

# **Perceived Roles of the Media in Young People's Engagement with Climate Change: A Study of Young Undergraduates at Mautech, Adamawa State**

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## **Abstract**

Climate change is a problem that requires the engagement of various stakeholders/social actors for a solution to be found (in forms of adaptation and/or mitigation). Engagement with climate change composes of a range of activities from knowledge, generating interest, taking personal and collective actions, pressuring public officials, etc. While the (traditional) mass media (radio, TV, newspapers, magazines) have been known to promote awareness, knowledge and engagement, little is known about the efficacy of social media in climate change engagement especially among the young people who are the future leaders and therefore, very crucial to what may be done about climate change in the future. This study compares the influence of mass media and social media in the perception of climate change among undergraduates at Modibbo Adama University of Technology, Yola one of the universities in Nigeria. Using survey

research method, findings show that awareness and intension to engage in climate change issues are very high among the respondents. However, despite the high use of social media by the respondents, it was found out that the mass media have higher perception of effective compared to social media. The study concludes that social media has a secondary place in promoting climate change engagement but is still relevant. The study recommends more countrywide robust studies of the influence of social media on climate change engagement.

**Keywords:** Climate change engagement, social media, mass media, young people

## **Introduction**

Climate change is one of the major environmental problems affecting the whole world. It manifests in various forms like floods, drought, storms, heat waves, ice melting, etc and is experienced all over the world in varying degrees. As problematic as climate change is, solutions to it have been and are always being identified and attempted through adaptation or mitigation. While adaptation is concerned with adjusting to climate change, mitigation is concerned with reducing the emission of Green House Gasses which are the chief cause of global climate (Mastrandrea and Schneider, 2009).

According to the World Health Organisation (WHO), climate change interactions directly or indirectly lead to numerous forms of conditions that have deleterious effects on human health. Such effects include mortalities, morbidities, poor environmental conditions, food and water shortages, mental, nutritious, and other health related effects (WHO,2003). Brown, Hammill and

Mcleman (2007) add that climate change poses security threats to societies because of its impact on resources like rain fall, water availability, food production and population distribution. Nigeria, like many other countries, is vulnerable to climate change impact especially in the areas of land use, water resources, agriculture, energy, biodiversity, habitat, among others. Nigeria's vulnerability is attributed to its long coastline, rain fed agriculture, high population, drought and desert-prone lands, threatened water resources, inadequate financial and technological capacity and lack of robust climate change institutional and legal framework (NEST,2004).

As an issue that has wide global impacts, there is the need for people to be involved or engaged in finding solutions to the problem. This is idea behind climate change engagement. However, climate change engagement is not a one-off activity as different individuals, groups and communities will simultaneously be required to take action for it to be effective. For instance, at the individual level, people are expected, as part of engagement to reduce their carbon consumption and improve adaptive behaviors like conserving energy, buying energy efficient appliances, tree planting, reducing emission from vehicles, etc. However, it is to be noted here that climate change engagement should combine engagement from three domains; the individual, the community and the governance with each domain having multiple focus from agriculture, science, health, education, environment, economy, etc.

According to Defra (2007) individuals have a big role to play in any effort to reduce or mitigate climate change because it has a lot to do with behaviour modification. Individuals have to first of all understand the problem, before they change their behaviour positively as it relates to climate change. However, Climate change engagement should not be limited to only some segments of a population but needs to be all inclusive with everyone expected to be engaged. Young people need to be

incorporated into activities of climate change adaptation as they are the future leaders of the planet who will likely experience more hazardous climate change conditions if the problems of climate change progresses. Young people in every country are a important group in the fight against climate change as they represent the future of climate change related behaviour whether positive or negative.

Also, young people have been reported to be more tech savvy (very proficient) in using ICTs in general, and social media in particular, compared to their parents who rely more on traditional mass media. With regard to climate change, the mass media are the principal means through which news and intelligence including climate change issues are disseminated to the public through reports, interviews, opinions, etc. (Bell,1994; Wilson,1995; Whitmarsh,2009; Ungar,2000). Hence, media contents are very important to the awareness, understanding, and response to climate change. While young people do also use the mass media in getting information on issues and occurrences, they are also likely to be high users of social media outlets available. To what extent do young people especially undergraduates in Nigeria use social media to get information on climate change issues? Are there differences in perception of climate change related to media use? Using young undergraduates at Modibbo Adama University of Technology, (MAUTECH), Yola therefore, this study examines young peoples' own engagement with climate change and the extent to which social media promote climate change engagement. It will also compare mass media and social media impact on climate change engagement by these young people. The paper is guided by the following objectives:

- (a) To determine MAUTECH young undergraduates' level of awareness on climate change and its engagement.
- (b) To determine the perception of effectiveness of social media and mass media the young undergraduates' engagement with climate change.

