

Eötvös Loránd University Faculty of Education and Psychology

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Thesis of Doctoral (PhD) Dissertation

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The Role of Service Dogs in Social Integration – the Results of An Emancipatory Research

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I. THE BACKGROUND AND RELEVANCE OF THE RESEARCH

1.1. The reasons for choosing the topic

I chose the topic of my research based on my example. I was born with severe hearing impairment. Thanks to my parents', remedial teachers' and teachers' work over many years, I learnt to lip read and speak - making use of my minimal residual hearing as effectively as possible. My daily life is facilitated by two certified hearing dogs. In my free time, I assist the NEO Hungarian Non-Profit Service Dog Association as a founding member, programme leader and volunteer. I regularly have attitude forming sessions at kindergartens, schools and workplaces with my service dogs.

Inclusive research approaches that have been present from the 1990s support the joint, equal work of partners with and without disabilities in researches. If the disabled (e.g. mentally disabled) people participate in the research as partners, it can be defined as **participatory research**. In the case of emancipatory research, the entire process is led by suitably qualified, competent disabled people. My doctoral thesis constitutes as **emancipatory research** since I coordinated the research as a hearing-impaired remedial teacher-sociologist and service dog owner. As these trends find the presentation of personal aspects important as well, I also reported on my personal experiences in some parts of my thesis (Barnes, 2009; Bergold & Thomas, 2010; Marton, 2014; Sándor, 2018).

I realize it on a daily basis that service dogs – supplementing other assistive tools (e.g. hearing aid, wheelchair), of course – can facilitate their owners' social integration through emotional and physical assistance. However, in Hungary, there is little evidence-based research on the impact assessment of the use of service dogs (Loványi, 2018a, 2018b). My doctoral research seeks to fill this void as well since comfortability is significant for the topic (Babbie, 2008).

1.2. Problem statement

Nowadays, several types of service dogs are available in Hungary as well: (1) guide dogs, (2) hearing dogs, (3) dogs for the mobility-impaired, (4) dogs for personal assistance (e.g. for people with panic disorder or autism), (5) seizure-alert dogs (e.g. for epileptic or diabetic owners) and (6) therapy dogs, of which the best-known in the public mind is the work of the guide and therapy dogs (Loványi & Perlusz, 2016). According to the public database of the central umbrella organisation, the Hungarian Service and Therapy Dog Association (Hungarian Service and Therapy Dog Association [MATESZE], 2020), in Hungary, 208 certified guide dogs and 449 therapy dogs have official certifications, while only 3 seizure-alert dogs and 9 hearing dogs facilitate their owners' daily lives (website of MATESZE).¹ However, based on our surveys (e.g. Loványi & Mányik, 2011; Molnár, 2017) and the data on the waiting list of the NEO Hungarian Non-Profit Service Dog Association (NEO Hungarian Non-Profit Service Dog Association [NEO MSKE], 2020), there is demand for the training of considerably more service dogs.

The work of service and therapy dogs is often needed in environments where animals are not allowed otherwise, the specially-trained dogs do not only work at home or on the streets. For instance, visually impaired or mobility-impaired owners rely to a large extent on the assistance of their dogs, deaf or partially deaf people might need their service dogs for sensing the fire alarm signal at an accommodation establishment and they often have dog therapy sessions at schools, hospitals or even retirement homes (Cole, Gawlinski, Steers &

¹Data from January 2020.

Kotlerman, 2007; Grigore & Rusu, 2014; Kovács, Bulucz, Kis & Simon, 2006; Loványi, 2018a).

The existing law provides different rights for the owners of service dogs to facilitate independent living. Even *Section 7/C of Act XXVI. of 1998 on the rights and equal opportunities for persons with disabilities* highlights that disabled individuals can take their service dogs to the territory of a body, institution, service provider providing public services with areas open to all.

Regulation 27/2009 (XII. 3.) of the Ministry of Social Affairs and Labour on the training, examination and applicability of service dogs, which entered into force on 11 December 2009, also provides various rights for people using service dogs (owners, habilitation trainers).

