

STUDY ON THE CREATION OF SOME DIGITAL PLATFORMS

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Abstract: *The transformative events of the year 2020 brought into sharp focus the notion that the seemingly boundless technological resources at our disposal have yet to be fully harnessed. Amid these developments, the act of building a website emerged as a tangible and hands-on approach to both practice programming skills and acquire essential new technological proficiencies. At its core, an online platform can be succinctly defined as "a website designed with the sole purpose of enabling interaction among its users." These platforms are often rooted in the idea of community, encompassing the myriad facets of social interaction, collaboration, and engagement that this concept entails. In practical terms, the development of an online platform follows a trajectory like that of any other web project. It necessitates meticulous development, a designated IP address, and, when applicable, a domain name linked to that IP to ensure accessibility. This article serves as a conduit for a comprehensive study that delves into the art of platform creation while systematically identifying the challenges that invariably emerge along this creative journey. The primary objective of this research endeavor is to illuminate pathways for enhancing the quality of platforms, particularly in response to the ever-evolving landscape of market dynamics and user requirements. By dissecting the intricacies of platform development, this study seeks to contribute valuable insights that can empower creators to navigate the evolving digital terrain with competence and innovation.*

Keywords: *digital platform, programming, development, web project, technology.*

INTRODUCTION

This academic perspective delves into the remarkable evolution of platforms within the digital landscape, shedding light on their pivotal role in reshaping our societal and economic dynamics. By providing a comprehensive framework for defining and understanding platforms, we aim to explore their multifaceted impact on various facets of contemporary life. From their inception as facilitators of online marketplaces to their present-day influence on social networks, data-sharing ecosystems, and more, platforms continue to wield significant influence in our interconnected world [1]. In this exploration, we will dissect the underlying mechanisms and implications of these digital infrastructures, offering insights into their contributions to the ever-evolving digital age.

Utilizing the Google Trends search engine as a point of reference, the author conducted an analysis of the search term "digital platform" to track its frequency of searches across multiple countries. This examination covered the past five years, encompassing the period up to the present day.

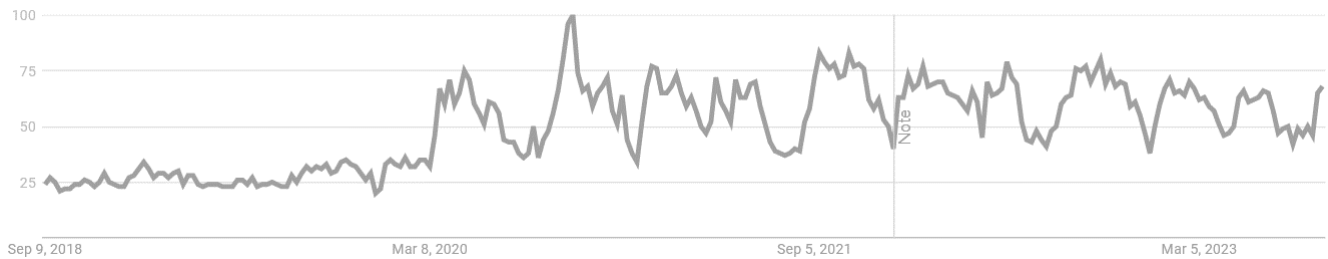


Figure 1: The evolution of interest in digital platforms from 2018 to the present. Source: *Adapted from <https://trends.google.com/trends/>, accessed August 2023*

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The development of platforms can be traced back to the early days of the Internet, but it gained significant momentum with the rise of web-based technologies and the increasing connectivity of people worldwide. Platforms have since become integral to various aspects of our lives, from social networking and e-commerce to transportation and accommodation services [7].

One of the key drivers behind the creation of platforms is the power of network effects. Network effects occur when the value of a platform increases as more users join and contribute to the ecosystem [2]. As platforms attract more users, they become more attractive to other participants, leading to a positive feedback loop of growth and engagement.

The success of early platform pioneers such as Amazon, eBay, and Google demonstrated the transformative potential of these digital ecosystems. These companies leveraged the power of the Internet to connect buyers and sellers, create vast marketplaces, and provide access to an unprecedented amount of information [4]. Their success paved the way for the emergence of numerous other platforms across various industries.

Today, we see platforms in diverse sectors, ranging from social media platforms like Facebook, Instagram, and Twitter, to ride-sharing platforms like Uber and Lyft, and accommodation platforms like Airbnb [5]. These platforms have disrupted traditional industries, challenging established business models and empowering individuals and small businesses to participate in the digital economy [3].

