

## **ONLINE COURSE METHODOLOGY OR HOW TO ACHIEVE 60% COMPLETION RATE?**

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In the context of current global and regional challenges (such as the rapid spread of modern technologies, the upsurge of migration processes, COVID-19 pandemic, military conflicts, etc.) the share of online education is increasing worldwide, making educators pay increasing attention to the creation of high-quality online courses. The main problem with online learning is the fact that online course authors fail to achieve high completion rates. According to the latest research, the average rate of those learners who successfully complete online courses and get certified is about 5–10 %. Thus, a key issue in online education is the strategy of deploying the content in such a way as to ensure sustained motivation and thereby high rates of completion of the learning process.

According to the experience of the Ukrainian platform of free massive open online courses “Prometheus”, in some courses it was possible for target audiences (for instance, teachers) to achieve the indicators of 10–20 % of certified listeners. However, more than 60% of students completed the online courses created by the Laboratory of Modern History of Ukraine and Innovative Educational Technologies of Zaporizhzhia National University. What is the secret of such numbers? How to create a massive open online course so that as many students as possible finish it? How to ensure the success of educational products in online format? These are the main questions that will be the subject of our consideration in this article.

The article characterizes the phenomenon of the online course “Critical Thinking for Educators” (MOOCs platform “Prometheus”, Ukraine) based on the analysis of statistical data. The research shows that to reach a high completion rate it is important: to develop a course taking into account the needs of the target audience and students’ internal motivation; use the designation of the target audience in the title and during advertising; analyze the widest possible statistical information to adjust the course methodology; take into account the course feedback – forum messages, etc. In general, the key success factor for an online course is the compliance of the course content with the needs of the target audience and the internal motivation of the learners. As our analysis demonstrates, the course completion rate is an objective indicator of a subjective phenomena, that is, the interest of the target audience.

## **МЕТОДОЛОГІЯ ОНЛАЙН-КУРСУ, АБО ЯК ДОСЯГТИ ПОКАЗНИКА ЗАВЕРШЕНОСТІ В 60 %?**

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**Ключові слова:** освіта, онлайн-курс, методологія онлайн-курсу, показник завершеності онлайн-курсу, фактор успішності онлайн-курсу.

В умовах сучасних глобальних та регіональних викликів (як-от стрімке поширення сучасних технологій, сплеск міграційних процесів, пандемія COVID-19, військові конфлікти тощо) у світі зростає частка онлайн-освіти, що змушує освітян приділяти дедалі більше уваги створенню високоякісних онлайн-курсів. Основною проблемою онлайн-освіти є та обставина, що авторам онлайн-курсів не вдається досягти високих показників завершеності навчання. Згідно з дослідженнями, середньостатистичний показник кількості тих, хто завершив онлайн-курс, становить 5–10 %. Відтак ключовою проблемою онлайн-освіти є стратегія розгортання змісту так, щоб забезпечити стійку мотивацію та високі показники завершення процесу навчання. Як свідчить досвід української платформи безоплатних масових відкритих онлайн-курсів “Prometheus”, для цільових аудиторій (наприклад, педагогів) вдалося досягти показників у 10–20 % сертифікованих слухачів. Проте створені Лабораторією модерної історії України та інноваційних освітніх технологій Запорізького національного університету онлайн-курси закінчили понад 60 % слухачів. У чому секрет таких показників? Як створити масовий відкритий онлайн-курс, щоб якнайбільше слухачів його завершили? Як забезпечити успіх освітнім продуктам в онлайн-форматі? Ось основні питання, які стануть предметом нашого розгляду в цій статті.

Схарактеризовано феномен онлайн-курсу «Критичне мислення для освітян» (платформа “Prometheus”, Україна) на підставі аналізу масиву статистичних даних. Результати експериментально-дослідної роботи дозволяють стверджувати, що для досягнення високих показників завершення важливо: розробляти курс з урахуванням потреб цільової аудиторії та внутрішньої мотивації слухачів; використовувати позначення цільової аудиторії в назві та рекламі; аналізувати якнайширшу статистичну інформацію для коригування методології курсу; враховувати зворотний зв'язок (повідомлення на форумі тощо). Загалом ключовим фактором успіху онлайн-курсу є відповідність його змісту потребам цільової аудиторії та забезпечення внутрішньої мотивації слухачів. Відсоток завершеності (completion rate), як свідчить наш аналіз, є об'єктивним показником суб'єктивних явищ, тобто інтересу цільової аудиторії.

**Problem statement.** In the context of the COVID-19 pandemic, the share of online education is increasing. Accordingly, educational institutions have to pay increasing attention to the creation of high-quality online courses [14]. In the conditions of the Russian-Ukrainian war of 2022–2023, the problem of distance learning in Ukraine has become very acute, since many educational institutions simply cannot work permanently and full-time: the buildings of hundreds of universities and schools have been destroyed or damaged; dozens of universities are

under occupation, so are some students; many teachers and students have unstable internet connection because of blackouts, etc. At present, the availability of a high-quality educational product on the Internet is an urgent need for modern education in Ukraine, because sometimes there is no alternative at all.

The main problem of online learning is the fact that online course creators fail to achieve high completion rates. Studies show that the average number of those who completed an online course is 5 % [19]. Hence, a key challenge for online education is the

strategy of building and deploying content in such a way as to ensure sustained motivation and thus completion of the learning process. As evidenced by the experience of the Ukrainian platform of free massive open online courses “Prometheus”, it was possible for target audiences (for example, educators) to reach the target of 10–20% of certified trainees. However, the online courses [17; 18] created by the Laboratory of Modern History of Ukraine and Innovative Educational Technologies (Zaporizhzhia National University, Ukraine) were completed by 60 % or more of participants. What is the secret of reaching such a rate? How to create a massive open online course so that as many students as possible complete it? How to ensure the success of online educational products? These are the main questions that will be the subject of consideration in this article.

