

Investigating the effectiveness of advertising cues

A report within the framework of the AdLit SBO research project



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AdLit is a four-year interdisciplinary research project on advertising literacy, which is funded by VLAIO (Flanders Innovation & Entrepreneurship). The main goal of the AdLit project is to investigate how we can empower children and youth to cope with advertising, so that they can grow up to be critical, informed consumers who make their own conscious choices in today's new media environment.

The AdLit consortium comprises of the following partners:

University of Ghent: Research group CEPEC and Department Education

University of Antwerp: Research group MIOS and Department Marketing

KU Leuven: Research group Centre for IT and IP Law (CiTiP)

Free University Brussels: Research group CEMESO

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In cooperation with the AdLit consortium

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Introduction

Many legislative and self-regulatory principles indicate that commercial messages should be clearly recognizable as such (Verdoodt, Lambrecht & Lievens, 2016). In practice, this has led advertisers to develop advertising cues that help consumers to recognize (subtle) advertising messages. An advertising cue is designed to help adults and children to differentiate between content and advertising (Cai & Zhao, 2010). However, principles addressing (embedded) advertising do not formulate specific guidelines for this design. Therefore, in practice, a wide variety of advertising cues are being used.

In developmental literature, children are often referred to as “cued processors”, as they need a cue to trigger their persuasion knowledge (Van Reijmersdal, Rozendaal, & Buijzen, 2012). As a consequence, these children need to be encouraged to think about advertising that they have seen. To critically deal with commercial message, it is necessary that children apply their current advertising knowledge. However, for new, non-traditional advertising formats, the activation of advertising literacy is difficult. Non-traditional formats often blur the boundaries between advertising and entertainment (Van Reijmersdal, Rozendaal, & Buijzen, 2012). Further, non-traditional advertising formats often rely on affect-based techniques. As a result, children and adolescents have difficulties with critically reflecting on non-traditional advertising formats.

The risk analysis conducted within the AdLit project, confirmed that children have difficulties with advertising formats that are fully embedded within the media content. An advertising disclosure could help children to recognize when they are being targeted by embedded advertising. Previous research on the effectiveness of (currently used) advertising cues has provided mixed results (see Brahim et al., 2016 for an extensive review). An and Stern (2009) plead that a cue might be ineffective due to a variety of shortcomings, such as the placement wording or the content itself. Surprisingly, little to none research has been done with regard to the design of advertising cues, especially with regard to children. This research gap was addressed in the AdLit project, supporting the major aim of the research project: empowering minors to cope with embedded and hybrid advertising. The AdLit studies described in this research report focus on different types of embedded advertising: product placement, banner advertising on children’s websites and advertising on social networks.

In the first study, entitled “*Disclosing brand placement to young children*”, we investigated how an advertising cue can influence young children’s cognitive advertising literacy and attitudes towards the brand with regard to product placement. Attention was given to the cue modality (visual or auditory) and timing (cue presented during exposure to commercial content or cue presented prior to commercial content). This study was accepted for publication in the peer-reviewed International Journal of Advertising (De Pauw, Hudders & Cauberghe, in press).

In the second study, entitled “*The development and testing of a ‘child-proof’ advertising cue to disclose embedded advertising*”, a multi-method approach was followed in order to design a new advertising cue. In a first substudy, children were asked to give input on advertising cue design during co-creation sessions. The second substudy tested different advertising cues which were designed based on the results of the co-creation sessions using eye tracking technology. Based on the eye-tracking results, one final advertising cue was tested. In the last substudy, this



advertising cue was compared with two existing advertising cues. The results of this study lead to important implications with regard to advertising cue design. This study will be submitted to an international peer-reviewed journal.

In the third study, entitled “*The effectiveness of disclosing advertising on SNS: explaining how and when adolescents are influenced by peer norm disclosures*”, we addressed the effectiveness of advertising cues for an adolescents target group and focused on social networks. Based on theoretical insights with regard to peer norms, four experiments were set-up. This study will be submitted to an international peer-reviewed journal.

