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Education Through Wikipedia

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Abstract

Wikipedia belongs to education in various ways. One gains knowledge by reading Wikipedia, the other obtains profound knowledge by contributing to Wikipedia. It is the reason why educators in many countries include Wikipedia editing into their curriculum. The article is dedicated to the ecosystem of education through Wikipedia and other Wiki projects which were created by the author, developed by Wikimedia Armenia and settled in Armenia. For seven years Wikimedia Armenia has been implementing Wikipedia Educational projects in different rural regions of Armenia and hopefully will continue its development. The system offers permanent creative learning for teachers, as well as deep and interdisciplinary education on their future field of engagement with students. It revolutionarily changes the attitude of teachers and students towards education. It facilitates the teacher and student relationships. It also changes students' interrelation from contest to cooperation. It shifts the attention of educational players from marks to topics' perception. Of course, the most valuable advantage of this approach is that teachers improve their knowledge continuously and students, even not the smart ones gain comprehensive knowledge. This ecosystem is constantly improved based on statistical surveys. The components of the ecosystem were honored as the coolest Wikimedia projects and registered as trademarks: Wikicamp, Wikiclub. In the current article the full overview of education through wiki projects is given. The detailed description and innovative solutions on the challenges of today's education will be introduced in the upcoming articles of the publication issue.

Keywords: Wikipedia, education, Wikimedia projects, flipped classroom, teachers' training, non-formal education.

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1. Education is in Crisis around the World

How many people have you met who have graduated from school but are illiterate or at best have superficial knowledge despite having excellent marks at school? How many have

graduated from universities but cannot even formulate their thoughts? With the new technologies, it becomes a total disaster!

You can get any information from the Internet. You don't really need to think or explore thoroughly. On the other hand, the technological era will automate many human skills. So, in the future, the most desired and required people will become interdisciplinary professionals, while subjects and concepts in schools are still studied as entirely separate things. Textbooks, even innovative ones, shortly become inappropriate.

Teachers - being used to repeat the same content every day, are not able to handle scientific and technological innovations. With the COVID-19 pandemic, it turns even worse.

To fill the gaps in the knowledge of teachers, many webinars and trainings are being organized by educational institutions, but little is improved. Generally, after the training course, teachers mostly continue using the traditional methods of teaching. However, learning through Wikipedia is entirely different.

In many countries, Wikipedia is used for educational purposes differently. In the beginning, everyone faced the same problem that Wikipedia is not trustworthy - it includes misinformation, which is why it should not be used either by students or by teachers [1, 2]. However, the picture gradually changed internationally as many teachers and students began using Wikipedia in their educational processes. Some began promoting specific language content on Wikipedia concentrating on scientific topics [3]. Others suggested allowing students to use Wikipedia, as a source for information by teaching them the methods of discerning the truth from misinformation using third sources [2]. As a result, Wikipedia was gradually incorporated into the educational processes of universities in different countries, for example, the USA and Canada. Wiki Education, which supports the Wikipedia Education Process runs a program in which university instructors assign articles to their students on specific topics to add on Wikipedia [4]. Professors from Texas A&M University-Kingsville consider that wiki assignments help the students to gain a deep understanding of certain content and to gain knowledge collaboratively [5]. A high school teacher from Pennsylvania considers Wikipedia as a tool to conduct research by using its sources, bibliography and external sources [6].

The approaches of using Wikipedia in educational processes are quite different. Based on international experience, Wikimedia Armenia localized the practice of teaching with Wikipedia by developing new approaches and methods of educating through Wikipedia - mainly incorporating Wikipedia in educational processes in a way that substantially benefits both the students and teachers and Wikipedia itself.

2. Wikipedia Belongs to Education

Below are the statements on why reading or contributing to Wikipedia is the best way to learn and digest the topic of one's study.

1. Wikipedia is contributed from all over the world. Thus, you get the information that is created, updated and enhanced by thousands of humans.
2. Topics are not connected to a singular subject (physics, chemistry or biology, etc.), it describes an object or a concept.
3. All subjects or concepts highlighted in the content are linked to corresponding articles on Wikipedia, which help people understand each word's meaning, therefore, understanding the content profoundly, too.