**Analysis of research and publications.** It is generally accepted that Massive Open Online Courses (MOOCs) can provide free education at the university level on a huge scale. A concern often raised about MOOCs, as Katy Jordan rightly points out, is that while thousands of people enrol for courses, quite few actually complete them [10]. Therefore, the key issue is the analysis of the ratio between the number of registered trainees and the number of those who completed the online course, that is, the completion rate. Many specialists from various fields such as Krista Neher [13], Eric Melchor [12], Rochi Zalani [20], Graham Glass [5], Amy Ahearn [1], Chuck Eesley [4], Katy Jordan [8; 9] and others, consider this indicator as a significant signal of the course effectiveness and ways to improve it. The above authors, inter alia, consider the factors that make it possible to increase the course success, which can be measured in its completion rate.

Krista Neher states that online course completion rate is generally about 5%. Despite this, there are clear actions that can increase the completion percentage up to 80–100%. She offers proven tips that have improved course completion rates for online learning, namely: 1) set a clear deadline for completion; 2) break the course into smaller steps; 3) block time in calendars; 4) have a clear “why”; 5) communicate, communicate, communicate; 6) reward and recognize; 7) follow up with incompletes [13].

Eric Melchor states that on average only 5–15 % of students complete an online course. His article explores four tactics that can help increase completion rates of the learners and turn them into your ardent supporters. The author refers to the main reasons why students may not complete the course: the course may be too long and complex, or vice versa, too easy to do; students are too busy and forget about it; students got what they needed within several modules; learners do not understand the instructions; the value of completing the entire course is not clearly

stated. To increase the number of certified students, 4 tactics are suggested: 1) invite your students to work in teams; 2) add mystery with drip content; 3) send a personalized video to motivate students; 4) use learning enablement tools to support students (use pre-made or custom-made notebook templates for your students). Eric Melchor is confident that using these 4 tactics will make students feel engaged, supported and inspired throughout their learning journey. The most valuable remark is the recommendation not to be afraid to try something different, because the teacher knows his students best [12]. Why is it the most valid point? It’s because finally, in passing, attention was paid to the most important character in online education – the consumer of educational content.

Rochi Zalani considers the increasing engagement in online courses to be the key factor in increasing their completion rate. Such a statement seems quite obvious, but the answer to the question is important: how to ensure the engagement? The author makes general, streamlined recommendations: he views “engaged learning” as the course taker’s ability to understand the material, reflect, cooperate and find information. All this increases the satisfaction of your course buyers [20].

Graham Glass – the founder and CEO of CYPHER LEARNING – states from his own experience that online course completion rates are on average as low as 5–15 %. His publication is devoted to answering the question: what does the completion rate mean? He is convinced that Internet entrepreneurs must find the right balance between two opposing tendencies: the learner’s desire to change and instant gratification. Therefore, he (notice, just one of the few) focuses on the course design: how to create a successful course deployment? What should be the teaching methodology? The author has identified one of the crucial factors for the success of an online course, although the answer to this important question is quite streamlined: start with the middle, that is, create a course not from beginning to end, but from the middle and work your way to both ends. The gist of the recommendation is like this: by clearly presenting the result and content, it will be easier to plan an engaging beginning, which, in turn, will keep the audience on course. In addition, the researcher regards offering online community support, demonstrating the trainees their progress in learning, gamification of learning, setting deadlines, displaying the value of the course, and optimizing learning on the go (the ability to learn on mobile devices) as important factors [5].

Amy Ahearn analyzes in her article the experience of Acumen, where she develops online courses, some of which reach 85 % completion rate. The author considers this a breakthrough, since five years ago only 5 % of students completed the online courses she had developed. She refers to the main success factors:

making people pay for online programs; increasing the selectivity of courses; adding program managers and teaching assistants to supervise students. Other significant measures that help more students to continue learning online, listed by the researcher are: 1) make students put their skin in the game; 2) avoid training on demand and set deadlines instead; 3) combine synchronous and asynchronous learning; 4) use the power of peer pressure; 5) make students feel noticed; 6) do not be afraid to offer cash prizes or other rewards at the end of the course; 7) develop activities to help adult learners complete projects for work [1].

Chuck Eesley states that out of 23,577 students who worked individually on an online course, only 2% completed the course. Whereas, out of 2,671 students working in teams, 32% graduated. Completion rates were higher for mentored teams, which achieved 44% completion. The data, Chuck Eesley argues, testifies to the power of responsibility in general, as well as the sense of social obligation that arises when students are counted on by others. That's why students who work in a team log in 5 times more often than students who work without a team – the activity level is 26% higher than usual [4].

Fiona Hollands and Aasiya Kazi presented the results of a study conducted in 2018. The data shows that edX and Coursera courses have a completion rate of 15 % or less [6]. Also, according to Katy Jordan's estimates, only one course has a rate of 60 % (6,501 out of 10,848 registered on the course). Thus, in accordance with K. Jordan's data, the record for a massive open online course is 60% completion rate for an audience of almost 11 thousand learners [10].

Justin Reich and José Ruipérez-Valiente presented the results of the study conducted by the Massachusetts Institute of Technology in 2019. The data shows that over the past five years, online courses have experienced an astronomical dropout rate of around 96%. This high dropout rate has not improved in more than six years [16].

Tucker Balch noted that the percentage of completion actually has a different meaning for MOOCs than it has for regular university courses. This is mainly due to the varying levels of investment that students make from the start ("putting skin in the game" really matters). Thus, a high completion rate for a free MOOC is not the same as for a paid course [2].