The creation of platforms has also sparked new opportunities for innovation and entrepreneurship. Developers and businesses can leverage platform infrastructure and APIs (Application Programming Interfaces) to build and launch their own services and applications, often referred to as “*platform ecosystems*” [6]. These ecosystems thrive on the collaboration and contributions of third-party developers, who create value-added products and services that further enhance the platform's offering.

Methodology

To carry out the proposed study, the author utilized a range of research methods, starting with the selection of the research topic and the rationale behind this choice. This process was followed by an in-depth exploration of the subject matter. These selected methods involved delving into the issue through materials provided by reputable institutions and a comprehensive review of specialized papers related to the chosen topic, ultimately resulting in the extraction of valuable insights.

This article presents the outcomes of a study designed to identify the primary challenges associated with the creation of some digital platforms. During this analysis, a survey approach was employed to gain insights into the perspectives of the local community regarding the behavior of web-based platforms' creators. To collect data, a semi-structured questionnaire was crafted, consisting of a series of 13 closed-ended questions and open-ended inquiries. Google Forms served as the platform for distributing the survey, which was carried out in Romania, primarily through virtual channels such as Facebook, WhatsApp, and email, during the months of July and August. The survey sample comprised 45 individuals aged between 18 and 60 years. Afterward, data analysis was conducted using descriptive statistics software.

Results and discussions

The demographic composition of the respondents revealed that 60% of them were male, with all participants falling within the age range of 20 to 60 years. The average age among the respondents was 33 years. Additionally, 53.3% of the participants hailed from rural areas.

In terms of educational background, the majority of respondents, accounting for 62.2%, had completed only secondary education, which is equivalent to high school. Meanwhile, 31.1% of the participants had pursued higher education. A smaller portion, constituting 3%, had received only elementary education.

The initial question aimed to ascertain whether the respondents had engaged in recent platform-creation endeavors. Out of the total participants, 71.1% of respondents affirmed that they had indeed been involved in platform creation activities, while 13 indicated that they had not undertaken any such projects in the recent past.

1. Have you worked in the last months on creating a platform?

45 answers

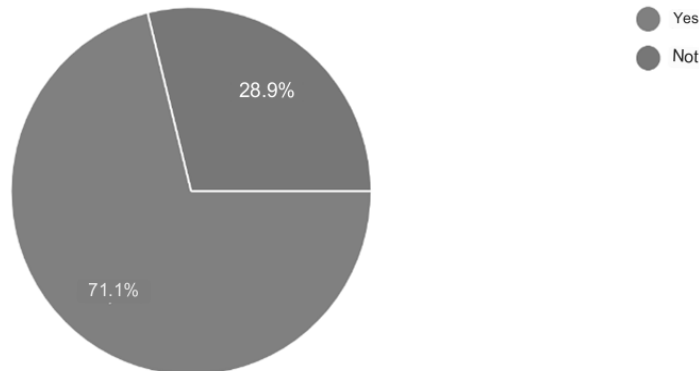


Figure 2: Frequency of respondents who have created digital platforms recently

The second question inquired about the most recent platform that respondents had been involved in creating. The responses were categorized into three main types of platforms, each receiving 11 answers (24.2%): e-testing platforms, information platforms, and social media platforms. Additionally, 13.3% of respondents reported their involvement in the creation of e-commerce platforms, 6.7% had contributed to streaming platforms, 4.4% had participated in developing e-learning platforms, and 1 respondent had not been engaged in recent platform creation endeavors, as illustrated in Figure 3.

