



AN INVESTIGATION INTO PRE-SERVICE TEACHERS' MOTIVATION TOWARDS RECYCLING BEHAVIORS

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Abstract:

The aim of the present study is to analyze pre-service teachers' motivations towards recycling behavior. The survey model was adopted and the sample comprised 157 pre-service teachers studying at various teaching departments of Gazi University. "Motivation towards Recycling Behaviors Scale", developed by the researcher was used as the data collection instrument. The scale which was analyzed with regard to reliability and validity comprises 19 items and four dimensions: internal motivation, external motivation, lack of motivation and social impact. The collected data were analyzed by means of SPSS 18 and LISREL 8.7; t-test, ANOVA and multiple-regression were performed. As a result of the study, it was found out that pre-service teachers' motivation towards the recycling behavior varied between medium and high levels; following environmental magazines and recycling behavior frequency variables are significant determinants of motivation towards recycling behavior, and the variables of recycling behavior frequency and following environmental magazines are significant predictors of recycling behavior.

Keywords: motivation towards recycling, pre-service teachers, recycling

1. Introduction

Industrial revolution has brought about many changes in the world. The most important of all is the change in the environment. Others can be listed as the rapid, unprecedented, large-scale environmental changes caused by human behavior, such as air pollution, water pollution, decrease in biological variety, environmental pollution, use of resources, environmental injustice, and population problems (Keller, 2000; Kump, Kasting & Crane, 2004).

Inattentive and indifferent conducts experienced in technological developments and industrialization have upset the ecological balance of the world and as a result,

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have lead to environmental issues such as pollution, extinction of species, diminishing sources of energy, decrease in available agricultural lands, nuclear risks, and rapid growth of population (Borden, 1985; 56). These issues experienced by all living creatures and ways that must be followed to overcome them have been among the matters discussed in recent years.

2. Problem of Research

Day by day, especially in large cities, the amount of solid wastes that are produced and must be discharged has become a problem. Increasing standard of living due to economic development has resulted in the diversification of demands in a society, therefore the continuous release of new products and the appearance of new consumption patterns. In "The Challenge of the Environment" report by the United Nations Development Program, it is stated that, out of 720 million tons of waste produced yearly in the world, 440 million tons waste are produced by the developed countries. In large cities, the municipal authorities can only collect 25-55% of the wastes and garbage left outdoors renders the neighborhood unusable as well as poses a great threat to human health (UNEP, 1995).

An analysis of the causes of environmental problems reveals that the most significant resources of these problems are humans and human-related issues. The mankind's constant effort to get more and more from the nature, desire to change the environment in line with his/her own interests have resulted in the problems that the environment is exposed to now. In order to solve environmental problems, some solutions have been devised and practiced by countries and societies. In the solution of environmental problems, the individuals also have responsibility as well as countries and societies.

The most significant responsibility of the individuals' towards environment is environmentally conscious behaviors. Economical use of water, using mass transportation vehicles, using renewable energy resources, planting trees, and recycling are some of the environmentally conscious behaviors that can be performed by individuals. Among the environmentally conscious behaviors, recycling behavior has an important place.

An analysis of the factors influencing people's recycling behaviors reveals that many factors are effective in the formation of recycling behaviors. One of the factors which influence people's recycling behaviors is people's motivations towards recycling behaviors.

The literature on motivation towards the environment brings to the fore the self-determination theory by Deci and Ryan (1985). According to this theory, motivation has a significant role in the maintenance of positive behaviors towards the environment. This approach considers motivation towards the environment under three categories. These are external motivation, internal motivation, and lack of motivation. Internal motivation brings about behaviors like satisfaction, happiness, and pleasure. In other words, it is related to the individual and these behaviors are realized of their own free

will. As for external motivation, it is the motivation controlled by behaviors from the environment. It can be expressed as the motivation leading to behaviors done in order to be approved, accepted and appreciated by others. In lack of motivation, negative ideas related to the realization of the behavior are in effect. For this reason, there is a decrease in the possibility of performing these behaviors (Pelletier et al., 1998).

