

What are the elements of images that lead to content understanding for the hearingimpaired?

Total number of persons with disabilities and hearing disabilities

4,287,000 (Total number of persons with disabilities)

312,000 (Total number of hearing impaired)

motive

- ① **Want to help the hearing impaired. !**
- ② **Want to make commercials that all people can enjoy.**
- ③ **Want to solve the SDGs.**

10 REDUCED
INEQUALITIES



Elements Leading to Content Comprehension

II.

Subtitles, sign language, and
Reading from mouth movements, etc.
and definitions

Elements Leading to Content

Hypothesis

Hearing impaired people can use **sign language** and **mouth movements** to understand the content of commercial.

Method of Investigation

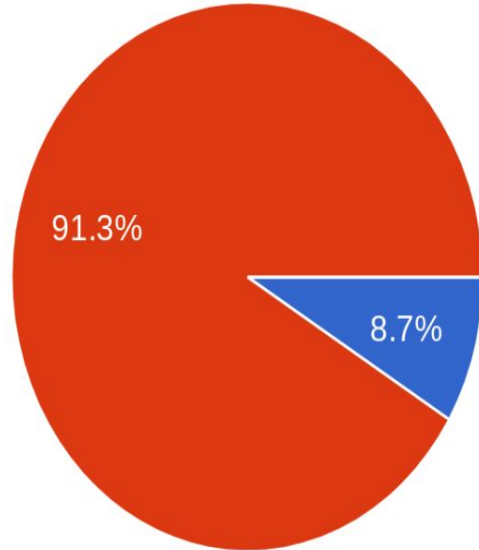
1 Survey of previous studies

2 Survey of hearing-impaired organizations in and outside of Fukui Prefecture via Instagram and email

Questionnaire survey and results

What is the number one help in understanding the content of TV, commercials, etc.?