2. What is the last platform created?

45 answers

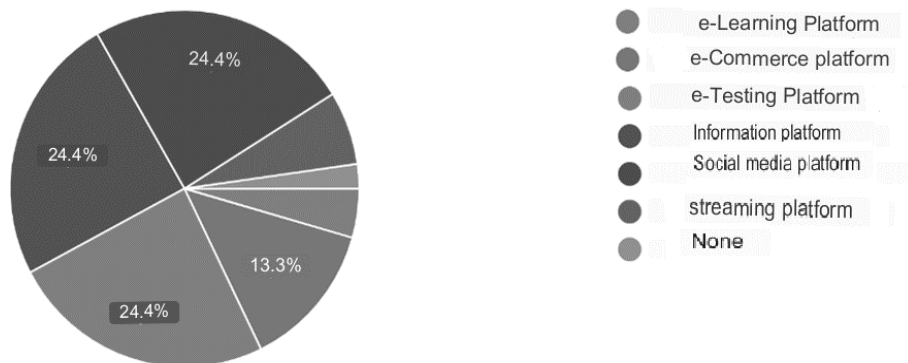


Figure 3: Identification of the last digital platform created

When it came to obtaining the initial specifications for their respective platforms, the majority of respondents, specifically 53.4%, reported that it took them between 1 to 3 days to receive these specifications. Nine respondents mentioned that they received them within a single day, while 17.8% of respondents indicated that the process took more than 1 week.

6.7% of participants reported a significantly quicker turnaround, taking less than 8 hours, and one respondent stated that it took more than 120 minutes.

3. How long did it take to communicate the initial desired specifications?

45 answers

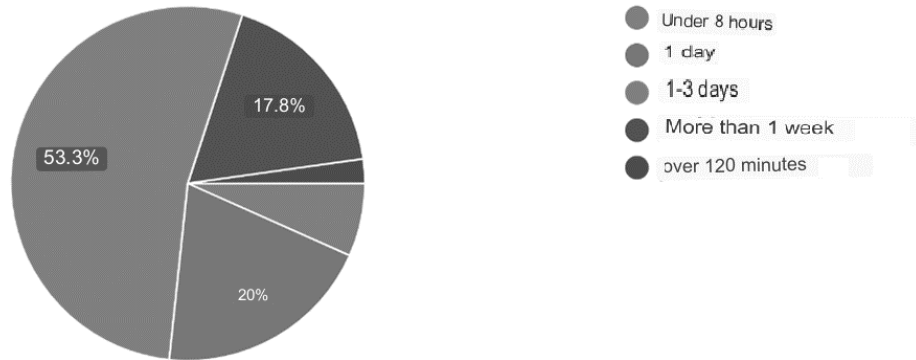


Figure 4: Identifying the time required to receive the initial specifications for the platform

In comprehending the initial specifications for their platforms, the responses varied, as illustrated in Figure 5. Sixteen respondents (35.6%) mentioned that it took them between 1 to 3 days to fully understand the specifications. 28.9% of respondents reported needing a full week for this task, while seven respondents stated that they achieved clarity within a single day.

In contrast, 13.3% of participants mentioned that it took them more than 1 week to grasp the specifications. 4.4% of respondents indicated that they accomplished this task in under 8 hours, and one respondent stated that it took more than 120 minutes. This suggests that some platform projects may involve complex or detailed specifications that require additional time and effort to understand thoroughly.

4. How long did it take you to understand all the specifications initially received and to realize if there are any incomplete or wrong specifications?

45 answers

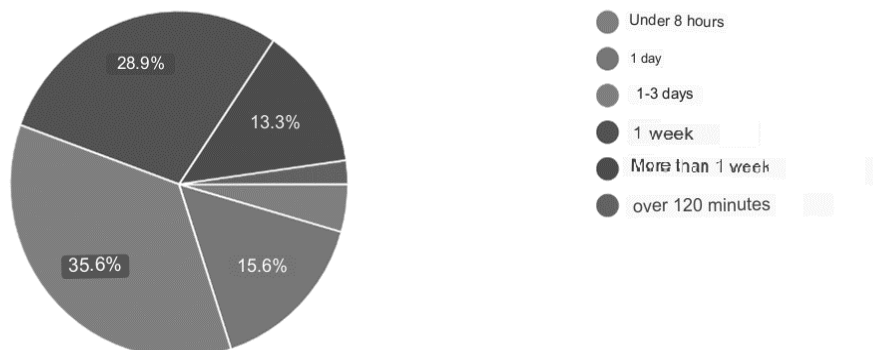


Figure 5: Identifying the time required to understand the initial specifications

Concerning the establishment of specifications, respondents predominantly favored two timeframes: 30-60 days and 60-120 days, both garnering 28.9% of responses each. These were followed by the selection of a 15-30 days period by 20% of respondents, alongside two additional time intervals with 11.1% of responses each: less than 15 days and exceeding 120 days. The collective data indicates an average timeframe of 59 days for comprehending and setting specifications.

