

Effectiveness of Biodiversity Conservation Campaign Materials and Strategies in the Forest Ecosystem of Carranglan, Nueva Ecija, Philippines

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This study was conducted to identify the effectiveness of different modes of campaign materials for the biodiversity conservation campaign in the forest ecosystem of Carranglan, Nueva Ecija, Philippines.

Survey questionnaires were used to gather data such as demographic characteristics, mode, attributes, contents, and the respondents' retention of the biodiversity campaign data. The data obtained in the study were analyzed descriptively. Frequency counts, percentages, and averages were computed. Likewise, graphical presentations were used for ease of describing and comparing the results of the study. All statistical analyses were performed using Statistical Package for the Social Sciences (SPSS).

The print materials (posters, brochures, leaflets, pamphlets), collateral materials (eco-bags, shirts, pens, notebooks), seminar-workshops, field demonstrations, and social networks were identified as effective tools of campaign materials. However, posters were chosen to have the highest relevance, importance, and impact on biodiversity conservation campaigns, while brochures were considered the most cost-efficient and cheapest among all campaign materials.

Keywords: Campaign materials and strategies, effectiveness, attributes, biodiversity conservation, cost-efficient

INTRODUCTION

The Philippines is a tropical archipelago with vast natural resources for a fast-growing population. Because of its geographical isolation, varied ecosystems, and high endemic rates, it is one of 17 mega-biodiversity

countries with about 70-80 % of the world's plant and animal species (CBC, n.d.).

Unfortunately, it is also one of the world's hotspots, with many endangered and threatened species under extinction (DAO, 2007). According to Echanove (2008), the Philippines lost an estimated 2.1% forest cover per year (2000-2005) due to the combination of climate change and human-made exploitation (i.e., population growth and consumption patterns), straining the resources (Environmental Science for Social Change, 2010).

Pantabangan-Carranglan Watershed's largest portion is in Pantabangan and Carranglan, Nueva Ecija. Farmlands are topographically unirrigated, so farmers depend on rain and the watershed. Residents rely on large fish ponds to produce fish, while other residents' income sources are business activities, including wood and rattan craft, animal dispersal, kaingin, charcoal-making, and small establishments. Hence, many residents in this area rely on watershed goods and services for their livelihood, hurting the area's biodiversity.

Despite knowing about biodiversity's importance (provisioning, regulating, supporting, and cultural services) for a long time (Cavanagh et al., 2016), human beings continue to do activities that have been causing massive extinctions. Moreover, human beings are inherently inclined to ignore problems that are not specifically present in their lives; some lack knowledge of this biodiversity crisis, possibly due to the advent of a technology-dependent lifestyle; some are concerned but do not know how to solve the problem, and some have chosen to ignore the problem. The issue of loss of biodiversity is so extensive that small-scale effort collections can potentially mitigate the problem.

Biodiversity issues are challenging to communicate. These issues are difficult for most people to believe and detect; much of the time, it passes unnoticed amid variability, unless they have encountered and reached disaster proportions (Shah, 2014). Thus, education and communication may be among the most effective methods to public attention, awareness, and action. Communication has also been described as society's lifeblood or a steering wheel that pushes development programs and behavioral changes (NAP, 2010). It involves continuous knowledge exchange among participants until they reach a common understanding, playing a significant role in the natural resource management program (NAP, 2010). Citizens, governments,

and the private sector cannot render biodiversity in their choices without a reasonably accurate understanding of the issue. The lack of public knowledge of biodiversity's value ranks among the most significant (CBC, n.d.). Without understanding the importance of biodiversity to human well-being, stakeholders are unlikely to incorporate biodiversity concerns into their everyday lives and practices. This situation may also contribute to the low political priority given to biodiversity issues. To make informed decisions, people must have at least basic knowledge of the causes, likelihood, and severity of impacts and the range, cost, and efficacy of various options to limit biodiversity loss (CBC, n.d.).

Biodiversity awareness relates to public recognition of environmental issues and their impact on economic issues and social living standards (Ajam, 2006). Awareness and participation of public biodiversity are vital to achieving a sustainable future (Ajam, 2003). Campaigns are one example of an educational awareness tool and often most effective when aimed at particular audience groups since the content can be customized to community activities, needs, and challenges. Additionally, these campaigns involving environmental conservation and compliance agencies and local communities can build a sense of environmental stewardship, ease collaborative hardship, and provide a platform for fresh ideas and greater engagement (CBC, n.d.)

A wide range of government agencies and non-governmental organizations (NGOs) are currently promoting, publicizing, and making biodiversity information accessible to citizens in different ways, most of which seek to minimize biodiversity losses (Northern Ireland Biodiversity Strategy Report, 2005). Moreover, local communities serving as ecosystem and species diversity protectors are more likely to recognize the risks of biodiversity loss than those in cities and businesses (Kotler & Armstrong, 2012), as their livelihoods rely on these resources.

Several campaigns or promotional strategies were used to foster awareness of biodiversity conservation. Multimedia (print, broadcast, and social media) can increase environmental awareness in vulnerable communities in developing countries (i.e., Philippines). According to Kotler and Armstrong (2012), using creativity to capture the audience (i.e., visual art, words that challenge), multimedia can potentially engage people to act and conserve biodiversity while enhancing its long-term benefits. Promotion

campaigns' essence and content can stimulate a more profound sense of mutual obligation and ownership of biodiversity, thereby persuading and appealing to people's emotions (Kotler & Armstrong, 20122). Through this, the poignant and personal encounters in nature can evoke concern for biodiversity. Using individual species from their local community to discuss complex biodiversity issues can be a compelling "hook" that may appeal to their pride, leading to information retention (Kotler & Armstrong, 2012).

Furthermore, seminars/workshops are also essential tools for educating the public on environmental issues, encouraging communities to participate and interact with each stakeholder (Hesselink et al., 2007). Opportunities for local stakeholders to play a significant role should be encouraged to develop awareness, appreciation, and compassion for biodiversity leading to their active engagement and participation in conserving and protecting biodiversity.

An extensive campaign or promotion regarding biodiversity conservation is required in order to stop or mitigate biodiversity loss. Several organizations in the Philippines such as the Foundation for Philippine Environment (FPE), Haribon Foundation for the Conservation of Natural Resources, Inc., Biodiversity Management Bureau (BMB), Institute for Climate Change and Environmental Management (ICCEM) of Central Luzon State University (CLSU), and other well-known government agencies are hosting seminars and training workshops.

However, even with the advent of these strategies, government and local government units still offer less emphasis and support (CBC, n.d.), making these biodiversity initiatives hard to implement due to lack of involvement. Thus, the empowerment of each local community stakeholder, particularly the academe and researchers in resource management and conservation policies, is being established (CBC, n.d.).

Biodiversity awareness through Information, Education, and Communication (IEC) and campaigns within the country's local communities must be evaluated for their effectiveness. This study looked into the respondents' preferred campaign materials and their perception of the campaign materials' modes and attributes. The effectiveness in the study can be identified as the respondents' ability to evaluate each campaign materials' attributes (clarity, audibility, appeal, exposure, and attractiveness). The study identified the respondents' perception of what attributes and features of the

campaign materials used were visible, appealing, and attractive. As each attribute was identified, the effectiveness was also determined by how the respondents interpreted these campaign materials’ uses and determined what information was retained from previous campaign materials pilot testing. Retained information is an indicator of effectiveness. Moreover, this study was conducted to identify the most cost-effective biodiversity conservation campaign material suitable for respondents and other stakeholders.