23 responses



sign language



subtitles



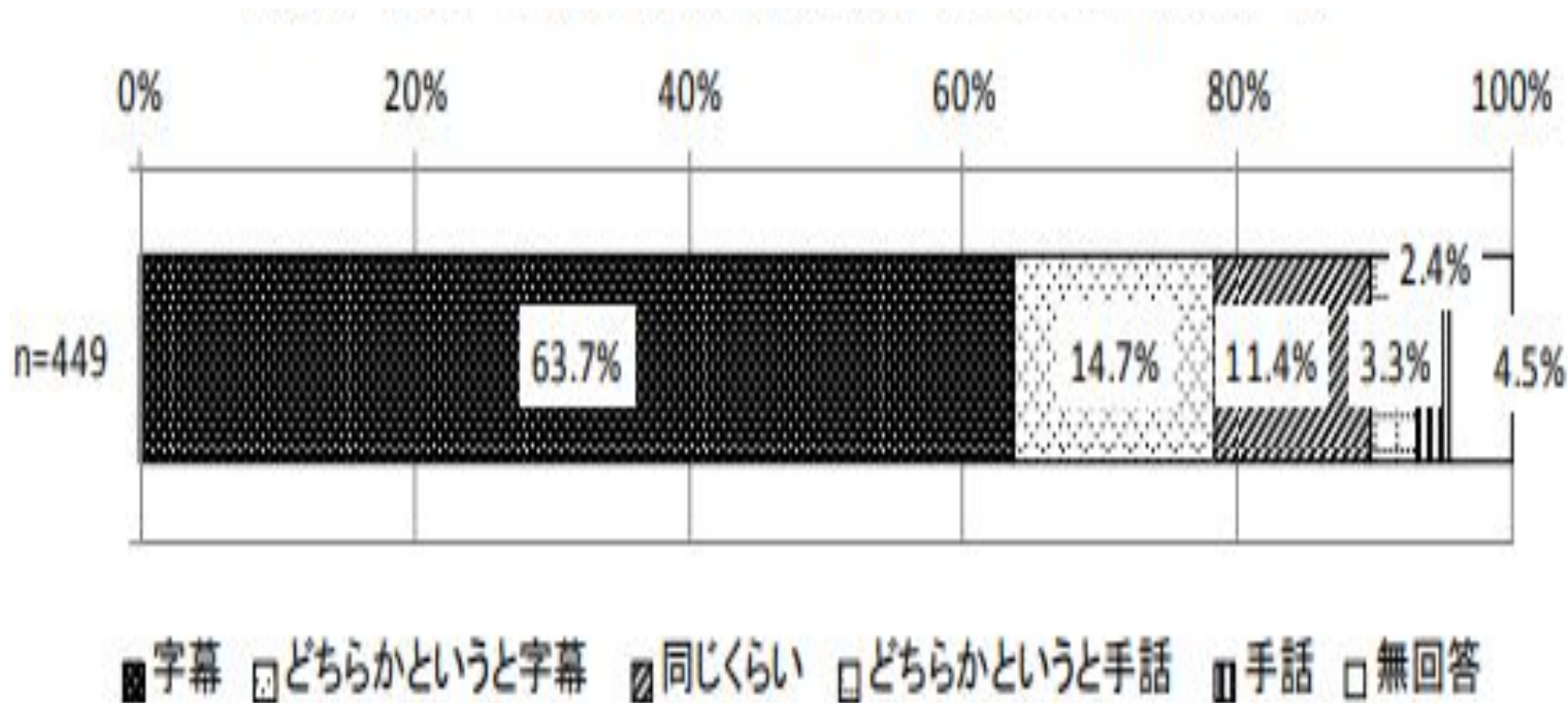
mouth movements

Only hearing impaired

Are subtitles the best help?