In the final chapter of this report, we formulate recommendations for the design of effective advertising cues.



Disclosing Brand placement to young children

De Pauw, P., Cauberghe, V. & Hudders, L.

Highlights

- ❖ An advertising cue is more effective in activating cognitive advertising literacy when the cue is presented:
 - a. Visual (vs. auditory)
 - b. Presented prior to the media content (vs. during media content)
- ❖ Among less skeptical children, a higher cognitive advertising literacy leads to a higher attitude towards the placed brand

Research Aim

How do different types of warning cues influence cognitive advertising literacy and attitude toward the placed brand among children between 8 and 10 years old?

1. Study 1 – Cue modality

Method and results

A between-subject experiment with a one-factorial design (cue modality: no cue vs. auditory cue vs. visual cue) was conducted in this study. In total, 98 children participated. As stimulus material, we opted for a kids' TV program excerpt with a brand placement for ketchup.

The results of these experiment showed that children had a higher cognitive advertising literacy when the advertising cue was presented prior to the media content. In addition, a cue-activated cognitive advertising literacy lead to a more positive brand attitude. This, however, was only for the among children who were less sceptical towards brand placement.

2. Study 2 – Cue timing

Method and results

In this second study, a between-subject experiment with a one-factorial design (cue timing: prior vs. during media content) was used to investigate whether the timing of the cue influenced the advertising cue's effectiveness. The stimulus material used was a movie excerpt with a brand placement for candy. About half of the respondents saw the advertising cue prior to the movie excerpt, while the other half saw the advertising cue during the movie excerpt.

This results of this study indicate that children who saw the advertising cue prior to the media content reported a higher cognitive advertising literacy. Furthermore, for children with a less sceptical attitude towards brand placement, a cue-activated cognitive advertising literacy lead to a more positive brand attitude.

Conclusion

Warning cues can be effective for children to cope with embedded advertising. However, this effectiveness is greatly determined by the cue's characteristics. This study also found that it is important to acknowledge moderating role of sceptical or critical attitudes in studying advertising literacy.



The development and testing of a “child-proof” advertising cue to disclose embedded advertising to children

De Jans, S., Vanwesenbeeck, I., Cauberghe, V. & Hudders, L.

1. Study 1: Co-creation Workshops with Children

Highlights

- ❖ The shape and color of the advertising disclosure have to be striking, most preferred colors are red and yellow (in combination with black).
- ❖ General consensus on the wording ‘Reclame’ (Dutch for ‘advertising’) combined with an exclamation mark.
- ❖ Six different disclosure designs were constructed.

Research Aim

This first study aims to gather information and insights directly from the target group by conducting co-creation workshops with young children in order to develop a first selection of meaningful advertising cue designs for young children.

Method

Four co-creation workshops with 24 children between the age of eight and eleven years ($M = 9.96$, $SD = .96$) were organized. First, respondents were taught about advertising (literacy) in a short lesson. Next, the participants worked on two creative tasks to determine the optimal design for the advertising cue. The first task involved children drawing a basic shape and choosing appropriate wording for an advertising cue. The second task involved the children designing their own advertising cue. Each task was performed individually. Afterwards the different aspects of the advertising cue were discussed with the whole group. The data was analysed using NVivo. We used an a-priori approach to code the data. The codebook referred to the different visual aspects of an advertising disclosure, namely colour, shape, wording and punctuation mark.

Results

The respondents agreed that the shape of the advertising cue should stand out. They also acknowledged that the advertising cue should be displayed in a striking colour, most preferably red or yellow (in combination with black). There was a general consensus on the word ‘reclame’ (i.e., most commonly used word in Dutch for ‘advertising’). Finally, all the children preferred the use of an exclamation mark. Based on these results, eight different cue designs were developed. Two cue designs (a triangle and explosion-shape) were eventually eliminated due to problems with visibility and readability when the cue designs were implemented in a media context. Thus, six different advertising cue designs were used in the follow-up studies.



