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## The Influence of Motion Graphics on User Experience in Interactive Media

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### ABSTRACT

*The influence of Motion graphics on the user experience within interactive media, nevertheless, is less clear. User engagement, information retention and satisfaction in interactive media. An evaluation of the impact of motion graphics The study was conducted with an experimental technique having two category users one is containing motion graphics and second without them, we collect data from questionnaire n behavioural analysis. The results of this research showed that the average time span for interaction (interaction time) using motion graphics in Interactive Media was 18.86 minutes better than those who did not use it where they get a value of 12.71 minutes The motion graphics group retained information at a rate of 86.43%, compared to the other cluster without any frames, which was just 65.14%. The user satisfaction was also better, with an average score of 8.71 in the group with motion graphics than it is for 6.57 without animation. Motion Graphics is a key factor which together increases user engagement, information retention and satisfaction.*

### KEYWORDS

Motion graphics, user experience, interactive media, information retention

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## INTRODUCTION

Recently, digital technology has been impacting suggestion on media design and interaction especially in interactive media such as mobile apps, websites or games. Motion Graphics Maybe the most popular visual component to become famous was motion graphics. Motion graphics deliver just that and are not mere ornaments, but workable instruments to enhance the user experience (Hamidah et al., 2023). But, despite the widespread use of motion graphics in mobile interfaces, a rigorous understanding and analysis of how they affect aspects of user experience are scarce and frequently overlooked even during design development (Chongpornchai et al., 2021).

Today, many users expect interactive experiences to "just work" and be easy to understand. Motion graphics are frequently employed to help meet these ambitions,

with the intention of increasing usability by adding some flair (Perdani, 2024). Despite this, the poorly managed motion graphics can cause some concerns expressed as an increased level of visual distraction and cognitive load that disrupts navigation diminishing the quality of the interactions (KURTEŞ & MERCİN, 2022). This raises a question of how to make sure that motion graphics enhance the positivity of user experience, rather than distracting from it (Nuryaningsih et al., 2020).

Several studies have revealed that the use of motion graphics can draw more attention or engagement from users, as those elements guide visual flow and deliver information effectively. But this is not the only one evidence: there are also some elements that make a distraction if they have pushed forward or undependable such as motion graphics which act against user expectations of navigation and decreases their overall (Perdani, 2024). Moreover, some research suggests that animated graphics may influence respondents' brand perceptions; for the best or worst depending on their cohesiveness with a web layout (Hapsari et al., 2019).

Designers and developers face a tougher set of working conditions when it comes to incorporating motion graphics appropriately in interactive media due to the large number of factors that must be taken into account. In addition, the lack of guidance on best practices for motion graphics and user experience has only made it worse (KURTEŞ & MERCİN, 2022). Motion graphics, without the slightest concept behind result into a negative aspect that can make user interaction less effective and worse-off rather than being helpful (Hamidah et al., 2023). As such, future work is required in this area to provide a means of better understanding the effectiveness and impact of motion graphics as it relates to improving user-frustrating interactivity (Tsai et al., 2020).

In this research we try to have deep study of the influencing factor between motion graphics and user experience with interactive Media. The main goal of this study is to understand and analyze the important factors that affect experiencing motion graphics for an interactive user (Perdani, 2024). This research process aims to give further directions for designers and developers, in terms of how motion graphics can be best utilized within the interactive media with emphasis on the ease of navigation, emotional attraction & aesthetic impression (KURTEŞ & MERCİN, 2022).

Moreover, the study has a goal also to present best practices which can be useful for design process of more engaging use of motion graphics (Martinez et al., 2023). Understanding what influence motion graphics have on user experience would be more relevant and innovative design (Salam et al., 2022). Things to be done extend the given research gap the research's objective is to explore possible dangers of inappropriate usage of motion graphics and provide waysand means how those risks could have been handled (Ceyda, 2022). Accordingly, it is anticipated that this research will provide valuable insights into how interactive media designs could be improved so as to enhance the user experience and create greater usability (Zhang, 2024).