## **Literature Review**

Because of the likely impacts of climate change, it is expected that it will have influence on human behaviour especially communication behaviour. Numerous studies have outlined the relationship between various forms of human behaviour and climate change or global warming. Whitmarsh (2009), for instance, identifies public familiarity, source of information, trustworthiness and understanding of climate change compared to global warming in the U.K. using the survey technique. Results of the study show that familiarity with both global warming and climate change is as high as 97.1% of the respondents; the most common source of information of the two concepts is the mass media. However, despite being prolific as of information, the mass media only inspire a moderate amount of trust (2.7 in a 4 point scale) compared to scientists (3.5 out of 4 points). Also, respondents' understanding of global warming and climate change is largely about impacts rather than causes, process or information source. Although there are many other aspects of impacts likes diseases, unusually high or low rainfalls, destruction of habitats, etc most respondents when asked about climate change impacts mention temperature increase. However, despite the high level of familiarity/awareness of the two concepts (global warming and climate change), the scholar notes the low levels of understanding and engagement among the public regarding the two issues. The scholar, therefore, sees public information especially from the mass media as constituting a problem in conveying complex information (Whitmarsh,2009).

In Nigeria, Koko and Fakae (2011) examined the literacy level of universities management staff in the Niger Delta area of Nigeria. They found out that climate change literacy level of the respondents is limited in scope despite their relatively high level educational qualifications. The study also reported that university management staff indicated there are no specific policies to deal with climate change in university environments in the region. Koko and Fakae (2011) therefore recommended that universities

in Nigeria need to review their policies to incorporate environmental concerns especially climate change.

On the other hand, despite the general high awareness of climate change, studies have shown a general lack of knowledge and engagement with the issue (BBC World Service, 2007; Defra, 2007; Lorenzoni *et al.*, 2007). This implies that people do know about climate change but many among them may still not involve themselves in tackling the problem either at individual, communal and governance domains. Engagement from individual domain may range from using energy saving electronics, using clean energy, massive tree planting, supporting climate change policies, campaigning on climate change, etc.

While most of the studies that examines climate change engagement and the media are concerned with the mass media and the general population, in this study the impact of social media and young peoples' engagement. Due to the varying degrees of engagement in climate change, Seyfang *et al.* (2007) proposed the concept of carbon capacity to explain how individuals and the society at large make decisions from personal to governance levels (behaviour change, voting, lobbying, protest, etc). The models potency, according to Whitmarsh, Seifang and O'Neil (2011) is that it combines it account for all the level of decision by actors, different domains and aspects (food, travel, housing, etc). Even though the model was framed from mitigation perspective, it is still vital in analysing all climate change engagement action (even adaptation, which is the frontline action for majority of less developing countries).

Another scholar also analysed reasons why people are less likely to engage in climate change solutions. Moser (2006), in this respect, set out four major barriers to civic engagement with climate change from a North American perspective. According to her, people do not engage with climate change solutions due to (1) psychological-cognitive reasons, (2) social, (3) political and (4) other structural economic, institutional and technological

barriers. The scholar, therefore, recommended the following communication measures as panacea to civic engagement with climate change solutions:

1. Increase the sense of urgency
2. Link climate to everything else
3. Take control over the framing of climate change stories
4. Don't hide uncertainty and don't hide behind it
5. Be careful with alarmist messages
6. Don't get hung up on words; create meaning instead
7. Don't try to persuade everyone, just focus on the critical few
8. Use people like us and reach across divide
9. Begin building a positive vision worth fighting for and
10. Be kind

It can be observed from the literature that most of the studies on climate change engagement use general population as respondents. This study focused on specific segment of the general population who are younger and are educated. The focus on the respondents is to highlights the state at which these young people, who are very important to the future of climate change engagement, are likely to engage in trying to find solutions. Secondly, whereas most studies on engagement looks at the mass media in general, this study adds the dimension of social media. Also, there are few studies on the issue in Nigeria. Therefore, this study attempts to fill in the vacuum.

