

HOW DO FORMATS AND INFORMATION PRESENTATION MODALITIES INFLUENCE VIEWER'S RECALL, RECOGNITION AND BRAND AWARENESS?

Mikyung KIM

Faculty of Media Communication Department
Chungwoon University, South Korea
mkqueen@chungwoon.ac.kr

ABSTRACT

This paper tests through the five-minute video, which was produced in a Web content format reflecting the consumption patterns of young consumers in snack culture age. This study examines how do contents format such as documentary format and entertainment format, and information presentation modality such as visual modality and audio-visual modality influence viewers' memory and attitude for information through experimental research method. Depending on the contents format, significant differences were found in viewer's recall and attitude, except for recognition. For viewer's recall, the entertainment format ($M=3.341$) was found to be more effective than documentary format ($M=3.096$). For attitudes, documentary format ($M=3.180$) showed a more positive attitude than the entertainment format ($M=2.508$). The results of recognition and attitude were statistically significant based on information presentation modalities (visual, audio-visual), excluding recall. For recognition and attitude, the audio-visual information was higher than the visual information. The interaction effects of content formats and information presentation modalities on recall, recognition and attitude were not statistically significant ($F=.007, p=.932$). The interaction effects of content formats and information presentation modality on recall have been shown to be statistically insignificant. Two-way interaction effects of the contents format and information presentation modality to recognition were statistically significant ($F=25.260, p<.001$). The effects of the interaction of contents formats and informational presentation modalities on attitudes were not statistically significant. Attitudes based on contents formats are different, but differences in information presentation modalities are not significant. Young consumer's focus on web contents is weakening. In this regard, consumers' recall and recognition and brand awareness of web content are important for enhancing the effectiveness of communication.

Keywords: format, visual, audio-visual info, recall, recognition, brand awareness

INTRODUCTION

The 'snack culture', which is the new culture consumption trend where people watch drama and entertainment with a short clip of 3 to 5 minutes regardless of the location, has settled in mobile media age. Young consumer's focus on web contents is weakening.

As the use of contents through mobile devices has spread, preference for media formats is changing. Young consumers usually use video clips that show three to five minutes of drama or entertainment instead of a 40-50-minute TV program.

The concentration of mobile content users is decreasing. Concentration is the ability to focus and immerse oneself in one place over a limited period of time. Concentration is a long-term memory of understanding, primarily in the left side of the brain. Memory is, moreover, an important element in the digital environment. As presented in the Limited capacity model of the processing of the mediated message in Lang (Lang, 2000, 2006), because the user's mental resources are limited, they experience a cognitive overload that fails to handle all of the information provided. As a result, users may actually consume content but not have the communication effect.

It is also widely linked to the storage of memories, which reconstructs key information to remember. They can cut, add, decorate and distort memories. This coordination is a working memory. The working memory forms the schema over time and remains the brand awareness. Memory is a major factor in checking the effectiveness of learning. Memory differs in influence according to information presentation modalities. A variety of new forms of information expression in mobile communication are used to integrate disparate information types such as video, text, and voice into a single medium. It is evolving from text-oriented to graphic, animation, and video. The concept of memory in cognitive processing of information presentation patterns in mobile environments is sometimes defined as the ability to properly position visual and auditory information within existing knowledge, experience, and conceptual understanding and context. In this regard, consumers' recall and recognition and brand awareness of web content are important for enhancing the effectiveness of communication.

This study examines how do contents formats and information presentation modalities influence viewer's recall, recognition and brand awareness for information. This paper sets up the docu-format and entertainment-format

as the media contents format and measures recall, recognition and brand awareness depending on these formats. This paper divides the visual modality and audio-visual modality as the information presentation modalities and measures recall, recognition and brand awareness depending on the modalities.

LITERATURE REVIEW

Communication effect by contents format.

Formatting is the form and order in which the information is organized. In a broadcast program, the format refers to the essential elements, appearance and style of the program maintained throughout each episode of the series. The format of the past was understood as the basic idea, composition, and development process of a television series. The current format is conceptualized as a package containing all the programming, or as a strict meaning targeted for remake or traded through contract (Shim, Doobo, 2017).