1.3 Research Focus

In many studies, it has been observed that although people state they support recycling programs, in practice, recyclable waste is usually thrown away just as regular waste. In studies investigating the causes of inability to realize recycling behaviors, lack of time was the most often cited reason (Vining & Ebreo, 1990; Gamba & Oskamp, 1994; McCarty & Shrum, 1994). Even in places where recycling regulations have been made, and people volunteer to recycle, participation in recycling is reported to be at a low level. Even in cases where recycling is mandatory, people do not always separate their products. Therefore, studies have investigated the way people perform recycling every day (Sansone and Morgan, 1992; Sansone *et al.*, 1992; Sansone & Harackiewicz, 1996). Samone et al. (1992) emphasized the fact that people must either take pleasure from a behavior or view it as useful in order to do a task. When people have a valid reason for performing the task, they carry on this behavior. If people find a reason for performing a task, they enjoy it and structure experiences related to this task as positive (Sansone *et al.*, 1992, p. 380).

It is also acknowledged that motivation towards the environment is closely related to behaviors towards the environment and environmental protection. One of the popular issues related to the environment is recycling (Ebreo & Vining, 2000; Diaz, 2005). Ebreo and Vining (2000) state that motivation is a significant factor which contributes to recycling. Ebreo and Vining (2000) also note that there are five motivation types for recycling. These are environmental sacrifice, social factors, problematic factors, and home-related factors. Environmental sacrifice and social factors are reported to have a positive effect over the recycling behavior. Diaz & Palacio (2005) found out that the quality of motivation is related to recycling. Auf der Mauer et al. (2004) examined the members and non-members of New Jersey Sierra Club in terms of attitudes and motivation towards the environment.

Considering the fact that children acquire recycling behaviors at school, teachers have great responsibility in this issue. In order to promote recycling awareness, teachers must have recycling awareness. In this respect, the factors influencing pre-service teachers' motivation towards recycling behaviors should be identified.

The aim of the present study is to analyze pre-service teachers' motivations towards recycling behavior. Answers to the following questions were sought with regard to this general aim:

- a) What is the level of pre-service teachers' motivation towards recycling behavior?
- b) Do pre-service teachers' motivation towards the recycling behavior change in terms of sex, program type, grade level, family's income level, and membership of environmental clubs?

- c) What are the variables predicting pre-service teachers' motivation towards recycling behaviors?

2. Methodology of Research

2.1 General Background of Research

The study is a descriptive field study and adopts the survey design. Survey designs aim to describe a state as it is or as it was (Karasar, 1999).

2.2 Sample of Research

The sample comprised 157 pre-service teachers studying pre-school education, primary school education, biology education and physics education at Gazi University, Faculty of Education. Of the pre-service teachers, 86% were female, 14% were male; 15% studied physics education, 16% studied biology education, 30% studied primary education and 31% studied pre-school education.

2.3 Instrument and Procedures

"Motivation towards Recycling Behaviors Scale", developed by the researcher was used as the data collection instrument.

Primarily, a literature review was conducted in the scale development process. The scale was developed by the researcher in order to determine students' motivation level in regard to the recycling behavior. Firstly, a literature review was carried out and expressions in motivation scales for other areas were adapted to recycling. The expressions were analyzed by a measurement expert and 5 experts in the field. At this stage, new items recommended by the experts were constructed; some items were removed from the scale and some were modified. Thus, the scale comprised 27 items. After obtaining the approval of experts again, a pilot study was administered in order to measure the reliability, validity and item discrimination values of the scale.

At the piloting stage, the scale was administered to a group of biology pre-service teachers and the participants' opinions related to the items were obtained. At the end of the analyses, 6 items which belonged to more than one factor and 2 items which decreased the reliability of the scale were removed. As a result of the reliability and validity analysis, the scale's Kaiser-Meyer-Olkin (KMO) coefficient was found to be .844; Barlett Sphericity test significance was determined to be 0.00, while Cronbach's alpha reliability coefficient was found to be .88. The scale whose factor structure was outlined comprised four dimensions: internal motivation, external motivation, lack of motivation and social impact. According to confirmatory factor analysis, the scale's goodness of fit indices were found to be as follows: chi square = 257.4, degree of freedom 146, Normal Fit Index (NFI) 0.98, Comparative Fit Index (CFI) 0.96, Goodness of Fit Index (GFI) 0.86, Root Mean Square Residual (SRMR) 0.066 and Root Mean Square Error of Approximation (RMSEA) 0.066, which demonstrates that the Motivation Towards Recycling Scale has good construct validity.