## **Methods**

The study adopted a survey research design as it is about the attitudes of a group of young people on climate change. The population of the study is all young people studying in Modibbo Adama University of Technology, Yola Adamawa State. Young people in this study refer to MAUTECH students aged between 16 to 35 years. In the population, university students were chosen because of their literacy level and lifestyle as they are more likely

to use social media compared to other youths who are outside the higher education system as well as convenience of the researcher. The study purposively sampled 300 second year level students of MAUTECH, Yola,. It used the purposive sampling technique because the result was not generalized to the population. Second year (also called 200 level) students were chosen for the study so as to strike a balance between freshness and experience at the university as well as the tendency to have more users of social media. The university has six faculties (called schools), 36 departments and 42 B.Sc. programmes; Agriculture, Engineering, Environment, Pure and Applied sciences, Technology Education and Management. One bachelors programme was randomly selected from each of the faculties (i.e. B.Sc. Economics, Survey, Mechanical Engineering, Business Education and Microbiology) and 50 students in 200 level were randomly polled from each of the selected programme. Data was descriptively analysed using tables, bar charts, percentage and raw scores. The instrument, a structured questionnaire, was validated by a climatologist and a mass communication scholar respectively. It was pre-tested on separate group of students not involved in the main study. As a result of which some minor changes were made to it.

## **Result**

Out of the 300 copies of the questionnaire administered, 279 were returned useful thus yielding 93% return rate which is useful for this study. Result show that 153 (54.8%) of the respondents are male, while 126 (45.2%) of the respondents are female students. As expected, most of the respondents, 214 (76.7%), are school certificate holders with 64 (22.9%) having a diploma/HND/NCE and 1 (0.4%) having a first degree. With regard to media selection, radio is the dominant media of choice by the respondents with 256 frequency followed by TV, social media, newspapers, magazines, websites and others (sms news alerts) respectively. This can be seen vividly on figure 1 below

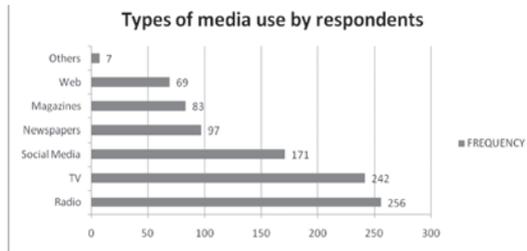


Fig. 1 Types and frequency of media use by respondents.

Those using social media were asked the type of social media they use. Common responses include Facebook, 2go, twitter, Youtube, Blackberry Messenger, Linked in, My Space, whatsapp, netlog, among others. Respondents who used social media (n=171) were further asked the frequency of their use of social media. Responses show that 79 (46.2%) use it daily, 41(24% monthly c a n

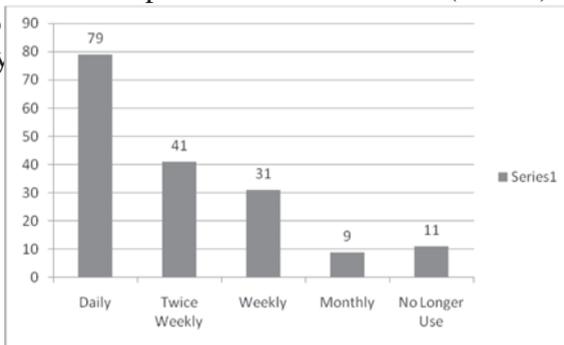


Fig. 2 on the frequency of social media use by respondents (n=171).