METHODOLOGY

Respondents and Location

The study was conducted at Sitio Binbin, Barangay General Luna in Carranglan, Nueva Ecija, specifically, the residents of the Sitio and the indigenous people closer to the biodiversity conservation site. A total of 83 respondents were present in Sitio Binbin, Barangay General Luna, Carranglan, Nueva Ecija, all of whom were exposed to the campaign materials and attended the training and workshop conducted by the Institute for Climate Change and Environmental Management (ICCEM) as part of the project funded by PCAARRD, DOST (Table 1).

Table 1
Categories of the Respondents of the Study in Sitio Binbin, Carranglan, N.E.

Category	Number	Percentage (%)
Elementary school teachers	3	3.61
Elementary students (Grades 4, 5 & 6)	14	16.87
LGU & Govt employees	8	9.63
Indigenous people	58	69.87
TOTAL	83	100

Data Instrumentation

A questionnaire was used to gather the respondents’ demographic characteristics, mode, attributes, content, and retention of biodiversity campaign data related to their level of awareness and promotional material preferences. For elementary school teachers, local government

and municipal unit employees and officials, grade school students, and indigenous people, the Tagalog version of the questionnaire was used to ensure correct understanding of questions. Table 2 shows the promotional materials produced and evaluated.

Table 2

Modes of Biodiversity Campaign Materials and Strategies used in the Study

Campaign Strategies	Biodiversity Campaign Modes Used			
Print	Posters	Leaflet		
	Pamphlet	Brochures		
Outdoor	Field Demonstration			
Seminar/Workshop	Seminar-workshop on Biodiversity Conservation in Carranglan Watershed, Carranglan, Nueva Ecija			
Collateral Materials	Ecobags	Pens	Shirts	Notebook
Social Media	Facebook	Twitter	Instagram	

The questionnaire consisted of three aspects: demographic characteristics, mode and attributes, IEC material content, and biodiversity campaign retention rate using a 5-point Likert scale to measure the respondents' attitudes and opinions regarding the effectiveness of biodiversity campaign materials.

Data Gathering

An ICCEM request for all biodiversity promotional materials was done for use in the evaluation of their effectiveness. Communication letters were disseminated to the barangay and municipal officers of Carranglan, Nueva Ecija requesting for data collection. Evaluation of biodiversity campaign materials was assessed using a 5-point Likert scale style survey questionnaire that included the following parts: promotional campaign materials used, their attributes, and content. Open-ended questions were also asked to determine the retention and effectiveness of the biodiversity campaign materials and contents.

ICCEM already conducted a pre-test one year ago, with the same respondents, using the initial data to provide timely feedback to plan the

next stage of the biodiversity interventions to test the message's potential. Respondents were given sufficient time (max. one hour) to answer the questionnaires given to assess the campaign materials in terms of relevance, importance, impact which were used to decide the campaign's effectiveness.

Data Analysis

The data collected in the study were analyzed descriptively with graphical presentations used to explain and compare the study results. The demographic features, preferred modes, attributes, and content of the biodiversity campaign used the close-ended questions using the 5-point Likert Scale. The questions included important measures of the efficacy of preferred modes in the biodiversity campaign.

Chi-Square Correlation Analysis was performed to assess the relationship of the respondents' demographic characteristics to their desired campaign mode and attributes. Frequency counts and percentages were used to analyze the preferred mode of campaign materials; percentage analysis assessed the respondents' characteristics, contents, and retention rates. Analysis of percentage was determined using the formula where the total number of campaign materials recalled was divided by the total number of campaign materials exposed and used. All significant tests were compared at a 5 % probability level. All statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSION

Mode of Campaign Materials and their Attributes and Content

Collateral Materials

Most respondents (85.5 %) saw and read the collateral materials given and distributed to them. They are also interested in the materials and asked the researcher for additional samples (Figure 5).

Table 3 shows eco-bags different appeals and strengths from the respondents' viewpoint. Most respondents said that the eco-bags they got were highly effective as part of the biodiversity conservation campaign. Eco-

bags are appealing because this is an easy way to advertise any advocacy, brand, event, or business (Ecopromotions, 2014). Eco-bags are made from local and conventional materials and are often viewed as valuable, reusable, and long-lasting that can continuously remind consumers of the message. If an individual takes the eco-bag somewhere, the message can then be promoted to other people exposed to the eco-bag. In addition, the respondents (98.59%) viewed the eco-bags as clearly visible as it includes a logo conveying a message that is easy-to-see and understand. In terms of attractiveness, the respondents (98.59 percent) said the design, color, and image matched the campaign message (Table 3), that fits the advocacy needs (Fell, 2013).

Table 3

Collateral Materials and Their Attributes as Perceived by the Respondents

ATTRIBUTES		MODES			
		Ecobags	Shirts	Pen	Notebook
Appeal	Reminding the importance	98.59%	98.59%	88.73%	88.73%
	Functional	98.59%	98.59%	90.14%	90.14%
	Has entertaining look	98.59%	98.59%	63.38%	63.38%
	Has an intriguing effect	98.59%	98.59%	87.32%	87.32%
	Instrumental at home	98.59%	98.59%	90.14%	90.14%
	Serving as Inspiration to act	98.59%	98.59%	61.97%	61.97%
	Useful to their lives	98.59%	98.59%	90.14%	90.14%
Visibility Attractiveness	The images have the right size	90.14%	90.14%	85.91%	85.91%
	The colors are suitable to the theme	95.77 %	95.77 %	84.50%	84.50%
	Enticing to read	98.59%	98.59%	84.50%	84.50%
	Believable	98.59%	98.59%	88.73%	88.73%
	Eye-catching	98.59%	98.59%	63.38%	63.38%

For shirts, respondents (98.59%) view them as appealing. Shirts appeals to the public because of its role as a status symbol and as a collectible, even with the advertiser, institution's logo, and name imprinted on it (PPAI, 2014). Similarly, shirts are a handy and functional item, making more people willing to take one and wear one. These collaterals can last longer

than their advertised product, creating greater scope and promotional message retention (Levy, 2012). The respondents (90.14 %) also viewed the design and text imprinted on the shirts as visible and easy to understand, increasing advocacy awareness. Most respondents stated that the shirts are also attractive (98.59%), as they offer a personalized impact to whoever wears it (Vaughn, 2009). They are usually grateful when they receive apparel items, whether it is a classy embroidered shirt to a silk-screened shirt, as it is considered a walking advertisement, especially if worn every time (Vaughn, 2009).