The format for export consists of 'bible', 'flying producer' and 'business kit'. 'Bible' is a manual that details how to organize a program, which character is the right person for the MC, where the camera should be and how to size it. 'Flying producers' will be sent from the format exporting country to the format importing country. He & she is the advisor for the proper production of the program. 'Business kits' explain more in detail. It also provides a good position and how to promote programs. 'Business kits' also include a list of advertisers and the type of PPL.

Providing the same message in different formats can enhance the effectiveness of the message, not only because of increased access to the information, but also because people are interacting and interacting with the message in different ways. Depending on the type of message that major media such as newspapers and TV send out, the message's signifier is likely to change. Posters and magazines tend to present messages in language and visual strategies, but television tends to generate viewers' interest by providing more visual and auditory cues and maintain interest through reports of diversity and personal interest (McQuail, 2005). There is also a tendency to become less perceptive as a story by first becoming involved in entertainment elements. In particular, tension or expectations about the story make it difficult to contemplate the message in detail (Kim Soyoon, Lee Hyunou, 2007). A study on the communication effects of formats analyzed the impact of recall and recognition by comparing the pre and post program ad format and intermediate ad formats (Hong, Jongpil & Lee, Youngah, 2010). Research has found that the intermediate ad format recalls and recognizes a larger number of brand names and ad messages than the pre and post program ad format. The format of the intermediate ad format has been shown in a more effective way than the pre and post program ad format, as it facilitates the user's memory of advertisements.

Table 1 Comparison of contents format between documentary format and entertainment format

	Documentary format	Entertainment format
	<Knowledge Channel ©>	<SNL Korea Special Lecture>
Time	An average of five minutes	An average of five minutes
Configuration	Subtitles, Still Cut, Video	Subtitles, Narrative narration, Video
Format	A super-mini documentary	A mixed entertainment
Information Presentation Mode	Visual + audible(background tone)	Visual + audible(background tone + narration)

Communication effect by information presentation modalities.

Effectiveness studies based on message presentation modalities mainly deal with the effects between types of media, communicator, and messages. Message delivery forms appear to affect the understanding and persuasion of the message and attitude changes (Andreoli & Worschel, 1978; Chaiken & Egly, 1976; 1983).

Mainly, message presentation modalities are divided into visual and auditory information. Researchers claim that using multiple informational formulas facilitates learning. They argued that providing learning to use both the hearing and vision of learners is more effective in memory and also activates working memory (Penny, 1989; Low & Serller). Some studies suggest that auditory information affects consumers' attitudes and behaviors and that visual information has a strong effect at the beginning of the message, but that auditory factors work strongly in the second half.

According to Limited capacity model of mediated message processing by Lang, because the mental resources that viewers use at a certain point in time are limited, when large amounts of information are presented, viewers experience cognitive overloads (Lang, 2000, 2006). The effect of news formats such as Pyramid shape and Reverse Pyramid shape: the pyramid shape of the time sequence was shown to influence the understanding and

recall and recognition of viewers (Lang, 2000, 2006). Whether photos and graphics are inserted increases the viewer's news memory (Newhagen & Reeves, 1992; Lang, Newhagen, & Reeves, 1996; Fox et al., 2004). Depending on the format of the online and printed newspapers, news is perceived differently and the agenda provided are taken differently (Althaus & Tewksbury, 2000; 2002). Message presentation modality appear to affect understanding, persuasion, and attitude changes on the message (Andreoli & Worchel, 1978; Chaiken & Eagly, 1976, 1983).

Pavio's dual-coding theory (Pavio, 1990): As learning is presented as auditory and visual information, it is entered into the human sensory memory, respectively. The auditory information is organized by the speech processing system and the visual information is organized by the visual processing system into images. These organized information creates responses through reference links to each other. It is more effective to present information using both visual and auditory at the same time than using either visual or auditory (Mayer & Anderson, 1991).

Cognitive Load Theory (CLT) starts with the premise that human cognitive capacity is limited. When visual and auditory information is presented in media usage learning, the learners will be able to process information without any cognitive load. Effective learning is interrupted when too much learning information is provided.