4. During creating or developing Wikipedia articles, one studies the subject deeply and learns continuously to describe thoughts even better.
5. If one translates articles constantly, then he/she enhances the vocabulary of the foreign language and the translation skills becoming fluent in both languages.
6. While participating in discussions one becomes more patient enhancing the listening skills and taking into account the others' opinions.
7. Contributions that one does are visible to everyone, so the superiors can see the level of one's knowledge and contributions entirely.
8. Education managers and authorities have an opportunity to uncover and evaluate teachers' potential through statistics and contributions on Wikipedia.
9. In a few years, one can achieve the top professional level in the world in a specific field.

3. Ecosystem of Education through Wikipedia

Considering the international experience, Wikimedia Armenia has developed an ecosystem of Education through Wikipedia, which was almost seven years being run in different urban and rural regions of Armenia. The system provides permanent creative learning for teachers and an all-embracing interdisciplinary education for students in their future field of engagement [7].



Fig. 1 Education through Wikipedia.

The ecosystem developed by the author and implemented by Wikimedia Armenia consists of several components which enable to fully incorporate Wikipedia into educational processes of schools and universities and to enrich Wikipedia itself. These components are teachers' training, Wikiclubs, Wikicamps, Wikiclassrooms, and university collaborations. The novelty of the ecosystem is that it addresses the "Education with Wikipedia" question via several target groups in terms of age and profession. Talking about teaching Wikipedia to teenagers, Samir Elsharbaty, then Wikimedia Foundation's Communications Intern, announced that it is challenging to train teenagers who are not acquainted with research which is vital for Wikipedia. While most of the editors worldwide are adults, Wikimedia Armenia has adopted another approach - alongside others, target

teenagers to develop their researching abilities and language skills from young age by using and working on Wikipedia.

Teachers' training is the most important part of education via Wikipedia [9]. We train hundreds of teachers to contribute to Wikipedia encouraging them to bring these skills to the classroom and to develop their own way of working with students via Wiki projects.

The Ministry of Education in several countries includes Wikipedia training as a component of the accreditation process. In some countries, the Ministry of Education is working with the Wikimedia Foundation's educational team or with Wikipedia Educational Foundation.

After Wikipedia training courses teachers can run a Wikiclub or a Wikiclassroom. Wikiclubs are an alternative and non-formal educational activity. The idea to open Wikiclubs in different regions of Armenia was born out of the concern to provide youngsters with meaningful activity and make education a habit.

More than seven years of experience running Wikiclubs shows that it corresponds to the needs of all students: smart or not. Each student can find his or her niche and grow! They get profound knowledge, they acquire learning skills such as literacy, concentration, perception skills and critical thinking abilities.

In Wikiclubs we use Wiktionary - a comprehensive dictionary - for improving children's literacy, we use Wikisource - an online digital library - for attention and literacy. Wikipedia and Wikiversity are great tools for improving concentration, formulating thoughts, and deepening perception, diligence and thinking abilities.

Wikiclubs' approach has been copied by many countries, for example the GLAM Macedonia User Group effectively learned and localized the idea of Wikiclubs [10]. There are Wikiclubs in schools, universities, and GLAM institutions.

Wikicamps are the most inspiring and encouraging part for students. WikiCamp: a short vacation for students where they learn about Wikimedia projects and edit Wikipedia and also play sports, go hiking, play intellectual games, and do other amusing activities. To get Wikicamp tickets students contribute to Wikipedia during the year.

Wikiclub-Wikicamp combination enhances students' interest in learning. While in schools the learning is estimated via marks, in each project of the ecosystem students receive points depending on the quantity and quality of their contribution to Wikipedia, Wiktionary, and Wikisource. The statistics are provided on a regular basis - each month. Instead of marks students get prizes appropriate for their input. The highest prize is a ticket to Wikicamp. To attend Wikicamp students have to work during the whole academic year. Therefore, sooner or later learning is becoming a habit.

Wikiclassroom is a more evaluated level of education through Wikipedia. It needs the joint effort of teachers of various subjects: native and foreign languages and interconnected subjects related to a certain topic. Students are working on the article jointly in a group along with teachers. Flipped classroom method is used during lessons. First attempt to implement this idea was during a biology class in Lernapat school of Lori province. The school teachers were so excited and inspired that they moved their course to the Wikiclassroom model [11].

University collaboration is common around the world, as in the cases of the USA and Canada where within the framework of Wikipedia Student Program Wiki trainers provide assistance to university professors to run the course through Wikipedia [4]. In Armenia, it is more successful in linguistic and medical universities. Brusov State University has been running internship and diploma programs through Wikipedia for almost three years [12]. It significantly enhances students' vocabulary and translation skills.

