

THE CONTRIBUTION OF COMPUTER COMMUNICATIONS TO RAISING AWARENESS ABOUT ENVIRONMENTAL PROTECTION: A CASE STUDY OF THE #BORANKA CAMPAIGN

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Abstract: This study focuses on the role of computer-based communications in increasing awareness of environmental protection, using the #Boranka campaign as a case study. By conducting a literature review on the use of computer-based communications for environmental awareness raising, and analyzing social media posts and conducting interviews with campaign organizers, the study evaluates the strategies, messages, and effects of the campaign on the public. The results of the study reveal that the #Boranka campaign successfully raised awareness about environmental protection and attracted volunteers, with computer communications, particularly social networks, playing a significant role in achieving these goals. The use of social networks allowed the campaign to reach a large number of people and emphasize the importance of environmental protection. The campaign's messages were clear, calling for action and citizen engagement in environmental protection. Despite facing challenges such as lack of resources and technical skills, the campaign organizers were able to overcome these obstacles through various strategies. The study concludes that computer communications are an effective tool for raising awareness about environmental protection, particularly when used in combination with other methods. It recommends further research to explore how computer communications can be used to achieve specific environmental goals.

Keywords: computer-based communications, scouts, social networks, citizen engagement

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1. INTRODUCTION

Environmental protection and conservation have emerged as critical global concerns in recent years (Liu et al. 2001; Gulliver et al. 2020). The escalating degradation of natural resources and the alarming rate of deforestation necessitate urgent action and widespread awareness to address these pressing issues (FAO 2023; Hansen et al. 2013). In this digital age, computer communications platforms and social media have emerged as powerful tools for promoting environmental causes and mobilizing communities towards positive change (Penney 2015; Graham et al. 2015).

This study aims to examine the role of computer communications in raising awareness about environmental protection, focusing on a noteworthy case study—the #Boranka campaign. Originating in Croatia, the #Boranka movement has gained significant traction, demonstrating the potential impact of online platforms in fostering environmental consciousness and driving collective action (Guo and Saxton 2014).

The #Boranka campaign revolves around reforestation efforts and aims to combat deforestation through community participation. By organizing volunteer events and leveraging the power of social media, the campaign has successfully rallied individuals to actively contribute to the restoration of forest ecosystems (Gulliver et al. 2020). This case study presents an opportunity to delve into the various ways computer communications have played a pivotal role in shaping environmental awareness and engagement within the context of the #Boranka movement.

The objectives of this paper are twofold: first, to analyze the strategies employed by the #Boranka campaign in utilizing computer communications to raise awareness about environmental protection; and second, to assess the impact and effectiveness of these communication strategies in mobilizing individuals towards environmentally conscious behaviors and participation in reforestation activities.

To achieve these objectives, a multi-method approach will be employed. Qualitative analysis will be conducted on social media content, including reach, impressions, and number of online media publications related to the #Boranka campaign. Additionally, quantitative data will be gathered through interviews to gauge the level of awareness and engagement among participants influenced by the campaign's digital communications.

The findings of this study have implications for understanding the potential of computer communications in environmental advocacy and the broader context of utilizing online platforms for promoting sustainable behaviors.

By examining the success of the #Boranka campaign, this research aims to provide insights and lessons for future environmental campaigns seeking to leverage computer communications to maximize their impact.

In the following sections, we will delve into the theoretical framework underpinning this study, review relevant literature on the intersection of computer communications and environmental protection (Yang et al. 2018; Wang et al. 2022), and present the methodology employed for data collection and analysis. Subsequently, the results and their implications will be discussed, followed by concluding remarks and suggestions for further research.

The #Boranka campaign aimed to address the challenge of engaging the wider public in active participation in reforestation efforts during the age of likes and shares. The strategic insight was that people are more likely to engage in nonprofit actions when they feel a tangible impact and have a sense of meaningful contribution. To leverage this insight, the campaign introduced a unique tool called "Boralice" – crayons made from ashes collected from fire sites. The Boralice provided people with a tangible and motivational tool to contribute to reforestation.

2. MATERIALS AND METHODS

The #Boranka campaign, observed from 2018 to 2021, aimed to raise awareness about environmental protection and promote reforestation. The study employed a mixed-methods approach to evaluate the campaign's strategies, messages, and effects on the public. Key participants in the study included the campaign director, the marketing agency director, two volunteers, and two sponsors.

Data collection for the study encompassed various sources, including campaign reports, official records, and interviews with the participants. The collected data focused on several important metrics, such as the number of volunteers, amount of donations, and the quantity of trees planted. Data validation methods were applied to ensure data accuracy and reliability.

