

The Effectiveness of Online Petitions About Environmental Issues on The Change.org Site Users

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Abstract

Environmental problems are issues vital to human life and other living creatures. Through the development of technology and information, the public can be engaged in massive street protests against the parties who should be responsible for damage to the environment and environmental protection campaign. During 2018, environmental issues became popular topic at the online petition on the Change.org website. “Seruan Penetapan Hari Hutan Indonesia” is a themed online petition environmental issues that have the support of more than 538 thousand signatures. This study was conducted to determine the effectiveness of an online petition on Change.org environmental issues at the site using a measurement EPIC (Empathy, Persuasion, Impact, Communication) Model. The quantitative research approach to use the paradigm of positivism. Methods of data collection are done through questionnaires to 100 followers Instagram account Change.org. The results showed that the online petition on environmental issues is the first dimension of empathy, of the affection and cognition, the saturation level that online petitions on environmental issues can be accepted by users. Secondly, persuasion dimension, related to changes in confidence and the desire to behave, familiarize yourself that users have the perception that online petitions on environmental issues right on the website Change.org. Third, the impact dimension, namely knowledge and involvement of the message effective, though users do not always share information petition to social media or instant messaging applications. Fourth, the dimensions of communication, messages and the user's understanding of environmental issues online petition which was signed on the website Change.org. Based on the results of the study prove that the theory of S-O-R (Stimulus-Organism-Response), namely the higher the level of attention on stimulus in the form of empathy and persuasion of the message delivered, the more effective the impact and communication carried out by Change.org Instagram active users.

Keywords: Online Petition, Environmental Issues, EPIC Model, Effectiveness

1. Introduction

Environmental pollution, global warming, climate change, the decadence of biodiversity and natural resources are an environmental issue raise human consciousness to environmental sustainability. Environmental problems caused a less supportive environment for human life. The Environment is often called unity with all things space, power, state, and living creatures, including humans and their behavior (BPS, 2017, p.3). It will affect the well-being of humans and the global economic order.

Knowledge and understanding of the condition and quality are very important as a basic policy of a country to exploit the potential of the environment that is focused on improving people's welfare. Through the development of technology and information, the public can be engaged in massive street protests against the parties who should be responsible for damage to the environment and environmental protection campaign. One Internet-based protest today is the emergence of online petitions on environmental issues via website Change.org website.

The workflow is done by Change.org as a medium to unite the claim by gathering as much support. The process begins by creating an online petition at www.change.org website. Subsequently, disseminated via social media and all persons have the right to participate by signing the petition.

Utilization of online petitions is used to channel the aspirations of the people. The support provided through the signing of the petition will be sent automatically to the target petition. Community initiatives, to initiate and support the online petition on a particular issue is an order of participation. During 2018, the site Change.org has increased significantly the number of votes of 4 million users last year to 6.5 million (www.change.org, accessed on February 2nd, 2019 at 20:30 pm).

Environmental issues become the most popular topics online petition on the website Change.org petition with the amount of more than 2 million. The environmental issues petition with the big support, for example are a petition for land burning companies that are still being punished or a petition supporting two expert witnesses who sued IPB lecturers. An online petition at most supports the theme of

environmental issues, namely on "Seruan Penetapan Hari Hutan Indonesia" for the support of more than 413 thousand signatures. The phenomenon was triggered Minister of Environment and Forestry (LHK) actively respond to the voices of public demand through features in Change Response Decision Maker.

Achievement of the objectives set by the Change.org site closely related to promotional activities. Effectiveness and efficient campaign carried out directly or indirectly affect the public intention to sign the petition in support. The workflows which done by Change.org be repeated cycles, starting from dissemination to social media owned by people who have signed the petition. A petition that have signed will be send to the e-mail of petitioner. If there are more people who signed the petition, there will be more the message sent to the e-mail petitioner.

Change.org petition system remains function like as the conventional petition. The people who signed the petition will rely on social media to get information to participate. The promotional activities can be considered effective if it gets a fast response in accordance with the purpose of Change.org. The purpose of this promotion is to stimulate awareness and relevance, so to gain the act of signing by the people on certain petitions.

