



TAO collaborative project

Sub-project: TAO - Senior Knowledge



Funded by:

European Commission

Federal Ministry of Education and Research (BMBF)



Third Age Online, subproject: TAO – Seniorwissen/Silver Knowledge

funding no.: 16SV3985

Duration: October 2010 to September 2013

Wikimedia Deutschland
Gesellschaft zur Förderung Freien Wissens e. V., Berlin 2013

Author: Dr. Elvira Schmidt

Contributors: Marius Hoch

Daniel Kinzler

Cornelia Trefflich

This report is published under a free license:



Version 3.0 unported

1 Contents

2	Tasks	4
3	Project prerequisites, planning and procedure.....	4
3.1	Pilot phase	6
3.2	Implementation phase	7
4	Initial research situation.....	9
5	Results.....	12
5.1	Defining the target group and acquiring participants.....	12
5.1.1	Results	13
5.1.2	Conclusions	14
5.2	Acquiring project partners.....	15
5.2.1	Results	17
5.2.2	Conclusions	17
5.3	Building up a network of community experts.....	18
5.3.1	Results	18
5.3.2	Conclusions	19
5.4	Selecting key contents and organizing the courses	20
5.4.1	Results	22
5.4.2	Conclusions	23
5.5	Evaluation	25
5.6	Accessibility for the disabled	27
6	Summary and recommendations.....	28
7	Publications on the project	30
8	Bibliography and sources	30
9	List of annexes	32

2 Tasks

The aim of Third Age Online – Community & Collaboration (TAO) was to identify new ways in which older adults (aged 50+) can use the Internet (Web 2.0). The idea was to show older adults how to use the Internet for collaboration and community building (social networking). A further, closely related aim was to draw on the knowledge, experience, and social skills of this target group and to increase its members' participation in society. The aim of the project was thus to enable older people to widen their horizons and social spheres of activity in the spirit of life-long learning.

Within this general context, the aims of the Wikimedia Deutschland (WMDE) sub-project Silberwissen (Silver Knowledge) were to encourage older people with extensive work and life experience to start writing for Wikipedia and to increase the number of senior citizens contributing to the online encyclopedia on a long-term basis. The idea behind Silberwissen was to show older people how they can share their knowledge and experience in the online encyclopedia, thus making it available to interested users. A further aim was to improve the quantity and quality of the free knowledge available in the encyclopedia. The goal was to generate a win-win situation for the senior citizens participating in the project on the one hand, and for the Wikipedia communities and society as a whole on the other.

The experience gained in the sub-project also proved useful in developing a methodological guide for online communities and community platform operators. The main focus of the initiative was on developing effective approaches for motivating and mobilizing senior citizens to participate in Web 2.0 communities.

A further important focus of the TAO project was on developing a user interface design and functionality adapted to the needs of older people (straightforward, self-explanatory user guidelines for people with little or no experience of Web 2.0 formats). On the basis of a detailed analysis in Wikipedia, the goal was to define tasks aimed at improving accessibility. Solutions were to be found using Wikisoftware and, where possible, implemented in close cooperation with the community.

3 Project prerequisites, planning and procedure

The online encyclopedia Wikipedia is one of the most frequently visited pages on the Internet. Several thousand volunteers work together via the Internet to ensure Wikipedia's quality, diversity, and currentness. However, the 50+ age group is under-represented among our editors¹. The immense popularity of Wikipedia and the trust readers² place in it were important prerequisites for the sub-project. All contributors, whether they write articles,

¹ Richter, Pavel, Projekt „Silberwissen“ – Den Erfahrungsschatz von Senioren für die Wikipedia erschließen. In: Kampmann, Birgit et al (ed.): Die Alten und das Netz, p. 331, Wiesbaden 2012.

² Evaluation report "Web 2.0 und die Generation 50+", p. 13, result GmbH, Cologne 2007.

program, provide photographs, proofread etc. work on a voluntary basis. The project was based on the idea that some groups of senior citizens would be interested in getting involved with Wikipedia or another Wikimedia project³ and that given the necessary guidance, they would be able to do so.

A further important prerequisite for the project's success was the involvement of volunteer editors from Wikipedia or other Wikimedia projects. As soon as the Silberwissen project was launched, editors were asked if they would be interested in taking on the role of community experts. Most editors readily agreed to support the project.

The results of a WMDE workshop with senior citizens held in Cologne in 2008 were very useful in planning the structure and number of events for the target group. (See Section 2.2 – Implementation phase).

At the time of the project launch, Wikimedia organizations in other countries (Wikimedia chapters) did not have any experience of encouraging older editors to get involved with Wikipedia or its sister/associated projects. Their experiences were restricted to younger age groups such as students.

Our plan involved a two-stage process. During a **pilot phase** of around six months, we held courses introducing the concept of working with Wikipedia over the course of several weeks at three or four locations in cooperation with education institutes. We prepared the **implementation phase** on the basis of the results and experiences gained during the pilot phase. Both phases of the project were implemented as planned and supported with an ongoing **evaluation and analysis** process.

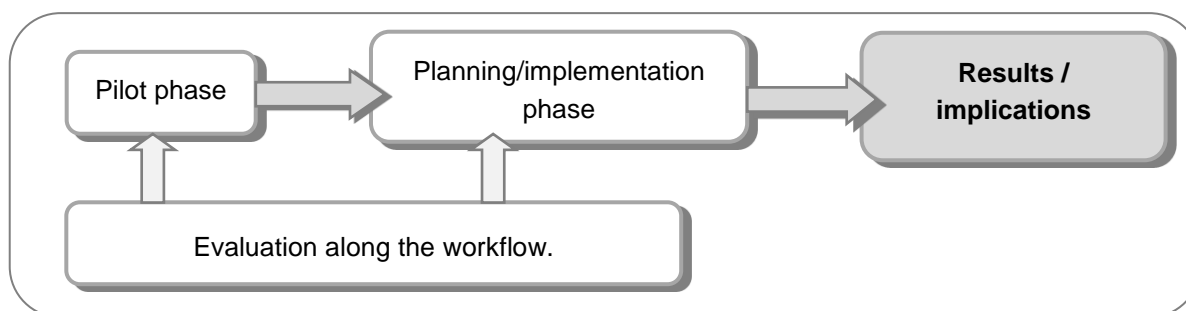


Figure 1: Project implementation

³ <https://de.wikipedia.org/w/index.php?title=Wikimedia&oldid=122456581>

Besides Wikipedia, the best-known Wikimedia project, several others exist: Meta-Wiki, Commons, Wiktionary, Wikibooks, Wikiquote, Wikiversity, Wikisource, Wikinews, Wikidata, Wikivoyage

3.1 Pilot phase

The following tasks were set for the pilot phase (see Figure 2):

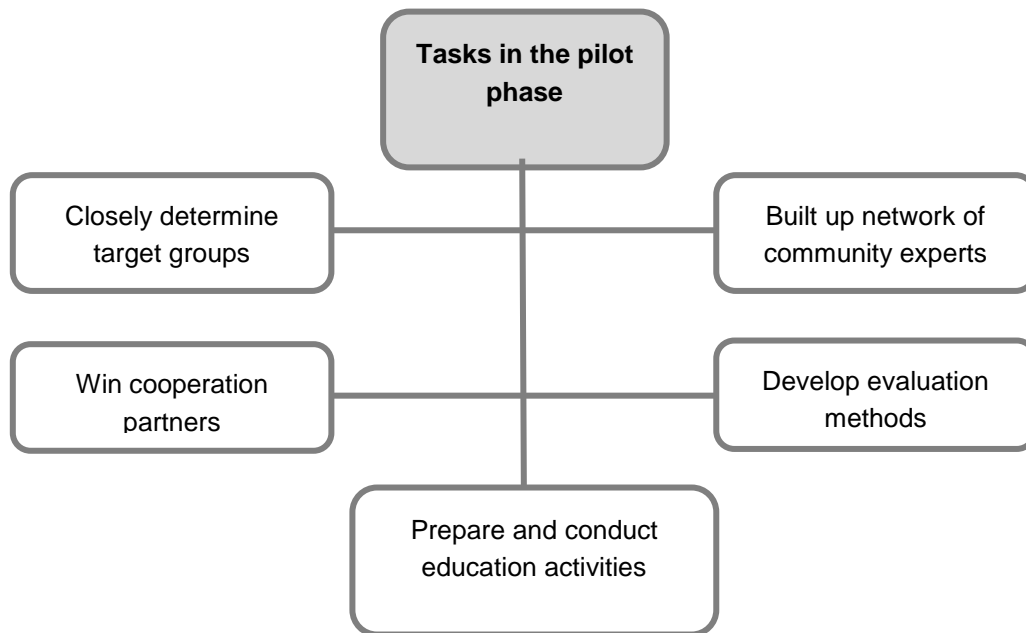


Figure 2: Tasks during the pilot phase

- Define target groups more precisely and draw up the participation criteria

Prepare community experts for their work with senior citizens interested in training by making them aware of the enormous range of people in the 50+ and 60+ age groups. The group of over-50s ranges from experienced people in employment, who use the Internet on a daily basis, to very elderly people who may have never used any new media. It was therefore necessary to define a certain level of technical know-how as a prerequisite for attending the workshops.