Katy Jordan analyzed more than 200 online courses and came to the following conclusions: 1) the average enrollment rate for a course is 42,844 students, and this is declining over time as the number of courses available continues to increase; 2) for most of the courses completion rate is less than 10% of the number enrolled, with an average value of 6.5%; 3) considering completion rates is a starting point for a better understanding of the reasons behind them and deciding how courses can be improved for both

students and course leaders [8]. Unlike many other studies on the topic, Katy Jordan's publications are neither personal experience or general psychological reasoning, nor logical conclusions from psychological truths, but are a statistical analysis of various parameters of online courses. It adds value to this paper, since the relevant aspects of creating an online course are revealed, and the results obtained do not fit into general trends, namely: the rate of course enrollment is at least twice as high as the average; and the number of online course takers not only does not decrease over the years, but is growing rapidly (see Figure 2). In addition, the 60% completion rate record set by Katy Jordan [8] belongs to the course with an audience of almost 11 thousand, while here is presented a similar indicator for an audience of more 90 thousand learners, that is, the enrollment contingent which is 9 times larger. Thus, the experience presented in this article is unique, and therefore deserves careful study.

In her further research, Katy Jordan [9] demonstrated that multiple regression analysis of a large sample of online courses provides the insight into the impact of various aspects of MOOC course design. The main factors that largely predicted completion rates were identified: start date, course duration, and type of assessment. That is, recent courses show a higher completion rate, while earlier ones do not. Short courses have a higher completion rate than longer ones. Courses with automated grading show higher completion rates than peer-assessed courses. If apply these findings to the practices presented in this study, then it can be argued that the course under consideration corresponds to only one factor of a high completion rate, namely: automated assessment. While the other two factors should have ensured a low completion rate, because the course is 5 years old (not so recent) and is designed for 5 weeks' work (27 lectures, 48 videos; it can hardly be called short). The online course under consideration "Critical Thinking for Educators" [18] has an audience of more than 90 thousand learners, 5 weeks' duration, is rather long-running (5 years), it is free, there are no time limits and no other external incentives, so it simply should not have a 60% completion rate. Of course, only if the aforementioned authors correctly identified the success factors for an online course. But the analyzed online course has a 61,76 % completion rate. This circumstance proves that it's not that simple with defining the success factors in online education. Moreover, the experience presented in this article is unique and therefore deserves a thorough consideration of this phenomenon. The key question is: what is the secret of success?

Some judgments can be made on this matter. The analysis of publications on the problem of completion rate and recommendations for increasing it allows concluding that the calculations performed indicate



some correlations. For example: 1) experience in creating online courses matters (recent online courses are more successful); 2) duration matters (short courses are more successful); 3) the type of assessment matters (automated evaluation increases the chances of online course success). Does this mean that for the success of an online course, one just needs to be the author of several courses, make a short online course, and implement automated assessment? Isn't it too simple a success recipe for an educational product? Commercial organizations are well aware that it is not that simple. Therefore, they are more concerned with analyzing their experience in selling online courses and profitability as an indicator of success. Note that this is not the worst indicator. But what is the bet on raising the completion rate? It is easy to see that all the recommendations of the above authors are aimed at external motivation: you need to create time limits, you need to instill a sense of responsibility in the team, you need to limit asynchrony, etc. The techniques mainly focus on applying the "whip" to the learner. And almost no one thinks about the "carrot". It is worth noting that some authors recommend providing incentives during the course. But is it that very "carrot", which is an endless source of energy for learning new things? This is all very reminiscent of the manipulative ways of influencing a person, well described in the studies of Robert Cialdini [3].

It is somewhat surprising that such methods of influencing a person are promoted in democratic countries. It is unlikely that such a practice can be considered humane in relation to students. After all, the true source of energy for learning new things is interest that cannot be aroused without understanding the true needs of the audience. In the analyzed publications this aspect is not discussed at all, with the exception of a casually dropped remark by Eric Melchor [12]. In this context, it is appropriate to recall the proverb: "you can lead a horse to water, but you cannot make him drink". Figuratively speaking, the authors' recommendations are aimed at trying to get the horse to drink with kicks and threats, instead of making him thirsty. The course under consideration managed to achieve a unique result precisely because the initial positions were fundamentally different: not external motivation (short-term and low-impact), but internal one (strong, long-term) was put into the basis of the online course design.

**Purpose.** In this article, the subject of analysis is the phenomenon of the massive open online course "Critical Thinking for Educators" [18] on the free platform of MOOCs "Prometheus". The study aims at finding out: why did more than 60% of the learners graduate from this course? What factors contribute to the engagement of learners in an online course? How can an online course methodology increase the learners' certification rate?

**Methodology.** Using the analysis of statistical data from the platform of massive open online courses "Prometheus", the following questions will be considered:

1. Does the indication of the target audience in the title of the course contribute to an increase in the number of the course graduates?
2. How can the analysis of statistical data on watching video lectures improve the methodological support of the course?
3. What is the average age of the target audience and what is the distribution of learners by age? How can this help enhance online education?
4. What conclusions can be drawn from the study of the gender distribution of the course participants?
5. How do forum discussions contribute to identifying the key success factors for an online course?

**Summary of the main research material. Target audience of the online course: should it be indicated in the title?** On October 30, 2017, the online course "Critical Thinking for Educators" was launched on the "Prometheus" platform. Course authors: 1) Serhii Terno, professor at Zaporizhzhia National University; 2) Natalia Stepanova, Associate Professor of the Cherkasy Regional Institute of Postgraduate Education of Teachers; 3) Serhii Gorbachev, director of School 148 in Kyiv named after Ivan Bagryany. Course methodology: 27 lectures (48 videos that are 5–8 minutes long); 27 lecture notes and presentations (located under the video); 92 test tasks; 27 lists of sources and resources for each topic; one creative task. The course was to be studied the following way: the learners watched video lectures, read notes, studied presentations, and completed test tasks after each topic. The training was designed for 5 weeks.