The final Motivation towards Recycling Scale comprised 19 items and four dimensions: internal motivation, external motivation, lack of motivation and social impact. The items which formed the internal motivation factor were 1, 2, 5, 7, 10, 18, 19; the items which formed the external motivation factor were 3, 6, and 17; the items related to the environmental benefit factor were 4, 8, 9, 11, 12, and 13, and the items related to the lack of motivation factor were 14, 15, and 16. The items in the scale had five options: "very few", "few", "medium", "high", and "very high".

2.4 Data Analysis

Several statistical techniques related to the sub-problems were used in the data analysis process. The validity and reliability analyses were run by means of SPSS and LISREL software. In addition to these analyses, t-test and ANOVA were used for analyzing pre-service teachers' motivation towards recycling while regression analysis was used for predicting motivation towards recycling behaviors.

3. Results of Research

The aim of the present study is to analyze pre-service teachers' motivation level towards recycling behavior. In line with this general aim, the findings are presented in Table 1.

Table 1: Descriptive findings related to pre-service teachers' recycling behavior

	N	Minimum	Maximum	* \bar{M}	S
Recycling Motivation	157	32	85	66.70	9.90

Table 1 demonstrates that pre-service teachers' mean recycling motivation score is $\bar{M}=66.70$. This demonstrates that pre-service teachers' motivation towards recycling vary from medium to high levels.

The second sub-problem was stated as "Do pre-service teachers' motivation towards recycling behavior vary significantly in terms of sex, program, age, income level, and recycling behavior frequency?" The findings related to this sub-problem are presented below:

Table 2: *t*-test results for pre-service teachers' motivation towards recycling behavior scores in terms of sex

Sex	N	* \bar{M}	S	sd	t	p
Female	135	67.32	9.69	155	1.977	0.04*
Male	22	62.86	10.59			

* $p < 0.05$

Table 2 shows that female pre-service teachers' mean recycling motivation score is $\bar{M}=67.32$ while male pre-service teachers' mean score is $\bar{M}=62.86$. The *t*-test results reveal a significant difference with regard to female pre-service teachers ($t(155)=1,997; p < 0,05$).

Table 3 demonstrates the t-test results related to pre-service teachers' motivation towards recycling results with regard to following environmental magazines.

Table 3: t-test results for pre-service teachers' motivation towards recycling behavior scores with regard to following environmental magazines

Following magazines	N	\bar{x}	S	sd	t	p
Yes	30	70.92	6.24	151	2.313	0.02*
No	123	66.17	10.05			

*p<0.05

Table 3 shows that the mean motivation score of pre-service teachers who follow environmental magazines is \bar{x} = 70.92, while the mean score of pre-service teachers who do not follow such magazines is \bar{x} =66.17. The t-test results reveal a significant difference on the part of pre-service teachers who follow environmental magazines ($t(151)=2.2313$; $p<0.05$).

Table 4 shows the ANOVA results for pre-service teachers' recycling motivation scores with regard to the program variable.

Table 4: ANOVA results for pre-service teachers' recycling motivation scores with regard to the program variable

	ss	sd	ms	F	p
Within groups	284.743	3	94.914	0.996	0.410
Between groups	15034.187	153	98.263		
Total	8648.477	156			

Table 4 reveals that pre-service teachers' recycling scores do not differ significantly with regard to the program variable ($F(3-153)=0.996$; $p>0,05$). This indicates that the program variable does not have a significant effect on determining motivation towards recycling behavior.

Table 5 shows the ANOVA results for Pre-Service Teachers' Recycling Motivation Scores with regard to the age variable.

Table 5: ANOVA results for pre-service teachers' recycling motivation scores with regard to the age variable

	SS	SD	MS	F	p
Within groups	36.671	2	18.335	0.184	0.832
Between groups	15280.560	153	99.873		
Total	8648.477	155			

On the basis of Table 5, it could be argued that pre-service teachers' recycling behavior scores do not differ significantly with regard to the age variable ($F(2-153)=0.184$; $p>0.05$). In line with this finding, it could be argued that the age variable does not have a significant effect on determining pre-service teachers' motivation level towards recycling behavior.