On the issue of climate change, respondents were asked whether they are aware of the issue. Their response show that 98.5% (275) claim to be aware of the issue, leaving only 1.4 Or 4 who reported not knowing the issue. Although this high level of

self reported awareness was expected, respondents' level of awareness was tested in a true or false question about climate change issues in general as it applies to Nigeria. The result show that on a scale of ten, 216 (77.4%) of the respondents scored 5/10 and above thereby confirming the high awareness even though less than the initial self reported response. Conversely, 22.6% of the respondents do not have adequate knowledge of the issue. The score of performance on climate change awareness is shown in Table 1 below:

S/NO	Frequency of Respondents	Percentage	Score Over 10
1	16	5.7	10/10
2	18	6.5	9/10
3	19	6.1	8/10
4	19	6.8	7/10
5	84	30.1	6/10
6	62	22.2	5/10
7	27	9.7	4/10
8	11	3.9	3/10
9	09	3.2	2/10
10	12	4.3	1/10
11	4	1.4	0/10
<b>TOTAL</b>	279	100%	

Table 1 on the respondents tested scores on awareness of climate change issues.

The respondents were further asked on their opinion as to need for everyone's engagement with climate change for solutions. 236 (84.6%) agreed 'yes' that everyone should get involved and only 43 (15.4%) disagreed. When asked whether they, as individuals, can engage themselves to be part of those who should take action in climate change solution, 214 (76.7%) agreed, while 19 (6.8%) disagreed and 46 (16%) don't know. Those who answered 'yes' to the previous question, were further asked to indicate their level of commitment to action or engagement. Responses show that 74 (34.6) indicated very strong; 87 (40.7%) strong; 43 (20%) average; and 10 (4.7%) weak.

With regard to media and climate change engagement, respondents were asked to indicate their perception of

effectiveness of various types of media in promoting climate change engagement. Responses, as can be seen on Fig. 3 and Table 2, show that radio (251 scores for effectiveness) and television (258 scores for effectiveness) as the dominant in their perception of promoting engagement despite their use of social media. Newspapers, magazine and billboards/posters are considered average in effectiveness with 141, 129, and 109 for effectiveness respectively. On the contrary, social media did not fare better in the effectiveness rating

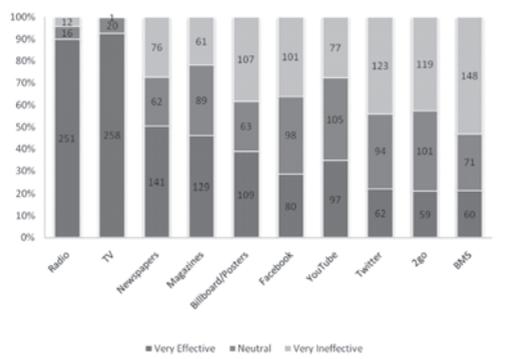


Fig. 3 Perceived effective various types of media by the respondents (N=279).

as most of them scored low; Facebook 80, YouTube 62, Twitter 62, 2go 59 and BMS 60 respectively. In fact, all the social media score higher on ineffectiveness in the potential for climate change engagement. See Table 2 and Fig. 3 for details.

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Media	Very Effective	Neutral	Ineffective	TOTAL(%)
Radio	261 (93.5%)	16 (5.7%)	2 (0.7%)	279 (100%)
Television	258 (92.5%)	20 (7.2%)	1 (0.4%)	
Newspaper	141 (50.5%)	62 (22.2%)	76 (27.2%)	
Magazines	129 (46.2%)	89 (31.9%)	61 (21.9%)	
Billboards/Posters	109 (39.1%)	63 (22.5%)	107 (38.4%)	
Facebook	80 (28.7%)	98 (35.1%)	101 (36.2%)	
YouTube	97 (34.8%)	105 (37.6%)	77 (27.6%)	
2go	59 (21%)	101 (36.2%)	119 (42.7%)	
BMS	60 (21.5%)	71 (25.5%)	148 (53%)	

**Table 2** on the perceived effectiveness of various types of media on climate change engagement

Respondents were also asked to rate mass media and social media in their capacity to promote climate change engagement. Responses show that mass media scored 201 for effectiveness; 48 for neutral and 30 for ineffectiveness. On the other hand and consistent with the earlier finding, social media scored 125 for effectiveness; 81 for neutral and 177 for ineffectiveness as can be seen on Fig 4.9