- Acquire the first project partners

Our aim was to get a wide range of education institutes involved in senior citizen education on board as project partners in various cities. Potential local partners included senior citizens' universities and academies, church-based education institutes, adult education centers, and associations with specialist knowledge and a high percentage of older members. The final part of this task involved drawing up a list of groups of suitable long-term project partners.

- Organize, hold, and evaluate educational events with senior citizens

In the run-up to the workshops, we drew up basic contents for workshop participants in cooperation with active Wikipedia editors. We also prepared a list of recommended methods for working with senior citizens and produced supporting materials. In cooperation with the community experts and our partner institute Centre for General Scientific Continuing Education of the University of Ulm (ZAWiW), we noted the experiences gained during the pilot phase workshops with senior citizens. We then developed guidelines⁴ on the content and methods of the workshops on the basis of these results.

- Create a network of community experts willing to help older people get involved with Wikipedia, to discuss their experiences, and to hold workshops.
- Develop suitable evaluation methods.

We produced an anonymous questionnaire for workshop participants to gauge their immediate reactions and ascertain their views on their future activities. The questionnaire was successively adapted according to the experiences gained. The analysis was complemented by further methods. (See Section 4.5 – Evaluation)

3.2 Implementation phase

We implemented and developed the results from the pilot phase over the course of the following years. Priorities included acquiring more local projects partners and expanding the pool of community experts. We also organized regular sessions for the community experts to discuss their experiences. At these meetings, the community experts were also offered training courses to improve their teaching skills, particularly in relation to the 50+ target group. During the project period, these sessions for community experts were held twice a year for several days at a time and focused on discussing experiences, developing programs, and acquiring new project partners.

The tasks in the implementation phase involved various fields of activity. The first aim was to **attract new editors**; the second to encourage their **long-term involvement in the Wikipedia community**. We expected to attract different target groups in the various locations and education institutes.

Discussing our experiences with European partners such as SeniorWeb Netherlands and SeniorWeb Switzerland over the course of the project proved extremely useful. We explored whether SeniorWeb Netherland's experience in involving senior citizens in online networks on a long-term basis could be applied in Germany.

The launch of an editor acquisition program aimed specifically at the 50+ target group generated a lively debate in the German-speaking Wikipedia community, particularly among older contributors. Talks on this subject date back to 2008 when the workshop series Wikipedia in Senior Citizen Internet Cafés was launched in cooperation with the

⁴ <http://de.wikiversity.org/w/index.php?title=Projekt:TAO/Silberwissen&oldid=331715> (version of June 12, 2013)

Diakonisches Werk Rheinland (Church Social Service Agency of the Rhineland) in Cologne⁵. Our experiences from this workshop were included in the project planning.

From the beginning, our aim was to involve active community members in the project. The opinions voiced on the Wikipedia talk pages about the 50+ program that later became Silberwissen revealed the different images that younger people have of older people and how people in the target group see themselves. Some people felt unpleasantly surprised at being put in the 50+ category of “old people”, which to their minds has only negative connotations. The following are typical comments typical from the debate⁶:

Example 1

“Why do particular age groups require special treatment? If the jargon is unintelligible to 80 percent of the older and 60 percent of the younger contributors, the problem is the jargon, not the people! Improving usability etc. would benefit all users. Treating people according to the age category they fall into smacks of ageism! I might be over 50, but I absolutely refuse to see myself as a member of an ‘over-50 generation!’”

Example 2

“[...] I was rather put off by the ‘over-50’ label. (By the way – isn’t that the generation that developed computers, software, Google, and Wikipedia?) [...] It sounds like some scheme the job center has devised for social rejects. ...I found it surprising.”

Supporters of programs for the elderly included:

Example 3

“...Getting older people involved in Wikimedia projects would affect both the communication environment and the quality of the work. But it could also lead to more communication problems, which is a point worth investigating, in my opinion. I think it would definitely make sense to spend a few years focusing on the involvement of senior citizens. [...]

Increasing the participation of older people in Wikimedia projects would greatly improve the projects’ image. I think there are huge cultural differences between the generations as regards media use. [...]

If involving senior citizens in online communities really does improve their social lives, which then also has a positive effect on their health, this would be a reason to put public money into these kinds of projects. [...]

The discussions showed that any attempt to increase the number of older people involved in Wikipedia and other Wikimedia projects can only be planned in cooperation with experienced

⁵ <http://www.forum-seniorenarbeit.de/index.phtml?sNavID=373.120&mNavID=373.117&ffsm=1&ffmod=tx&object=tx|373.2201.1&La=1&FID=373.2201.1>, last accessed: August 18, 2010.

⁶ Cited in: http://de.wikipedia.org/wiki/Wikipedia_Diskussion:Silberwissen/Archiv_2009#Thema_1, last accessed: July 01, 2013.

editors. The aims of such projects must also be clearly set out and explained to interested members of the community.

4 Initial research situation

In the preparatory phase, research relevant to the project was evaluated according to the following aspects:

- Life-long learning and senior citizen education: A particular focus of research in this category was on voluntary, self-motivated learning.
- Heterogeneity of the senior citizen age group and its effect on attempts to define this target group more precisely.
- Evaluation and application of research findings on senior citizens and web 2.0 formats for the planning and implementation phase.

The results of international Wikipedia surveys such as the UNU Merit survey (Maastricht, Netherlands) formed the basis for planning and developing the sub-project. The reasons Wikipedia users gave for deciding whether or not to write articles for the online encyclopedia⁷ and the relation this bore to their age provided the basis for strengthening participants' motivation.

We also made use of scientific institutes' research findings on involving senior citizens in online communities. The wide-ranging practical results of research by ZAWiW (WMDE's science project partner in Germany) on learning in later life were also very useful. Studies on dismantling barriers to use and on the communication needs of older people were important in determining our choice of methods, e.g. opting for online or offline sessions or for smaller or larger groups. Our main sources included the results of the Senior Citizens and New Media workshop in Ulm in 2009⁸; the Web 2.0 and the Generation 50+ study⁹; and various analyses on older people using the Internet¹⁰, specifically on the number and proportion of contributors aged 50+ to the online encyclopedia Wikipedia (see Figure 3).

⁷ PRELIMINARY ANALYSIS OF WIKIPEDIA SURVEY DATA, Topic: Reasons for non-contribution, Philipp Schmidt und Ruediger Glott, United Nations University MERIT, April 2009.

⁸ conference "Senioren aktiv – Europäische Bildungsprojekte" for seniors in the program GRUNDTVIG, Ulm 2009.

⁹ The generalizability of the study "Web 2.0 und die Generation 50+" is limited. Only 40 seniors in two cities were asked to participate. Despite the low number of case studies, these results provide us with helpful suggestions. Central statements, such as the priority of usefulness of websites as judged by seniors, were confirmed in discussions at the conference "Senioren aktiv – Europäische Bildungsprojekte" in Ulm, 2009.

¹⁰ Initiative D21: (N) Onliner Atlas 2008.