2. Study 2a: Eye-tracking Study 1

Highlights

- ❖ Limited fixations on the different disclosure designs.
- ❖ No significant difference in total number of fixations between the six different disclosure designs.
- ❖ The children did fixate on the banners centrally.

Research Aim

This study aims to select the final advertising cue by examining which of the six constructed advertising cue designs (integrated in a media context) attracts children's attention to the greatest extent by using eye-tracking technology.

Method

In this study, 18 six- to ten-year-old children participated ($M = 8.11$, $SD = 1.41$). The six constructed advertising cue designs were incorporated into screenshots of a children's website containing two online banners. The advertising cues were integrated on the upper right corner of the online banners. The screenshots (each containing two different online banners and two identical advertising cues) were interspersed with other screenshots that did not contain any online banners or advertising cues. In total, using a within experimental design, the children were exposed to 18 screenshots of websites for children's channels. The screenshots of the websites were randomized to avoid order effects. The eye-tracking study was conducted using the SMI Mobile Eye Tracking Device IViewX RED. Experiment Center software (3.7) (SMI Experiment Suite™ 360°) was used for stimuli presentation and data collection. A five-point calibration was performed before each recording session. The obtained data was analysed using SMI Behavioral and Gaze Analysis software (SMI BeGaze™) and subsequently transferred to SPSS 24 to conduct additional analyses. The advertising disclosures were identified as areas of interest (AOIs).

Results

Data from the eye-tracking study revealed that there were only two fixations on one of the advertising cues (the advertising cue without background containing the word 'Reclame!' in red), whereas there were no fixations on the other five advertising cues. However, a repeated measures analysis of variance (ANOVA) showed that the children did not fixate significantly more on this advertising cue compared to the other five advertising cue that were not fixated on ($F(1) = .12$, $p = .732$). The eye-tracking data also showed that many of the children did fixate on the online banners; however, they did not look at the advertising cues on the upper right corner of the online banners, they only fixated on the banners centrally. Thus, although the advertising cue did not attract attention, there appeared to be no banner blindness among these young children. It was therefore decided to conduct an additional eye-tracking study (study 2b) in which we opted to place the advertising cues on top of the online banners in the middle (instead of on the upper right corner), to ensure that the advertising cues would attract greater attention.



3. Study 2b: Eye-tracking Study 2

Highlights

- ❖ The children still paid relatively little attention to the advertising cues.
- ❖ A black rectangular advertising cue with yellow letters 'Reclame!' was selected as the new advertising disclosure as the children significantly fixated more on this cue design.

Research Aim

The aim of this study is identical to study 2a, namely to select the new advertising cue by testing which of the six constructed cue designs attracts most attention from young children.

Method

Twenty-four children between the age of seven and twelve years ($M = 8.67$, $SD = 1.55$) participated in the study. The stimulus material and design used in this study were similar as in study 2a; however, in this study, the advertising cues were placed on top of the online banners in the middle (instead of on the upper right corner of the online banners). The children were again exposed to the 18 screenshots. The procedure was exactly the same as the procedure in study 2a and the exact same eye-tracking device was used.

Results

A repeated measures ANOVA was conducted to compare the total number of fixations (TNOF) between the six different advertising cues, which seemed to be significant ($F(2) = 3.05$, $p = .047$). In particular, an LSD post hoc test revealed that the children significantly paid more attention to the black rectangular advertising cue with yellow letters 'Reclame!' (TNOF: 6; $M = .25$, $SD = .11$) compared to the advertising cue that was least fixated on by the children (TNOF: 0; $M = .00$, $SD = .00$).

4. Study 3: Experimental Study Testing Ad Disclosure Effectiveness

Highlights

- ❖ The children better recognized advertising when they were exposed to the new advertising cue compared to existing advertising disclosures.
- ❖ The children also better recognized, understood and liked the newly developed advertising disclosure.

Research Aim

An experimental study was conducted to test the effectiveness of the newly developed advertising cue in terms of advertising recognition and advertising cue recognition, liking and understanding by comparing it with existing advertising cues that are currently being used in Belgium to disclose brand placement and online banners.