The study involved analyzing the collected data using statistical and analytical techniques. Specific variables, such as the number of volunteers, amount of donations, and trees planted, were examined to derive meaningful insights. Data processing, organization, and presentation were performed to facilitate analysis, and appropriate software or tools were utilized, when applicable.

Ethical considerations were taken into account throughout the study. Necessary permissions and approvals were obtained to conduct interviews and gather data, ensuring compliance with ethical standards.

Results were reported through the use of tables, graphs, or charts, allowing for the clear presentation of findings. The interpretations and discussions of the results were integrated into the Results and Discussion section of the research article.

It is important to acknowledge potential limitations of the study. These may include the reliance on self-reported data, the limited sample size, and the specificity of the #Boranka campaign, which may limit generalizability to other environmental campaigns.

3. RESULTS AND DISCUSSION

The campaign's implementation involved distributing Boralice crayons to citizens and inviting them to draw trees on the boranka.hr website, symbolically donate, and virtually plant their drawings in a virtual forest. Additionally, real trees were planted by volunteers in the burned areas of Dalmatia, based on the number of virtual trees planted.

The #Boranka campaign achieved exceptional results, surpassing all set objectives:

The campaign successfully raised over 3,000,000 HRK in donations, exceeding the goal by more than double. This demonstrated the strong engagement and support from the community.

The campaign mobilized 7,500 volunteers, surpassing the target by 2.5 times. The enthusiastic response from volunteers indicated their genuine commitment to actively participate in reforestation efforts.

A total of 100,000 seedlings, saplings, and seeds were planted, exceeding the initial target. The physical act of planting trees reinforced the campaign's message of tangible impact and active involvement.

The success of the #Boranka campaign can be attributed to several factors. Firstly, the campaign's unique approach of distributing Boralice crayons, which resonated with individuals on an emotional level, proved highly effective in motivating active participation. Secondly, the virtual forest on the boranka.hr website provided a digital platform for engagement, allowing individuals to contribute and witness the growth of their virtual trees.

Furthermore, the campaign achieved significant media coverage, both through earned and unpaid PR, appearing in numerous educational and informational programs. This extensive coverage enhanced the reach and visibility of the campaign, further raising awareness about the importance of forest conservation and the consequences of wildfires.

The #Boranka campaign stands out within its category as it successfully generated real change in society by inspiring individuals and organizations to take meaningful action. It surpassed expectations in terms of public engagement, donations, volunteer participation, media exposure, and educational impact. The campaign's ability to motivate and mobilize the wider public sets it apart and makes it deserving of recognition for its marketing effectiveness.

Through an interview with the organizers of the campaign (in which the director of the campaign, the director of the marketing agency, 2 volunteers and two sponsors participated), the study evaluates the strategies, messages and effects of the campaign on the public. There were five questions, and the participants had a similar view of the results. Below are the questions and summaries of the answers.

Question 1: How did computer communications contribute to raising awareness about environmental protection through the #Boranka campaign?

Answer 1: Computer communications played a crucial role in raising awareness about environmental protection through the #Boranka campaign. The campaign utilized social media, websites, and digital tools to reach a wide audience and educate people about the importance of reforestation while encouraging participation in tree planting activities.

Question 2: What were the key strategies in utilizing computer communications to promote the #Boranka campaign?

Answer 2: Key strategies used in the #Boranka campaign included creatively leveraging social media platforms such as Facebook, LinkedIn and Instagram to share campaign-related information, images, and videos. Additionally, websites and mobile applications were used to facilitate donations and participation in tree planting activities.

Question 3: How did computer communications increase public engagement in the #Boranka campaign?

Answer 3: Computer communications enabled the general public to engage with the #Boranka campaign in various ways. Through social media, people could share campaign information with their friends and track the progress of tree planting efforts. Websites and mobile applications provided an easy means for donations and signing up for volunteer activities.

Question 4: What impact did computer communications have on the results of the #Boranka campaign?

Answer 4: Thanks to computer communications, the #Boranka campaign achieved exceptional results. By raising awareness about environmental protection and mobilizing people to participate in tree planting, the campaign gained significant popularity and captured the attention of a wide audience. As a result, numerous fire-damaged areas in Dalmatia were restored, and awareness about the importance of preserving natural resources was heightened.

Question 5: What are the future possibilities for utilizing computer communications in raising awareness about environmental protection?

Answer 5: The future of utilizing computer communications in raising awareness about environmental protection looks promising. Technological advancements provide new opportunities, such as using virtual reality and augmented reality to demonstrate the impacts of environmental destruction to individuals. Furthermore, the development of artificial intelligence can aid in targeting relevant messages and tailoring communication to individuals.

