectives and does not have sudden decisions.

Extrovertness: The person who received the highest score from the questionnaire enjoys spending time with people. He does not like to stay in the background, looks right until the end and convinces others in accordance with their own views.

Compatibleness: He behaves to help the person opposite and has collaboration with others. He/She is considerate, helpful, modest, he/she has a good relation with people, he/she is clear and honest.

Emotional Stability: High point from the "emotional balance" means that he/she is optimistic, calm, he/she is understanding against criticism, and he is balanced in anxiety. He is optimistic. Even when things go wrong, he is open to criticism and cannot be forced to confront their desires and wishes.

II. RESULTS

Participants respond each item by choosing the most representative one from five point likert scale. The alpha values for scales are shown in Table 1.

Table 1 Cronbach Values of All Dimensions Replaced in Questionnaire

Scales	Cronbach Values
Awareness of environmental problems	0.89
Awareness of individual responsibility	0.86
Perceived environmental knowledge scale	0.92
Personality traits	0.79

In the regression analysis for all dimensions were conducted in order to determine the competencies that discriminate the superior student from the others. According to the results of the regression analysis for all dimensions have significant loads to define each group (see Tables 2-4).

The regression model is depicted in the Table 5. An adjective checklist which includes 25 adjectives is added the questionnaire to identify personality of the participants.

Table 2 Regression Model for General Awareness of Environmental Problems

	Beta	St.D.	St.Beta	t	p
(Constant)	4.12	0.11		21.21	0.00**
Environmental pollution is not at the dangerous level all over the world	0.24	0.10	0.14	1.15	0.07
Environmental pollution is a temporary problem	0.11	0.12	0.06	0.20	0.32
Humanity is abusing the environment	0.12	0.13	0.17	0.02	0.02*
Over next ten years environmental problems will diminish	0.13	0.10	0.11	1.24	0.00**
Industrialised societies give most people who live in them a high standard of living	0.21	0.15	0.10	1.16	0.01*

*p<0.05 **p<0.01.

Table 3 Regression Model for Awareness of Individual Responsibility

	Beta	St.D.	St.Beta	t	p
(Constant)	3.64	0.22		12,41	0.00**
Individual responsibilities are very important in protecting the environmental pollution.	0.11	0.22	0.13	1.11	0.01*
If we do not change the current consumption patterns, land degradation and topsoil losses will increase to the point where they can no longer support crops	0.22	0.12	0.31	3.44	0.03*
We can accept to change our lifestyles to protect natural resources	0.11	0.13	0.20	3,34	0.00**
Environmental protection is a governmental responsibility	0.11	0.14	0.11	1.50	0.04*

*p<0.05 **p<0.01.

Table 4 Regression Model for Perceived Environmental Knowledge Scale

	Beta	St.D.	St.Beta	t	p
(Constant)	4.35	0.16		34.13	0.00**
I know that I buy products and packages that are environmentally safe	0.15	0.05	0.07	0.28	0.02*
I know more about recycling than the average person	0.25	0.12	0.12	0.32	0.12
I know how to select products and packages that reduce the amount of waste ending up in landfills	0.14	0.08	0.14	0.25	0.18
I understand the environmental phrases and symbols on product package	0.16	0.11	0.14	0.17	0.04*
I am very knowledgeable about environmental issues	0.09	0.20	0.17	0.14	0.03*

*p<0.05 **p<0.01.

Table 5 Regression Model for Personal Traits.

	Beta	St.D.	St.Beta	t	p
(Constant)	4.12	0.09		28.00	0.00**
Openness to Experience	0.05	0.05	0.05	024	0.02*
Conscientiousness	0.06	0.06	0.07	0.23	0.00**
Extrovertness	0.05	0.11	0.09	0.16	0.03*
compatibleness	0.12	0.09	0.11	0.19	0.17
Emotional Stability	0.14	0.05	0.12	0.27	0.00**

*p<0.05 **p<0.01.

III. DISCUSSION

Environmental awareness is a very crucial issue in our modern industrialized world. To foster the importance of this issue, we have focused on this topic. The meaning of environmental knowledge, awareness of individual responsibilities and awareness of environmental problems may differ from person to person. The main idea behind this research is to dig the perception of awareness according to the personal traits.

This research aims at clarifying the relation between students' personality types and their environmental awareness. The research was conducted on the departments of engineering students at Istanbul Arel University. In this study, the questionnaire has been applied for the academic students. Consequently, the conscience level of awareness of the subject has been researched and some statistical data have been added.

As a result when the conscientiousness level of the students increases, they evaluate all the environmental issues positively. However, if the student behaves as a type of openness to experience emotional balance increase, the student contributes to his/her workplace and environment policy project more positively.

In the research, participants perceived environmental knowledge, awareness of individual responsibility, awareness of environmental problems and personal traits scales were applied to assess the students' environmental awareness at university.

CONCLUSION

No doubt that environmental awareness is a crucial issue for everybody. The youth awareness should be high for a clear future environment. In this study, the questionnaire for the academic students has been provided, applied and consequently, the conscience level of awareness of the subject has been researched and some statistical data have been added.

In the research, it is examined the correlation of the staff's evaluation related to the institutional communication effectiveness with the staff's personal qualities, and it was found that all of the staff's evaluation related to the institutional communication elements' effectiveness has a positive correlation with some personal qualities.

According to the research results, the student who is considerate, helpful, modest, compatible, clear in their opinions and honest has high environmental awareness. Moreover, the student who permanently creates new ideas, has various hobbies and interests, has awareness and behaves friendly to environment.