Prior Research Survey II

Intention to watch subtitles and sign language N = 449

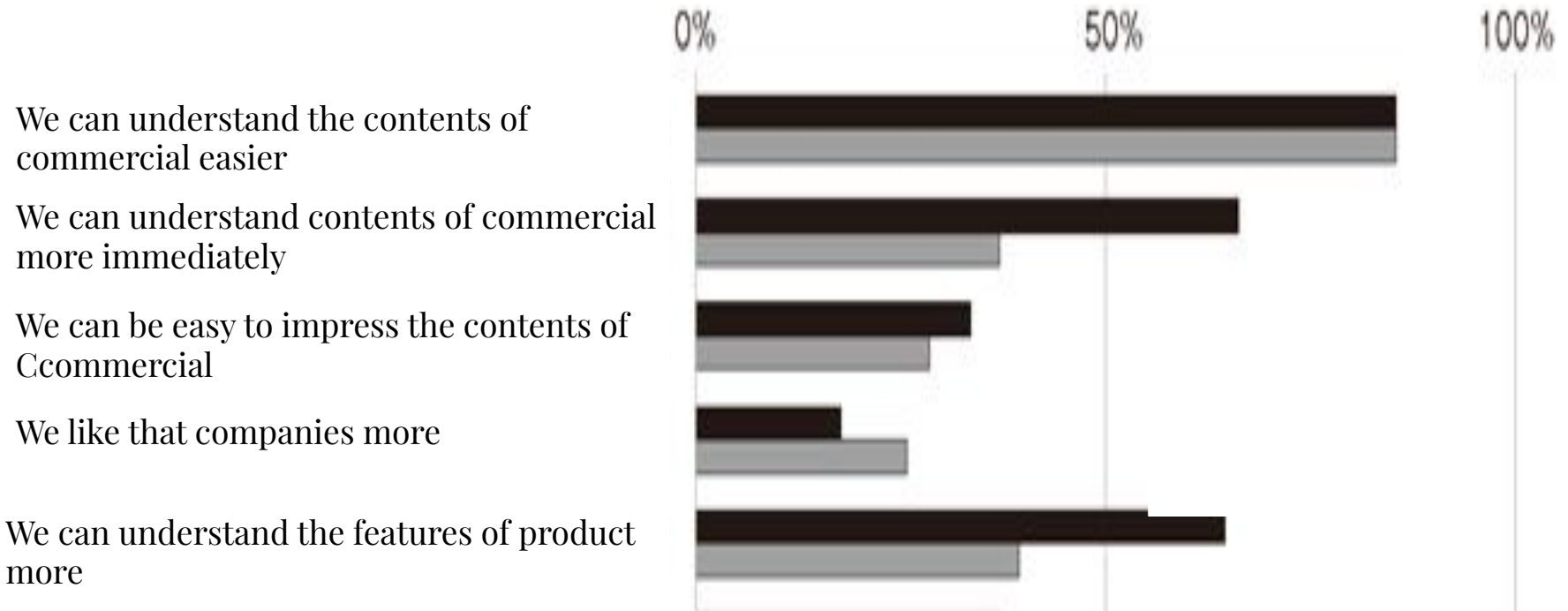


Many viewers watch
videos with subtitles

Advantages of subtitled commercials

Q: What are your feelings and impressions of this subtitled commercial?

(Answered by having them watch the actual subtitled commercial.)



Content of commercials
with subtitles are more
likely to be better
understood

Other findings

- Subtitles are two lines of 24 characters each.
Text is the most common.
- Food commercials require subtitles most
- Subtitles are most often displayed at the bottom
- White is the most common color for subtitle

Further research on
subtitles

**Research on the relationship
between font style and
readability of subtitles**



ご協力よろしく申し上げます

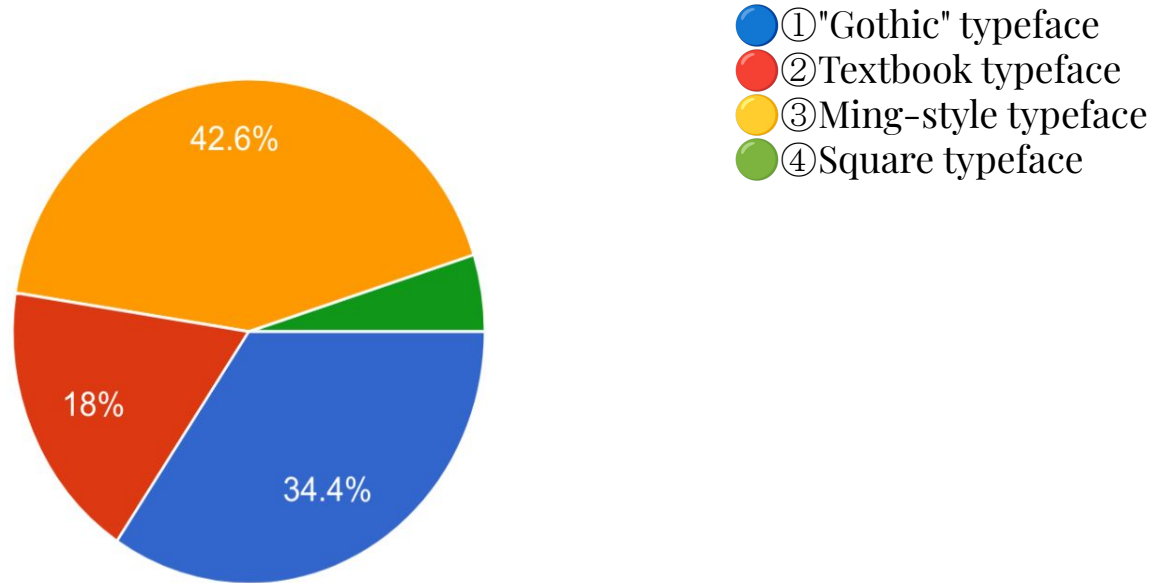
ご協力よろしく申し上げます

ご協力よろしく申し上げます

ご協力よろしく申し上げます

Which of the four do you feel is itself the easiest to read?

61 件の回答



Consideration

- The elements required for content comprehension in video and conversation are different.

- Sign language and mind-reading require skill, but subtitles are the most useful for understanding because they can be seen and understood and do not require skill.

- For the hearing impaired, subtitles are the best way to help them understand the content of the images.

- The thickness of the font is somewhat affected.