Table 6 shows the ANOVA results for Pre-Service Teachers' Recycling Motivation Scores with regard to the income level variable.

Table 6: ANOVA results for pre-service teachers' recycling motivation scores with regard to the income level variable

	SS	SD	MS	F	p
Within groups	425.546	2	141.819	1.439	0.234
Between groups	14683.603	153	98.548		
Total	8648.477	155			

On the basis of Table 6, it could be argued that pre-service teachers' recycling behavior scores do not differ significantly with regard to the income level variable ($F(2-153)=1.439; p>0.05$). Thus, the income level variable does not seem to have a significant effect on motivation towards the recycling behavior.

Table 7 shows the ANOVA results for Pre-Service Teachers' Recycling Motivation Scores with regard to the participation frequency variable.

Table 7: ANOVA results for pre-service teachers' recycling motivation scores with regard to the participation frequency variable

	SS	SD	MS	F	p	Scheffe
Within groups	2417.546	4	60.387	7.188	0.00**	Never-Usually
Between groups	12612.750	150	84.085			Never-Always
Total	8648.477	155				

** $p<0.00$

An analysis of Table 7 reveals that pre-service teachers' motivation towards recycling behavior does not vary significantly in terms of recycling frequency ($F(4-150)=7.188; p<0.05$). The Scheffe test results demonstrate that the difference between scores stems from the groups "who do not participate in recycling-who generally participate in recycling" and "who do not participate in recycling-who always participate in recycling".

The third sub-problem was stated as "What are the variables' predictive power with regard to recycling behavior?". The obtained findings are presented in Table 8.

Table 8: Multiple regression results for independent variables' prediction of recycling behavior

Variables	β	Standard Error _B	Standardized β	t
Constant	70.924	6.387		11.104
Sex	6.142	2.180	.230	2.817*
Magazine	4.293	2.056	.169	2.088*
Recycling	3.208	.771	.339	4.160**
Department	.460	.934	.049	.492
Age	.363	1.317	.028	.276
Income	.121	.800	.012	.151
	R= 0.445	R²=0.198	F= 5.596*	

Table 8 demonstrates that the variables altogether explain approximately 20% of the variance. Analysis of the parameters of the regression model shows that standardized regression coefficients (β), predictor variables' significance rank with regard to motivation towards recycling behavior; frequency of participation in recycling ($\beta=0.339$; $t=4.160$; $p<0.05$), sex ($\beta=0.230$, $t=2.817$, $p<0.05$), following environmental magazines ($\beta=0.169$, $t=2.088$, $p<0.05$), program type ($\beta=0.049$, $t=0.492$, $p>0.05$), age ($\beta=0.028$, $t=0.276$, $p>0.05$) and income ($\beta=0,012$, $t=0,151$, $p>0,05$). Taking into consideration all of these variables, recycling behavior frequency, sex, and following environmental magazines are significant predictors of motivation towards recycling behavior; program type, age, and income variables are not significant predictors of motivation towards recycling behavior.

4. Discussion

Motivation towards the recycling behavior is one of the most significant factors which contribute to the maintenance of recycling behavior. In the present study, some findings have been obtained with regard to several variables' effect over the motivation towards the recycling behavior.

It was found out that pre-service teachers' motivation towards recycling vary from medium to high levels. In a previous study, Berglund (2006) had found that the household's motivation towards recycling was at a low level. One of the most significant findings obtained was that pre-service teachers' attitudes towards recycling behaviors do not vary significantly in terms of age, income level, program types. In line with these results, it could be argued that age, income level, and program type are not significant predictors of motivation towards the recycling behavior. In another study by Bakar and Aydınli (2012) it was found that, participants' plastic recycling behavior does not vary significantly with regard to income level variable. Corral-Verdugu (2003) had found that age is not a significant predictor of recycling behavior. Although these findings are in line with the findings obtained in the present study, it is possible to see differing results in the literature. To illustrate, Saphores et al. (2006) stated that young adults have more tendency to participate in recycling programs in comparison with the aged. [Daneshvary](#), [Daneshvary](#) and Schwer (2002) found that the income variable is a significant predictor of the recycling behavior.