Cognitive Load Theory (CLT) describes as split-attention effect the phenomenon that too much information distracts the attention of the learners, which reduces learning effectiveness. Previous study compared groups of video + narration with groups of video + narration + subtitles. The result of the experiment showed that groups of video and narration had a high learning effect.

Subtitles are primarily concerned with information delivery, content understanding and attention focus. Text subtitles in advertisements are text coded information provided by the voice. The complexity of these information can lead to cognitive loads (Jung, Kihyun, 2003). News Ticker, a text-messaging information, was also found to have a negative effect on understanding and remembering news information (Lee, Hyemi et al, 2009).

Narration refers to "an explanation or explanation of a story from outside as the scene progresses, without showing up on a scene in a movie, a broadcast play, or a play". The sound effect is sound except speech, music, and commentary, or intentionally added sound.

Research Question

This study has several questions:

RQ1: What are the recall, recognition and attitude depending on the difference of content formats?

RQ2: What are the recall, recognition, and attitude depending on the difference of information presentation modalities?

RQ3: What is the recall, recognition and attitude depending on the interaction of content formats and information presentation modalities?

Research Methodology

The five-minute video, which was tested in this paper, was produced in a Web content format reflecting the consumption patterns of young consumers. As an experiment, we produced video related to the subject "fast food" in the modality of documentary like < knowledge channel © > and entertainment format like < SNL Korea >. The first experiment was composed by mashup the video of "Deep Tree" using the format of < Knowledge Channel © >, the representative content of EBS. The second is a 'fast food' conversation in the hit drama 'Dokkaebi', which is based on the format of "SNL Korea Special Lecture" by tvN. Information presentation modalities were presented as visual (video + subtitles) and audiovisual (video + subtitles + narration + music) information.

Variables

- Formatting refers to the essential elements, appearance, and style of a program and refers to a scheme or form that contains the core of a particular program.
- Information presentation modality refers to a combination of visual and visual information. Visual information is defined by images and subtitles, and audio-visual information is defined by images, subtitles and sounds.
- Memory is defined as working memory. Memory is divided into sensory, working and long-term memory. Working memory refers to the state in which information that progresses in any area of cognitive activity is stored

temporarily. Memory related to information stored in temporary storage that is easily accessible for a short period of time without special effort and repetition. There are two ways to retrieve these memories. It is recall and recognition.

- Brand awareness is the amount of positive or negative emotion a person has about a subject (Thurstone, 1931). That is a learned predisposition to react consistently, and favorably and unfavorably to a target (Fishbein & Ajen, 1975).

Research Result

The effect of viewer's recall, recognition and brand awareness depending on the contents format?

Depending on the contents format, significant differences were found in viewer's recall and attitude, except for recognition. For viewer's recall, the entertainment format like <SNL Korea Special Lecture> (M= 3.341) was found to be more effective than the documentary format like <Knowledge Channel®> (M=3.096). For attitudes, <Knowledge Channel®> format (M = 3.180) showed a more positive attitude than the <SNL Korea Special Lecture> (M = 2.508).

Table 2 The effect of viewer's recall, recognition and brand awareness depending on the contents format

	Contents Format	Sample Number	Mean	SD	Difference of M	df	t	p
recall	Entertainment SNL	127	3.341	.770	.244	239	2.804**	p<.01
	Documentary KC®	114	3.096	.549				
recognition	Entertainment SNL	127	3.092	1.321	.244	239	2.854	p=.324
	Documentary KC®	114	2.913	1.380				
brand awareness	Entertainment SNL	127	2.508	.564	.179	239	.988***	p<.001
	Documentary KC®	114	3.180	.808				

The effect of viewer's recall, recognition and brand awareness depending on the information presentation modality

The results of recognition and attitude were statistically significant based on information presentation modalities (visual, audio-visual), excluding recall. For recognition, the audio-visual information (M = 3.455) was higher than the visual information (M = 2.575) and the audio-visual information (M = 2.968) was more apparent than visual information) (M=2.706) in the attitude.