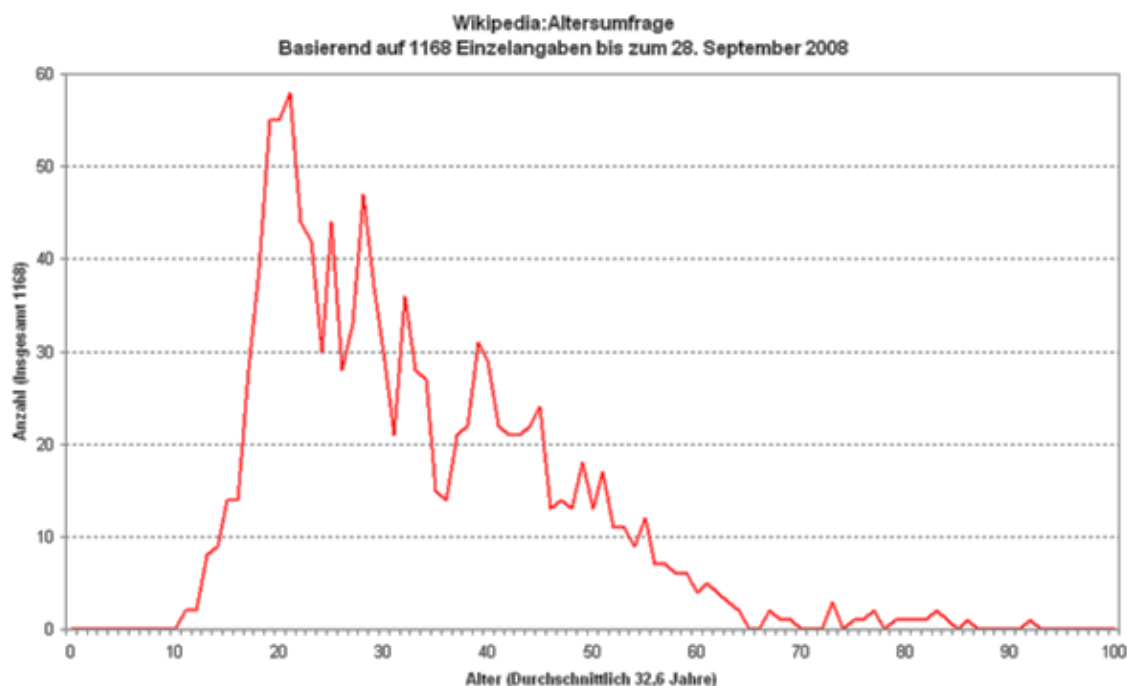


Figure 3: Age structure in the Wikipedia community (according to information provided by contributors)

The key results of our preparatory research on the topics mentioned above can be summarized as follows:

There is a clear link between Internet use and age. The number of Internet users decreases with increasing age. Factors such as education, gender, and income also influence the frequency and spread of Internet use. At the time the survey was conducted, the decreasing numbers of both male and female Wikipedia editors aged 50+ was particularly acute. The number of contributors in the 20-30 age group was also in steady decline. There was an imbalance between the number and proportion of older people in the population as a whole, and their number and proportion among Wikipedia editors. Even taking into account that not all editors state their age when they register (this information is submitted on a voluntary basis), the trend shown in the diagram is evident.

The representative surveys conducted in the following years confirmed this trend. Proportional changes could only be noted in the under-50 age groups¹¹.

People in the 50+ category mainly use the Internet to obtain information. Useful and interesting content is a clear priority for senior citizens. The practice of establishing and developing contacts in online social networks was not very widespread among senior citizens before the project or during its early stages. One of the most significant barriers preventing older people from getting involved in online communities is the technology that users have to deal with.

¹¹ Merz, Manuel (2011): Wikipedia Editor Satisfaction Survey. First impressions. WikiCon, Nuremberg, 9-11 September 2011, www.purl.org/merz/20110909.

The results of ZAWiW's international project, e-learning in Later Life¹², showed that contacts in web communities must always be supplemented by personal contacts if projects are to be successful. This applies both to e-learning and to communities on general topics.

Areas of research which were still relatively new at this stage included the user behavior of senior citizens in online communities and the possibilities of their using these communities to actively shape their "retirement" and participation in society.

The findings of a worldwide Wikipedia survey in 2009 greatly improved our understanding of what motivates volunteers. Asked under what conditions they would work with Wikipedia, the most frequent answers from respondents aged 60+ were:

- "[...] if I knew that there was a special area where my help is needed."
- "[...] if I knew that other people would find my work useful."
- "[...] if someone would show me how it works."

The research findings and practical experience available at the start of the project, as well as information from the wide-ranging discussions among Wikipedia editors, led us to conclude the following as regards the approach to be taken in the project:

- Online learning must be accompanied by **personal contacts** in order to make progress clear to all participants. Community experts should also be the participants' contact person in case of problems with or questions on Wikipedia. These experts should also provide a practical introduction to Wikipedia's system of online communication for resolving issues.
- Events should not just be about disseminating knowledge and doing practical exercises on contributing to Wikipedia or other Wikimedia projects, but also focus on **motivating people to get and stay involved**.
- **One workshop** alone is **not enough** to ensure long-term cooperation with older people.
- Participants should leave our courses and workshops with **visible indicators of success**.

We used these findings to plan the organization and draw up the key contents of the workshops and to attract local project partners.

¹² Semberova, Janá: Opportunities and perspectives of lifelong learning in older age. In: e-Learning in Later Life 2006-2008, pp.18-28.
Cariolato, Silvia: Gruppenarbeit in EDV-Grundlagenkursen. In: e-Learning in Later Life 2006-2008, pp. 28-30.
Hietaluoma, Annelie und Sajanao, Milla: Das Projekt Geronet – IKT-Kompetenzen für Senioren. In: Learning in Later Life 2006-2008, pp. 65-66.

5 Results

We held over 100 events all over Germany with participants in the 50+ age category over the course of the project period (October 2010 – September 2013). The clear majority of the approximately 800 participants had already retired or taken early retirement. Less than half of the participants were female.

The results of these events held in cooperation with community experts (volunteer Wikipedia editors) and our project partners are summarized below along with suggestions for future activities. The results are presented according to the key project tasks listed above.

- Define the target group and the participation criteria
- Acquire and train community experts
- Acquire a range of project partners involved in senior citizen education
- Agree on key content and basic information for lectures and workshops
- Prepare evaluation and define evaluation aims and realistic means of implementation

5.1 Defining the target group and acquiring participants

We used the ARD/ZDF offline survey definitions of media user types as the basis for approaching potential participants. These types were defined as “interested in a wide range of topics”, “culture-oriented traditional thinkers”, “domestic” and “withdrawn”¹³. We found these categories helpful in understanding the heterogeneity of our target group and in defining detailed participation criteria for our courses. In order to prepare the courses and to ensure our message reached the right audience, we drew up a list of criteria that potential course participants should meet. Clear communication was equally important for our project partners, enabling them to search through their networks more efficiently. The course participation criteria were:

- Computer and Internet use
- Extensive knowledge gained from professional experience or a hobby and the willingness to share it with the world as free knowledge
- Willingness to learn new things

We wanted potential participants to be aware that we were looking for active commitment and a certain familiarity with computers and the Internet. We also emphasized our need for the expertise senior citizens have accumulated over the course of their lives. After

¹³ Gerhards, Maria und Anette Mende: Offliner: Ab 60-jährige Frauen bilden die Kerngruppe, Ergebnisse der ARD/ZDF-Offlinestudie 2009. In: media Perspektiven 7/2009.

retirement, many people often feel superfluous, and that their knowledge is of no more use to anyone. From the beginning of the project, we showed them that they can share their knowledge with others.

It was important to us to motivate senior citizens to work with us on a long-term basis rather than just on a “one-off” project. Appealing to participants’ own interests and areas of expertise, and demonstrating the various ways in which they can apply them in Wikipedia, are important incentives to long-term involvement. As a rule, an interest in long-term involvement accumulates slowly and steadily. (See Figure 4).

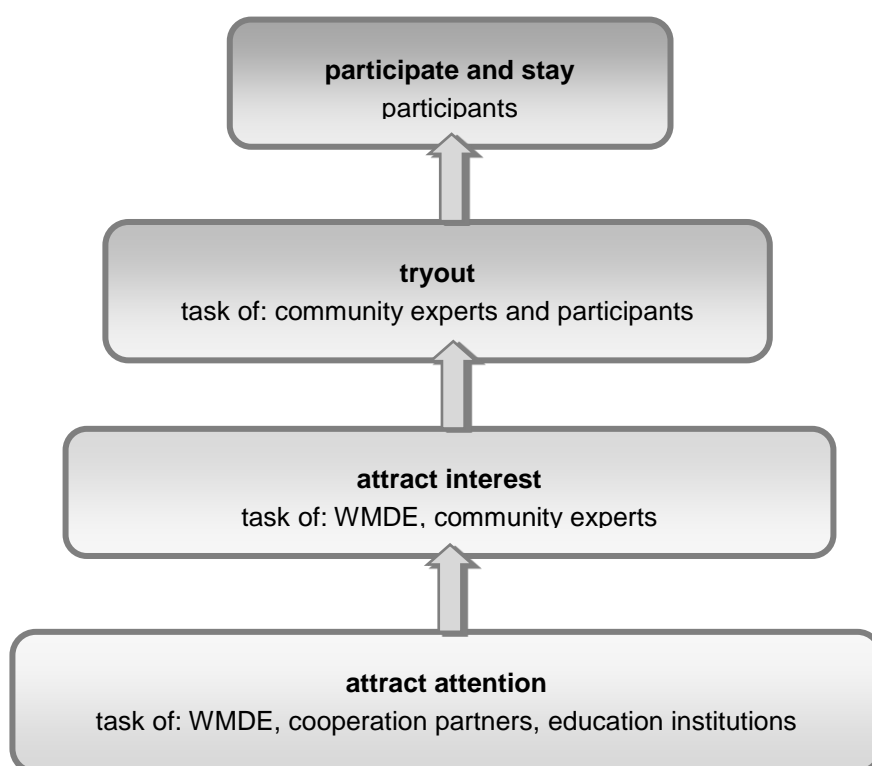


Figure 4: Steps to obtaining new editors

5.1.1 Results

The more precisely a target group and its personal interests were addressed, the more likely people were to take a course and even tackle a few technical problems in the process. If these conditions were met, people turned out to be extremely interested in long-term cooperation, as shown by courses at a training institute in Worms and an association in the district of Potsdam-Mittelmark.