Issues

- We don't know if a video with more elements would be easier to understand.
- We don't know if it has to do with the font or the thickness.
- Fewer subjects in the experiment

Future Activities

- Experiments on comprehension of subtitles, by number of elements**
- Create commercial and enter some competition**

References

厚生労働省(2018年4月9日) 平成28年生活のしづらさなどに関する調査
https://www.mhlw.go.jp/toukei/list/dl/seikatsu_chousa_c_h28.pdf 2023年 2月2日

東京医療センター 慶應義塾大学医学部(2021年3月25日)男女別・世代別の平均聴力を解明
<https://www.keio.ac.jp/ja/press-releases/files/2021/3/25/210325-1.pdf> 2023年 2月2日

三菱UFJリサーチ・コンサルティング
(2021年 9月) 字幕と手話の視聴意向
https://www.soumu.go.jp/main_sosiki/joho_tsusin/b_free/pdf/120127_2.pdf 2023年 2月2日

株式会社電通(平成2015年3月)デントーと総務省による字幕付きCMあたりに対する評価、効果等に関する調査研究
https://www.soumu.go.jp/main_content/000372825.pdf 2023年 2月2日

北信越ろう学生懇談会

熊本県ろう者福祉協会青年部

福島県聴覚障害者協会青年部

福岡県聴覚障害者協会青年部

一般社団法人陽けたら海へ

全日本ろう学生懇談会

関東ろう学生懇談会

質問:CM や動画に字幕が必要だと思うジャンルを選んでください。

聴覚障害者・難聴者

1

オリンピック

2

食品

3

家電

4

通信

5

旅行

6

保険

聴者

1

食品

2

オリンピック

3

保険

4

公共

5

通信

6

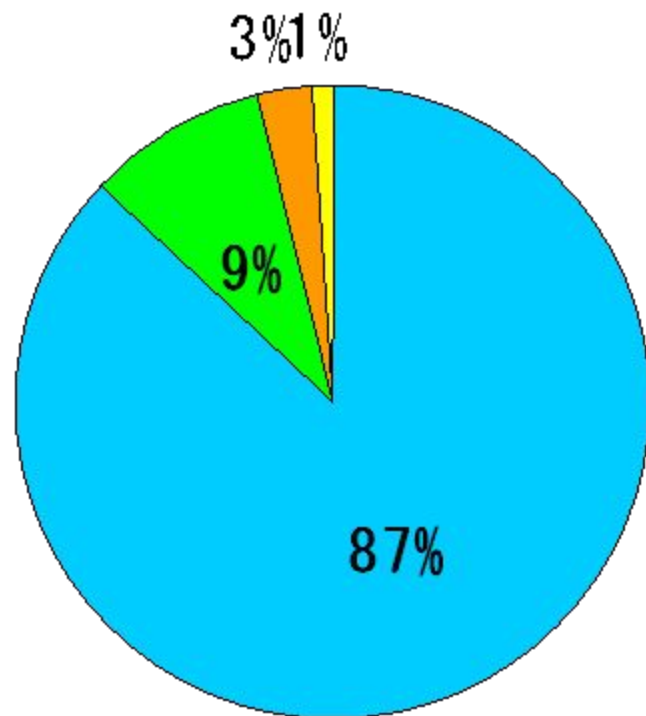
日用品

表 7. 「自在切り」の字幕表示時間度数分布表 (n=282,274)