According to Indonesian Dictionary (KBBI), effectiveness is a word form of securities. It is the effect or impression, success, efficacy. Effectiveness refers to the level of achievement of results. To create the necessary attitude promotional activity capability, a message can be understood in depth by the user. Therefore, the promotion process will affect the cognitive, affective and conative. Durianto (2003, p.15) stated that the effectiveness of media campaigns which related to the recall and persuasion, can be explain with the EPIC study model developed by AC Nielsen. The EPIC model consists of empathy, persuasion, impact, and communication.

Dimensions of empathy is a mental state that makes a person identifies himself or find themselves in the same feelings or thoughts of the other person or group. Empathy involves affection and cognition of a person. The effective response involves feelings among other emotions like special feeling, mood, and

evaluation differ in intensity and improvisation. Cognitive responses involves the process of thinking consciously, unconsciously and automatically.

Dimensions of persuasion is a change in the attitude of confidence, and the desire to behave caused a promotional activity (in Durianto, 2003, p.87). In the persuasion process using a central line and peripherals. Central line focusing on the message. Peripheral pathways are not focusing on the message but stimulants peripherals like a celebrity.

Dimensions of impact is the amount of knowledge attained the level of engagement with the user through the process of signing. User engagement refers to the perception of the relevance of the personal with the object, event or activity. Users can choose from three types of knowledge of the object, ie knowledge about the nature or character of the object, the positive benefits of the object, and the value of an object to be achieved.

Dimensions of communication (in Durianto, 2003, p.89) explains that the provision of information about the user's ability to recall the main message, comprehension, and the strength of the impression left that message. Two steps being taken, among other first stages of creating a communication campaign for the encoding of meaning. The second stage is decoding, users enter and understand the information in the promotion of communication and develop a personal interpretation of the meaning understood.

This study had been done with SOR model of theory. This model was influenced by the discipline of psychology, particularly the tradition of behaviourism (Mulyana, 2008, p.143). The principle of stimulus-organism-response (in Mulyana, 2008, p.144) is essentially a simple principle of learning, where the effect is a reaction to certain stimuli. Thus, one can expect or predict a close link between media messages and audience reaction. The main elements of this theory are the message (the stimulus), a receiver (organism), and effects (response). SOR model of theory sees the communication that took place was also affected by human factor. Implicitly, it is assumed that the response, in this case, human

behaviour can be predicted. Communication is considered static, humans are considered to behave under the external conditions (stimulus). Human behavior is not based on the will, desire, or free will (Mulyana, 2008, p.145).

2. Method

This study used a quantitative approach that is a research which aims to test a theory by means of elaborate hypotheses and collect data to support or refute these hypotheses (Creswell, 2014, p.27). The paradigm used in this study is positivism. Positivism in practice is an organized method for combining deductive logic with the empirical observation of the behavior of individuals to find and confirm the existence of a causal probabilistic legal order, which can be used to predict general patterns in human activity (Bungin, 2017, p.39).

This study conducted by a survey. The research tried to explain quantitative survey of trends, attitudes, or opinions of a population by examining a sample of the population (Creswell, 2014: 19). In the survey, the collection and analysis of social data are highly structured and detailed through a questionnaire as the main instrument to obtain information from a number of respondents are assumed to represent a specific population. Therefore, the correct sampling technique determines the quality of the research.

Population is the whole of the object whom can be a source of research data (Bungin, 2017: 110). The population in this study is @changeorg_id Instagram account followers. The sample which taken is purposive that is a sampling technique with specific considerations such as the respondent is an Instagram account followers @changeorg_id, respondents had signed a petition related to environmental issues via the website Change.org. The number of population for this study were 4922 (www.change.org, accessed on February 2nd, 2019 at 20:30 pm).

Determining the size or number of samples also can be done by statistical calculations. To determine the sample size, researchers using the formula Slovin.

$$n = \frac{N}{1 + Ne^2}$$

Information:
 n = the sample size
 N = population size
 e = precision

The error rate in this study was 10% or 0.1. The estimated error rate of 10% is taken as the level of trust in research is 90% or 0.90. Measurements the corresponding number of population in this study are:

Noted that:

$$N = 4.922$$

$$e = 0.1$$

$$n = \frac{4.922}{1 + 4.922 (0,1)^2}$$

= 98.008 (minimal)
 = 100 (rounded)

Based on the sample size calculation using the formula Slovin, the number of samples in this study was 100 samples.