In the present study, it was also understood that female pre-service teachers had a significantly higher level of motivation towards recycling in comparison with male pre-service teachers. In other words, the sex variable is significant in terms of determining the motivation level towards recycling. Lansana (1992) also emphasized that there is a significant relationship between recycling behavior and sex. Ebreo, Hershey and Vining (1999) stated that gender is a significant predictor of recycling. These results are in line with the findings of the present study.

One of the other significant results reached is that pre-service teachers who follow environmental magazines have a significantly higher motivation towards recycling than those who do not follow magazines. It could be argued that doing

environment-related activities influenced motivation towards recycling positively. Vining and Ebroe (1992) stated that interest in environment influences recycling behavior positively.

Frequency of participation in recycling behavior is found to be a significant predictor of motivation towards recycling behavior. It was found that pre-service teachers who do not recycle or who recycle less frequently have significantly lower level recycling behaviors than those who frequently recycle. In other words, pre-service teachers who have a habit of recycling have higher motivation towards recycling than those who do not. [Daneshvary](#), [Daneshvary](#) and Schwer (2002) had found regular recycling habits to be a significant predictor of recycling behavior. This is in line with the results of the present study.

5. Conclusions

The most important result of the present study is that sex, following environmental magazines, and recycling frequency are significant predictors of motivation towards recycling behavior. An analysis of the significance ranks shows that recycling behavior frequency is the most significant predictor of motivation towards recycling.

In light of the findings obtained, it could be argued that:

- Considering the fact that following environmental magazines influences recycling motivation positively, related activities can be organized at universities.
- Another result is that recycling habit is one of the most significant predictors of recycling behavior. On the basis of this, when planning environment-related activities, activities which promote recycling habit formation may give higher priority.
- Another finding of the present study is that recycling habit, sex, and environmental activities predict a significant portion of motivation towards recycling. Future studies should investigate the effect of other variables on predicting recycling behavior.

References

- Auf der Mauer, G., Hollander, A., Hu Huifen, J., Hunter, K.D., Isenbügel, S., Kohonick, M., Matveeva, N., Wolfe, J., & UNESCO-UNEVOC. (2004). *Technical and vocational education and training for sustainable development: An annotated bibliography of research and related literature (1998-2004)*. UNESCO-UNEVOC International Centre Publications.
- Bakar F. ve Aydinli B. (2012). Bilim ve sanat merkezi öğrencilerinin plastik, plastik atıkların geri dönüşümü ve çevreye etkileri konusunda tutumlarının incelenmesi (Batı Karadeniz Bölgesi Örnekleme).X. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Niğde.

- Berglund, C. (2006). The assessment of households' recycling costs: the role of personal motives. *Ecological Economics*, 56, 560–569
- Borden, R.J. (1985). *Personality and ecological concerns. Ecological beliefs and behaviour*. Greenwood: Westport.
- Corral-Verdugo, V., Frías, M., Pérez, F., Orduño, V. & Espinoza, N. (2002). Residential water consumption, motivation for conserving water, and the continuing tragedy of the commons. *Environmental Management*, 30, 527-535.
- Deci, E.L. and Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior* (Plenum, New York).
- Diaz, G., & Palacio, A. (2005). Recycling behavior: A multidimensional approach. *Environment and Behavior*, 37(6), 837-860.
- Ebreo, A. & Vining, J. (2000). Motives as predictors of the public's attitudes toward solid waste issues. *Environmental Management*, 25, 153-168.
- Ebreo, A., Hershey, J. & Vining, J. (1999). Reducing solid waste: Linking recycling to environmentally responsible consumerism. *Environment & Behavior*, 31, 107-135.
- [Gamba, R.J.](#) & [Oskamp, S.](#) (1994). Factors influencing community residents' participation in commingled curbside recycling. *Environment and Behavior*, 26, 587–612.
- Karasar, N. (1999). *Bilimsel araştırma yöntemi*. Ankara: Nobel Yayın Dağıtım Ltd. Şti.
- Kump L.R., Kasting J. F., Crane, R.G. (2004). *The Earth System*, 2nd edn. Pearson Education, Inc, Upper Saddle River, NJ, p. 419.
- Lansana, F.M. (1992). Distinguishing potential recyclers from nonrecyclers: A basis for developing strategies. *Journal of Environmental Education*, 23, (2), 16–23
- McCarty, J.A. & Shrum, L.J. (1993). A Structural Equation Analysis of the Relationships of Personal Values, Attitudes and Beliefs about Recycling, and the Recycling of Solid Waste Products," in *Advances in Consumer Research*, Vol. 20, L. McAlister and M. Rothschild, eds., Provo, UT: Association for Consumer Research, 641-646.
- Pelletier, L.G., Tuson, K.M., Green-Demers, I., Noels, K., & Beaton, A.M. (1998). Why are you doing things for the environment? The Motivation Toward the Environmental Scale (MTES). *Journal of Applied Social Psychology*, 28, 437–468.
- Sansone, C. & Harackiewicz, J.M. (1996). 'I don't feel like it': the function of interest in self-regulation. In L. Martin & A. Tesser _Eds. *Striving and Feeling: interactions between goals and effect*. Mahwah, NJ: Erlbaum, pp. 203]228.
- Sansone, C. & Morgan, C. (1992). Intrinsic motivation and education: Competence in context. *Motivation and Emotion*, 16, 249-270
- Sansone, C., Weir, C., Harpster, L. & Morgan, C. (1992). Once a boring task always a boring task? Interest as a self-regulatory mechanism. *Journal of Personality and Social Psychology* 63, 379-390.
- Saphores, J.D., Nixon, H., Ogunseitani, O., & Shapiro, A. (2006). Household willingness to recycle electronic waste: An application to California. *Environment and Behavior*, 38, 183-208N. Daneshvary, R. Daneshvary, R.K. Schwer Solid-waste recycling behavior and support for curbside textile recycling *Environment and Behavior*, 30 (1998), pp. 144–161