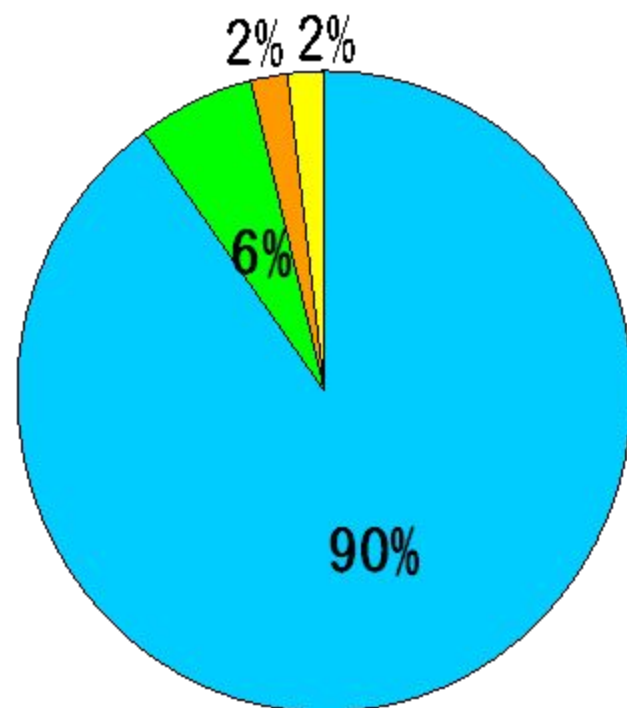
データ区間 (上限, 秒)	頻度	累積 %
0.2	0	0%
0.4	0	0%
0.6	6	0%
0.8	62	0%
1.0	348	0%
1.2	4,099	2%
1.4	8,180	5%
1.6	12,267	9%
1.8	16,878	15%
2.0	21,911	23%
2.2	22,912	31%
2.4	23,170	39%
2.6	22,738	47%
2.8	22,081	55%
3.0	21,814	63%
3.2	18,277	69%
3.4	16,156	75%
3.6	13,761	80%
3.8	11,827	84%
4.0	10,178	87%
4.2	7,578	90%
4.4	6,317	92%
4.6	4,924	94%
4.8	3,942	95%
5.0	3,102	97%
5.2	2,330	97%
5.4	1,773	98%
5.6	1,336	98%
5.8	1,072	99%
6.0	825	99%
6.2	598	99%
6.4	511	100%
6.6	329	100%
6.8	266	100%
7.0	252	100%
7.2	118	100%
次の級	336	100%