The type of data in this study is primary data. Primary data is data obtained from the first data source in the field (Kriyantono, 2014: 41). Sources of data in this study came from the results of the questionnaires. The collection of data by researchers through an online survey using a questionnaire. Data collected by researchers drawn from responses to questionnaires given to a sample online. Selection is done with consideration of how the online population base owned research and data collection online can save time and effort. Online questionnaires are also adapted to the study population derived from @changeorg_id Instagram account

This study used a Likert scale to measure a person's attitude about an attitude object (Kriyantono, 2014: 138). Indicators of variable attitude toward an object are the starting point to create a question or statement that must be filled in by the respondent. Any statements or answer the question associated with that form of support or statement expressed in words as follows:

1. Strongly Agree (SS), by a score of 5
2. Agree (S), by a score of 4
3. Simply Agree (CS), is given a score
4. Disagree (TS), is given a score of 2
5. Strongly Disagree (STS), was given a score of 1

The validity of an instrument can be determined by comparing the Pearson Product Moment correlation index with 10% significance level. reliability testing a construct that has been turned into an instrument made to prove the accuracy, consistency, and accuracy of instruments to measure the construct. In this study, researchers tested the internal consistency reliability. The formula used to measure reliability by Cronbach's Alpha through SPSS.

Data analysis techniques in this study were to measure the effectiveness of the media campaign includes dimensions of empathy, persuasion dimension, the dimension of the impact, and the dimension of communication. From all of these dimensions were analyzed using weighted average score, ie any given weight respondents. How to calculate the scores are adding up all the product of the value of each weight is divided by the total number of times (in Duriyanto, et al, 2003: 96).

Information:

X	= Average weighted	$X = \frac{\sum fi \cdot wi}{\sum fi}$
fi	= frequency	
wi	= weight	

Next, use the range scale. The assessment is to determine the position of the respondents with a score of each variable. Weights alternative answers that are formed from the rank scale technique consists of a range between 1 to 5 as the relative positions of the very negative to the positive. The calculation of the scale range with a formula, as follows:

Information:

$$Rs = \frac{R}{M}$$

R = the greatest weight - the smallest weight

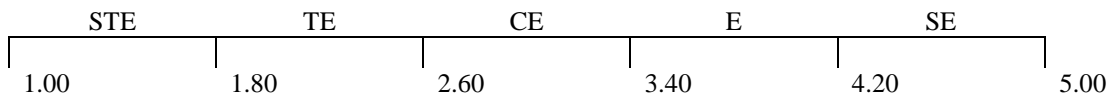
M = number of weight categories

the scale used is a Likert scale, the scale of 1 to 4, then the range scale of assessment of 0.75.

It is obtained from the following formula:

$$Rs = \frac{5-1}{5} \quad Rs = 0.8$$

The range scale (Rs) is used in the scale range decision as decision making from analysis of the EPIC models. Therefore, the decision has obtained a position, as follows:



Each dimension EPIC model will be analyzed separately using the average score to determine the effectiveness of each of these dimensions.

3. Result & Discussion

Researchers conducted the interpretation of the data obtained from the exploration of each variable through the items in the questionnaire statement. Before the data interpretation, validity and reliability of the items in the statement of the dimensions of empathy,

persuasion, impact, and communication. In a test of validity, the amount of data (n) is 30, degree of freedom (df) were obtained, namely 28. Based on the level of significance to test the two directions of 0.1, then r tables in this study were 0.306. Reliability testing is done by stating that all existing items in each dimension have been proven reliable and each had a Cronbach's Alpha values above 0.6 (Kriyantono, 2014: 143). Here are the results of validity and reliability test conducted for all dimensions, as follows:

Table 1 Results of Test Validity and Reliability Dimensions EPIC Model

Dimension	Statement	Validity test		Cronbach's Alpha
		R arithmetic	R table	
dimensions of Empathy	1.	0.567	0.306	0.755
	2.	0.775	0.306	
	3.	.892	0.306	
	4.	0.859	0.306	
	5.	.769	0.306	
	6.	0.647	0.306	
dimensions Persuasion	7.	0.754	0.306	0.835
	8.	0.755	0.306	
	9.	0,795	0.306	
	10.	0.819	0.306	
	11.	.780	0.306	
Impact dimensions	12.	0.567	0.306	0.865
	13.	0.775	0.306	
	14.	.892	0.306	
	15.	0.859	0.306	
	16.	.769	0.306	
	17.	0.647	0.306	
	18.	0.725	0.306	
dimensions of Communication	19.	.673	0.306	0.758
	20.	0.735	0.306	
	21.	.788	0.306	
	22.	0,702	0.306	
	23.	0.722	0.306	
	24.	0,645	0.306	

Source: Researcher (2019)

Based on the data in Table 1 indicate that any statement of the dimensions of communication has a value of $r_{count} > r_{table}$, it can be concluded any statements listed in the questionnaire is valid for eventual distribution to the entire sample.