About 88.73 % of respondents, as shown in Table 3, revealed how appealing writing tools (pens) were to respondents. Pens are useful to farmers who need to calculate and write their transactions and expenses (Vaughn, 2009; PPAI, 2016). In addition, the pen appeal comes from hand feeling or sensation when respondents receive pens (Wei & Jiang, 2005). According to the respondents, the pen's imprints were visible (85.91%); although very small, it could still clearly portray the logo, color, and message. The pens received are considered attractive campaign materials (84.50 %), as design colors matched the environment/earthly colors (green and brown). Apart from being reliable, they are also customizable and cost-effective identical to notebooks (Wei & Jiang, 2005; Vaughn, 2009; PPAI, 2016).

Biodiversity's importance is the only attribute of the notebook that the respondents find appealing. This is a clear inference that notebooks' style, colors, and the message written still helped respondents recall the campaign's message (Wei & Jiang, 2005). Items such as notebooks influence parents and children as they can be used concurrently with pens. Like shirts, they can serve as walking ads when their kids use them at school (Vaughn, 2009; PPAI, 2016). Notebooks were very visible while transmitting the campaign message (85.91%). The respondents believed the front cover page of notebooks helps foster the campaign's advocacy; however, they claim that it is not as attractive as shirts and eco-bags. Collateral materials are good campaign materials providing the respondents' an enduring impression and helping the individual recall the type of campaign or product (Wellner, 1998).

Field Demonstration

Field demonstrations are traditional marketing practices involving people, product distribution, and advocacy. Field demonstrations were held in various locations in the Municipality of Carranglan and various municipalities in Nueva Ecija (Figure 1).

Table 4 shows that 73.33% of respondents viewed the road caravan or field demonstration as clearly visible when this biodiversity conservation campaign strategy was conducted in their area. This suggests that the aspects (posters, messages, and videos) used in the caravan allowed respondents to use three of their senses (see, hear, and touch), making them meaningful. Moreover, 97.78 % of the total respondents agreed that the sound and voice-over used were of good quality, noticeable, and attracted curiosity. The promotional audibility fosters awareness and brand recognition because repeated exposure, whether the sound causes appreciation or annoyance, increases sensitivity to whatever threshold people listen (Moulton, 2013).

In terms of the field demonstration appeal, most respondents agreed that it matched the theme's campaign and was fun to watch. Moreover, the respondents saw this activity as appealing because participating in such activity is their first exposure. Around seventy-six percent (75.56%) of respondents also view this activity as attractive as it fosters communication through design, color, motion, stagecraft, music, audibility, and tonality (Orwig, 2013).

Table 4

Field Demonstration and Its Attributes as Perceived by the Respondents

Attributes		Percentage
Clarity	Giving clarity	55.55%
	Giving information	62.22%
	The message is easy to comprehend	62.22%
Audibility	The voice is of high quality and clear	97.78%
	The background music is of high quality	97.78%
Length	The length of the activity is suitable for them to enjoy	97.78%
	The activity is matching the campaign	100%
Appeal	Useful	100%
	Attracting them to participate in the activity	100%

Visibility	The images have the right size to be seen	73.33%
	The music matches the theme	73.33%
Attractiveness	Believable	75.56%
	Captivating	75.56%



Figure 1. Field demonstration and seminar-workshops conducted

Seminar-Workshops

Seminar-workshops are scholastic activities capable of uniting learners and provide education on the different biodiversity conservation topics. ICCEM organized the seminar-workshop at the Research, Extension and Training Amphitheater in Central Luzon State University, attended by various stakeholders from Sitio Binbin, Carranglan, Nueva Ecija.

The seminar discussed mining, wildlife hunting, slash and burn (kaingin), various watershed flora and fauna, and incorporating green technologies such as botanical pesticides and phytoremediation. This event aimed to raise awareness and inform stakeholders about the location’s current situation. However, only 42.2% of the total respondents had the opportunity to attend and participate in the ICCEM-CLSU seminar-workshop (Figure 1), with 57.8% of respondents unable to attend due to their agricultural jobs.

Concerning the seminar-workshop attribute and content (Table 5), most of the seminar-workshop clarity attributes were highly effective for

the respondents with a rating of 97.14%, and 85.71% for images, text sizes, sounds, and design used in the PowerPoint presentations and seminar duration. This supports the findings of a study that the length of an ad or event fosters retention because the longer the event, the more the group members feel their value to the advertiser (Rosenthal, 2012).

Table 5

Seminar-workshop and Its Attributes as Perceived by the Respondents

Attributes		Percentage
Clarity	The speaker conveyed the message clearly	97.14%
	The lecture given is easy to understand	85.71%
	The lecture given is clear	85.71%
Audibility	The speaker's voice tone is clear	85.71%
	The microphone and sound system has a clear effect	85.71%
Length	The length of the seminar is enough for participants to enjoy	85.71%
Readability	The presentation is easy to read	85.71%
	The letters and font used is at the right size	97.14%
Appeal	The seminar matches the theme of the campaign	48.57%
	Useful to their lives	48.57%
	Inciting	48.57%
Attractiveness	Believable	100%
	Fascinating and captivating	100%
	It gives an inviting feeling	100%

Social Networks

Social networks are computer-aided tools enabling people or businesses to build, share, or exchange information in virtual communities and networks (Luo & Donthu, 2001; PPAI, 2016). The study had social media accounts like Twitter, Instagram, and Facebook (Figure 2). It is believed that these social media sites foster enjoyment by enabling them to read posts, view images and videos, and observe various designs and styles. Besides that, social media/networks can reach respondents even with the distance and educational differences (Luo & Donthu, 2001; PPAI, 2016). More than half of the respondents (55.4 %), mainly aged 11 to 36, had access, familiarity, and are active social media users.

Results also showed that clarity and attractiveness were the most important attributes for all the respondents (100%), followed by readability (97.82%) (Table 6). Even so, 82.61% of the respondents exposed to social media said the text and photos were clear; the messages are straightforward and easy to remember. In terms of readability, most of the respondents (97.82%) said that the letters, text, font styles, and designs were easy to read and understand.

Social media is useful and appealing for most respondents as it can help improve advocacy awareness acting as a new voice and content outlets for the campaign (Luo & Donthu, 2001; Demers, 2015; PPAI, 2016). Social networks are more straightforward, open, and educational for users who access it (Sorce & Dewits, 2007; Nielsen, 2011; Demers, 2015). The biodiversity conservation campaign used various visual content in social networks such as text, pictures, and videos, which were essential to public engagement, making the campaign highly appealing, recognizable, and enticing to most respondents (80.43%).