Judging by the feedback from questionnaires (see Section 4.5 – Evaluation), between 30 to 50 percent of the course participants were still not sure whether they wanted to contribute to

Wikipedia/Wikimedia Commons in the long term after they had completed a course. This percentage tended to be lower in adult education centers. Course participants mentioned the time required to gain the necessary skills and difficulties with the syntax or technology as obstacles to further involvement. Many participants also said they did not know what they could write about.

Senior citizens' own estimates of their ability to meet the course participation criteria – familiarity in using computers and the Internet – were quite varied. The courses showed that there were indeed differences between their levels of knowledge and skills. Opinions on the pace of the course were equally wide-ranging: one group agreed to wait until everyone had understood, while other groups found the pace too slow at times.

Participants whose computer and Internet skills were not as well founded proved unable to join the course at a later date, or to catch up on the content they had missed, as the knowledge gap was simply too big.

5.1.2 Conclusions

Addressing **personal interests and areas of expertise** is the best way of involving senior citizens in Wikipedia. Crucially, this gives participants the motivation they need to overcome technical and communication obstacles. This approach also appeals to their professional skills and life experience, which are essential prerequisites for long-term involvement.¹⁴

The basis of cooperation in Wikipedia – sharing knowledge and putting it online as free content – is also essential in terms of motivating participants. The community experts' most important task is to create an understanding of this basis.

Particularly for senior citizens, learning means more than the acquisition of knowledge; it is also a social process¹⁵, influenced by personal contacts both with the community experts leading the course and fellow participants. Building up personal contacts is important for subsequent discussions among the participants.

In the future, we should do more to encourage the long-term involvement of interested course participants as editors or photographers. In some cases, contacts with local Wikipedians can meet the need for further offline support. Regular local Wikipedia get-togethers provide a good opportunity for participants to ask questions and benefit from other people's experiences. Online activities and personal contacts can be combined. This is an important factor in long-term involvement.

It is important to communicate the participation criteria clearly. Our experience has shown that the younger people in the senior category (aged 55 - 65) are particularly suitable candidates. Those aged 65 and over mostly had the necessary knowledge and the skill to write encyclopedia articles, but some of them had difficulties in working with computers and

¹⁴ De Groote, Kim: Entfalten statt liften, p. 54, Munich 2013.

¹⁵ Ibid., p. 156

the Internet. Recently retired people are less likely to already be doing voluntary work than older senior citizens who have often found a new role. Recently retired people thus seem to be a promising target group.

Our focus was on developing ways to support the long-term involvement of older newcomers as editors in Wikipedia. The chances of success are highest if contents reflect or rouse the interests of senior citizens and if involvement with Wikipedia allows them to make new personal contacts.

5.2 Acquiring project partners

The implementation and success of the program largely depended on finding suitable project partners. In fact, it was only possible to reach senior citizens in the first place by finding partners with reliable contacts and networks.

Our first task was therefore to find suitable project partners or groups of partners where both sides would benefit from long-term cooperation. Our plan was that the project partners would provide the space and technical infrastructure for the workshops and use their networks to attract course participants, while we would provide community experts and material for the workshops and guarantee online support after the courses. This worked well in practice. Where necessary, we also provided PR support during the preparatory phase. We tried out the following different ways of achieving this aim.

The first approach involved **using the existing networks and structures** of various organizations working in the field of senior citizen education. Potential local project partners included senior citizen universities and academies, church-based education institutes, adult education centers, and a senior citizens' computer club. In each case, we introduced the Silberwissen program and its aims, as well as what we expected from the project partners and the tasks that we would undertake.

We also **directly approached associations** with extensive specialist knowledge and a high percentage of older members. These included associations specializing in local or regional history, the history of technology, and other topics. We introduced Silberwissen and explained its aims to the board or members. We also identified knowledge gaps related to the association's area of expertise in Wikipedia and highlighted them at these events. The reaction was generally positive, and most participants could indeed be convinced of the fact that "their" contents would reach a far greater number of interested people through Wikipedia. Once we had presented the various support mechanisms that we could provide, the discussion quickly turned to forms of cooperation and organizational details.

We also launched a **nationwide information campaign** in cooperation with the German Senior Citizens League via its **newsletter *aktiv***. Information was sent to senior citizen offices all over the country. It was designed to get senior citizens interested in working with Wikipedia and also provided contact details.

In addition, the North-Rhine Westphalia Federal State Adult Education Center Association sent information to **all adult education centers in the state**. The results of these two campaigns in the first third of the project term informed our further course of action. (See Section 4.2.2 – Conclusions.)

The information we sent to potential project partners defined our target group, the division of responsibilities between the partner organization and our office, and our expectations of the cooperation (see Annex 2 – Checklist for project partners). We also outlined the contents and aims of the Wikipedia courses.

The aim of these activities was to build up a network of project partners with whom we could offer the courses. Creating a network of partner organizations enabled us to discuss our experiences on attracting course participants from the target groups, methods of training senior citizens, and long-term involvement of interested course participants in Wikipedia or other Wikimedia projects via the respective project partners.

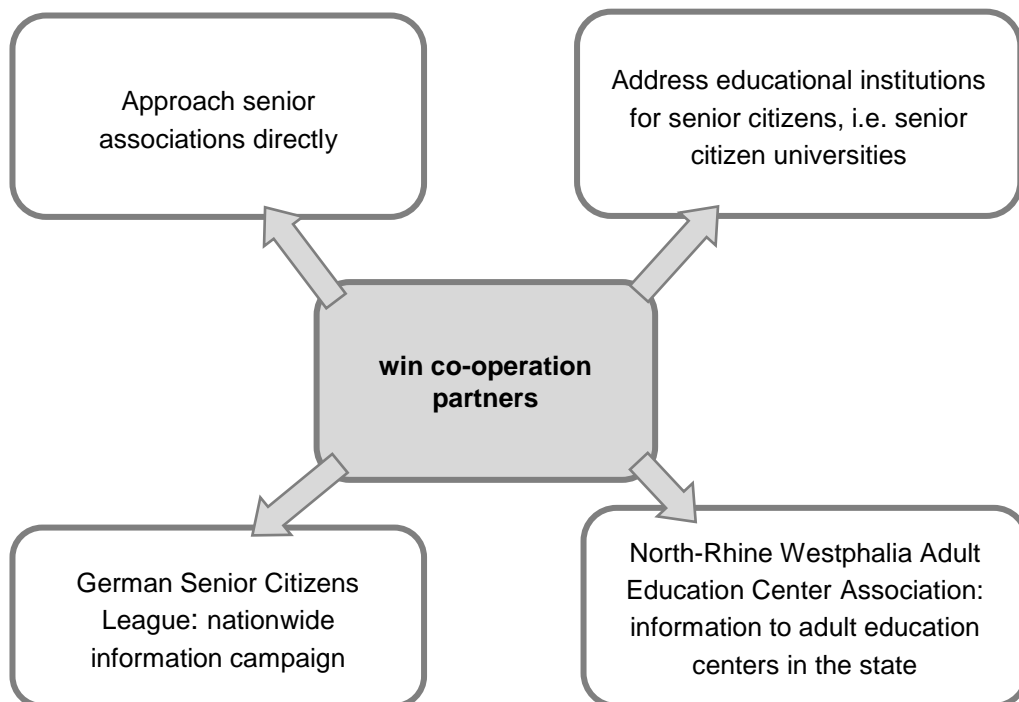


Figure 5: Activities to acquire project partners

5.2.1 Results

Events held in cooperation with **senior citizen universities** generally met our expectations. It proved difficult, however, to secure “support” for newcomers or ensure long-term activities if the community expert was not based locally. Very few participants had the initiative to organize meetings to discuss experiences in the first few months after the course had finished.