The UN Agreement on the rights of disabled people (Act XCII. Of 2007) lists and lays down disabled people's most significant rights, to the practice of which a specially-trained service dog can contribute considerably (e.g. equality and non-discrimination, mobility and safety, independent living and being included in the community, access to information, job access and employment, participation in cultural life).

According to the people involved and media reports (Népszava Online, 2014; hvg.hu, 2019), the operators and holders of the facilities in question are not familiar with the legal background regarding the training and application of service dogs, therefore they sometimes prevent the owners from obtaining public services and being in areas open to all with their dogs. Hence, the disabled owners can be inconvenienced (e.g. the security guard asks them to leave with their service dogs) The Commissioner for Fundamental Rights has also dealt with this issue (the report No. AJB 2663/2013 of the Commissioner for Fundamental Rights).

Several national and international literature sources discuss the topic of (service) dogs, although they appear in different studies (e.g. Miklósi, 2010; Szánthó, Miklósi & Kubinyi, 2017; Topál, Erdőhegyi, Mányik & Miklósi, 2006) due to aspects different to the orientation of the dissertation. Moreover, the few available research results (e.g. Eddy, Hart & Boltz, 1988; Herlache-Pretzer et al., 2017; Lane, Matthews, Ellison & Palmer, 2016) usually focus on particular sub-areas, service dog types (e.g. the quality of life of owners of dogs for the mobility-impaired or guide dogs). At the same time, being a remedial teacher-sociologist and affected person, the need arose in me for a comprehensive, complex research from the aspect of one of the most significant questions of special-needs sociology, the (re)integration of people with disabilities (Bánfalvy, 2016).

1.3. Objectives, research questions

It is obvious, even at the level of the problem statement, that the success and acceptance of the use of service dogs, and effectiveness of the owners' social integration are influenced by several related individual and environmental factors.

My research is exploratory and descriptive as in the light of legislation and the national/international experiences, I intended to assess:

- how service dogs are applied on a daily basis in Hungary.
- how familiar the representatives of bodies, institutions and public service providers are with the different custom-trained service dog types and the legal background.
- what factors affect the acceptance of service dogs among the public service provider institutions, in the facilities open to all (e.g. shops, accommodation establishments, means of public transportation) where service dogs can stay with their owners and trainers without restrictions, according to the existing laws.
- how service dog influence, facilitate their owners' social integration and the success of their integration into the community.

I analysed the topics outlined in the objectives along six key questions:

1. The exploration of the current national and international situation in the light of the laws and the success of social integration.
2. The analysis of the factors affecting the acceptance and assertion of the rights of the people using service dogs (social aspect).
3. The examination of the effects of service dogs (based on owners' reports) in addition to physical help (e.g. alerting owners to sounds, carrying baskets) and the examination of social acceptance (beyond the physical and psychological aspect).
4. The comparison of experiences of the methods and analytical procedures used to reach the different target groups (questionnaire survey, interview-based survey, evaluation of data with a statistical computer program, "qualitative" (comprehensive, interpretative) text analysis, using a content analysis software).
5. Based on the results, a proposal for improving the situation.
6. By developing an impact pathway map, I pre-tested and validated the action plans suggested for realisation (e.g. exploring mutually supportive connections, defining the specific goals/priorities, exploring the necessary interventions and their expected effects).

II. THE FEATURES AND METHODOLOGY OF THE RESEARCH

2.1. Research questions

Based on literature sources, my own experiences, reports of service dog owners in my social circle and news in the press, I formulated the following questions:

1. According to service dog owners, do their dogs facilitate their social integration (e.g. communication, transportation, participation in community programmes)?
2. In service dog owners' views, how has the acceptance of service dog changed in the past three years in Hungary?
3. Do international practices differ – for instance, regarding the acceptance of service dogs, their owners' access to (public) services?
4. Do disabled people using service dogs face the fact that their rights to equal access to (public) services are infringed in daily life?
5. Are the interviewed representatives of (public) service providers familiar exactly with the different types of service dogs and the legal background concerning them?