Initially, the course was considered as an advanced training course for educators, but the working title was formulated as follows: "Fundamentals of Critical Thinking". This wording was rather vague and did not contain a hint of the target audience. The working group of the project discussed how to name the course. In particular, the following titles were considered: "Critical Thinking for Teacher" and "Critical Thinking for Educators". After a short discussion, it was decided to settle on the latter option, since the wording "Critical Thinking for Educators" made it possible to cover all workers in the education system as a target audience, and not just secondary school teachers. Thus, the title itself already worked as a clear indication of what kind of audience the course was intended for. Consequently, only those listeners were registered for the course, satisfying whose needs became the goal of the course. Therefore, the chances of retaining the audience increased, since the course topics were directly tied to the tasks and problems close to educational workers. And this is always a more advantageous position when the material is

presented taking into account the needs of the target audience.

The design of the course took into account such problems of teachers: personal maturity and teaching; teacher success factors; the role of values in the organization of the educational process; education as a transfer of values; values of dogmatic and critical thinking; what school should be like in order to bring up successful people; what kind of teacher is effective; the secret of successful teaching, etc. Moreover, the topic of developing critical thinking skills was presented by considering the cases of real problems solved by international organizations, military leaders, business captains, etc. in the recent past. The study of each new topic of the course began with an acquaintance with a real problem from the past. At the same time, the course audience was asked to pause watching the video and independently solve the problem that had once been solved by quite real people. And only after such a mental experiment the learners were offered a real historical solution to the problem and the theoretical material necessary for a successful solution given. Such a method of presentation enabled the achievement of the highest possible internal motivation (interest) in the study of the most complicated theoretical material. That is, considering the needs of the audience and the corresponding design contributed to maintaining a constant interest in the course or (as Rochi Zalani [20] argues) ensured the course-takers' engagement. And the responses of the students on the forum confirm this interpretation of the statistical data (see the forum page "My impression of the course"). Here are just some quotes from the learners: "Very accessible, instructive and interesting!"; "I am very impressed by this course"; "The course is extremely interesting"; "It is with great pleasure that I got acquainted with this course"; "The course became a kind of discovery for me"; "This is the first course on this platform that made me think"; "I listened to the lectures in one breath: concise, meaningful" [18]. It should be noted that the section "My impression of the course" was initiated by the students themselves and entered the top three on the forum. Thus, the design of the course was based on the needs of the target audience and the internal motivation of the students (providing interest), which allowed the largest possible number of students to stay on the course, and ensured a constant increase in the audience during 5 years (see Figure 2).

What statistics allows to conclude that it was the target audience that registered for the course? When registering on the platform, learners specify some information about themselves, for example age, gender, educational level. The analysis of this data reveals what kind of audience is represented by the course-takers. For example, on 16.02.2018, when the active phase of the course ended, 8,981 students

were certified (45,82%). Among them: persons with higher education – 87,85 %; women – 87,5 %. In Ukraine, 81 % of secondary and high school teachers are women. In primary school, 99 % of teachers are women [7]. Thus, the configuration of educators and course trainees is similar in terms of gender.

The overwhelming majority of learners (87,88 %) are people over 20, that is, working people; at the same time, 9,07 % of trainees did not specify their age. Thus, there is a reason to assert that those were in-service teachers who enrolled in the course, whose average age was 38. The age distribution of the registered listeners is as follows: without age indication – 1,778 (9,07 %) of learners; >20 years old – 914 (4,66 %); 20–24 years old – 2,013 (10,27 %); 25–29 years old – 2,248 (11,47 %); 30–34 years old – 2,248 (11,47 %); 35–39 years old – 2,379 (12,14 %); 40–44 years old – 2,330 (11,89 %); 45–49 years old – 2,509 (12,80 %); ≤ 50 years old – 3,497 (17,84 %). Thus, 85,07 % of trainees are aged 25 and over, that is, working teachers. At the same time, the most certified age group turned out to be teachers aged 50 and older (65 %). Certification by age groups is as follows: no age indication 1,778 (9,07 %); >20 years old: 914 (4,66 %); 20–24 years old: 2,013 (10,27 %); 25–29 years old: 2,248 (11,47 %); 30–34 years old: 2,248 (11,47 %); 35–39 years old: 2,379 (12,14 %); 40–44 years old: 2,330 (11,89 %); 45–49 years old: 2,509 (12,80 %); ≤ 50 years old: 3,497 (17,84 %). The figures show that the most motivated audience is represented by teachers aged 40–50 and older. Thus, the data indicates that it was the older age category of teachers who successfully completed the course in large numbers.

Summing up, it is worth pointing out the following: 1) the obtained statistics gives evidence that the development of an online course for the target audience and the designation of the target audience in the title of the course contributes to an increase in the course successful completion rate, since in such case fewer random people register on the course, and the course itself takes into account more accurately the needs of the target audience; 2) the online teacher development course is the most popular among the older age category (40+) as their education ended relatively long ago, and therefore they are the audience that is most interested in updating their knowledge and improving professional skills.

#### **Why is it important to keep track of the statistics of the online course during its active phase?**

The creation of the online course "Critical Thinking for Educators" [18] was the first experience of its authors. As they admitted, many aspects of working on an online course were far from obvious for them, in contrast to the technical support team of the course. For example, it was not clear that several fragments of a video lecture could be located on one page. That

is, the idea of horizontal scrolling of the content parts was not obvious to a significant part of the listeners. This fact became evident when the video viewer data was analyzed. So, what was discovered? It turned out that if there were two videos on one page and moving on to the second video required horizontal scrolling, then the second video was watched by at least 10% fewer listeners. The analysis prompted the platform to introduce an information image that demonstrated how to use horizontal scrolling on the page of each new topic (see Figure 1).

Thus, it is extremely important to monitor and analyze as broad statistical information as possible on how the students complete an online course: the number of video views, typical errors in tests, the most successful age categories, etc. Such feedback allows to make adjustments to the methodology of the course, to maximize the educational product's effectiveness, and increase the number of those who successfully completed it.