Method

A 2 (advertising cue: existing advertising cue versus new advertising cue) by 2 (advertising format: brand placement versus online banner advertising) between-subjects experimental study was conducted. In this study, 157 children between the age of ten and eleven ($M = 10.27$, $SD = .45$) participated. The placement of the advertising cues was manipulated by either showing an existing advertising disclosure to disclose brand placement ('PP-logo') or online banner advertising ('Advertisements-logo') or by showing the newly designed advertising cue. In the brand placement condition, the children first had to watch a short TV program excerpt containing brand placement after which they



had to fill in a questionnaire. The advertising cues appeared on screen for exactly six seconds at the beginning and at the end of the fragment. In the online banner condition, the children were first asked to surf on a self-constructed and controlled website (containing one online banner and one advertising cue) for children. Then, they had to fill in the same questionnaire. In contrast to the brand placement condition, the advertising cue were constantly displayed upon the online banners (in the middle) when the children were surfing on the website, as this is also the case in real-life.

Results

An univariate ANOVA was conducted to examine the main effect of advertising cue on advertising recognition, and the interaction effect with advertising format. The analysis showed to be significant ($F(1, 153) = 4.54, p = .035$). In particular, the analysis showed that the children better recognized advertising when exposed to the new advertising disclosure ($M = 3.72, SD = 1.15$) compared to the existing advertising cue ($M = 3.29, SD = 1.29$). The interaction effect of advertising cue and advertising format was not significant ($F(1, 153) = .01, p = .929$), which indicates that the main effect of advertising cue on advertising recognition holds true for both advertising formats.

A Chi-Square-test was conducted to examine the main effect of advertising cue on advertising cue recognition. The analysis was significant ($\chi^2(1) = 13.00, p < .001$) and showed that advertising cue recognition was higher for the new advertising cue (49.4% correct recognition) than for the existing advertising cue (21.8% correct recognition; $z = 3.6, p < .001$). Specifically, for the brand placement condition, the Chi-Square-test showed ($\chi^2(1) = 14.65, p < .001$) that advertising cue recognition was significantly higher for the new advertising cue (64.9% correct recognition) compared to the existing advertising cue (22.7% correct recognition; $z = 3.8, p < .001$). For the online banner condition, this finding could not be confirmed ($\chi^2(1) = 2.09, p = .148$).

To investigate the main effect of advertising cue on advertising cue knowledge, again a Chi-Square-test was conducted and showed to be significant ($\chi^2(1) = 55.09, p < .001$). The children better comprehended the new advertising cue (79.7% correct understanding) compared to the existing advertising cue (20.5% correct understanding; $z = 7.4, p < .001$). Two separate Chi-Square-tests showed to be significant both for the brand placement ($\chi^2(1) = 47.12, p < .001$) and the online banner condition ($\chi^2(1) = 12.84, p < .001$). In the brand placement condition, only 2.3% of the children knew the correct meaning of the Belgian PP-symbol, whereas 75.7% comprehended the correct meaning of the new advertising cue ($z = 6.9, p < .001$). In addition, 44.1% of the children understood the meaning of the advertising cue that currently discloses online banners, while as much as 83.3% knew the correct meaning of the new advertising disclosure ($z = 3.6, p < .001$).

Finally, an univariate ANOVA, which showed to be significant ($F(1, 153) = 4.68, p = .024$), was conducted to investigate the main effect of advertising cue on advertising cue liking, and the interaction effect with advertising format. More specifically, the analysis showed that the children liked the new advertising disclosure ($M = 2.92, SD = 1.02$) more than the existing advertising disclosures ($M = 2.56, SD = .88$). The interaction effect of advertising cue and advertising format on disclosure liking was not significant ($F(1, 153) = .72, p = .375$), which indicates that the main effect of advertising disclosure on disclosure liking holds true for both advertising formats.