5. What was the total time to establish all specifications?

45 answers

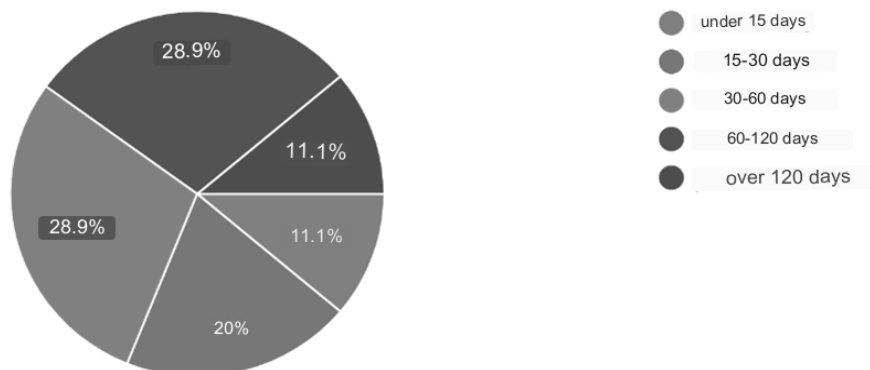


Figure 6: Identifying the total time to understand the specifications

To better understand the opinions regarding the quality of the information they received, respondents were prompted to assign a score ranging from 1 to 5, with 1 indicating “very dissatisfied” and 5 signifying “very satisfied”. In relation to the quality of the information received, a majority of respondents expressed satisfaction, with 60% of them giving favorable scores.

Additionally, 26.7% of respondents reported being highly satisfied, while 13.3% remained neutral in their assessments. The collective data yielded an average score of 4.13, all the results being depicted in Figure 7.

6. How satisfied are you, in general, with the quality of information you receive when you are asked to work on creating a platform?

45 answers

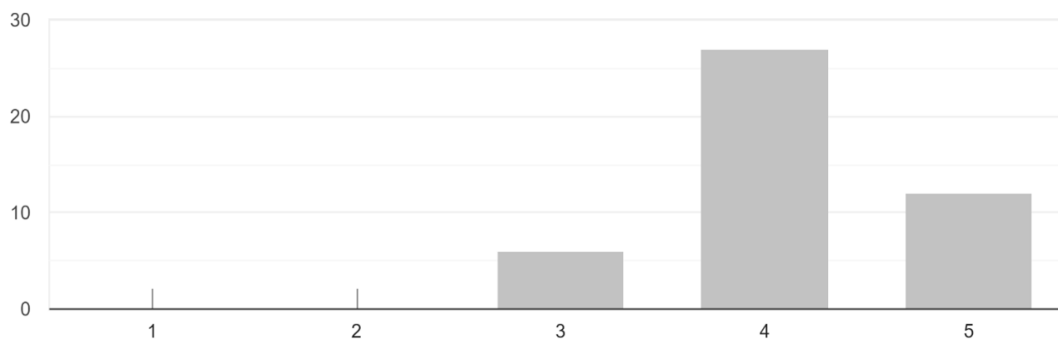


Figure 7: Identifying the opinion about the quality of the information received

In terms of the time it took for respondents to receive the necessary information to initiate platform development, their assessment varied. Nineteen respondents expressed dissatisfaction, while 13 remained neutral in their evaluation. Six participants reported satisfaction, and four were highly satisfied, but three respondents were very dissatisfied, resulting in an average score of 2.75.

Regarding the relevance of the provided information, 22 respondents expressed neutrality, while 9 respondents were dissatisfied. On the positive side, 6 participants were satisfied, and 5 were highly satisfied, although 3 respondents were very dissatisfied. The average score for relevance was 3.02.

When it came to the structure and ease of understanding of the information, 17 respondents were neutral, while 12 found it satisfactory. Nine respondents were dissatisfied, four were very satisfied, and three were very dissatisfied. The average rating for the structure and clarity of the information was 3.11.

These findings demonstrate a range of perceptions among respondents regarding the timing, relevance, and structure of the information they received for platform development, with some expressing satisfaction and others indicating dissatisfaction or neutrality.