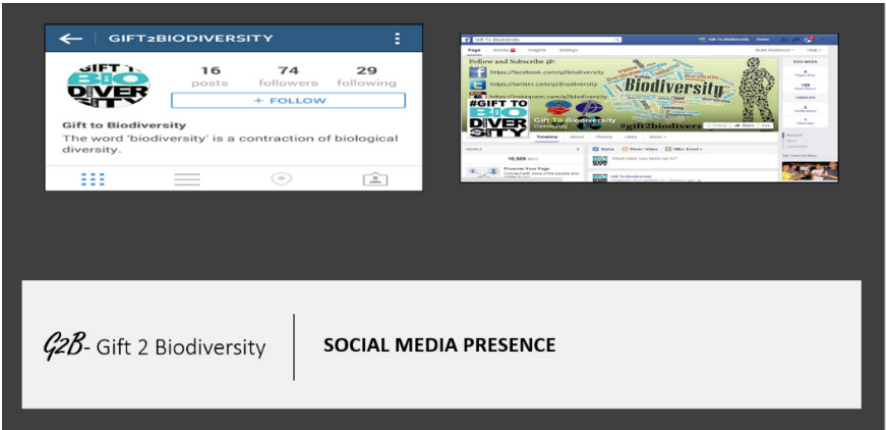


Figure 2. Social media utilized in the biodiversity conservation campaign

Table 6
Social Network and Its Attributes as Perceived by the Respondents

Attributes		Percentage
Clarity	Full of information	100%
	The message is easy to understand	100%
	The message is easy to remember	80.4%
	The letters and pictures used are suitable for the theme	95.65%

Readability	The presentation is very noticeable and pleasing	43.4%
	The letters and font used are of the right size and style	97.82%
	The font style is easy to read	97.82%
Appeal	Attracts you to attend	80.43%
	Easy to comprehend	97.82%
	Useful to their lives	78.26%
Visibility	The images and texts used are at the right size	82.61%
Attractiveness	The background music and images used are enticing	95.65%
	Believable	80.43%
	Captivating	80.43%
	The color matches the theme	100%

Print Materials

Of all the campaign materials which are displayed and circulated, print materials are the most comfortable to distribute, easy to find, repositionable, and flexible (Captivating signs, 2015), which is why most respondents viewed them as appealing, noticeable, and desirable (Figures 3, 4 and 5).

Table 7 indicates that 62.96 % of the respondents agreed that posters could convey meaningful and reliable messages and have font types, design, and size that are readable and visible. The respondents (96.3%) consider posters highly attractive (Figure 3), as they are eye-catching due to their rich colors and flexible theme alignment. These print materials can attract onlookers from a distance and can accommodate more text and image content. It also encourages reinforcement because people frequently appear to be exposed to them, reinforcing the message in their minds (Peer, 2012). According to Daye (2015), most people prefer posters to leaflets, brochures, and pamphlets because color affects the human brain and psychology. Colorful posters improve the object’s presence that directly affects behavior, attitudes, values, and culture (Daye, 2015).

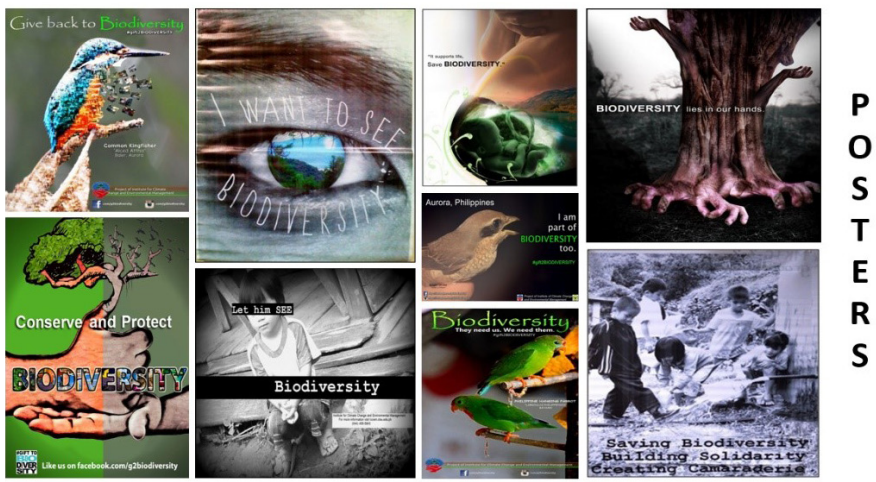


Figure 3. Posters used in the biodiversity conservation campaign.

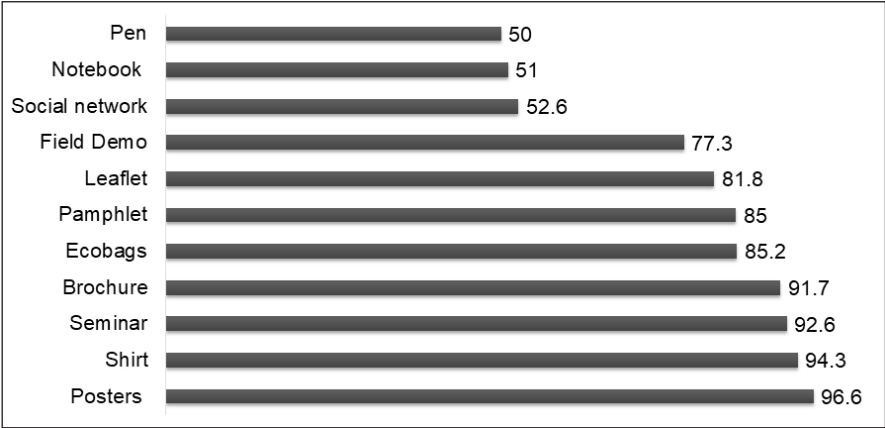


Figure 4. Biodiversity campaign sample brochures and leaflets.



Figure 5. Pamphlets and collateral materials used in the biodiversity conservation campaign.

Brochures are detailed paper documents to fold into a prototype (Chadwich, 2013). It is considered desirable as it is more powerful and pocket-friendly than TV ads; it can focus entirely on campaigns and deals, thereby gaining undivided attention from all possible respondents (Peer, 2012). Four brochures were used and distributed with wildlife hunting topics, slash and burn (kaingin), mining, and biodiversity conservation (Figure 4). Nearly 70 percent (69.13 %) of the respondents believed that brochures were highly effective in terms of clarity (Table 7), as the font style and text size in the brochure were easy to read, and the material contained many information. Visibility and appeal-wise, 96.3 % of the respondents said that they were captivating and could influence them to read and know the biodiversity crisis. Likewise, 96.3 % of them also said brochures were very visible, while 69.13 % said they were believable and catchy. This implies that the content of the brochures provided was supported informatively with relevant images that could incite action.

Table 7
Printed Materials and Their Attributes as Perceived by the Respondents

Attributes		Posters	Brochure	Leaflet	Pamphlet
Clarity	The message is clear	62.96%	69.13%	46.91%	96.3%
	Easy to comprehend	62.96%	69.13%	46.91%	96.3%

	The message is accurate and precise	62.96%	69.13%	46.91%	96.3%
Readability	Easy to understand	62.96%	56.79%	30.86%	46.91%
	The letters are easy to read	62.96%	96.29%	30.86%	30.86%
	The designs are comprehensible	61.7%	45.67%	96.3%	30.86%
Appeal	Easy to remember	74.07%	69.13%	96.3%	96.3%
	Functional	69.13%	96.3%	96.3%	96.3%
	Entice you to take a second glimpse	56.79%	96.3%	30.86%	96.3%
Visibility	The images and texts used are in right size	55.56%	96.3%	30.86%	30.86%
Attractiveness	Captivating	71.60%	96.3%	30.86%	30.86%
	Believable	96.3%	69.13%	30.86%	30.86%
	Eye-catching	96.3%	69.13%	30.86%	48.14%

Leaflets are typically used for ads, marketing, and additional label information (Figure 4). Unlike brochures, they have much information not present in other campaign materials (Peer, 2012). Results showed that more than ninety percent (96.3 %) of the respondents regarded the leaflets as easy to remember and practical, while only 30.86 % claimed they were eye-catching, as they were more intrigued by brochures, posters, and collateral materials.