#### Why is it significant to track the dynamics of course development and what can it tell about?

The life of the course begins with the active phase: i.e. when the course is actively advertised in the media

and social networks; the first wave of learners registers and completes tasks and activities; instructors are actively involved in the educational process – they comment on posts on the forum and answer questions from the audience. The second phase begins after the first wave of certification, somewhere in the third month after the course publication, and does not involve a promotion campaign or teachers' active participation. The active phase of the course lasted for 5 weeks (30.10.2017–04.12.2017). During December 2017 – January 2018, the first wave of certification took place, and the second phase of the course started at the beginning of February 2018. The dynamics of registration and certification is presented as a diagram (see Figure 2). The vertical scale shows the number of course participants, and the horizontal one – the time points for measuring the number of subscribers and certified listeners. As of 09.05.2021, the number of participants was 87,301; the number of issued certificates was 53,335 (61,09 %). As of April 18, 2022, the number of students was 96,207; the number of certificates issued was 59,417 (61,76 %).

Carefully studying the dynamics of subscribers and certified graduates, one can find the following

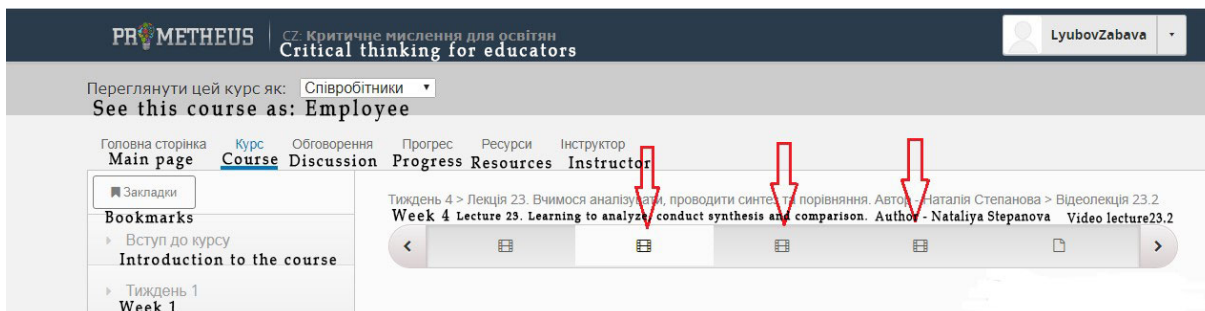


Fig. 1. Methodical design of a topic of the online course “Critical Thinking for Educators”

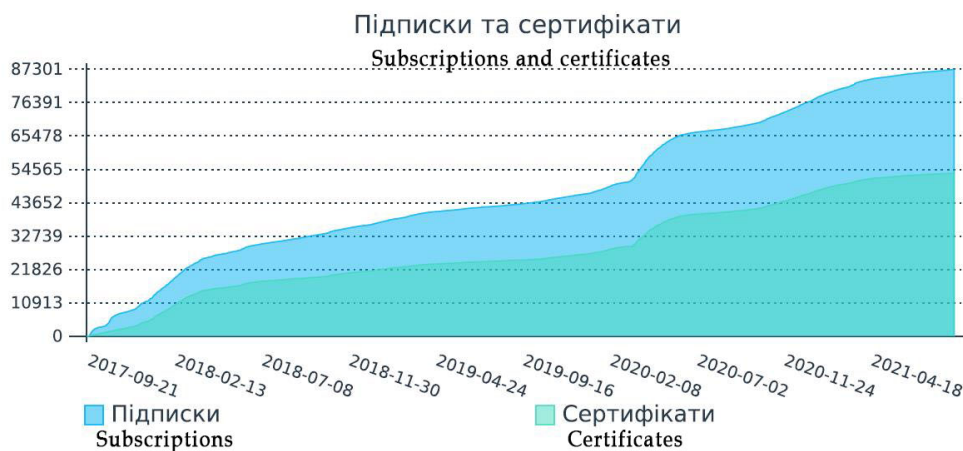


Fig. 2. Dynamics of registration and certification of the online course “Critical Thinking for Educators”



paradox: there is no advertising, there is no promotion of the course on social networks, but the number of subscribers is constantly growing, as is the number of certified participants. What does such dynamics demonstrate? How does the course recruit new trainees, and in what way is the number of certified trainees increasing?

If there is no promotion of the online course by the publisher, and the number of subscribers is continuously growing, then the main source of attracting new learners are the course graduates. These are the course trainees who become the main advertisers. In their turn, the graduates of the course can recommend it to their colleagues only if they find this online course interesting and useful for themselves. Thus, the constant increase in the number of students on the course leads to the conclusion that the authors of the course managed to determine accurately the needs of their target audience, and created an educational product that satisfied these needs. It can be unambiguously summarized that the online course “Critical Thinking for Educators” [18] is popular among the target audience (educators in Ukraine).

Let's consider why the number of certified trainees is growing. What does this demonstrate? Is this indicator relevant? As becomes evident from literature surveys, often in scientific publications and in publicistic editions the completion rate indicator – the number of students who completed the course – becomes the point of pride. Discussions are underway, what this indicator evidences. Is it a proof of the educational product's quality? Some say that a high completion rate is the proof of the quality of the online course. The logic of such reasoning is as follows: if more students have completed the course, then the course is of high quality.

Others object to that (as a rule, those whose courses fail to achieve high rates): 50% of students do not enter the course at all, so their absence initially cannot be the basis for judging the quality of an online course. In addition, what if you have made up very simple tasks so that any sane person will complete correctly – and here is the key to a high completion rate. At the same time, however, the fact is overlooked why the learner should do these tasks if he/she is not interested. Another justification for low completion rates is unfair advertising: the authors promised one thing, but provided something completely different.

Whatever explanations are sought for low completion rates, they can hardly be viewed as convincing. Such reasoning resembles an attempt to find a justification for unfulfilled hopes. There is a clear message behind such conclusions: we created a course, and did not receive a high completion rate, but this is not because the course is bad, it happened for other reasons beyond our control. In contrast, this paper

hypothesizes that the completion rate is an important indicator of course success among students, and offers the arguments to support this statement.