字幕の場所別割合

NHK

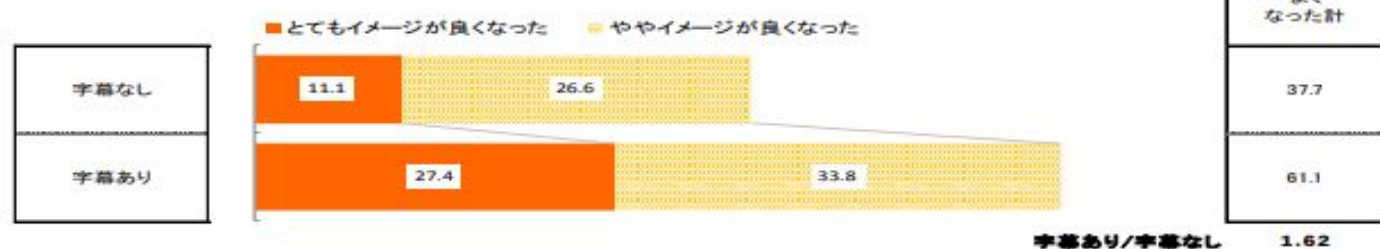


民放

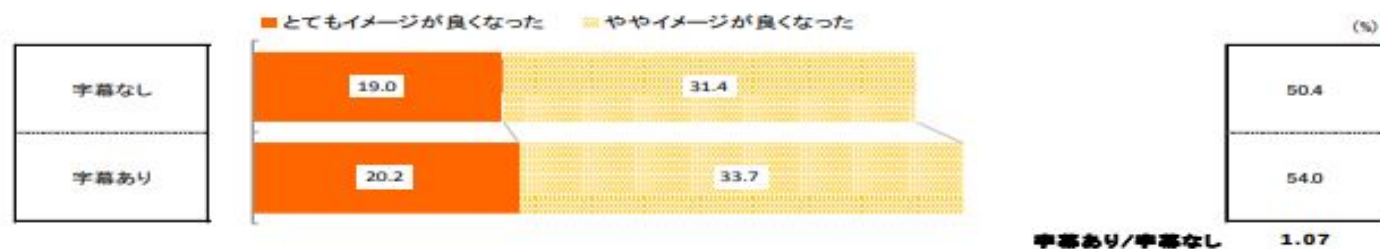


提供企業イメージ上昇度（調査した6素材の平均）

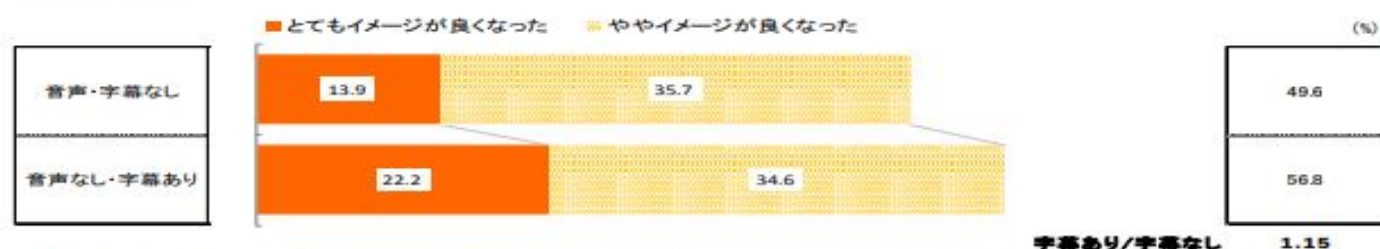
<聴覚障がい者(N=42)>



<耳が聞こえにくい高齢者等(N=42)>



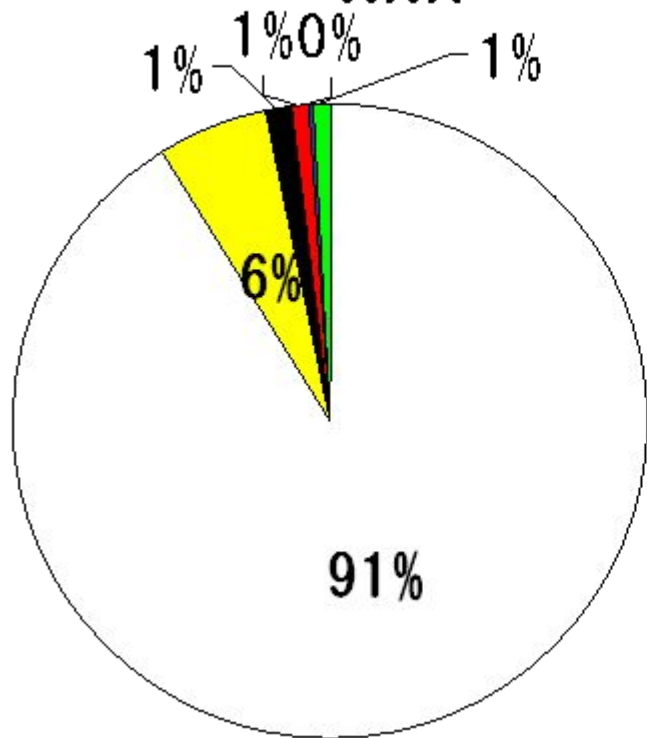
<聴者(N=42)>



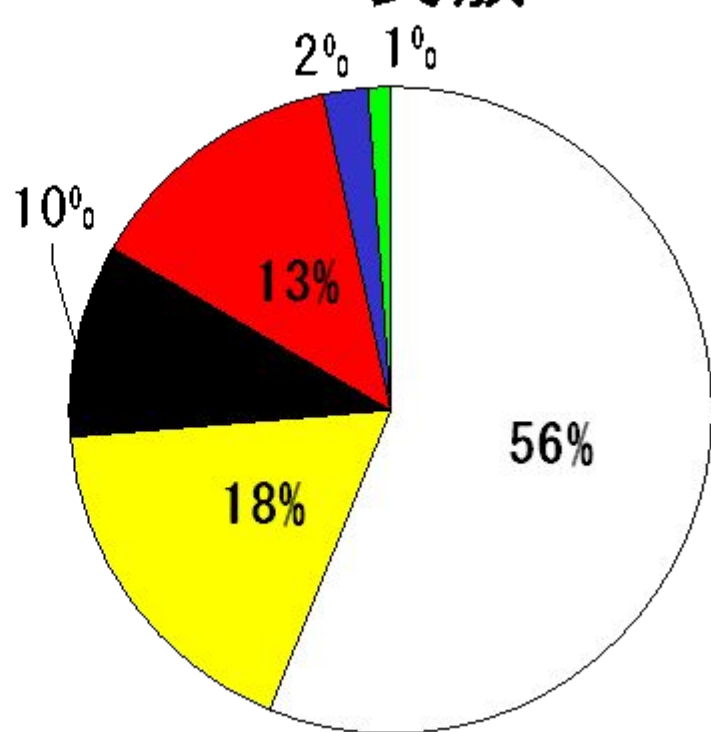
関東1都3県の20～74歳の男女、健聴者42名、耳が聞こえにくい高齢者等42名、聴覚障がい者42名によるホールテスト調査（集合アンケート調査）平成27年2月～3月実施