## **RESEARCH METHOD**

In order to examine the impact of motion graphics on user experience, we design an filed experiment which makes use a quantitative research methodology. By doing this, the research could aim to compare two interactive media versions: one that included motiongraphic elements and another with no movement. Participants will be randomly assigned to one or the other set and will engage with both forms of media. Surveys are used to measure engagement, recall and satisfaction levels among the users and quantitative user behavior data analytics is performed. The results from both groups will be compared to

examine the motiongraphic effect. Significance of differences will be measured using statistical analysis.

## RESULT AND DISCUSSION

When evaluating the effect of motion graphics on user experience of interactive media, we were not able to confirm whether any that effectively generalizes this upcoming era and helps designers better plan their designs will emerge in the future. In this study, the independent variable is the introduction of Motiongraphic elements in interactive media. This will be compared between versions that have motiongraphics of and those that do not when demonstrating whole media. Dependent variables include user engagement, which is measured by interaction level and much time time the media is left on screen; information retention, which is evaluated according to how well users can remember lots of information; and user satisfaction, which will be a questionnaire about both how you felt with your contact with this media and what you thought about all in all after coming into contact with said publications. Control variables include what kind of content the materials are and how complicated these are made. We need to be careful so that any differences in the results may not be caused by something outside or apart from motion graphics. The scope of the User Engagement, Information Retention and User Satisfaction variables are shown in Table 1.

Table 1. Range of user engagement, information retention and User's satisfaction variables

ID Respondents	Groups	User Engagement (time interaction, Minutes)	Information Retention (%)	Users Satisfaction (Score 1-10)
1	Motion graphics	15	80	8
2	Without Motion graphics	10	60	6
3	Motion graphics	18	85	9
4	Without Motion graphics	12	65	7
5	Motion graphics	20	90	8
6	Without Motion graphics	14	70	6
7	Motion graphics	22	88	9
8	Without Motion graphics	11	55	5
9	Motion graphics	17	82	8
10	Without Motion graphics	13	68	7
11	Motion graphics	19	87	9
12	Without Motion graphics	15	72	6
13	Motion graphics	21	91	9
14	Without Motion graphics	16	66	7
15	Motion graphics	16	84	8
16	Without Motion graphics	14	61	6
17	Motion graphics	23	89	9
18	Without Motion graphics	12	62	6
19	Motion graphics	18	86	8
20	Without Motion graphics	13	64	7

According to the study of data resulting showed that among other user groups, those who interacted with an interactive media are significantly different from users; and requires motion graphics. In the user engagement feature, for group no motion graphics 12.71 minutes and another average interaction time are 18.86 in minutes used motion graphics. This implies that motion graphics can be used to make media more useful for user interaction.

With respect to information retention, the motion graphics group retained 86.43% of total content on average in comparison with only a 65.14% for subjects without motion graphics. This suggests that motion graphics also enhance the recall of educational information by users.

And lastly, user satisfaction, with the motion-graphics group scoring an average of 8.71 and without a score only reaching to 6.57 Motion graphics enhance user satisfaction level in interactive media by these findings. In conclusion, the data indicates that motion graphics can help in making interactive media more engaging and effective for higher user engagement (impressions), retention of information and satisfaction.

## CONCLUSION

This study reveals that motion graphics significantly improve user experience of interactive media. Motion Graphics: Engages the User, Longer average interaction time, More information retention compared to media w/out motion graphics. Similarly, the motion graphics helped to raise user satisfaction overall. These outcomes emphasize that designers have to consider adding motion graphics for their designing media before a more convincing effect is gained.

Interactive media developers should further extend the tools involving motion graphics to enhance user experience. Further research is to be needed, as well as case studies aimed at identifying the most effective types of news motion graphics in different media contexts.

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