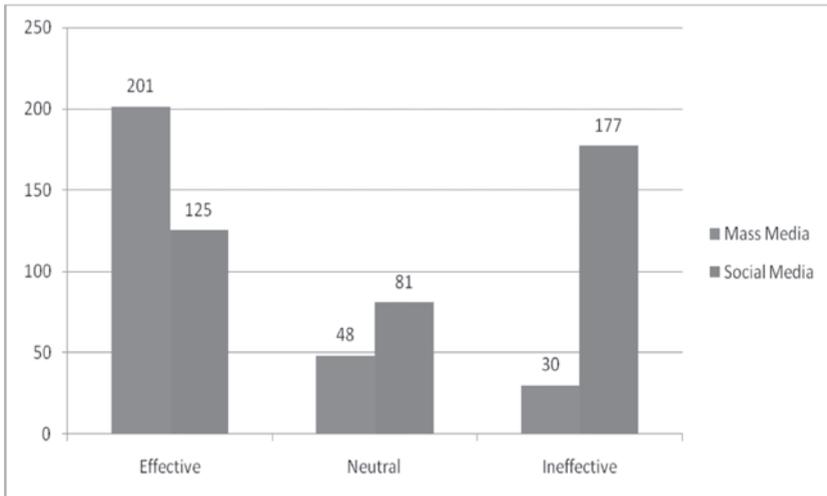


Fig. 4 On the perceived effectiveness of mass media and social media in climate change campaign (N=279).

The data on Fig 4 show that the mass media is seen as more effective in helping engagement with climate change as they have 201 scores compared to 125 for social media. On the other hand, social media are considered ineffective by a score of 177 compared to a score of 30 for mass media. On neutral score, mass media have of 48 while social media have a total score of 81.

### **Discussion**

The first objective of the study is to determine young peoples' level of awareness of climate change and its engagement in Adamawa State. The result of this study, as presented above, shows that awareness about climate change on the two measures, (self report and true or false test) are high at 98.5% and 77.4% respectively. This is consistent with major reports in previous studies which show that awareness of the issues can be very high especially as a result of high media attention and climate change related occurrences like floods, heat waves, political meetings, meetings etc.

However, it has been observed by Stamm, Clark and Eblacas (2000) that awareness of climate change alone does not lead to understanding of the issue. According to them, awareness of an environmental problem like climate change focuses on instances (e.g. flood, heat, drought, etc.) and does not mean specific knowledge about causes, consequences and solutions. The result of their survey showed that despite having a high level of awareness of climate change among respondents (80%), there are also a number of misconceptions of the issue by respondents when probed further (like only half of respondents consider fossil fuel very important in causing climate change; or considering deforestation as the most important contributor to climate change). They encountered similar misconceptions with regard to consequences and solutions to climate change. This implies,

therefore, the need to probe further the relative high newspaper induced climate change awareness found out in this study. This is pertinent because lurking behind the high awareness could be a high dose of confusion and contradiction of climate change which may vary from place to place. Such confusion, if it exists, may hamper the need to engage with climate solutions.

Also, the findings of this study showed that a high majority of the respondents (76.7%) indicated they will agree to get engaged in climate change solution and a further 34.6% indicated very strong commitment and 40.7% strong commitment.

The second objective of the study is on the perceived effectiveness of social media and mass media in young peoples' engagement with climate change. Findings, as presented in Table 2 and Fig. 3 showed that radio, television, and newspapers respectively are viewed to be more effective compared to other media listed like Facebook, YouTube, Twitter, 2go, etc. Also, the result of the finding on comparing perceived effectiveness of social media and mass media confirms also confirmed the initial finding by placing mass higher than social media (see Fig 4). Despite the fact that young people are often associated with social media usage and higher competencies compared to older people (Papert, 1996; Tapscott,1998) social media is not perceived to be more effective in helping the respondents' engagement with climate change. This findings points to the secondary potency of social media in climate change engagement of respondents and therefore means mass media is more important that social media in engagement. So, climate change engagement campaign for youth have to still give more focus to mass media especially radio and TV so get across young people like the respondents in Nigeria. Though social media use may be increasing by the day as more and more are getting connected through them, they can for now mainly complement the mass media. Another factor that may count against social media in engagement is the fragmentations in the high number of competing social media outlets, different

functions for each, lack of credibility, inconsistency of audiences/messages, poor ICT services and penetration, among others.