The United Nations Environment Program (UNEP). (1995). Taking Action, An Environmental Guide for You and Your Community.

Vining, J. & Ebreo, A. (1990). What makes a recycler? A comparison of recyclers and non-recyclers. *Environment & behavior*, 22, 55-73.

Vining, J. & Ebreo, A. (1992). Predicting recycling behavior from global and specific environmental attitudes and changes in recycling opportunities. *Journal of Applied Social Psychology*, 22, 1580-1607.

Appendix

A. Beliefs about the Future of Environment and Motivation towards Recycling Scale

Dear teacher candidates, in order to make the environment a better place, we should become more environmentally conscious. Separating recyclable products such as paper and plastic is one of the possible contributions to the environment. In the present study, your purposes for separating recyclable products (e.g., paper, plastic) and your beliefs about the future status of the environment will be examined. Thank you for contributing to our study.

Res. Asst. Dr. Osman ÇİMEN

Sex: Department:..... Year: Age:

Your family's monthly income () below 1000 TL () 1000-2000 TL () 2000-2500 TL () Over 2500 TL

Environmental club/foundation membership: () Yes () No Environmental magazine followed: () Yes () No

How frequently do you throw products like paper, plastics, glass in recycle bins?

() Never () Rarely () Occasionally () Generally () Always

Question: I separate recyclable waste such as paper, glass and plastics and throw them into recycle bins because	Very low	Low	Medium	High	Very high
1. In order to feel happy	1	2	3	4	5
2. I separate waste since it is rational	1	2	3	4	5
3. So that wheelchairs can be bought for those in need	1	2	3	4	5
4. In order to save the trees	1	2	3	4	5
5. Since I will feel guilty when I do not do it	1	2	3	4	5
6. In order to help people in need	1	2	3	4	5
7. Since I will feel better when I contribute to the environment	1	2	3	4	5
8. In order to prevent paper waste	1	2	3	4	5
9. In order to decrease environmental pollution	1	2	3	4	5
10. Since it is a part of my life	1	2	3	4	5
11. In order to protect the environment	1	2	3	4	5

12. In order to prevent wastefulness	1	2	3	4	5
13. So that wastes can be used again	1	2	3	4	5
14. I think that separating paper will not contribute to saving the trees	1	2	3	4	5
15. I think collecting plastic covers/lids will not be useful for people	1	2	3	4	5
16. I believe that recycled glass contributes little to manufacturing of new glass	1	2	3	4	5
17. If I do not collect plastic covers/lids, I will feel sorry for people who need wheelchairs	1	2	3	4	5
18. Since participation in recycling campaigns make me happy	1	2	3	4	5
19. Since I feel more valuable when I do something useful for the environment	1	2	3	4	5

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