Our cooperation with **adult education centers** (Volkshochschule) generally attracted fewer participants, and the few who did come showed much less interest in “joining in”. There was also less interest among the centers in supporting our aim of long-term cooperation. Approximately 50 percent of our events at adult education centers had to be cancelled due to lack of interest. There were often organizational problems at centers that did have a sufficient number of course participants. We were surprised by the differences between senior citizen universities and adult education centers’ approaches to attracting participants, and between the participants’ levels of commitment. This may be because the two kinds of institute address different target groups and because senior citizen universities are generally located in larger cities and can thus reach a wider circle of potential participants.

The information sent to the DSL’s nationwide senior citizen network undoubtedly raised the target group’s awareness of WMDE and the Silberwissen program. However, only around 70 offices replied with enquiries – a disappointing result. Most of the enquiries came from small or very small places. We received 13 enquiries from cities with over 100,000 inhabitants. As the phone calls revealed, smaller places also had problems attracting the minimum number of course participants and providing the necessary infrastructure, such as a room with a sufficient number of computers, a reliable Internet connection for all participants, etc.

5.2.2 Conclusions

Directly addressing senior citizen groups interested in education (via the networks of education institutes or direct contacts in their sphere), rather than wide scale mailing campaigns, enabled us to reach the target groups defined above.

Senior citizen education institutes in larger cities, particularly senior citizen universities, are important potential partners. They were able to provide the reliable technical and organizational framework required for the Silberwissen program. Senior citizen universities can also bring together participants from a wide variety of study courses/programs and make a selection of their material available on Wikipedia.

In the interests of efficiency, our future activities should therefore focus on larger cities. Cities with education institutes of supra-regional significance are particularly interesting. In smaller places, associations dedicated to a specific topic may be suitable partners if they cooperate

with other specialist groups to guarantee a sufficient number of participants and the necessary technical set-up.

Our talks with education institutes focused on improving the long-term impact of the workshops. We discussed various aspects of building up personal contacts to support newcomers and the technical and content-related aspects of working with Wikipedia.

A contact person should be made available to participants after the course. We discussed a range of options including further contact with the community experts, training “Wiki buddies” (former Silberwissen participants who receive good training in small groups and then look after future participants) or closer collaboration with Wikipedia mentors.

We also discussed the possibility of making joint research the basis of collaboration with Wikipedia. Again, many formats are possible, such as informal get-togethers over coffee, tutorials, excursions, intergenerational research events, working groups etc.

Further supporting activities could also be initiated on a local level, for example, Wikipedia group meet-ups with newcomers, or presentations introducing individual editors and their articles. In general, participants should be more integrated in the Wikipedia community through newsletters or circulars targeted at this particular group.

5.3 Building up a network of community experts

Our first step in this direction took the form of a workshop in Ulm with experienced Wikipedians in 2011 to discuss various ways of getting senior citizens interested in working with Wikipedia and to draw up a list of basic contents and outlines for support material. The second step involved bringing community experts from the Wikipedia in Schools and Silberwissen projects together in a nationwide network. Our experts were thus able to communicate with each other more effectively, which had a positive impact on their work and increased their organizational flexibility.

5.3.1 Results

The nationwide network of community experts met a great need for training and information about Wikipedia. We acquired a reputation as a reliable partner for institutes working in senior citizen education.

We added a section on the project as an internal wiki in the education and knowledge platform to facilitate communication among the community experts. This wiki made community expert reports and course materials available to everyone involved in the project and provided an easy way for community experts to discuss course methods, experiences, and results online.

We also held workshops for community experts twice a year. These sessions focused on the methodological approaches in the programs and course materials, and provided a forum for the experts to discuss their experiences.

The qualities course participants most valued in “their” community experts were commitment, expertise, their way of dealing with questions, and patience. Course participants had very different levels of media skills. A few participants were critical of the pace at which the courses were taught. Older participants more often said that they had difficulty keeping up with the pace of the workshops at times.

Based on our own aims and on the experience of SeniorWeb Netherlands and ZAWiW (our project partner in Germany), we set the following **criteria for community experts**. They must have:

- a strong desire to disseminate the ideas of free knowledge and collaborative work – the founding principles of Wikipedia experience as Wikipedia or Wikimedia volunteers, enabling them to introduce newcomers to working and communicating with the Wikipedia community
- an interest in working with older people
- basic skills and – ideally – practical experience of teaching adults or older people, or the willingness to acquire these skills

5.3.2 Conclusions

Enthusiasm for the idea of free knowledge and experience in a wide range of Wikipedia-related tasks are essential criteria for becoming a community expert. Despite their great enthusiasm for free knowledge and Wikipedia, our experts should be able to see things from the perspective of a total newcomer. They should also have the necessary teaching skills and basic knowledge of adult education to respond to varying demands from a small group of participants. Knowledge and experience of working with Wikipedia should be matched by basic knowledge and experience of adult or senior citizen education. To ensure long-term success, community experts are best supported with the following measures:

- **Discussing experiences**
Community experts working with senior citizens or older adults benefit from opportunities to discuss their experiences both online and offline. Regular meetings at well-spaced intervals and an online platform on the topics currently being discussed meet this need. The online platform provides formal details on events, as well as an opportunity to discuss problems, successes, new ideas, and projects.
- **Training experts**
Teaching such a heterogeneous group of people is a very challenging task. Our experts also need to take into account the fact that course participation is on an

entirely voluntary, self-motivated basis. Their job is both to teach participants and to motivate them to work with Wikipedia on a long-term basis. This makes it especially important to equip experts with the necessary methodological and teaching tools for “their” target group. Even if they have experience of adult education, experts still find application-oriented method training useful. We should therefore provide community experts with the necessary support structure in the future.

- Teaching and learning materials

Community experts and course participants made repeated requests for new teaching and learning materials. The support material was used in different ways, both by the community experts and the participants. The additional handouts (see Annex 4) were a welcome supplement, but did not fully meet the participants’ needs for information. An important next step is to develop materials for participants to use at home, and to ensure that teaching and learning materials are aligned.

Community experts make a significant time commitment when they agree to teach a course on Wikipedia. The courses require extensive **preparation and follow-up work**. They can involve up to six sessions, in which our experts have to pace the content according to the group’s abilities. The experts also need to consider the participants’ different interests and varying levels of ability in dealing with computers and the Internet, and to select examples and exercises that correspond to their interests or region. Once the course has finished, community experts also need to be available online for further questions from participants. In addition, they should be willing to discuss their experiences with other experts. Agreeing to teach a course means making a commitment to project partners and course participants. In short, it involves more responsibility than their normal volunteer activities in Wikipedia or other Wikimedia projects.

5.4 Selecting key contents and organizing the courses

The results of the Wikipedia in Schools projects (2010 – 2012) were useful in selecting the basic content and preparing presentations and introductory workshops. We adapted our experiences from workshops with teachers to the needs of senior citizens. We had to develop new methods and exercises for working in Wikipedia for this target group.

Course participants were taught the basic skills they need to process and write articles for Wikipedia and to use images from and upload their own images to Wikimedia Commons. They were also taught the basics of free licenses and free content. (See Figure 6: Module on basic knowledge).