Pamphlets are unbound booklets consisting of one sheet of paper printed on both sides, folded in half (Figure 5). As shown in Table 7, 96.3 % of the respondents claimed that the pamphlets distributed were clear, appealing, and easy to understand. This means that these materials could still induce a call for action and serve as their guide. However, only 30.86 % claimed they were highly attractive, as the content is more on texts and information than images compared to posters, resulting in a low impact on people (Daye, 2015).

Effectiveness of the Biodiversity Mode’s Attribute and Content

Figure 6 highlights the perspective on the importance and use of biodiversity in their area. Most respondents, especially male farmers above the age of 41 and married, viewed livelihood as their main reason for protecting and preserving biodiversity in the area. Since the respondents mostly live in the vicinity of the site’s mountainous area and far from the center of trade, they viewed flora and fauna around them as their primary source of livelihood. Both students and indigenous people (50 %) viewed biodiversity campaign materials as tools to

support their livelihood, while government employees (54.55 %) and teachers (41.59 %) regarded biodiversity conservation campaign materials as significant techniques and strategies to protect and conserve forest biodiversity.

In terms of the information retained by the respondents, Figure 7 revealed that the main information instilled in the respondents' minds was to take good care of the fauna to avoid extinction (72.3 %) and the preservation of forests/ trees (56.6 %), especially the indigenous people closer to the site of conservation and dependent on the ecosystem.

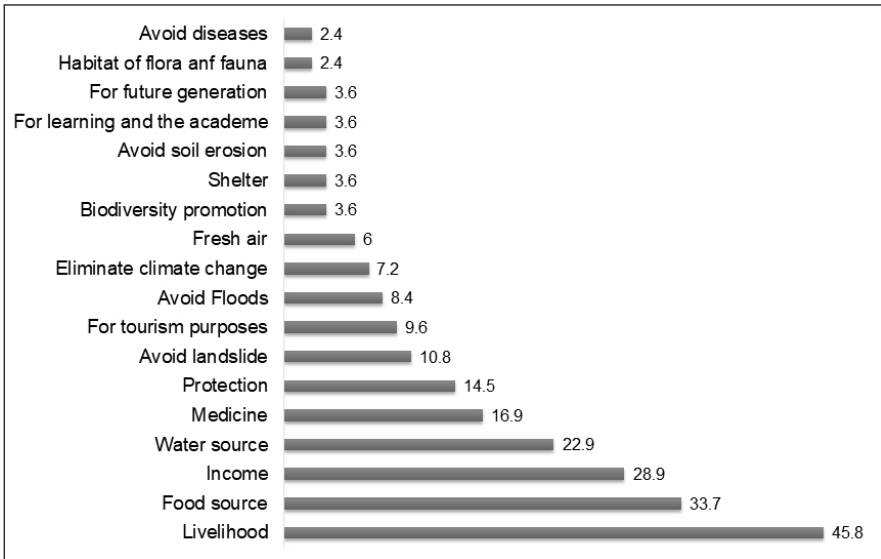


Figure 6. Percentage of respondents who gave the uses of the various biodiversity campaign materials

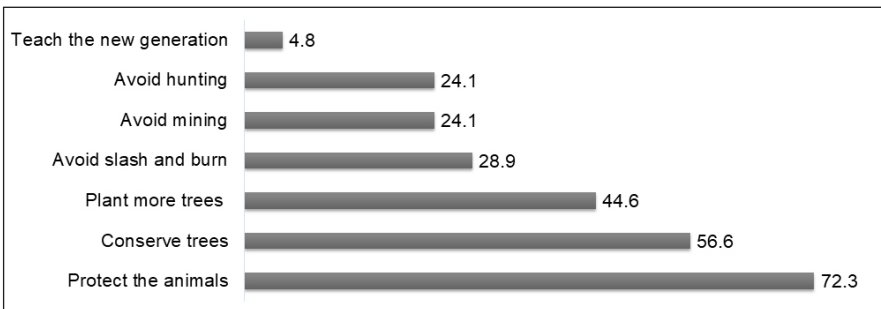


Figure 7. Percentage of respondents who replied what information have been retained from the various biodiversity campaign materials

Figure 8 shows the number of responses based on their demographic profile, which preferred the various conservation campaign materials. Most respondents, especially women aged 41 and married, preferred posters as attractive campaign material for biodiversity conservation. Print media, especially posters, are still the best sensory media material due to its tangibility, paper-feel, and ability to trigger several senses (Printpower, 2012).

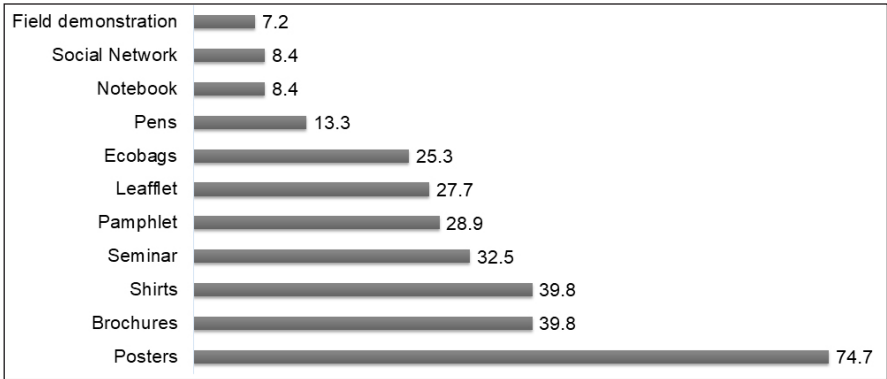


Figure 8. Percentage of respondents who gave preference on the various biodiversity campaign materials

Figure 9 presents respondents' responses to describe the various campaign materials' features and biodiversity conservation characteristics. Results show that the campaign materials and strategies were true to life (56.6%), while only a few respondents (2.4%) replied that the campaign materials were boring. The findings indicate that the concepts of materials used in the biodiversity conservation campaign were well-executed to attract target respondents.

Particularly among the indigenous people and teachers, the campaign materials were considered believable due to the richness of information, and the interaction they had during the seminar-workshop. They also perceived the campaign materials as educational because the information contained in the materials helped educate the students and their families to protect biodiversity. Students (78.57 %) and government employees (54.15 %) perceived campaign materials as easy to understand because they could quickly share their knowledge with their classmates and colleagues.