Why is the completion rate growing even when here is no publisher's promotion of the course? The explanation is that the audience of the course is increased due to the recommendations of the course participants themselves, who direct the interested audience to the course. For example, the completion rate of the MOOC “Critical Thinking for Educators” at the end of the active phase was 24 % [15], in two years – 55 % [11]; in five years – 61%. Only the growth of the target audience on the course allows to increase this indicator. Thus, the audience of the course increased for only one reason – the course met the needs of the target audience.

Such a high completion rate allows asserting with a high probability that the course turned out to be interesting for the learners. What can make the learners sit in front of the monitors and go through the course up to the end, if they are not interested? Meanwhile, the interest (yet again) will increase the rate of successful course completion for the target audience, and this will be reflected in specific numbers. So, a high completion rate indicates that the course content meets the needs of the target audience. In this case, value judgments such as “good” or “high-quality”, etc. are not appropriate. One can hardly know with certainty what characteristics a “good” and “high-quality” online course should have. In this case, the completion rate is an objective indicator of subjective phenomena, that is, the interest of the target audience in this course. Thus, it is obvious that in the analyzed case the needs of the learners coincided with the supply in the online education market.

**The course forum is an element of feedback for authors.** The forum of the online course “Critical Thinking for Educators” was represented by both permanent headings and headings that were initiated by the students themselves. Permanent headings will be presented by popularity (from the largest number of posts to the smallest, as of 09.11.2021): 1) “Questions to the teacher” – 467 messages; 2) “Discussion of the material” – 435 messages; 3) “My impression of the course” – 395 messages; 4) “Questions regarding tests” – 266 messages; 5) “Why I am taking this course” – 250 messages; 6) “Creative task” – 199 messages; 7) “Obtaining a certificate” – 164 messages; 8) “Technical questions and errors found” – 142 messages; 9) “Frequently asked questions” – 46 messages. Thus, the learners were the most active in their interaction with the course instructors. In particular, the problems of personal maturity and immaturity were actively discussed; the correlation of concepts “thinking”, “intellect” and “wisdom”; the Karpman drama triangle in the relationship between the participants of the learning process; the problem of proactivity, and

many more. The fact that the section “Questions to the teacher” was the most active, testifies to the genuine interest that the course topics aroused.

Very indicative in this respect was the response of the teacher under the nickname “nadya2010”. She wrote: *“Greetings! A very interesting course! To be honest, I came here “not entirely voluntarily”, I was told it was necessary))). As it was said, there is still a lot of totalitarianism in our system. But here you can find positive things too. I thought, now I’ll take a quick run, get a certificate – and well done!)) But no! I’m hooked))) (in a good way). I want to really perceive, understand, analyze the material and apply it in my life (although, of course, I have already used something before). This course prompted a lot of things to think about, both in professional activity and in personal one. Indeed, the main question I pose myself is: what kind of students do I want to see, and what kind of teacher do I need to become for them? The emotional, simple and clear presentation of the material deserves separate THANKS!”*

Besides, it should be noted that the third most active column “My impression of the course” had not been planned by the organizers at all. The initiator of this forum topic was Olga Ragozina, a primary school teacher from Kropyvnytskyi. And the site administrator, seeing the popularity of the category, decided to consolidate it and make it permanent. Since the educators expressed their feelings, thoughts, and impressions here, it was not entirely appropriate for the course instructors to be included in the correspondence. That is why, despite the third place by the activity of posts, this heading probably takes the first place according to number of messages from the learners. The activity of the course authors in this section is minimal. It contains a wealth of valuable information, mostly complimentary, about how students interact with the course, what they experience, and how it all matters to them. Certainly, it is important to examine closely the emotional, cognitive, and value contexts of studying the course: what emotions does the course evoke? How is the learning process going on? How is it assessed by the audience? In general, according to the feedback from the learners, it can be stated that the course brought them strong positive emotions, the learning process was arranged in an interesting and exciting way, and the experience gained turned out to be very valuable for educators.

In support of what has been said, here is a short quote from Valentina Nikolaienko: “With each lecture, more and more interest arises, what’s next? New horizons, like books of your life, are opening up. And you can’t abandon the thought of how to find an answer to this or that question”.

**Results and discussion.** According to the statistics obtained during the experiment, the audience of the online course “Critical Thinking for Educators” has been constantly growing for 5 years. The number of certified participants has also increased. At the same time, the advertising of the educational product took place only before its launch. Thus, the online course autonomously recruited new students without extra promotion and reached a completion rate of 61,09 % as of 05.09.2021 (see Table 1).

Consequently, the authors of the online course managed to determine accurately the needs of education workers in Ukraine and create an online course, which became the champion of the massive open online courses platform “Prometheus”. A rapid rise in the completion rate occurred in 2018 when the rate more than doubled: from 23,5 % to 54,28 %. In 2019, the increase was insignificant and amounted to only 0,22%, but the number of learners increased from 33,149 to 45,472, that is, by 12,323 listeners, which is more than a third. The number of certified students increased from 17,992 to 24,760, that is, increased by 6,768 people, also by more than a third. Thus, a slight increase in the completion rate in absolute terms is significant and comparable to the number of those who completed the course at the end of the active phase. During 2020 the completion rate approached 60%, and exceeded it in 2021.

Such results were quite unexpected. Such a rapid growth in the completion rate came as a complete surprise, and prompted the authors of the article to analyze the phenomenon of the online course “Critical Thinking for Educators” and identify the factors that ensured its success.