7. How satisfied were you with:

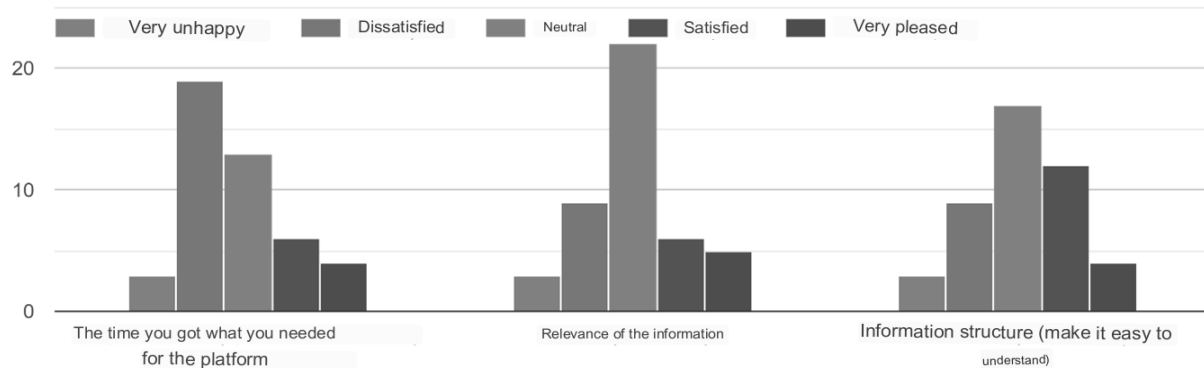


Figure 8: The degree of satisfaction regarding the information

In the subsequent section of the questionnaire, respondents were asked to express their level of agreement with a series of statements, using a scale ranging from 1 to 5, where 1 represented total disagreement, 2 signified partial disagreement, 3 indicated neutrality, 4 denoted partial agreement, and 5 reflected total agreement.

The first statement pertained to the loading speed of large datasets on different platforms. In response to this statement, 17 respondents expressed neutrality, while 16 respondents leaned towards partial disagreement. Additionally, 8 participants partially agreed with the statement, 3 strongly agreed, and 1 strongly disagreed. The average rating for this statement was 2.91.

The second statement revolved around the impact of unsupported browsers on platform performance. Regarding this statement, 22 respondents were neutral in their stance, 11 participants partially agreed, 9 leaned towards partial disagreement, 2 strongly agreed, and 1 strongly disagreed. The average rating for this statement was 3.08.

These responses indicate a range of opinions among the respondents regarding the challenges associated with large datasets and unsupported browsers on platform performance, with varying degrees of agreement and disagreement.

8. To what extent do you agree with the following statements:

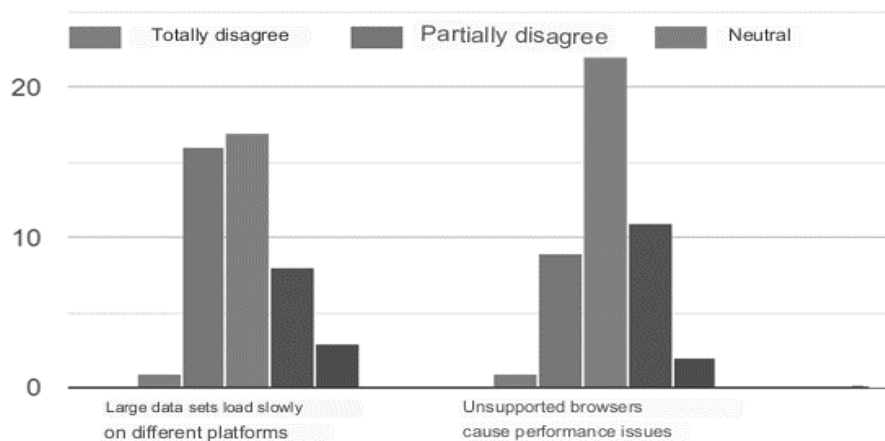


Figure 9: Identifying the problems

The third statement addressed the impact of geographical distances from the data source on performance. In response to this statement, 21 respondents expressed neutrality, while 12 respondents leaned towards partial agreement. Additionally, 7 participants partially disagreed with the statement, 4 strongly agreed, and 1 chose total disagreement. The average rating for this statement was 3.24.

The fourth statement focused on the use of non-delegable functions and inappropriate data row limits for non-delegable queries, which can increase the effort required for data transfer. In response to this statement, 21 respondents were neutral,

while 13 participants partially agreed. Moreover, 4 respondents leaned towards partial disagreement, and an equal number of 4 strongly disagreed with the statement. Three respondents strongly agreed. The average rating for this statement was 3.38.

These responses reveal diverse perspectives among the respondents regarding the impact of geographical distances and the use of non-delegable functions on platform performance, with varying degrees of agreement and disagreement.