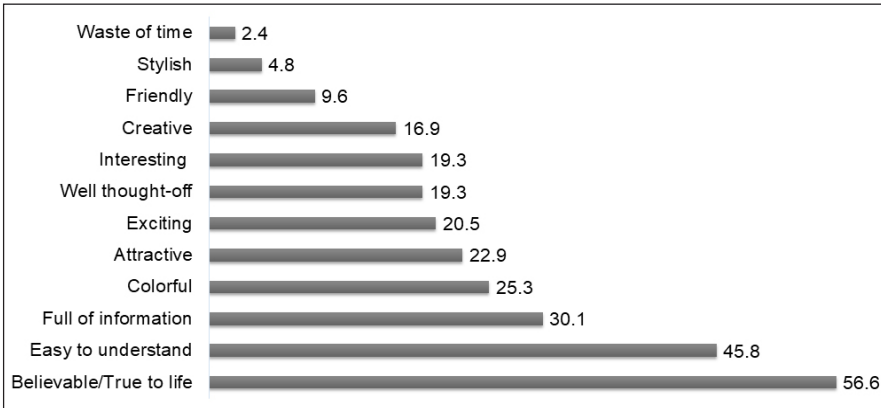


Figure 9. Response of the respondents on the description of the features and characteristics of the various biodiversity conservation campaign materials

The respondents also gave preference rankings for the various conservation campaign materials. Results revealed that most respondents gave the campaign materials a ranking of 10, which implies they liked the campaign materials given, distributed, and presented.

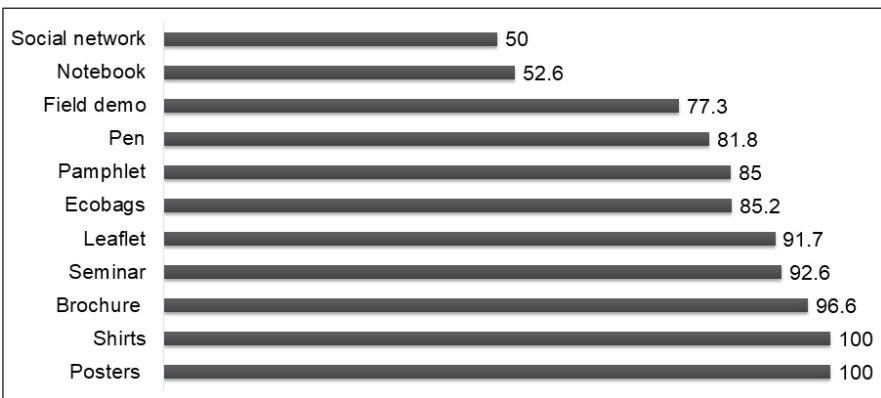


Figure 10. Response of the respondents who gave relevance on the various biodiversity conservation campaign materials and strategies

Figure 10 presents the respondents' understanding of biodiversity conservation materials' importance. Results also showed that respondents viewed posters and shirts (100%) as the most relevant campaign material for the current Carranglan biodiversity situation, followed by brochures (96.6%) and seminar-workshop (92.6%). Furthermore, findings on the research on

print materials (posters) showed that print readers can still retain their ability to read longer articles regardless of age, income, and education. Reading print materials does not offer many distractions to focus on reading, leading to information retention (Printpower, 2013).

In Figure 11, posters (87.95%) are considered the most important campaign material, followed by seminar-workshops (57.83%), shirts (56.62%), and brochures (53%). The text, design, and image richness can somehow voice the campaign message that respondents can easily recognize and appreciate (Kent, 2012).

Furthermore, both posters and brochures are relevant for promotional retention because they can be displayed everywhere and are reasonably cheap, making them easier to manufacture and reach a broad audience (Arens & Rossiter, 2012).

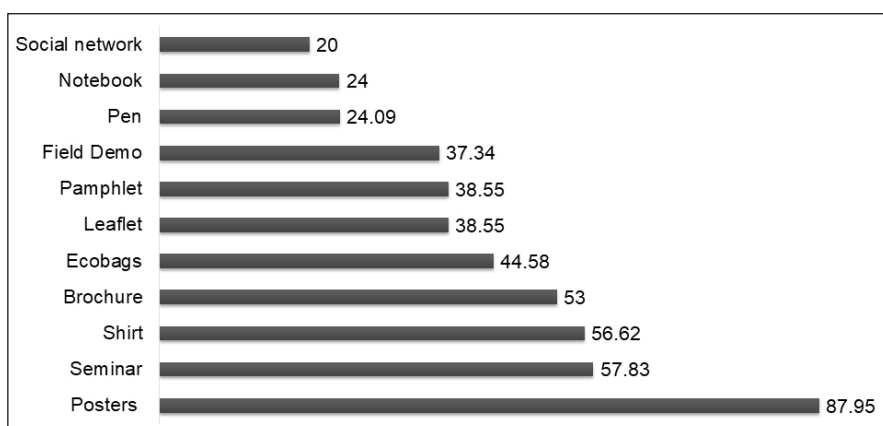


Figure 11. Response of the respondents who gave importance on the various biodiversity conservation campaign materials and strategies

The seminar-workshop is also important to the respondents as it promotes collaborations and cooperation to target audiences (Levy, 2012). Additionally, seminar-workshops generate clear images and information and develop connections in support organizations with advocacy center representatives.

Moreover, results in Figure 12 showed that posters (96.60%) received the largest number of respondents' responses on campaign material impact, followed by shirts (94.3%), seminar workshops (92.6%), and brochures (91.70%).

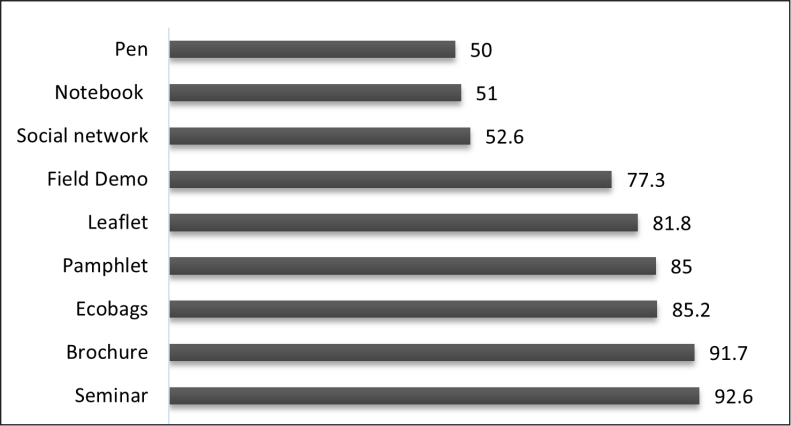


Figure 12. Response of the respondents who gave impact on the various biodiversity conservation campaign materials and strategies

Students (92.86 %), indigenous peoples (71.78 %), and teachers (91.57 %) perceived posters as having the highest impact while brochures, leaflets, and pamphlets had the highest impact on government employees due to their richness of information. Posters are media forms capable of making immediate impacts due to the frequency of impact, even passers-by building a cumulative effect creating a remarkable impact (Dunn, 2007). Shirts also create a positive impression. People prefer collateral materials such as shirts, caps, and bags as they are believed to have greater use in their everyday lives.