### **Conclusions and Recommendations**

The study examined the extent of young peoples' engagement with climate change solutions in Adamawa State and the extent to which social media can compete with mass media in helping to engage young people with climate change solutions. Finding show that there is a high level of awareness of climate change and also high responses on young peoples' engagement with climate change. However, despite the high use of social, respondents showed the mass media, led by radio and TV are highly perceived to be more effective in engagement with climate change. The paper concludes therefore that despite the popularity of social media among young peoples, it should play secondary role in any campaigns targeted at such people in the study area. The paper therefore recommends that similar studies be done across Nigeria using parametric techniques so as to make a firm conclusion on young people in the country. It is also recommended that organisations doing climate change campaign need to use social media, especially the popular so as to carry young people, who are essential in future engagement, along.

### **References**

- BBC World Service (2007). All Countries need to Take Major Steps on Climate Change: Global Poll [http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/25\\_0922207climatepoll.pdf](http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/25_0922207climatepoll.pdf) accessed 22 March, 2011
- Bell, A. (1994). Media (Mis)communication on the Science of Climate Change. *Public Understanding of Science*, 3(4): 259:275.
- Brown, O. Hamill, A., and McLeman, R. (2007). Climate Change as 'New' Security Threat: Implications for Africa,

*International Affairs*, 83(6): 1141-1154.

- Defra, (2007). Key Fact about Climate Change. Emissions of Green House Gases 1990 -2006 (provisional) UK [www.defra.gov.uk/environment/statistics/globalatmos/kf/gakf05.htm](http://www.defra.gov.uk/environment/statistics/globalatmos/kf/gakf05.htm). accessed 15th March 2011.
- Koko, M.N. & Fakae, B.B. (2011). Climate Change and Management Literacy: The Case of the Niger Delta Universities in Nigeria. *American Journal of Scientific and Industrial Research* <http://www.scihub.org/AJSIR>. Accessed March 14, 2012.
- Lorenzoni, I., Nicholson-Cole, S., & Whitmarsh, L. (2007). Barriers Perceived to Engaging with Climate Change among the UK public and their Policy Implications, *Global Env. Change*, 17 (445-459).
- Mastrandrea, M. & Schneider, S.H. ( 2009). Global Warming. *Microsoft® Encarta® 2009* [DVD]. Redmond: Microsoft Corporation.
- Moser, S.C (2006). Communicating Climate Change – Motivating Civic Action: Opportunity for Democratic Renewal? Draft paper for presentation at Conference on Climate Politics in North America, Woodrow Wilson International Centre for Scholars, Washington D.C., May 18-19, 2006.
- NEST/GCSI (2004). *Nigeria Climate Change: Executive Summary of Five Multi-Sector Surveys on Nigeria's Vulnerability to Climate Change*, Ibadan: Nigeria Environmental Study/Action Team. p. 12.
- Papert, S. (1996) *The Connected Family: Bridging the Digital Generation Gap*. Seymour Paper, Atlanta : Longstreet Press
- Seifang, G., Lorenzoni, I. & Nye, M. (2007). Personal Carbon Trading: Notional Concept or Workable Proposition? Exploring Theoretical, Ideological and Practical Underpinnings. *CSERGE Working Paper EDM 07-03*, UEA, Norwich, UK

- Stamm, K.R., Clark, F. & Eblacas, P.R. (2000). Mass Communication and Public Understanding of Environmental Problems: The Case of Global Warming, *Public Understanding of Science* 9, 209 <http://pus.sagepub.com/cgi/content/abstract/9/3/219>. Accessed October 19, 2011.
- Tapscott, D. (1998) *Growing up Digital: The Rise of the Net Generation*. New York: McGraw-Hill
- Ungar, S. (2000). Knowledge, Ignorance and the Popular Culture: Climate Change Versus the Ozone Hole', *Public Understanding of Science*, 9(3): 297-312.
- Whitmarsh, L. (2009). What's in a name? Commonalities and Differences in Public Understanding of "Climate Change" and "Global Warming". *Public Understanding of Science*, 18: 401-420.
- Whitmarsh, L., Seyfang, G. & O'Neil, S. (2001). Public engagement with Carbon and Climate Change: To What Extent is the Public Carbon Capable? *Global Env. Change* 21 (56-65).
- World Health Organisation (2003). *Climate Change and Human Health: Risks and Responses*, Geneva: WHO. p156.
- Wilson, K.M. (1995). Mass Media as Sources of Global Warming Knowledge. *Mass Communication Review*, 22:75-89.