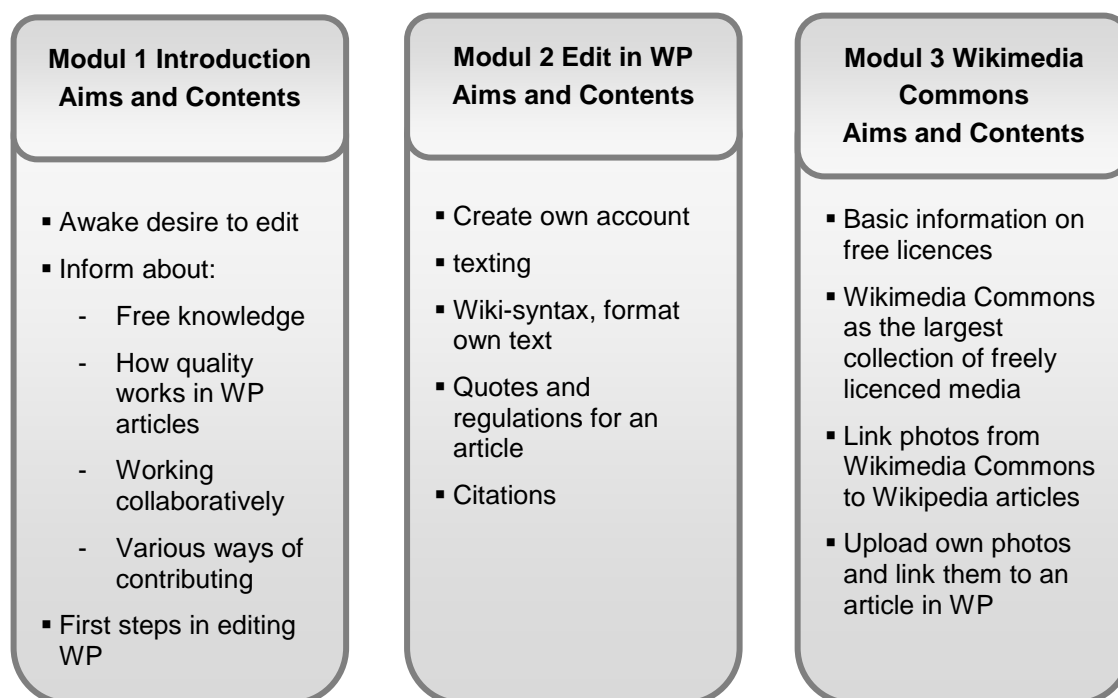


Figure 6: Module on basic knowledge

Many participants had to overcome both technical and psychological barriers during the project. On the technical side, most participants found the syntax in Wikipedia's editing mode unfamiliar and difficult to understand. In psychological terms, many also found new ideas such as the form and style of communication, the fact that anyone can modify an existing text, and the lack of editing or proofreading very hard to accept. Particularly at the beginning of the courses, participants had trouble with the idea that "their" texts could be modified or even partially deleted by any other editor. They found this way of way of working together strange and unappealing. This initial attitude generally changed once the group had done some exercises together and particularly after it had had a positive experience of writing its first article together.

Different organizational circumstances led us to experiment with a variety of ways of teaching the modules listed above:

- Focused teaching units in three to four workshops in two to four-week intervals
- One workshop per month over a period of six to eight months, alternately with and without a community expert leading the group or a session without the community expert
- Compact two-day weekend seminar
- One-day seminars every six months over a period of two years

- Six workshops over a period of three weeks (two workshops a week)

The wide variety of course structures resulted from the different conditions set by our project partners. However, this variety also gave us the opportunity to see what works best for the specific needs of this target group.

During the first few months, we saw while many senior citizens were interested in attending lectures, many of them were less enthusiastic about playing an active part. We therefore took care to emphasize from the start that active cooperation was the aim of the project. The introductory workshops were designed to motivate participants to get involved and to inform them about the way Wikipedia works and the concept of free knowledge (see Annex 4). We discovered that the best approach was to involve course participants actively right from the start. Community experts were therefore advised to gear their workshops towards active participation.

5.4.1 Results

The various workshops allowed the participants to build up contacts with one another and with the community expert, which – as we have seen – is a prerequisite for long-term voluntary involvement with Wikipedia. Reliable personal contact is very important for older people, who turned to “their expert” first when problems came up. Online support structures were of much less importance to them. Despite being recommended by the community experts, participants in this target group made little or no use of Wikipedia’s mentoring program¹⁶.

Our community experts used various approaches and developed their own exercises to give course participants a practical introduction to Wikipedia.

- Using Wikipedia’s “sandbox” for draft texts
- Introducing participants to the talk pages as a quality assurance mechanism for articles
- Exercises using sample texts on the community experts’ subpages with the aim of spotting and correcting errors and inserting footnotes, reference works, and links, e.g. “Liesel von der Post” (see Annex 4)
- Workshop pages in which course participants write an article together, which was put in the Wikipedia article namespace at the end of the course. Example: User:SenUniCo SoSe2013
- Exercises on using the help functions

¹⁶ Volunteer mentors in Wikipedia support new editors when they undertake their first steps; they are available online for questions: <https://de.wikipedia.org/w/index.php?title=Wikipedia:Mentorenprogramm&oldid=122654379>

- Discussions and welcome on the participants' talk pages to introduce them to the concept of collaborative work such as the "spoon exercise" in which participants write an illustrated text about spoons (see Annex 4). Exercises on linking photographs with articles on one's own subpages and uploading one's own photographs on Wikipedia.

Wikipedia benefited from the activities of the new participants. The results listed below are a selection of what was achieved in the courses:

User:Malabon had produced a total of 25 new articles by September 2013, including highly complex ones such as "Aufteilung des Reichsvermögens" ("Succession to Reich assets")¹⁷, which is not yet available in English.

In connection with the group's work on an article about Walter Fürstenau, user:Postmarke04 contacted the rights holders and persuaded them to make two photographs of Fürstenau and 12 images of his artworks available as free content. He uploaded these pictures to Wikimedia Commons and linked them to the article. He also compiled a list of articles on which he plans to work in the future. These articles will also involve a lot of research on using the data as free content.

User:PoMaSy contributed to the article on the Indo-European telegraph line and managed to make a license-free map available on Wikimedia Commons. The article was placed in the *Schon gewusst?* (Did you know...) section of Wikipedia's main page.

User:Kvikk specializes in photographing architectural monuments, uploads the pictures to Wikimedia Commons, and enters them in the relevant list of monuments. He has also written new articles and contributed to others.

During and after the workshop with local historians from the district of Potsdam-Mittelmark, photographs of architectural monuments from three municipalities were uploaded to Wikimedia Commons and are currently being entered into the list of monuments in the towns.

These examples show that the contributions of older people are just as diverse as those of younger editors. Long-standing hobbies, which have allowed people to become an expert on a topic, or a professional background in a particular field, provide a solid basis for people to get involved in Wikipedia and a motivation to share their knowledge with Wikipedia users all over the world.

5.4.2 Conclusions

The course structure that produced the best results in motivating older people to start working with Wikipedia/Wikimedia Commons was a series of successive workshops lasting two-and-a-half to three hours each (including breaks). Our results show that no more than one week should elapse between the various workshops. This structure enables course

¹⁷ https://de.wikipedia.org/w/index.php?title=Aufteilung_des_Reichsverm%C3%B6gens&oldid=122516013
(version of September 13, 2013)

participants to gradually familiarize themselves with the subject and gives them time to absorb what they have learnt and to try out some things for themselves at home, such as setting up their own account or collecting material for a group article.

Most participants found the handouts (Wikipedia 1 x 1, Wikimedia Commons, the Wikipedia homepage with explanatory notes, and a handout of key terms with space for the participants' notes) very useful. We did, however, receive many suggestions on how this material can be improved and what other materials should be developed. We will be working on these suggested improvements this year with the aim of producing better teach-yourself materials.

Community experts want teaching and learning materials to be more closely aligned. Developing guidelines for contributors would provide better support for new editors and the learning process both during and after the workshops.

While the importance of personal contacts during a voluntary learning process cannot be underestimated, the availability of supplementary online support providing first-hand information and opportunities to refresh or expand on knowledge gained during the workshops is equally important. It is also worth remembering that not everyone can attend offline courses for reasons of distance, limited time, etc. Providing online user guidelines would make basic information available to potential contributors irrespective of where they are based.

5.5 Evaluation

In evaluating the events, we aimed to assess the courses, community experts, and education institutes from the point of view of all those involved. To achieve this, we used a variety of complementary measures (see Figure 7: Evaluation measures).