Relationship of Demographic Characteristics with the Various Modes and their Attributes for the Effectiveness of Biodiversity Conservation Campaign

As seen in Table 8, the eco-bags’ appeal and attractiveness obtained a significant relationship with employment, while gender has a significant relationship with visibility. This result support studies that eco-bags are the most sought-after promotional content and have the lowest cost per impression (PPAI, 2016). They are handy, desirable, have a longer shelf-life, educational and can build loyalty by being an information reference tool (Fell, 2013; PPAI, 2016). In general, the public used promotional materials about two to four days a week, and 90% of those who got them used collateral materials and were kept for one to two years (PPAI, 2016). Moreover, the female respondents favored eco-bags (57% of total respondents) and

perceived them as a fashion statement that could be personalized and could tailor their preferences; thus, women carrying such bags broaden the message's scope and effect creating reciprocity. Often, since these bags are exposed to more extended periods and used by many, loyalty can be created over a lifetime (PPAI, 2016). Promo bags/eco-bags are also appealing to the unemployed because it is reusable. After all, they do not have the budget or luxury to purchase those bags.

Likewise, the shirt logo exposure is incredibly high when worn anywhere, expanding the scope of the message. It ranks first in recalling campaign messages across the globe due to its utility and design uniqueness (PPAI, 2016). Along with eco-bags and writing tools, these materials help inform the public of their intended campaigns. Interestingly, most male respondents said they prefer shirts to any other collateral materials, as they are comfortable and wearable.

Furthermore, pens and notebooks' appeal and attractiveness significantly correlate with gender, particularly with women (Table 8), as it is very convenient and useful for their children in school with notebooks/notepads and at home. Pens are excellent keys to writing memories, stories, emotions, and experiences and are more appealing when free (PPAI, 2016). Sixty-six percent of Asians love pens as devices; they are compelling despite their size, yet they have strong branding to convey vital information (PPAI, 2016). When people use pens when writing, the logo and message imprinted on them could be retained, creating an effect much like word of mouth advertising-the word is the physical item, and the mouth is the people swapping pens (Fell, 2013).

Table 8

Relationship of Demographic Characteristics with the Attributes of Collateral

Collateral Materials	Age	Gender	Education	Civil Status	Employment	Income
Bags						
Appeal	-0.117	0.099	0.046	0.072	-.236*	0.038
Visible	-0.056	-.278*	0.093	0.127	-0.215	0.031
Attractiveness	-0.116	0.098	0.047	0.071	-.237*	0.042
Shirts						
Appeal	-0.117	0.099	0.046	0.072	-.236*	0.038
Visible	-0.056	-.278*	0.093	0.127	-0.215	0.031
Attractiveness	-0.116	0.098	0.047	0.071	-.237*	0.042
Pens						
Appeal	-0.06	.338**	0.029	0.165	-0.223	0.023
Visible	0.046	0.228	0.009	0.165	-0.138	-0.094
Attractiveness	0.174	.420**	-0.08	0.019	0.04	0.059
Notebook						
Appeal	-0.06	.338**	0.029	0.165	-0.223	0.023
Visible	0.046	0.228	0.009	0.165	-0.138	-0.094
Attractiveness	0.194	.451**	-0.038	0.011	0.03	0.091

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Materials used for Biodiversity Conservation Campaign

Notebooks are favored by 24% of the total respondents as it is a natural partner for pens in remembering campaign messages and prompting action. Women often want to have notepads for them to be organized (PPAI, 2016). The collateral materials are considered attractive, visible, and appealing because they are useful, desirable, responsive to information, fun, unique, and educational, building brand value and loyalty (Chadwich, 2013; Fell, 2013). These materials can also be considered gifts rather than just an advertising campaign or giveaways, which is why they appeal. Their widespread reach could build awareness, eventually pushing people to act in response to the advocacy.

Printed materials such as brochures and pamphlets significantly correlate with age, income, civil status, and employment (Table 9). Many desired these print materials, particularly the unemployed and low-earners,

because they were given free and had more informative content to enjoy reading. Through this, they will remember and appreciate the message of the campaign. Elderly and middle-aged people are more likely to enjoy print advertising like brochures than young adults with little interest in the content (Hunt, 2011). Middle-aged people enjoy reading to learn more and are more likely to share what they have read. They also have a disturbance in their episodic (experienced events, in a specific time and setting) and semantic memory (general awareness of information, terms, and meaning), which is why they tend to read print materials and still recall relevant facts (Kausler, 1978; Glisky, 2007). On the other hand, young adults prefer pictures with a color richness that they enjoy and observe, implying their interest in posters.

Likewise, leaflets are more of context and content than posters and brochures. Table 9 shows that leaflets significantly correlate with age, gender, and income, while posters significantly correlate with gender and income. The correlation on gender implies that females are more optimistic about reading than males (Logan & Johnston, 2009). Even with growing age, reading attitude for both males and females becomes more negative as they get aged, but women are stable over time. Moreover, women have a more remarkable reading ability and aesthetic appreciation than men (Korsmeyer, 2008). More so, females prefer newspapers to advertising materials and print advertisements, where men prefer short texts with short sections. However, this explains why men still enjoy abstract art, drawings, and visual texts, while females prefer fiction, facts, and creative readings (Trondle et al., 2014). Posters depict more figurative art with texts, patterns, and colors that females prefer to recognize beauty and aesthetics while males concentrate on abstract art (Korsmeyer, 2008; Trondle et al., 2014); thus, supporting the significant relationship of posters to gender.

Table 9

Relationship of Demographic Characteristics with the Attributes of Printed Materials and other Campaign Materials for Bbiodiversity Conservation

Printed Materials & Other Campaign Materials	Age	Gender	Education	Civil Status	Employment	Income
Posters	0.089	-.567**	0.013	0.055	0.011	-.381**
Brochures	.359**	0.045	-0.116	.286**	-.342**	-.297**
Leaflets	-.267*	-.293**	0.019	0.186	-0.151	-.373**

Pamphlets	.302**	-0.118	0.03	.256*	-.305**	-.329**
Field Demo	0.087	-0.279	0.066	0.164	-0.017	-.356*
Social Network	0.273	-.462**	-.401**	-0.051	.362*	0.061
Seminar	-0.228	-.376*	0.177	0.252	-0.079	0.066

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Consumers also respond to optimizing their utilities when purchasing commodities (Hunt, 2011). Hence, past studies have centered on financial saving as a primary consumer advantage, so income significantly influences print ads. These are given free and contain information necessary for advocacy. Hence, it is rational that advertising attraction is more potent in low-earning households with small budgets (Kotler & Armstrong, 2012).

Also, Table 9 indicates that gender has a significant relationship with seminar-workshops. Seminars combine figurative art, discussions, themes, and activities participants can enjoy and socialize, particularly females. They like chatting, connecting, sharing, and engaging with each other (Huitt, 1997). Women also tend to have higher standards and evaluate what they have learned; they are likely to listen and have a higher chance of retaining the information (Brizendine, 2008). The female brain has a particular tremendous skill like excellent verbal agility, communication, empathy skills, defusing conflict, and can handle emotions and intellectualization. Males, however, have lean, mean problem-solving machine intellect than emotions. Male brains have developed right hemispheres responsible for visual, imaginative, and tone skills, while females have developed the left hemisphere responsible for reasoning, language, and motor skills (Brizendine, 2010).

The social network findings revealed a significant relationship with gender, educational status, and civil status (Table 9). Females regulate social media, particularly Facebook, religiously. They fancy using social media by adding and searching for friends and sharing their experiences. However, women still love interacting in person (Huitt, 1997) than on social media platforms. Men, on the other hand, are driven to sites like YouTube that concentrate on visual arts (photos and videos).