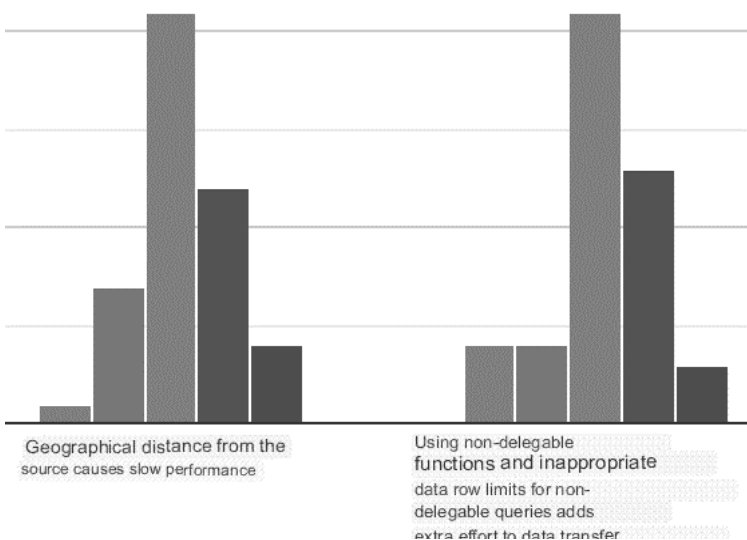


Figure 10: Platform performance

In response to the question about additional difficulties or challenges faced while working on platform development, respondents provided insights into their experiences. One respondent highlighted the issue of inadequate documentation and missing infrastructure. This challenge can significantly impede the development process, as clear and comprehensive documentation is essential for understanding the platform's architecture, functionalities, and requirements. When infrastructure is missing or incomplete, it can lead to delays, misunderstandings, and inefficiencies in the development process. Addressing these gaps is crucial for a smoother and more successful platform development project.

Another respondent pointed out the problem of inconsistency between the notions held by different teams involved in the project. This issue underscores the importance of effective communication and collaboration among cross-functional teams working on platform development. Misalignment in understanding key concepts or goals can lead to confusion, and conflicts, and ultimately hinder the project's progress. To mitigate this challenge, fostering clear communication channels and ensuring that all teams share a common understanding of the project's objectives is vital.

These responses underscore the multifaceted nature of challenges encountered during platform development. They emphasize the significance of well-documented processes, infrastructure support, and seamless collaboration among teams to overcome these hurdles and achieve successful platform creation. Addressing these issues proactively can contribute to more efficient and effective platform development projects.

CONCLUSIONS

In conclusion, this study delves into the intricacies of digital platform creation, gathering insights from a diverse group of respondents. The research engaged individuals of varying ages and educational backgrounds, offering a comprehensive perspective on the challenges involved in platform development. Notably, a significant portion of respondents possessed recent experience in platform creation, highlighting the study's relevance and timeliness.

The study also revealed varying timeframes for receiving and comprehending initial platform specifications, illustrating the diversity of platform projects. Respondents generally expressed satisfaction with the quality of the information they received, emphasizing the significance of clear and valuable guidance during the platform development process.

Technical challenges emerged as a prominent theme, encompassing issues such as the impact of large datasets, unsupported browsers, geographical distances, and non-delegable functions. These findings underscore the multifaceted nature of platform development.

Additionally, respondents identified challenges related to documentation and team alignment. Inadequate documentation and inconsistencies among teams were mentioned, emphasizing the pivotal role of effective communication, documentation, and team cohesion in overcoming these obstacles.

Overall, this study provides a comprehensive overview of the complexities, challenges, and considerations inherent in digital platform creation. It underscores the importance of adopting a holistic approach that combines technical expertise, user-centric design, sound business strategies, legal compliance, and ongoing improvement through user feedback. In a constantly evolving digital landscape, understanding, and addressing these challenges will be essential for platform creators striving to make a meaningful impact.

To strengthen the credibility and reliability of this study, the author may opt to amplify the research's trustworthiness by expanding the respondent pool. This expansion should encompass a broader spectrum of age groups and professional backgrounds. Such an inclusive approach would not only enhance the overall reliability of the research but also facilitate a more thorough exploration of the subject matter. By incorporating a diverse range of perspectives, the study could potentially uncover deeper insights into the intricate dynamics of platform usage and its broader implications. This expansion would underscore the commitment to rigor and comprehensiveness in investigating the multifaceted world of digital platforms.

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