Table 3 The effect of viewer's recall, recognition and brand awareness depending on the information presentation modality

	Information presentation modality	Sample Number	Mean	SD	Difference of M	df	t	p
recall	Audio-visual	110	3.188	0.636	-.069	239	-.781	p=.435
	Visual	131	3.257	0.723				
recognition	Audio-visual	110	3.455	1.405	.069	239	.790***	p<.001
	Visual	131	2.575	1.140				

brand	Audio-visual	110	2.968	0.764	.879	239	5.137**	p<.01
awareness	Visual	131	2.706	0.751				

The effect of viewer's recall depending on the interaction of content formats and information presentation modalities

The interaction effects of content formats and information presentation modalities on recall, recognition and attitude were not statistically significant ($F=.007$, $p=.932$). The interaction effects of content formats and information presentation modality on recall have been shown to be statistically insignificant.

Table 4 The effect of viewer's recall depending on the interaction of contents formats and information presentation modality

	Sum of square	df	Mean Square	F-value
Contents formats(A)	1.397	1	1.397	.851
Information presentation modalities(B)	42.420	1	42.420	25.843***
Contents formats * Information presentation modalities (A*B)	.012	1	.012	.007
Error	359.479	219	1.641	
Total	2423.000	223		

The effect of viewer's recognition depending on the interaction of content formats and information presentation modalities

Two-way interaction effects of the contents format and information presentation modality to recognition were statistically significant ($F = 25.260$, $p < .001$).

Table 5 The effect of viewer's recognition depending on the interaction of contents formats and information presentation modality

	Sum of square	df	Mean square	F-value
Contents formats(A)	30.835	1	30.835	74.143***
Information presentation modalities(B)	5.736	1	5.736	13.792***
Contents formats * Information presentation modalities (A*B)	10.506	1	10.506	25.260***
Error	98.566	237	.416	
Total	2065.375	241		

The effect of viewer's brand awareness depending on the interaction of content formats and information presentation modalities

The effects of interaction between content format and information presentation modalities were verified through a two-way ANOVA. The results showed that the two-way interaction effects of content format, visual and audio-visual modalities on brand awareness were not statistically significant ($F=3.698$, $p=.056$). Thus, the hypothesis of study was rejected. Although there is different brand awareness depending on the contents format, it seems that there is no interaction effect as there is no significant difference between the information presentation modalities (visual and audio-visual).

Table 6 The effect of viewer's brand awareness depending on the interaction of contents formats and information presentation modality

	Sum of square	df	Mean square	F-value
Contents formats(A)	3.188	1	3.188	7.078**
Information presentation modalities(B)	.271	1	.271	.603
Contents formats * Information presentation modalities (A*B)	1.666	1	1.666	3.698
Error	106.747	237	.450	
Total	2619.063	241		

CONCLUSION

Depending on the differences in format, more 'fast food' words and key messages were recalled and recognized. It is shown that sending the same message in different formats can increase information accessibility and enhance message effectiveness. It is more effective to present information using both the visual and auditory at the same time than using either the visual or auditory modalities. This result demonstrates the dual-coding theory and split-attention effect.

It infers that recall and recognition function differently in memory in the process of processing information of human. Recall is the memory of direct withdrawal, and the recognition is the indirect withdrawal. The research result is interpreted although it is seen that entertainment format increases level of attention and sense of immersion, it does not help level of understanding. Although it is single visual information, recognition of images and text is not effective when they are overloaded. Thus, the double-information, audio-visual information is helping the recognition. These findings demonstrate a prior study (Moreno & Mayer, 2002) that provides additional sound to enhance acceptance. Brand awareness can affect long-term memory by cognition, emotion and behavior, and can be expected to form a priori trend to maintain a sustained response. The interaction between content formats and information presentation modalities has enhanced the recognition effect.

Research results have the following implication in terms of web content creation and acceptance. Entertainment format helps the recall and brand awareness. The audio-visual presentation modalities help the recognition and brand awareness. In order to be more receptive when producing web content, it will be important to store it in direct memory in fun and entertainment formats, and to increase the recognition through double information (audio-visual). These will also be useful in shaping brand awareness in the long run. The interaction between the content format and the information presentation modalities affected the recognition. Therefore, it is important to keep in mind in production because the interactions increase understanding.

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