Twenty-five percent (25 %) of the 35-44 year-olds use social media regardless of their educational background. Furthermore, most middle-aged people also use Facebook, with 61 % of the respondents older than 35. Nevertheless, the majority of the respondents claim that they occasionally use

social media as most of them are unemployed, do not have the budget to buy gadgets, and have limited access to the internet. Nevertheless, they still believe these campaign tactics are useful for promotion nowadays (Techblog, 2015).

Cost-Effective Biodiversity Conservation Campaign Materials

Table 10 shows that seminar-workshops cost more than any other campaign materials among the biodiversity campaign materials, while pens and brochures are the cheapest. Results also revealed that collateral materials are effective tools specifically for campaign retention, similar to brochures and posters that create impact and relevance for audiences. Hence, brochures were the cheapest among the campaign materials and are considered to be the most cost-effective tool in the promotion of biodiversity conservation

Biodiversity is genuinely at risk, and it takes much commitment to disseminate such information for the different stakeholders to be aware of the current situation: several factors impact viewer reaction and retention in a campaign of advocacy. Results also revealed and proved beyond doubt that irrespective of the types of media, the mode of the presentation of a campaign or products, the advertising media attributes such as appeal, visibility and attractiveness and its content stand out as the most influential factor for retention.

The study also shows that 50% of the respondents were women who prefer logo-owned writing tools, while 44% were men who prefer promotional shirts. Because of their impact on education and how these materials nurture consumers' minds on why such a campaign was made, both genders still prefer print media materials to other campaign materials. Moreover, demographic characteristics had a significant relationship with campaign materials' attributes and content, affecting their retention.

The effective campaigns for the respondents are also viewed to have a high value. The study showed that over 70% of the respondents remembered the advocacy, and nearly 80% retained the message due to the attributes of the campaign materials used. The respondents noticed the message's comprehensibility and said they are technically accurate, logical, and matching the theme. Visual comprehensibility, appeal, image attractiveness were all appreciated by the respondents, and they believe it could command loyalty and commitment to the advocacy.

Table 10

Budgetary Allotment for the Biodiversity Conservation Campaign

Title	Description	Quantity	Amount	Cost
Biodiversity Conservation, Kaingin, Mining And Hunting (Tagalog And English)	3-Fold Brochure 8.5x11 Full Colored	8 Sets 600 Pcs/Set 4,800 Pcs/Total	24,000.00	5.00
Leaflet On Iksp (Tagalog And English)	Leaflet Full Colored	2 Sets 550 Pcs/Set 1,100 Pcs/Total	33,000.00	30.00
Pamphlet	Full Colored	3 Sets 55 Pcs/Set 165 Pcs/Total	8,250.00 (Book Cover Printing) 12,600.00 (Book Paper)	70.00 50.00
Posters On Biodiversity	Full Colored	36 Pcs	21,600.00	600.00
Shirts/Apparel	Assorted Sizes Black/Round Neck/Collared with Printed Logo on Front and Back	3 Sets 100 Pcs/Set 300 Pcs/Total	60,000.00	200.00
Ecobags	Medium Size Color: Green With Printed Logo	3 Sets 100 Pcs/Set 300 Pcs/Total	12,600.00	42.00
Foldable Pens	Regular Size; Black In Color; Brown & Green With Printed Logo	3 Sets 100 Pcs/Set 300 Pcs/Total	9,000.00	30.00
Novelty Pens	Assorted Floral Designs Color: Brown, Green, Red And Yellow	3 Sets 100 Pcs/Set 300 Pcs/Total	2,700.00	9.00
Notebook	Assorted Organic Designs Regular Size, 20 Pages Color: Brown	3 Sets 100 Pcs/Set 300 Pcs/Total	4,500.00	15.00
Field Demo	Road Caravans	-	46,100.00	614.67
Seminar-Workshop	-	-	167,844.00	1,118.96

CONCLUSION

Printing materials such as posters, brochures, leaflets and pamphlets and other promotional materials such as collateral materials (eco-bags, hats, pens, notebooks), seminar-workshops, field presentations, and social networks are successful tools for campaign materials to establish impact and significance for the audience and to promote retention in the mind of the respondents in order to induce action to preserve and support them. Results suggested that the printed materials, particularly brochures, were deemed the most appealing, desirable, and recognizable to the respondents as their content and features were easily remembered due to the combination of colored photos and texts that are a very effective tool for retaining the campaign materials that lead to value and loyalty to the campaign. However, the posters gained the highest significance, importance, and effect on biodiversity conservation campaigns, accompanied by shirts, seminars, and brochures. The print materials considered brochures to be the most cost-effective and cheapest of all the campaign materials used with high significance, importance, and effects.

RECOMMENDATIONS

Developing and creating campaign materials must be conducted to enhance public awareness on the importance of biodiversity for better appreciation and participation in the conservation programs in Carranglan, Nueva Ecija, and other forest ecosystems of the Philippines.

Advertising has a significant influence on consumer education and awareness. Toward the end, it is recommended that research be carried out continuously into the quality improvement of campaign materials that will make the audiences enjoy what they see and learn through advertising and campaign. Other activities or studies could develop more advertising campaigns, primarily on biodiversity, and continue to incorporate persuasive and reminder-oriented messages, incorporating the effect of color psychology in marketing. The messages must be strong and appealing enough to persuade and build brand preferences and encourage perception change.

Regarding the campaign material used, print media advertising with collateral materials, especially the posters and brochures, was the most potent and cost-efficient of all the campaign materials used. Given this, more attention and budget must be allotted to produce brochures and other print media targeting local communities. However, other media should also be produced and used; it should continue to employ integrated advertising to the advocacy.

Furthermore, guerilla marketing promotion is also recommended to execute, considering that it could be more appropriate to the respondents. Guerilla marketing promotion focuses on the low-cost unconventional marketing tactics fit for the desired target audience that yields maximum results. This promotion can best create an imaginative solution for representing advocacy without having a large budget and somehow creating an interaction between the audience and the message. This promotional strategy can also make any promotion memorable because of its shocking, surprising, drastic, humorous, and all-consuming effects. Such examples can include creating a life-size poster with the intended message near the site, using positivity, emotions, or even guilt to speak to the audience to see the posters or campaign materials more often, that is interactive for the audience to play and explore. The audiences who might encounter the promotion will most likely remember the brand and become familiar with their essence.

Moreover, experiential marketing could also be a good campaign strategy for the target audiences of similar researches. Experiential marketing promotion enables people to physically interact and immerse with the campaign, creating a closer bond between the consumer and the brand. Examples would be conducting forest field trips and tours with possibly mountain trekking and camping to the visitors and the people near and living the site for further exposure and experiencing the beauty of the place, making them aware of the campaign's message. This, combined with the guerilla marketing campaign, can create respondents/customers lifetime value (CLV) to encourage the audience to return. Furthermore, a separate study must be conducted to evaluate the effectiveness and efficiency of the biodiversity campaign materials and strategies used to assess and evaluate the respondents' inducement to act and determine what campaign materials and strategies are appropriate to their local community needs.

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