字幕の色割合

NHK



民放



- 白
- 黄
- 黒
- 赤
- 青
- その他

商品購入喚起度（調査をした6素材の平均）

<聴覚障がい者(N=42)>

字幕なし
字幕あり



字幕あり/字幕なし

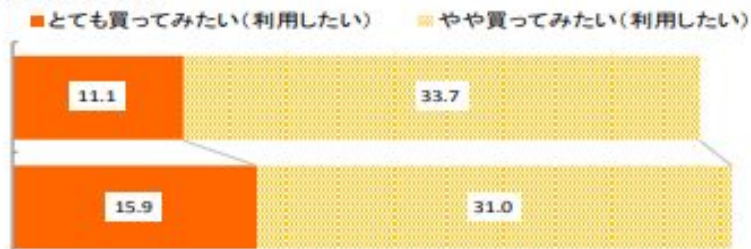
(%)

意向あり計
32.1
52.8

1.64

<耳が聞こえにくい高齢者等(N=42)>

字幕なし
字幕あり



字幕あり/字幕なし

(%)

44.9
46.8

1.04

<聴者(N=42)>

音声・字幕なし
音声なし・字幕あり



字幕あり/字幕なし

(%)

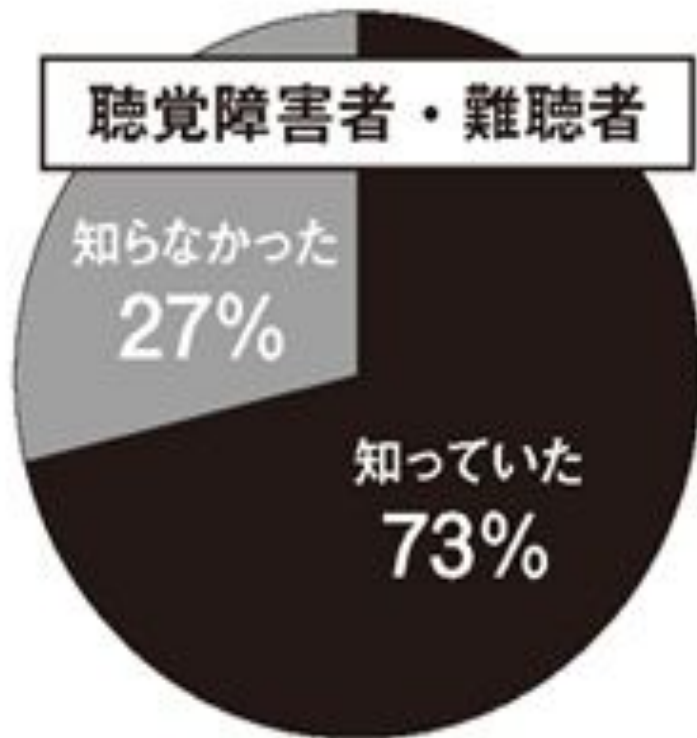
50.8
54.0

1.06

Subtitled commercials can
improve the corporate
image.