**Conclusions.** From 2017 to 2022, the authors are actively studying the dynamics of changes in the audience of the course, statistics of subscribers and certification, forum posts, etc. The analysis of statistical data allows to conclude that the course became the champion of the “Prometheus” platform in terms of the number of students who completed it and received a certificate. As of 18.04.2022, the number of students on the course was 96,207 people, and the number of

Table 1

**Dynamics of completion rate of the online course “Critical Thinking for Educators”**

Date/ Criterion	04.12.17	22.01.18	18.02.18	17.03.18	29.09.18	17.11.19	29.12.20	05.09.21
Number of listeners	8,702	15,440	19,602	23,765	33,149	45,472	76,239	87,301
completion rate	23,5 %	38,52 %	45,82 %	51,3 %	54,28 %	54,5 %	59,6 %	61,09 %

certified graduates was 59,417 (61,76%). What factors contributed to such a high completion rate? Many authors see external motivation as the success factor: you need to create time limits, you need to instill a sense of responsibility in the team, you need to limit asynchrony, etc. But in the process of creating the analyzed course the authors resorted to internal (strong, long-term) motivation: taking into account the needs of the audience and harmonizing the online course design with them. The analysis of statistical data and messages on the forum allows concluding that for the success of an online course it is extremely important to:

1. Design a course based on the needs of the target audience and the internal motivation of students.
2. Use the designation of the target audience in the course title and its advertisements.
3. During the active phase (the first wave of students), analyze as broad statistical information

as possible on how learners go through the online course, and make corresponding adjustments to the course methodology.

4. Track the deployment of the course in time: has it been possible to create a mechanism for autonomous recruiting of students to the course?

5. Analyze forum posts about content, teaching methods, learning difficulties, etc. in order to improve the course.

A key factor in the success of an online course, as the experience shows, is that the course content meets the needs of the target audience and the internal motivation of learners. A high completion rate indicates that the creators of the course managed to achieve such a match. Consequently, the completion rate is an objective indicator of subjective phenomena, that is, the interest of the target audience.

### BIBLIOGRAPHY

1. Ahearn A. Moving from 5 % to 85 % completion rates for online courses. EdSerge. URL: <https://www.edsurge.com/news/2019-06-06-moving-from-5-to-85-completion-rates-for-online-courses> (date of access: 09.06.2023).
2. Balch T. About MOOC completion rates: the importance of student investment. *The augmented trader*. URL: <https://augmentedtrader.wordpress.com/2013/01/06/about-mooc-completion-rates-the-importance-of-investment/> (date of access: 09.06.2023).
3. Cialdini R. B. Influence: the psychology of persuasion. New York, USA : Collins, 2007. 320 p.
4. Eesley C. Online course completion rates – social elearning strategy – novoed. NovoEd. URL: <https://novoed.com/resources/blog/elearning-social-completion-rates/> (date of access: 09.06.2023).
5. Glass G. How to increase your online course completion rate. LinkedIn. URL: <https://www.linkedin.com/pulse/how-increase-your-online-course-completion-rate-graham-glass/> (date of access: 09.06.2023).
6. Hollands F., Kazi A. Benefits and costs of mooc-based alternative credentials. 2017–2018 baseline survey results. Wixstatic. URL: [https://docs.wixstatic.com/ugd/cc7beb\\_5803e625ebee463ebc6f4796027366f1.pdf](https://docs.wixstatic.com/ugd/cc7beb_5803e625ebee463ebc6f4796027366f1.pdf) (date of access: 09.06.2023).
7. Головіна О. Освіта – суто жіноча справа? Або навіщо чоловіки в школі. *Нова Українська школа | Вебресурс НВШ*. URL: <https://nus.org.ua/articles/osvita-suto-zhinocha-sprava-abo-navishho-choloviky-u-shkoli/> (дата звернення: 09.06.2023).
8. Jordan K. Initial trends in enrolment and completion of massive open online courses. *The international review of research in open and distributed learning*. 2014. Vol. 15, no. 1. URL: <https://doi.org/10.19173/irrodl.v15i1.1651> (date of access: 09.06.2023).
9. Jordan K. Massive open online course completion rates revisited: assessment, length and attrition. *The international review of research in open and distributed learning*. 2015. Vol. 16, no. 3. URL: <https://doi.org/10.19173/irrodl.v16i3.2112> (date of access: 09.06.2023).
10. Jordan K. MOOC completion rates. *Katyjordan.com*. URL: <http://www.katyjordan.com/MOOCproject.html> (date of access: 09.06.2023).
11. Капустинська Т. Всі в курсі: як онлайн-освіта Prometheus робить дива для півмільйона українців. *Platfor.ma*. URL: <https://platfor.ma/topics/people/vsi-v-kursi-yak-onlajn-osvita-prometheus-robyt-dyvo-dlya-pivmiljona-ukrayintsiv/> (дата звернення: 09.06.2023).
12. Melchor E. How to boost online course completion rates in 4 easy steps. *Thinkific*. URL: <https://www.thinkific.com/blog/improve-course-completion-rates/> (date of access: 09.06.2023).
13. Neher K. 7 ways to increase online course completion rates. *eLearning Industry*. URL: <https://elearningindustry.com/ways-to-increase-online-course-completion-rates> (date of access: 09.06.2023).
14. Ouf S. An enhanced online learning environment in the time of COVID-19. *Informatica*. 2021. Vol. 45, no. 6. URL: <https://doi.org/10.31449/inf.v45i6.3327> (date of access: 09.06.2023).
15. Parkhomenko A., Segol R., Lisovychenko O. Comprehensive analysis of the students' motivation connection to the massive open online courses completion rate. *Interdepartmental scientific and technical collection "adaptive automatic control systems"*. 2019. Vol. 34, no. 1. P. 73–80.