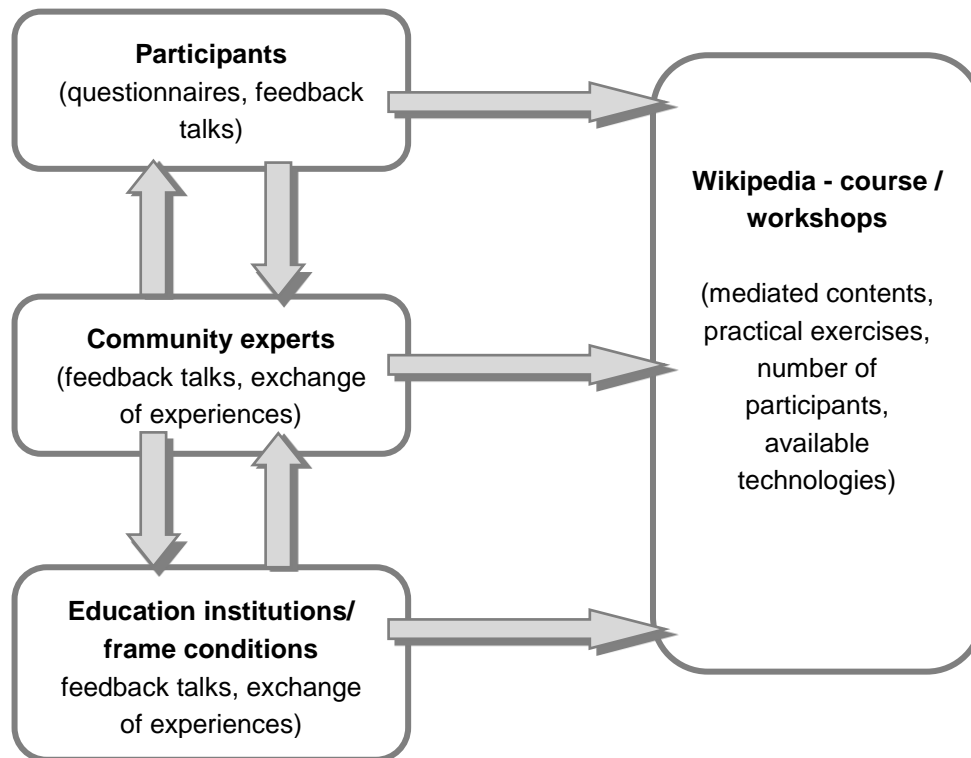


Figure 7: Evaluation measures

- Evaluation of questionnaires completed by Silberwissen course participants (see Annex 7)
- Reports by community experts during the forum and discussions at the workshops for community experts
- Sitting in at workshops by Education and Knowledge Department staff members and evaluation with the community experts afterwards
- Workshops with education institutes and regular telephone interviews after the end of a course

- Master's thesis by Annette Kintzi¹⁸ (interviews with participants, community experts, education institutes, and course observation)

Most education institutes also conducted concluding evaluation talks with the relevant community experts and participants. While the first three measures made it possible to gain feedback promptly and to adapt the courses as required, the aims of the sessions with the education institutes and community experts was to provide a forum for sharing experiences and to offer advice on fundamental issues, such as how to encourage people to work with Wikipedia and the length of the courses.

Evaluating the questionnaires provided insights into the kinds of Wikipedia activities that participants might like to undertake in the future. Between a third and a half of the participants said that were still unsure about whether they would continue to use Wikipedia/Wikimedia Commons after the course. Between a quarter and two thirds said that they would continue to use them. These proportions tended to be lower in adult education centers. Apart from a few exceptions, most community experts estimated that roughly the same proportion of "their participants" would continue to use Wikipedia and Wikimedia Commons after the course. There is no way of ascertaining how many participants have continued to use Wikipedia. Following an in-depth discussion with community experts, it was decided that they should not continually "check-up" on "their" participants. Statistics gleaned in this way could only ever be approximate, as some participants no longer use the account they set up during the workshop and would not necessarily inform "their" community expert that they were now using a new account.¹⁹

The various complementary methods used to evaluate the courses/workshops and those involved in them generally yielded workable results. The questionnaires showed that almost all participants had a positive opinion of the community experts. Community experts also received feedback on points not included in the questionnaire or more specific feedback on some of the more general questions during evaluation sessions with participants and education institute representatives. In turn, the community experts' experiences with the respective education institutes and participant groups provided a basis for evaluating the education institutes' suitability as future partners.

The outcome of the session with the education institutes also provided very useful guidance on how this work should continue in the future (see Point 5.2.2 – Conclusions). The session provided a forum for focused discussion about the experiences of those involved, as well as an opportunity to talk about how to attract more participants and ensure their long-term

¹⁸ Kintzi, Annette: Senioren und Online-Communities: Analyse von Bildungsmaßnahmen zur Aktivierung und Einbindung von Senioren in die Online-Community Wikipedia im Rahmen des Projekts „Silberwissen“. Master's Thesis at the University of Education, Heidelberg, 2012.

¹⁹ Lienhard Schulz (community expert): "Since it is unclear if the user accounts created during the course are continued to be used, or whether the people who continue to edit create new accounts for themselves, the number is hard to estimate. Especially in the last three courses which I conducted (FTZ Oct 2012, Akademie Nov 2012, Akademie Mar 2013), there were great sentiments of reservation. "Everything I do here now will always and forever be published and visible?" - that is to say that for some new editors, the idea that their first footsteps in Wikipedia were forever documented, if they continue to use the same user account, was embarrassing. To make the matter worse, in one of the courses, some blocking action took place, thus all of the accounts had been blocked for a while. I have encouraged these participants to create a new account for new contributions, about which we naturally have no knowledge.

interest. The discussion elicited a range of ideas and suggestions. This session also facilitated a direct and indirect evaluation of the community experts' work, which helped to define what is required of community experts.

5.6 Accessibility for the disabled

To improve disabled people's access to Wikipedia, various adjustments and extensions have been made to its MediaWiki software. Options for future improvement have also been evaluated. Many of the changes that we made were suggested in a 2011 report produced as part of the TAO project by the Access for All association to show which issues were hampering Wikipedia's accessibility. In addition to the problems highlighted in the report, the adjustments also addressed some problems pointed out by users. As well as the problems outlined below, a list of the software adjustments that have been carried out or are currently under review is included with this report (see Annex 8). An example of the kind of software adjustments that have been made was to add more detailed footnote links (“↑”), as this functionality is often only visual and cannot be accessed by screen-reader users. The initial idea here was to use WAI-ARIA attributes. Despite collaborating with Lisa Seeman, who helped to define the WAI-ARIA standard, we were forced to abandon this approach due to its poor or inconsistent implementation across different screen-reader or browser combinations. Although WAI-ARIA is theoretically the right approach for improving websites for screen readers, implementation has proved difficult in practice, as WAI-ARIA is defined very loosely and many screen readers and browsers do not support WAI-ARIA attributes at present or only support it to a limited extent. To resolve this problem, we found alternative options in some cases (e.g. using elements hidden via CSS instead of the ARIA label). Development also dragged at times due to poor implementation, as it was necessary to test the suggested adjustments thoroughly to ensure that they would be supported by the largest possible number of screen readers and browsers.

The review process required for MediaWiki adjustments is another factor that slowed development and is still holding back a large number of adjustments. As MediaWiki, like many other open source projects, relies on volunteers with very limited time to carry out these reviews, it is sometimes subject to long delays. This was particularly true of the adjustments to ensure accessibility for people with disabilities, as only a few volunteers are qualified to check whether adjustments are accessible. However, the community's close involvement in the development process also meant that we found some volunteers had already solved problems mentioned in the report without our knowledge. Volunteer software developers who made software adjustments as regards accessibility for the disabled were also supported by our reviews.

Many of the problems identified in the above-mentioned Access for All report are also not necessarily attributable to the software, but rather to the poor semantic quality or incorrect formatting of content produced and administered by the Wikipedia community. We therefore established contact with technically-minded Wikipedia editors to try to raise awareness about the issue and to suggest possible improvements.

The situation should improve in the future, particularly with regard to information boxes, as it recently became possible to use Lua scripting language in templates, thus making it far easier to use more complex HTML script. There are also plans to design templates that can incorporate data from the Wikidata project. The formatting templates for the hundreds of different information boxes will be consolidated and simplified in order to ensure the appropriate use of Lua and incorporation of external data sources. This process should make it much easier to create a semantically correct markup.

The mobile version of Wikipedia is another relatively new project that could be relevant for users with visual impairments. It has yet to be determined whether the site is sufficiently accessible to people with disabilities and to improve it if necessary. The site seems to be suitable for many screen-reader users, as its simplified structure, which omits features such as unnecessary navigation toolbars, should be easier to use than the desktop version, which has many more functions. In the long term, this page could also serve as a template for a simplified “skin”, which is specifically aimed at making the site more accessible to people with disabilities.

In general, we and the Wikimedia Foundation are always looking to optimize our websites and software to ensure greater accessibility to people with disabilities, as well as to improve the support provided to volunteers working in this area.

6 Summary and recommendations

With the TAO project and its sub-project Silberwissen, we are pursuing new ways to incorporate older people’s knowledge potential into the Wikipedia encyclopedia. When the project was launched and run, no comparable experiences or insights from other Wikipedia chapters were available. We discussed the topic of learning in old age with TAO partner organizations to the mutual benefit of all those involved.

The results show that senior citizens who are open to new challenges and interested in new educational opportunities can contribute valuable content to Wikipedia, thus helping to fill in many of the content gaps in the worldwide Internet encyclopedia.