Focus on subtitles

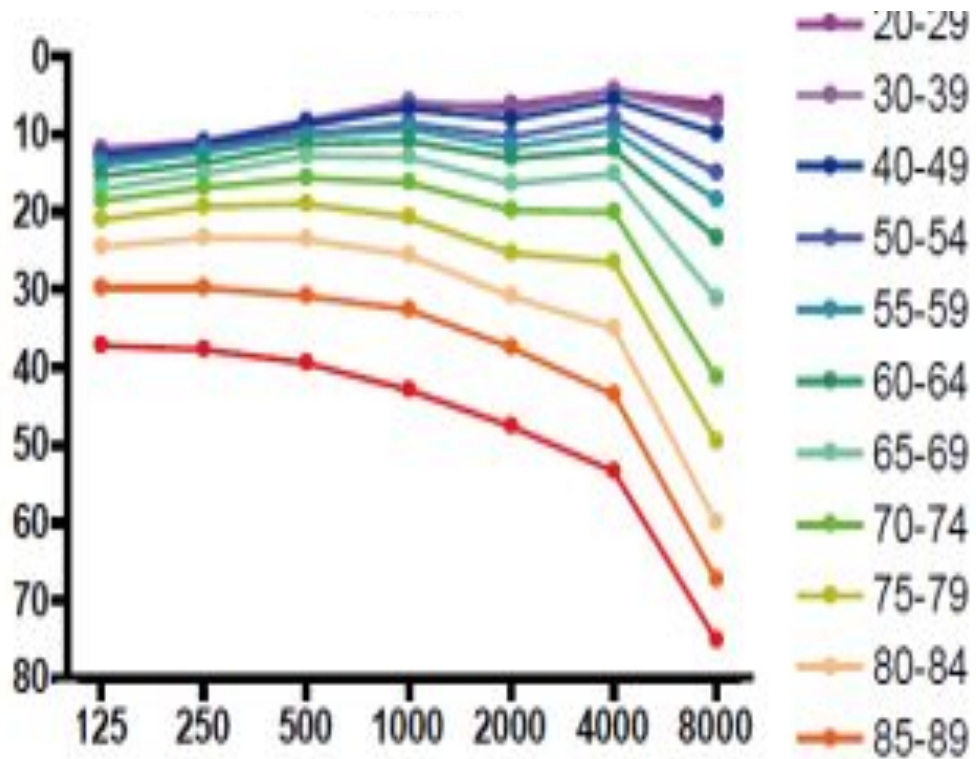
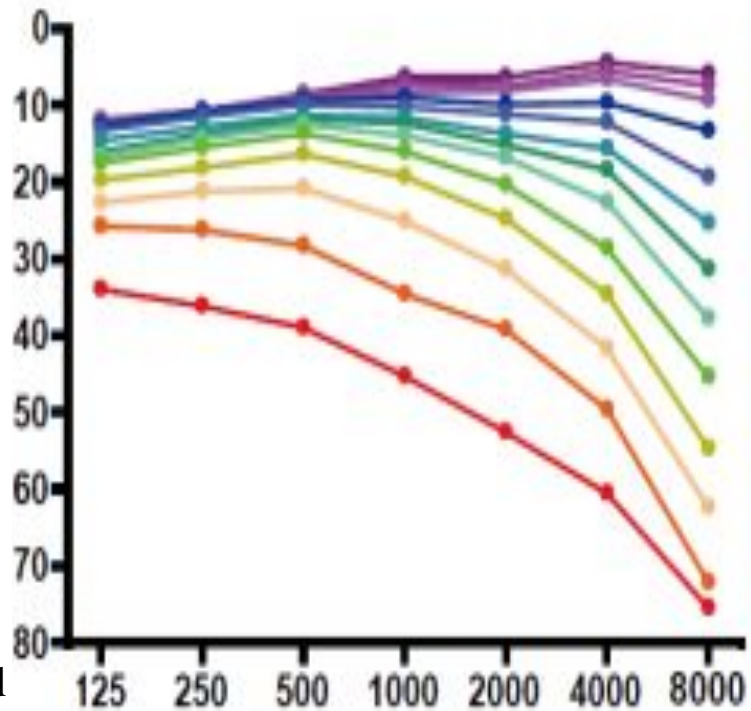
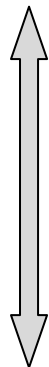
質問:あなたは一部の CM に字幕が付いていることを知っていましたか?



small
sound

DB

big
sound



Hearing change by age

What is a hearing impaired person?

ろう者 : People who lost their hearing **before acquiring spoken language**, most of whom use sign language as their first language.

難聴者 : People who have difficulty hearing but still have hearing

中途失聴者 : People who lost hearing after acquiring spoken language.

加齡性難聴者 : People who are hard of hearing as they get older.

Subtitled commercials
improve product sales

字幕付きCMの認知度
が低い