16. Reich J., Ruipérez-Valiente J. A. The MOOC pivot. *Science*. 2019. Vol. 363, no. 6423. P. 130–131. URL: <https://doi.org/10.1126/science.aav7958> (date of access: 09.06.2023).
17. Терно С. Освітні інструменти критичного мислення. *Prometheus – Найбільша платформа онлайн-курсів в Україні*. URL: [https://courses.prometheus.org.ua/courses/course-v1:Prometheus+CTFT102+2018\\_T3/about](https://courses.prometheus.org.ua/courses/course-v1:Prometheus+CTFT102+2018_T3/about) (дата звернення: 09.06.2023).
18. Терно С., Степанова Н., Горбачов С. Критичне мислення для освітян. *Prometheus – Найбільша платформа онлайн-курсів в Україні*. URL: [https://courses.prometheus.org.ua/courses/course-v1:CZ+CTFT101+2017\\_T3/about](https://courses.prometheus.org.ua/courses/course-v1:CZ+CTFT101+2017_T3/about) (дата звернення: 09.06.2023).
19. Wagner T., Dintersmith T. Most likely to succeed: preparing our kids for the innovation era. Simon & Schuster, Limited, 2015. 304 p.
20. Zalani R. Online education statistics (for creators & entrepreneurs...). *Elitecontentmarketer*. URL: <https://elitecontentmarketer.com/online-education-stats/> (date of access: 09.06.2023).

## REFERENCES

1. Ahearn, A. (2019, June 6). Moving from 5% to 85% completion rates for online courses. EdSErge. <https://www.edsurge.com/news/2019-06-06-moving-from-5-to-85-completion-rates-for-online-courses>
2. Balch, T. (2013, January 6). *About MOOC completion rates: The importance of student investment*. The augmented trader. <https://augmentedtrader.wordpress.com/2013/01/06/about-mooc-completion-rates-the-importance-of-investment/>
3. Cialdini, R. B. (2007). *Influence: The psychology of persuasion*. Collins.
4. Eesley, C. (2015, April 27). *Online course completion rates – social elearning strategy – novoed*. NovoEd. <https://novoed.com/resources/blog/elearning-social-completion-rates/>
5. Glass, G. (2020, August 21). *How to increase your online course completion rate*. LinkedIn. <https://www.linkedin.com/pulse/how-increase-your-online-course-completion-rate-graham-glass/>
6. Hollands, F., & Kazi, A. (2018, October 26). *Benefits and costs of mooc-based alternative credentials. 2017–2018 baseline survey results*. Wixstatic. [https://docs.wixstatic.com/ugd/cc7beb\\_5803e625ebee463ebc6f4796027366f1.pdf](https://docs.wixstatic.com/ugd/cc7beb_5803e625ebee463ebc6f4796027366f1.pdf)
7. Holovina, O. (2019, March 9). *Osvita – suto zhinocha sprava? Abo navishcho choloviky u shkoli* [Is education a purely female affair? Or why men at school?]. Nova ukrainska shkola | Veb-resurs NUSh. <https://nus.org.ua/articles/osvita-suto-zhinocha-sprava-abo-navishho-choloviky-u-shkoli/>
8. Jordan, K. (2014). Initial trends in enrolment and completion of massive open online courses. *The International Review of Research in Open and Distributed Learning*, 15(1). <https://doi.org/10.19173/irrodl.v15i1.1651>
9. Jordan, K. (2015a). Massive open online course completion rates revisited: Assessment, length and attrition. *The International Review of Research in Open and Distributed Learning*, 16(3). <https://doi.org/10.19173/irrodl.v16i3.2112>
10. Jordan, K. (2015b, June 15). *MOOC completion rates*. Katyjordan.com. <http://www.katyjordan.com/MOOCproject.html>
11. Kapustynska, T. (2018, May 14). *Vsi v kursi: Yak onlain-osvita Prometheus robyt dyva dlia pivmiliona ukraintsiv* [Everyone knows how Prometheus online education works wonders for half a million Ukrainians]. Platfor.ma. <https://platfor.ma/topics/people/vsi-v-kursi-yak-onlajn-osvita-prometheus-robyt-dyvo-dlya-pivmiljona-ukrayintsiv/>
12. Melchor, E. (2021, October 15). *How to boost online course completion rates in 4 easy steps*. Thinkific. <https://www.thinkific.com/blog/improve-course-completion-rates/>
13. Neher, K. (2021, March 25). *7 ways to increase online course completion rates*. eLearning Industry. <https://elearningindustry.com/ways-to-increase-online-course-completion-rates>
14. Ouf, S. (2021). An enhanced online learning environment in the time of COVID-19. *Informatica*, 45(6). <https://doi.org/10.31449/inf.v45i6.3327>
15. Parkhomenko, A., Segol, R., & Lisovychenko, O. (2019). Comprehensive analysis of the students' motivation connection to the massive open online courses completion rate. *Interdepartmental Scientific and Technical Collection "Adaptive Automatic Control Systems"*, 34(1), 73–80.
16. Reich, J., & Ruipérez-Valiente, J. A. (2019). The MOOC pivot. *Science*, 363(6423), 130–131. <https://doi.org/10.1126/science.aav7958>
17. Terno, S. (2018, November 28). *Osvitni instrumenty krytychnoho myslennia* [Educational tools of critical thinking]. Prometheus – Naibilsha platforma onlain-kursiv v Ukraini. [https://courses.prometheus.org.ua/courses/course-v1:Prometheus+CTFT102+2018\\_T3/about](https://courses.prometheus.org.ua/courses/course-v1:Prometheus+CTFT102+2018_T3/about)



18. Terno, S., Stepanova, N., & Horbachov, S. (2017, October 30). *Krytychne myslennia dlia osvitian* [Critical thinking for educators]. Prometheus – Naibilsha platforma onlain-kursiv v Ukraini. [https://courses.prometheus.org.ua/courses/course-v1:CZ+CTFT101+2017\\_T3/about](https://courses.prometheus.org.ua/courses/course-v1:CZ+CTFT101+2017_T3/about)
19. Wagner, T., & Dintersmith, T. (2015). *Most likely to succeed: Preparing our kids for the innovation era*. Simon & Schuster, Limited.
20. Zalani, R. (2022, November 22). *Online education statistics (for creators & entrepreneurs...)*. Elitecontentmarketer. <https://elitecontentmarketer.com/online-education-stats/>