Conclusion

Three studies were conducted to develop and test a new advertising disclosure to disclose different types of advertising to young children in multiple media formats. In a first study, co-creation workshops with 24 children were organized. This study resulted in the development of different disclosure designs based on the insights and preferences of the target group. Then, two eye-tracking studies among 32 children were conducted to select the new “child-proof” advertising disclosure by testing which of the constructed disclosure designs attracted the most attention from the children. A black rectangular disclosure with yellow letters ‘Reclame!’ (i.e., Dutch for ‘advertising’) attracted young children’s attention to the greatest extent and was therefore selected as the new advertising disclosure. Finally, an experimental study with 157 children was conducted to test the effectiveness of the newly developed advertising disclosure by comparing it with existing advertising disclosures that are currently being used in Belgium to disclose brand placement and online banner advertising. It was shown that children better recognized, understood and liked the new advertising disclosure and that the children also better recognized advertising after exposure to the new advertising disclosure compared to the existing ones.



The effectiveness of disclosing advertising on SNS: Explaining how and when adolescents are influenced by peer norm disclosures

Zarouali, B., Poels, K., Ponnet, K. & Walrave, M.

Highlights

- ❖ An advertising cue ‘sponsored’ activates more persuasion knowledge than no disclosure at all
- ❖ A peer norm disclosure (“your friends know this is sponsored”) scores better in activating persuasion knowledge compared to the ‘sponsored’ advertising cue
- ❖ This relationship is moderated by susceptibility to peer influence
- ❖ The peer norm disclosure can influence the way adolescents select their advertising settings in SNS

Research aim

The use of an advertising cue has been advocated by many actors over the past few decades as one of the most promising cues to inform young consumers of an upcoming persuasive message (i.e. trigger their awareness), and hence, stimulate them to be critical about it. However, a majority of studies found that advertising cues are not very successful in activating young consumers’ persuasion knowledge (for an overview, see Zarouali, De Pauw, De Jans, & Vanwesenbeeck, 2017). Extant research focused on mostly on visual and explicit characteristics (e.g. changing the duration, adapting the content, changing the position, etc.) (see Boerman & van Reijmersdal, 2016). These explicit features require to be detected, analysed and evaluated – thus they rely on cognitive elaboration. However, adolescents are often *unmotivated* and *unable* to allocate great cognitive resources to process a disclosure in an online environment. Therefore, we assert that the advertising cue literature needs additional knowledge that goes beyond what can be explained by mere (explicit) content and modality characteristics.

As a response to this, and guided by the tenets of the MAIN-model (Sundar, 2008), this study proposes a heuristic-based approach to investigate the effectiveness of advertising disclosures in increasing persuasion knowledge on SNSs among adolescents. More precisely, advertising cues aimed at adolescents should incorporate features that tap into the way adolescents heuristically (and implicitly) process information in a social networking environment.

Our point of departure is that peers are an important and well-established source of influence for adolescents. As Sundar (2008) argued, if a disclosure can trigger heuristics associated with peers’ beliefs and behavior, it might be a particularly powerful tool for adolescents. Therefore, we introduce and test an advertising cue based on the social proof heuristic, which we will call a *peer norm disclosure* (“your friends know this is sponsored”).

Method and results

1. Experiment 1 - Pilot study

In this pilot study, 129 adolescents (aged 14-16) participated. Before testing the peer norm disclosure (which will be done in Experiments 2-4), we conducted this pilot study to explore whether the traditional “sponsored” disclosure, which will constitute our control condition in the following studies, is well comprehended by adolescents. Results



confirm that adolescents do know what the word ‘sponsored’ means since this disclosure activates much more persuasion knowledge than no disclosure at all.

2. Experiment 2 – Comparing peer norm disclosure to the traditional disclosure

Experiment 2, involving 161 adolescents (aged 14-16) then proceeded to the comparison of the peer norm advertising cue to the advertising cue in terms of persuasion knowledge activation. In this regard, we also aim to demonstrate that this advertising cue is worthy of its name by revealing the underlying mechanism that drives the effectiveness, i.e. subjective norms. The results clearly indicate that the peer norm disclosure outperforms the control advertising cue in triggering persuasion knowledge, and that subjective norms is indeed the underlying mechanism that operates in this relationship.

