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## **USING A/B TESTING IN A SOFTWARE PRODUCT TO INCREASE THE NUMBER OF INTERNAL PURCHASES**

Today, mobile technology continues to occupy a key place in the life of an average citizen of any country in the world, because unlike personal computers, laptops, or other specialized solutions, a smartphone is more acceptable for an average person. Because a smartphone is cheaper than a personal computer or a laptop, and the operating system of a smartphone is simpler and more understandable for the user. So it's no surprise that the number of mobile users is increasing every year, and this trend is accelerating [1].

Statistical investigations regarding which devices and operating systems (OS) are used by visitors of the Internet, show, that the majority of users recently browse mobile versions of websites, using a smartphone or tablet based on the Android OS or iOS OS [1]. In the content consumption market, mobile OS continue to supplant personal computers.

As shown in a recent report from the search engine Tapive, which looked at the statistics of the applications for the Android operating system, which are placed in the US segments of the Google Play application store. Applications related to education are the third place of the most represented software products (3947 different applications on this topic are presented). [2]. Which confirms that this direction is in demand. In addition, statistics have shown that users are also ready to pay for content within applications.

Therefore, an important question arises as to how the tools available to the developer can be used to research the user in terms of what elements of the application he is interested in, and how design

changes in the subscription screen can lead to an increase or decrease in the number of subscriptions or internal purchases.

So, within the scope of the research, a mobile application was used, the functionality of which was aimed at teaching children of primary school age. The mobile application allows to conduct learning process in a playful way, to give children the opportunity to receive information about the surrounding world in such a way that it does not seem like boring lessons. In a way interesting to the child. The application offers the user a tasks in various subjects: mathematics, the Ukrainian language, the environment, etc. In addition, the functionality includes the ability to control the learning process by the teacher through a special web interface, or by parents through the appropriate chat bots, in order to have a complete view of the child learning progress.

However, the number of tasks in the application is limited, a child cannot complete more than three tasks per day, unless he has a paid subscription. There is a "Premium" button on the main menu of the application, which opens a screen with a description of the features of the paid version, but users did not pay much attention to it, according to internal analytics, this screen was practically not opened. After this screen began to be shown when the user tried to complete additional tasks, if the free daily limit was spent, the number of openings of this screen increased significantly, but users subscribed less often than the project owners needed.

In order to investigate the effect of the appearance of the Subscription screen on the number of purchases, it was decided to conduct an A/B test on Firebase [3]. As part of this, the initial version of the screen was used. The screen contained 2 subscription options with a short description: monthly and yearly. It also contained various stylized pictures from various games that the child should like. Along with this, another version of the screen was developed, which contained 3 subscription options with a more detailed description: for a month, for six months, for a year. In general, the second screen looked more informative and technological, and should appeal to parents. As part of A/B testing, when opening the Subscription screen, the first or second variant of the graphical interface was randomly

loaded. If the user made a purchase, this information was stored in the statistics for the first or second type of screens.

Research results showed that 30% of subscription purchases were made on the less informative type of screen that children liked. On the screen that contained more types of subscriptions, information and was intended for parents, 70% of purchases took place.

Thus, it can be concluded that even if the application is aimed at a children's audience, the purchases are made by parents who should get the maximum information about the service they want to pay for their child. In addition, the ability to get a subscription not only for a year and a month, but also for half a year allowed to get a service for those who thought that a month was too little, and a year (although in terms of months it was more profitable than buying months separately) was too much many. Therefore, together with additional information about the service, the user received more opportunities to choose a comfortable price and type of subscription.

From the conducted research, we can conclude that A/B testing is an important component of marketing research, especially in the specifics of mobile applications. Even if the app is intended for a different audience (kids), the screens offering subscription and payment should be informative enough and more suitable for the audience that will make the payment (parents).

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