At the same time, it was clear that the majority of participating senior citizens were only able to become active members of Wikipedia and Wikimedia Commons with the support of experienced Wikipedians. Help is particularly necessary in overcoming the following obstacles:

Participants were not familiar with wiki markup, and in general found it difficult to understand. They need to be highly motivated to overcome this obstacle. Further development of the VisualEditor could also facilitate access.

The **process of working with Wikipedia** (collaboration) and a basic understanding of free knowledge are completely new concepts for senior citizens, and they initially approach the activities with great reluctance. Not everybody was immediately convinced that “their” texts

and “their” images on Wikipedia or Wikimedia Commons were improved by the input of other Wikipedians. This attitude generally changed once the participants had become familiar with the process.

Writing an article for Wikipedia presents significant challenges in terms of content and regulations. Due to technical obstacles, these priorities often took a backseat. However, they are extremely important factors when working with Wikipedia. Senior citizens who are familiar with such technology through their former professions or their hobbies find the task much easier.

People need to be highly motivated in order to overcome these obstacles, as participation in Wikipedia is voluntary. However, voluntary participation in Wikipedia and other Wikimedia projects often faces competition from other voluntary activities, particularly in the case of senior citizens. **An interest in a topic is the most important factor in generating interest among senior citizens** and a persuasive argument for becoming active in Wikipedia. The motivation provided by such interest is of vital importance in encouraging senior citizens to overcome the technical and communication obstacles.

This thematic approach is most successful with clubs and associations whose main activities can increase the diversity of the topics covered in Wikipedia. Such topics include the preservation of local traditions, nature conservation and the history of the natural sciences. The participation of support groups from museums, libraries, and cultural institutions is also very useful.

Another important **area of access is via senior citizen universities and academies**, where senior citizens deal with topics of interest to them. If we were able to make the results of their voluntary work available worldwide, this would be an effective incentive for participation.

The participants need good computer and Internet skills in order to be able to cope with the wide range of steps involved in editing and drafting articles or in uploading photographs in articles. Recently retired people who have competences and skills from their work are at a clear advantage here. Moreover, these people are less likely to already be doing voluntary work than older senior citizens who have often found a new role.

In recent years, it seems that the name of the program has mainly attracted older senior citizens; the 50 – 60/65-year-olds tended to be of the opinion that they were younger than this “Silver Knowledge” target group. In order to attract older contributors and other underrepresented groups to Wikipedia, we should use a name that does not address any particular feature of the demographic. The focus should be on the activities and on the voluntary commitment to working with Wikipedia.

The results show that older people place great importance on **direct and personal contact with community experts** and other participants. Voluntary learning means more than just the acquisition of knowledge; it is also a social process. We need to take this fact into account in our introductory courses on working with Wikipedia. This places **certain demands on the community experts**. Enthusiasm for the idea of free knowledge and experience in a wide range of Wikipedia-related tasks are necessary but not the sole requirements for a

community expert. Experts must also be able to generate or increase the participants' motivation and put themselves in the place of participants who have never experienced the inner workings of Wikipedia. Such a role requires patience, methodology skills and, where possible, experience in adult and senior education.

High-quality learning material is extremely important for learning both in a group and independently. We need to develop material that allows people to independently acquire the basic skills needed for working with Wikipedia, irrespective of the formats of future educational services. This material should be supplemented by online services that encourage participation and introduce Wikipedia editors to new topics in a well-edited, attractive format. These services can be made available on digital platforms such as the nationwide and publicly accessible lecture platforms of senior citizen universities.

The fact that older people have more free time fundamentally means that they can be more active in Wikipedia than people who are still working. These possibilities can be used to attract new editors and therefore new content for Wikipedia. Over the last three years, we have been working with community experts to develop a framework and approaches for the successful integration of older participants. We should make use of the “potential of age” in the development of topic and writer diversity in Wikipedia and other Wikimedia projects.

7 Publications on the project

Richter, Pavel: Projekt Silberwissen – den Erfahrungsschatz von Senioren für die Wikipedia erschließen. In: Kampmann, Birgit et al.: Die Alten und das Netz. pp. 330-337, Wiesbaden, 2012.

Projekt Silberwissen. In: German Senior Citizens League newspaper “aktiv” of August/September 2013, pp.12-14.

Wissen ist Silber. In: German Senior Citizens League newspaper “aktiv” of November/December 2011, pp.10-11.

Schmidt, Elvira: Ältere Menschen teilen ihr Wissen in der Wikipedia. In: Tekster, Thomas (et al.): Senioren im Web 2.0, Schriftenreihe zur digitalen Gesellschaft NRW, Vol. 1 of September 2013, Marl, pp. 97-105.

8 Bibliography and sources

Age structure of Wikipedia editors 2008, as on September 28, 2008, version of September 16, 2009. URL: http://de.wikipedia.org/wiki/Wikipedia:Die_Wikipedianer/nach_Alter

2008 report on online training in the Wikipedia:Generation 50+ project. URL: http://wiki.wikimedia.de/wiki/Generation_50plus/Bericht_zur_ersten_Online-Schulung and

http://wiki.wikimedia.de/wiki/Generation_50plus/Bericht_zur_zweiten_Online-Schulung

(version of March 10, 2011).

Cariolato, Silvia: Gruppenarbeit in EDV-Grundlagenkursen. In: e-Learning in Later Life 2006-2008, pp.28-30, Ulm 2008.

De Groote, Kim: Entfalten statt liften. Munich 2013.

Discussion on the 50+ project in Wikipedia:

http://de.wikipedia.org/wiki/Wikipedia_Diskussion:Silberwissen/Archiv_2009#Thema_1

(version of July 1, 2013).

Gerhards, Maria and Anette Mende: Offliner: Ab 60-jährige Frauen bilden die Kerngruppe, Ergebnisse der ARD/ZDF-Offlinestudie 2009. In: media perspektiven 7/2009.

Hietaluoma, Annelie and Sajanao, Milla: Geronet project: - ICT Skills for Seniors. In: e-Learning in Later Life 2006-2008, pp. 65-66, Ulm 2008.

Kintzi, Annette: Senioren und Online-Communities: Analyse von Bildungsmaßnahmen zur Aktivierung und Einbindung von Senioren in die Online-Community Wikipedia im Rahmen des Projekts „Silberwissen“. Master's thesis from Heidelberg University of Education, 2012.

Active seniors – European educational projects for and with seniors in the Grundtvig Programme conference, Ulm 2009.

KEMP market analysis report – summary. KEMP (keep employment by developing e-skills) ReFIT e.V. Germany, undated.

Merz, Manuel: Wikipedia Editor Satisfaction Survey. First impressions. WikiCon, Nuremberg, September 9 – 11, 2011, www.purl.org/merz/20110909.

Projekt TAO/Silberwissen on Wikiversity.

<http://de.wikiversity.org/w/index.php?title=Projekt:TAO/Silberwissen&oldid=331715> (version of June 12, 2013).

Richter, Pavel: Projekt Silberwissen – den Erfahrungsschatz von Senioren für die Wikipedia erschließen. In: Kampmann, Birgit et al. (ed.): Die Alten und das Netz. pp. 330-337, Wiesbaden 2012.

result GmbH: Report on the results of the study “Web 2.0 und die Generation 50+” Cologne 2007.

Schmidt, Philipp and Ruediger Glott: PRELIMINARY ANALYSIS OF WIKIPEDIA SURVEY DATA, Topic: Reasons for non-contribution. United Nations University MERIT, April 2009.

Schroer, Joachim: Wikipedia: Auslösende und aufrechterhaltende Faktoren der freiwilligen Mitarbeit an einem Web-2.0-Projekt. Dissertation, Würzburg 2008.

Semberova, Janá: Opportunities and perspectives of lifelong learning in older age. In: e-Learning in Later Life 2006-2008, S.18-28, Ulm 2008.

TNS Infratest und Initiative D21: (N) Onliner Atlas 2008. June 2008.

9 List of annexes

Annex	1
List of local project partners	
Annex	2
Checklist for project partners	
Annex	3
Checklist for community experts	
Annex	4
Range of materials and exercises	
<ul style="list-style-type: none">• Introductory lectures on Wikipedia (Ralf Bösch, Dr. Uwe Rohwedder, Raimond Spekking)• Tips and recommendation to prepare workshops• Developing topics and exercises for a Wikipedia course (two examples)	
Annex	5
Wikipedia homepage with notes	
Annex	6
Handouts/notepads for participants	
Annex	7
Questionnaire for participants	
Annex	8
List of the software modifications that have been made or are under review	