4. Conclusion

It is time to bring this opportunity to schools and not via the utilities but via the creativity of each teacher and individual educators.

To influence education significantly, we need to use the top-down approach. We need permission from the authorities to reach each school, each university, each teacher, each lecturer and each student, therefore each human being.

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Կրթությունն Վիքիպեդիայի միջոցով

Սուսաննա Մ. Մկրտչյան

ՀՀ ԳԱԱ Ինֆորմատիկայի և ավտոմատացման պրոբլեմների ինստիտուտ
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Ամփոփում

Վիքիպեդիան և կրթությունը փոխկապակցված են. կարելի է գիտելիք ստանալ Վիքիպեդիա ընթերցելով և խորը գիտելիք ձեռք բերել՝ Վիքիպեդիայում ներդրում կատարելով: Այդ իսկ պատճառով բազմաթիվ երկրների մանկավարժներ ներառում են Վիքիպեդիան իրենց ուսումնական պլանում: Այս հոդվածը ներկայացնում է Վիքիպեդիայի և այլ վիքի նախագծերի միջոցով կրթական էկոհամակարգ, որը ստեղծվել է հեղինակի և զարգացվել Վիքիմեդիա Հայաստանի կողմից: «Վիքիմեդիա Հայաստանն» իրականացրել է Վիքիպեդիայի կրթական նախագծեր Հայաստանի տարբեր գյուղական շրջաններում: Համակարգը հնարավորություն է ստեղծում ուսուցիչների համար՝ շարունակ ստեղծագործ կրթվելու, իսկ աշակերտների պարագայում՝ խորացնելու իրենց միջառարկայական գիտելիքները ապագա մասնագիտական ոլորտներում: Այն արմատապես փոխում է ինչպես ուսուցիչների և աշակերտների վերաբերմունքը կրթության նկատմամբ, այնպես էլ ուսուցիչ-աշակերտ փոխհարաբերությունը: Այս մոտեցման շնորհիվ աշակերտների միջև մրցակցությունը փոխակերպվում է համագործակցության: Այն շեղում է սովորողների ուշադրությունը գնահատականներից դեպի թեմայի ընկալում: Հիրավի, այս մոտեցման ամենամեծ առավելությունն այն է, որ ուսուցիչները շարունակաբար բարելավում են իրենց գիտելիքները, իսկ աշակերտները ձեռք են բերում խորը գիտելիքներ: Էկոհամակարգի բաղադրիչներից Վիքիճամբարը և Վիքիակումբը ճանաչվել են Վիքիմեդիա լավագույն նախագծեր: Այստեղ ներկայացված է Վիքիմեդիա նախագծերի միջոցով կրթվելու ամբողջական պատկերը, մերօրյա կրթության մարտահրավերների առավել մանրամասն նկարագրությունն ու նորարարական լուծումները կներկայացվեն առաջիկա հոդվածներում:

Բանալի բառեր՝ Կրթություն, Վիքիպեդիա, Վիքիմեդիա նախագծեր, շրջված դասարան, ուսուցիչների դասընթաց, ոչ ֆորմալ կրթություն:

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Аннотация

Википедия во многом способствует образованию. Один получает знания, читая Википедию, другой - имея знания, внедряет свой вклад в Википедию. Это и есть главная причина, по которой преподаватели во многих странах включают редактирование Википедии в свои учебные программы. Статья посвящена инновационной экосистеме образования созданной автором, которая использует Википедию и другие вики-проекты как платформу для креативного обучения. В течение семи лет «Викимедиа Армения» реализует образовательные проекты Википедии в различных сельских регионах Армении и продолжает развивать. Система предлагает творческое обучение для учителей и междисциплинарное образование для учащихся в области их будущих профессий. Это меняет отношение учителей и учеников к образованию и, соответственно, меняются их взаимоотношения. Такой подход позволяет ученикам перейти от соперничества к сотрудничеству и переключить внимание на восприятие тем. Компоненты экосистемы Викилагерь и Викиклуб. были отмечены как самые крутые проекты Викимедиа и зарегистрированы как торговые марки. В статье дается укрупненная картина обучения через вики-проекты.

Ключевые слова: Википедия, образование, проекты Викимедиа, перевернутый класс, подготовка учителей, неформал.