Cronbach's Alpha value obtained from 6 statement in empathy dimensions of 0.755, it can be stated reliably. Dimensions persuasion have Cronbach's Alpha value of as much as 0.835 from 5 statement, so that otherwise reliable. Dimensions impact has Cronbach's Alpha value of as much as 0.865 from 7 statement, that otherwise reliable. Dimensions communication has Cronbach's Alpha value of as much as 0.758 from 6 statement, that otherwise reliable.

In this study, the dimensions of EPIC model that wants to be known and measured through 24 statement in the form of a questionnaire to be distributed to 100 respondents with answer choices Likert scale 1 - 5. The following description of the results of the calculation of these dimensions:

a. Dimensions of Empathy

Dimensions of empathy inform about the level of interest in the information submitted by the cognitive and affective. In the present study, the dimensions of empathy consist of 7 statement as follows:

Table 2 Distribution Frequency Dimensions of Empathy

No.	Commentary	SS %	S %	CS %	TS %	STS %	X
1.	I have an interest in seeing the online petition on environmental issues on the website Change.org	9	36	47	5	3	3.43
2.	I was not tired of seeing the online petition on environmental issues on the website Change.org	21	23	46	9	1	3.54
3.	I was not bothered with an online petition submission date information about environmental issues via email	14	31	49	6	0	3.53
4.	Change.org as a facilitator largest online petition right for environmental issues	13	49	30	4	4	3.63
5.	The online petition on Change.org environmental issues at the site to make known environmental issues	10	45	39	4	2	3.57
6.	I followed the online petition on the website Change.org	8	31	44	15	2	3.28
Cumulative Score dimensions of empathy = 3.49							

Source: Researcher (2019)

Results of analysis measuring the effectiveness of online petitions based EPIC model known that the dimension of empathy obtains an average cumulative score of 3.49. Empathy dimension scores were in the range of effective assessment, on the scale range from 3.41 to 4.21.

b. Dimensions of Persuasion

Dimensions of persuasion convey information from the online petition to increase the attention of a particular issue, so users gain an understanding of the impact of online petitions against the objectives set. In the present study, the dimensions of persuasion consist of 5 statements as follows:

Table 3 Distribution Frequency Dimensions of Persuasion

No.	Commentary	SS %	S %	CS %	TS %	STS %	X
1.	After seeing the online petition on the website Change.org, I am interested to participate in an online petition on environmental issues on the website Change.org	3	22	59	16	0	3.12
2.	After seeing the online petition on the website Change.org, I trust the online petition on Change.org environmental issues through the site than other sites	18	14	37	29	2	3.17
3.	After seeing the online petition at Change.org site, I was interested in signing an online petition on environmental issues	14	13	54	16	3	3.19
4.	The online petition on Change.org environmental issues at the site gives a positive outlook on environmental issues	13	36	45	6	0	3.20
5.	The online petition on Change.org environmental issues at the site attracted the attention	3	39	52	4	2	3.37
Cumulative Score dimensions of persuasion = 3.21							

Source: Researcher (2019)

Results of analysis measuring the effectiveness of online petitions based EPIC model known that the dimensions of persuasion obtain an average cumulative score of 3.21. Persuasion dimension scores were in the range of reasonably effective assessment, on the scale range from 2.61 to 3.41.

c. Dimensions of Impact

Dimensions of impact indicate an online petition related environmental issues into the limelight in comparison to other issues and the amount of knowledge achieved by the user through the involvement in the signing of the petition. In the present study, the dimensions of impact consist of 7 statement as follows:

Table 4 Distribution Frequency Dimension of Impact

No.	Commentary	SS %	S %	CS %	TS %	STS %	X
1.	After seeing the online petition on the website Change.org, I know the advantages of signing an online petition on the website Change.org environmental issues	10	21	58	11	0	3.30
2.	After seeing the online petition at Change.org website, I was able to distinguish the online petition on environmental issues with other similar issues	9	33	52	6	0	3.45
3.	I renew online petition information about environmental issues, whether you need an online petition	2	11	64	23	0	2.92
4.	I renew online petition information about environmental issues while signing the petition online	2	22	55	21	0	3.05
5.	Having signed an online petition on Change.org environmental issues on the site, I provide the information on social media accounts (Instagram, Facebook, Twitter)	10	18	50	22	0	3.16
6.	Having signed an online petition on Change.org environmental issues on the site, I provide the information to the instant messaging application (WhatsApp, Line, Telegram)	4	53	42	1	0	3.60
7.	The online petition on Change.org environmental issues at the site was able to describe the actual state	7	34	53	6	0	3.42
Cumulative Score dimensions of impact = 3.27							

Source: Researcher (2019)

Results of analysis measuring the effectiveness of online petitions based EPIC model known that the dimensions of the impact obtain an average cumulative score of 3.27. Impact dimension scores were in the range of reasonably effective assessment, on the scale range from 2.61 to 3.41.

d. Dimensions of Communication

Dimensions of communication provide information about the user's ability to remember, understand, and the strength of the main messages delivered. In the present study, the dimensions of communication consist of 6 statement as follows:

Table 5 Distribution Frequency Dimensions of Communication

No.	Commentary	SS %	S %	CS %	TS %	STS %	X
1.	When accessing the website Change.org, I always see the online petition on environmental issues	8	14	61	14	3	3.10
2.	I understand signing an online petition on environmental issues into the shape of my support for the issue	16	24	56	2	2	3.02
3.	I know the format of an online petition on environmental issues on the website Change.org	8	32	39	18	3	3.24
4.	An online petition at Change.org aims to introduce, directs, and reminded me of environmental issues	14	28	52	1	5	3.35
5.	The online petition on Change.org site environmental issues more clearly than other sites	10	40	35	12	3	3.42
6.	The online petition on Change.org environmental issues at the site is able to convey the message of the online petition	6	35	59	0	0	3.47
Cumulative Score dimensions of communication = 3.26							

Source: Researcher (2019)

Results of analysis measuring the effectiveness of online petitions based EPIC model known that the communication dimension obtains an average cumulative score of 3.26. Communication dimension scores were in the range of reasonably effective assessment, on the scale range from 2.61 to 3.41.

4. Discussion

Based on the results, the entire dimension of the EPIC model in measuring the effectiveness of online petitions on environmental issues with the most effective approach is a three-dimensional dimension of empathy than others. Dimensions of empathy obtain a cumulative score of 3.49, so we can say that emphatically online petition has been able to attract the attention of respondents to view and assess the appropriate level of the specific issue whether or not the issue was delivered of cognition and preference level of the issues presented of affection.

Dimensions of persuasion obtain an average cumulative score of 3.21, so it can be said that persuasion online petition has been able to increase awareness of a particular issue. From these assessments can also be concluded

online petition attracted respondents for information on environmental issues that affect users to sign an online petition related to environmental issues.

The cumulative score of the dimensions of impact at 3.27 and it can be said that an online petition has been able to become a centre of attention to environmental issues and engage users to understand the information shown on the online petition. Dimensions of communication have a score of 3.26, so it can be said that an online petition has been able to convey the message with good intentions and the user simply understands the message.

Use of the S-O-R theory in this study proves that the effectiveness of an online petition is a reaction to the stimulus in the form of the dimensions of empathy, persuasion, impact, and communication. The effectiveness of an online petition media effects on individuals who started from exposure to messages @changeorg_id Instagram account. Stimulus received and got the attention of the organism via Instagram account followers @changeorg_id EPIC dimension measured from the model. The stimulus reception understood by the organism, causing a certain effect on the individual.

5. Conclusion

It can be concluded that measuring the effectiveness of online petitions related to environmental issues using the EPIC approach is effective models. All of dimensions EPIC most effective model is the dimension of

empathy and within the range of effective scale with a cumulative score of 3.49. This caused online petitions related to environmental issues to have a message that is easy to understand and have a big enough attraction and enhance the user's intention to sign the petition.

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