3. Experiment 3 - Susceptibility of peer influence

In **Experiment 3**, we aimed to replicate the findings of study 2, and additionally test a relevant boundary condition with the moderator susceptibility of peer influence. In total, 142 respondents (age 14-16) participated in this experiment. Findings demonstrated that the replication of study 2 was successful. Moreover, we also found that the mediation effect of a peer norm advertising cue on persuasion knowledge is moderated by susceptibility to peer influence, meaning that the effect of a peer norm advertising cue on activating persuasion knowledge through subjective peer norms only occurs among adolescents who are highly susceptible to the influence of their peers.

4. Experiment 4 - Impact on actual behaviour

Finally, **Experiment 4**, in which 153 respondents participated (age 14-16), investigated whether the peer norm disclosure is successful in influencing actual behaviour, more precisely, the way adolescents select their advertising settings on a SNS. In this respect, we proved that this type of advertising cue is an effective trigger in encouraging adolescents to be more restrictive with respect to their ad settings on SNSs.

Conclusion

This study offers solid evidence based on multiple studies that advertising cues that are processed on a more implicit and heuristic level are more effective in triggering persuasion knowledge than explicit disclosures referring to the persuasive nature of an upcoming message. This finding offers valuable insights that point toward reconsidering the way scholars should approach studies on advertising cues.



Recommendations

Putting together all AdLit studies with regard to advertising cue effectiveness, we can formulate multiple recommendations that should be taken into account when designing and implementing an advertising cue.

A forewarning is preferred

Our research suggests that, for product placement, children benefit more from an advertising cue that is presented before the commercial content, compared to an advertising cue that is presented during the commercial content.

A disclosure cue should use the local adaptation of language

During our research, it became clear that the currently used advertising cues were not meaningful for children, as they were derived from English terms for the word 'advertising' or 'sponsored'. An adapted advertising cue, using a local translation for the children, provided better results with regard to understandability. Therefore, we suggest that future advertising cues could be adapted to the language of the children being targeted in the advertising.

Avoid the use of abbreviations

This recommendation became clear during our qualitative research on advertising cue design. Children were not aware of the current used abbreviation and preferred the fully written out words to avoid any misinterpretation.

An advertising cue should be presented centrally

The AdLit eye-tracking results showed that, for banner advertising, a central placement is preferred over a placement in the banners' corner. Nevertheless, a placement in the banner's right corner is currently the most-used place to disclose banner advertising. Following this finding, when designing a new advertising cue, it is important to consider the cue's location. Future research could also focus on other embedded advertising types to evaluate the ideal location for an advertising cue for other types of advertising.

Color(s), font and shape should stand out

Currently used advertising cues are often in subtle colours (such as grey and black). However, AdLit studies confirm that a striking advertising is a better option: not only do children prefer a more striking cue, a striking cue also leads to a higher ad recognition. Further, the shape of the advertising cue should also stand out to attract attention.

Peer norms and automatic processes

Especially for advertising in social media, our research with adolescents showed that an existing sponsored cue was more effective in activating persuasion knowledge compared to no cue. Adding a peer norm disclosure (i.e. "Your friends knows that this is sponsored"), however, was found to be the most effective way to trigger persuasion knowledge in adolescents.

Peer norm disclosures (based on the social proof heuristic) successfully arrive at triggering persuasion knowledge in an automatic and implicit way based on the if-then principle. In addition, they also encourage privacy-protecting behaviour on social networking sites. These are promising findings indicating that disclosures that tap into the way adolescents heuristically process information in a social networking environment are effective.

Final conclusion

The results of the abovementioned studies confirm that an advertising cue's effectiveness is highly depended on the cue's characteristics. Therefore, currently used advertising cues should be re-evaluated to see whether these advertising cues actually achieve their actual goal (i.e. increasing advertising recognition) among children. If not, it is recommendable that not effective advertising cues are replaced by advertising cues, designed following the abovementioned recommendations with regard to shape, wording, etc.

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