Communicating to the Ages: Influence of Age on Florida Homeowners' Informational Processing Behaviors

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Introduction

As Florida is surrounded by water on three sides and has many waterways within the state, water pollution resulting from Florida homeowners' fertilizer application is cause for concern (Shaddox & Unruh, 2017). As such, enhanced Extension programs are needed to better educate Florida residents about fertilizer application and water quality concerns (Lamm, Warner, Martin, White, & Fisher, 2017). Lamm et al. (2017) recommended videos as a possible tool to aid Extension in educating various audiences about water conservation and fertilizer use. In order to better design educational videos for Florida residents, it is necessary to better understand their informational processing behaviors. Since video media has been used widely and more frequently by younger generations than older generations (Zickuhr, 2010), processing behaviors during an education video may differ based on age.

Theoretical Framework

The Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986) served as the theoretical framework for this study. Per the ELM, information can be processed through two cognitive routes, including the central processing route and peripheral processing route. When an individual processes information through the central route, attitudes can be changed and more critical thinking occurs (Petty, Cacioppo, & Schumann, 1983). Exposure to persuasive communication can determine which route a person uses to process information. Elaboration requires both motivation and ability, which can be influenced by a variety of factors (Petty & Caciopo, 1986). This study was conducted to describe Florida residents' information processing behaviors and examine differences in their elaboration likelihood based on age. This study addresses national research priority area two: New technologies, practices, and products adoption decisions (Lindner, Rodriguez, Strong, Jones, & Layfield, 2016).

Methodology

The population of interest was Florida residents who were responsible for their home lawn care. The instrument used in this study was an online questionnaire. Face and content validity was established by a panel of expert faculty and staff, and *post hoc* reliability estimates were calculated using Cronbach's alpha. In addition to demographic questions, one section of the instrument was used for analysis. Respondents were asked to reflect on their experience watching an educational video on proper fertilizer application and indicate their level of agreement with 12 items pertaining to their information processing behaviors during the video. Responses were collected using a seven-point Likert scale with 1 = *Entirely Disagree*, 2 = Mostly *Disagree*, 3 = *Somewhat Disagree*, 4 = *Neither Disagree nor Agree*, 5 = *Somewhat Agree*, 6 = *Mostly Agree*, 7 = *Entirely Agree.* The internal consistency reliability was $\alpha = .81$. The link to the online questionnaire was distributed by a public opinion survey research company. Non-probability opt in sampling techniques are commonly used in public opinion research (Baker et al., 2013) and were used for data collection in this study. Responses were obtained from 2,000 of the 4,300 invited residents for a 47% participation rate. Respondents were divided into two age groups for data analysis: (1) ages 30 or younger; (2) older than 30. Levene's test was utilized to ensure the assumption of equality of error variances was not violated, and robust tests of equality of means included Welch's *F.* Data analyses included descriptive statistics and one-way ANOVA. A statistical significance level of .05 was established *a priori*.

Findings

Respondents' level of agreement with their informational processing behaviors during the video are displayed in Table 1. Negatively worded statements were reverse coded, and construct means were calculated for each age group. Statistically significant differences in overall construct means were observed between groups, for which the ANOVA yielded $F(1, 240) = 5.84$; $p = .02$; $\eta^2 = .004$.

Table 1. *Respondents' agreement with their informational processing behaviors*

Items	30 or younger		Older than 30	
	M	*SD*	*M*	*SD*
Attempting to analyze the issues in the message	5.56	1.40	5.32	1.53
Doing your best to think about what was said	5.47	1.62	5.61	1.44
Deep in thought about the message	5.33	1.45	4.96	1.45
Reflecting on the implications of the argument	5.32	1.48	5.22	1.49
Searching your mind in response to the ideas	5.32	1.49	4.87	1.56
Extending a good deal of cognitive effort	5.22	1.44	4.84	1.59
Taking it easy	4.62	1.83	3.56	1.67
Resting your mind	3.89	1.89	3.03	1.67
Not really exerting your mind	2.95	1.74	2.63	1.63
Not very attentive to the ideas	2.93	.89	2.46	1.77
Distracted by other thoughts not related to the message	2.63	1.85	2.15	1.46
Unconcerned with the ideas	2.61	1.73	2.13	1.47
Construct Mean Score	5.07	.89	5.24	.91

Conclusions and Recommendations

Overall, the information processing behavior of respondents over the age of 30 was slightly more positive than respondents 30 years old or younger, indicating a higher elaboration likelihood. However, examination of individual items yielded varying results. While watching the informational video on proper fertilizer application and use, respondents 30 years old or younger reported higher agreement that during the video they were analyzing the issues in the message, deep in thought about the message, searching their mind in response to ideas, and extending a good deal of cognitive effort. However, this same group was also more likely to be resting their mind, not really exerting their mind, distracted by other thoughts not related to the message, and unconcerned with ideas. These findings indicated respondents over 30 were more likely to process information though the central cognitive route, while respondents 30 or younger processed information through the peripheral route. Per the ELM, an individual's processing route is determined by his or her motivation, processing ability, and processing nature; both motivation and ability must occur (Petty & Caciopo, 1986). While respondents 30 or younger demonstrated the ability to process the information, lack of motivation may have contributed to their tendency to be less attentive. Extension programming should thus seek to increase interest in proper fertilizer application and water quality among younger homeowners. According to Petty and Cacioppo (1986), personal relevance is the most influential factor in an individual's motivation to process informational messages. Therefore, Extension messages should begin by establishing how the information is relevant to the younger audience. Lastly, as the influence of personal relevance can be mediated by other variables (Petty & Cacioppo, 1986), future research is needed to examine the influence of factors that influence Florida residents' information processing behaviors and abilities.

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