Based on the data, here is a simple data analysis (**Table 1**):

Table 1 Volunteer Engagement, Tree Planting, and Donations/Sponsorships Performance Summary

Year	Volunteer Engagement		Tree Planting		Donations and Sponsorships	
	Goal	Actual	Goal	Actual	Goal	Actual
2018	1.000	2.500	10.000	25.000	350.000 HRK	600.000 HRK
2019	2.500	3.700	25.000	40.000	600.000 HRK	650.000 HRK
2020	700	800	10.000	20.000	350.000 HRK	400.000 HRK
2021	1.000	1.200	10.000	20.000	350.000 HRK	520.000 HRK

1. Volunteer Engagement:

- The number of volunteers involved in the #Boranka campaign showed variations over the years: In 2018, the goal was to engage 1,000 volunteers, and the actual number surpassed expectations with over 2,500 volunteers. In 2019, the target was set at 2,500 volunteers, and the campaign exceeded it with over 3,700 volunteers. In 2020, the goal was to involve 700 volunteers, and despite the Corona pandemics, the campaign succeeded in engaging more 800 volunteers. In 2021, the target was set at 1,000 volunteers, and the campaign achieved over 1,200 volunteers.

2. Tree Planting:

- The number of trees planted in burned areas of Dalmatia varied across the years: In 2018, the campaign aimed to plant 10,000 trees, and the actual number surpassed the goal, with 25,000 trees planted. In 2019, the target increased to 25,000 trees, and the campaign exceeded expectations, planting 40,000 trees. In 2020, the goal was to plant 10,000 trees, and the campaign planted 20,000 trees, surpassing the target.

In 2021, the target was set at 10,000 trees, and the campaign planted another 20,000 trees.

3. Donations and Sponsorships:

- the campaign aimed to raise funds through donations and sponsorships:

In 2018, the goal was to collect 350,000 HRK, and the campaign surpassed it by raising over 600,000 HRK.

In 2019, the target increased to 600,000 HRK, and the campaign exceeded expectations, raising over 650,000 HRK.

In 2020, the goal was set at 350,000 HRK, and the campaign collected over 400,000 HRK.

In 2021, the target remained at 350,000 HRK, and the campaign raised over 520,000 HRK.

4. Media Coverage:

- the #Boranka campaign received significant media coverage, including appearances in educational and informational programs, contributing to raising awareness about forest conservation and the consequences of wildfires.

Table 2 Media Coverage

Year	Media publications	Reach on social media	Impressions in online media
2018	300	700.000	2.000.000
2019	300	700.000	2.500.000
2020	200	300.000	1.000.000
2021	300	850.000	2.000.000

These results demonstrate the successful engagement of volunteers, surpassing donation goals, and the significant impact of the campaign in terms of tree planting and media coverage.

4. CONCLUSION

The findings from the analysis of the #Boranka campaign data highlight its exceptional success in raising awareness about environmental protection and mobilizing public participation. The campaign effectively utilized computer communications, including social media platforms and websites, to reach a wide audience and educate them about the importance of reforestation. The distribution of Boralice crayons and the virtual forest on the boranka.hr website provided unique and engaging ways for individuals to contribute and symbolically participate in the campaign.

The results demonstrate that the campaign surpassed set objectives in terms of volunteer engagement, tree planting, and fundraising. The significant number of volunteers involved, exceeding expectations in each year, showcases the community's genuine commitment and active involvement in reforestation efforts. The planting of a large number of trees in the burned areas of Dalmatia, surpassing the goals, highlights the tangible impact of the campaign and reinforces the message of environmental restoration.

The successful fundraising efforts, surpassing donation targets in each year, demonstrate the community's support and financial contribution to the campaign's mission. Additionally, the extensive media coverage, including appearances in educational and informational programs, played a crucial role in raising awareness about the importance of forest conservation and wildfire consequences.

The #Boranka campaign's achievements and effectiveness in utilizing computer communications underscore the potential for such strategies in raising awareness and mobilizing action for environmental protection. The campaign's ability to inspire individuals and organizations to actively participate and contribute demonstrates its significance in driving real change in society.

These findings contribute to the understanding of the role of computer communications in environmental campaigns and provide insights for future initiatives. The success of the #Boranka campaign serves as a notable example of the power of engaging storytelling, creative communication strategies, and community involvement to address environmental challenges and promote sustainable practices.

Overall, the #Boranka campaign exemplifies the positive impact of computer communications in raising awareness, engaging the public, and promoting environmental protection. The campaign's achievements not only contribute to the restoration of burned areas in Dalmatia but also serve as an inspiration for future environmental campaigns seeking to leverage technology and community engagement for a sustainable future.

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