2.2. The structure and timeline of the research

Under the objectives of my research, the interviews started by involving a relatively homogeneous sample. I developed several alternatives to the investigation instruments, adapted for the features of the four sub-samples (e.g. age). These build upon one another (questionnaire survey – interviews):

1. questionnaire survey of Hungarian and foreign adult (18+) service dog owners.
2. in the case of Hungarian and foreign minor (under the age of 18) owners, the survey of parents/guardians.

It was the English version of the questionnaires that I sent to the foreign subjects. Based on the features of the different international practice, I made some minor

modifications to the contents of the surveys in the foreign language (e.g. not every country has a legal background regarding service dogs).²

3. interviews with service dog owners.
4. interviews with employees/managers of bodies, institutions and service providers providing public services.

The questionnaire survey was preceded by a preliminary orientation, the organisation of personal experiences and knowledge, and conversations with the subjects. These spontaneous activities created the basis for the relevance of the system of the questionnaire and the measuring tool. After the questionnaire survey, I created the interview questions for the service dog owners and the employees of the service provider institutions, taking into account the results of the survey (Horváth, 2004; Szokolszky, 2004; Seidman, 2002).

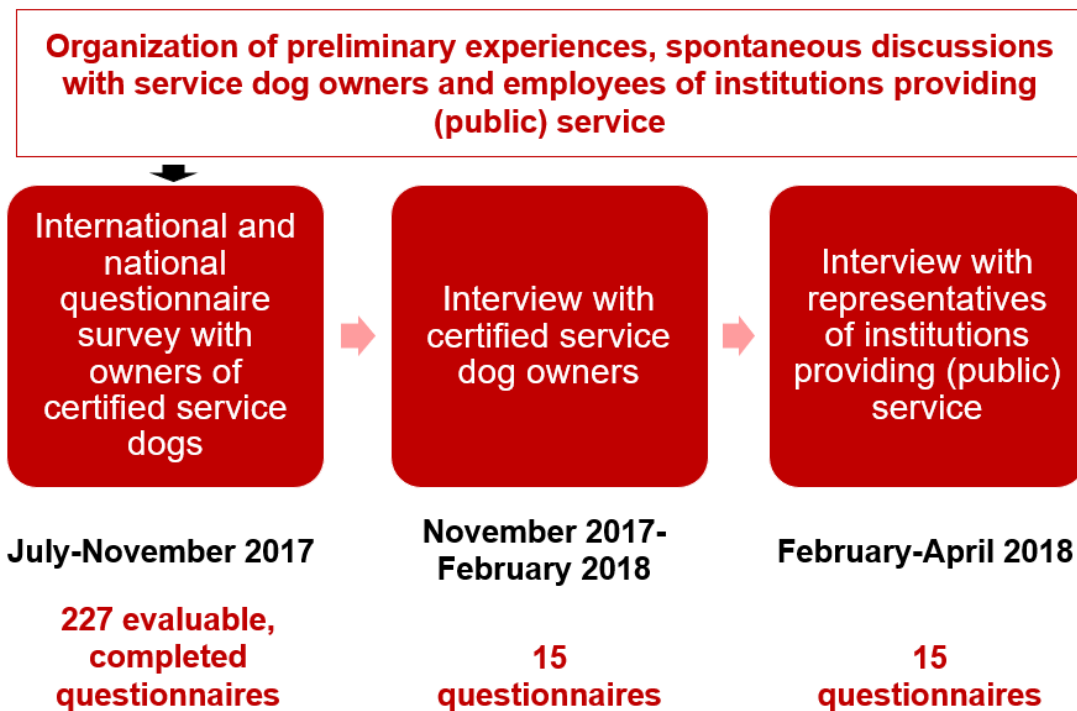


Fig.1 The research process³

In every phase of the research, I put emphasis on involving experts by experience (e.g. an adult owner and the mother of a child with multiple disabilities using a service dog delivered their opinions on the drafts of the questionnaire and the interview). They also regarded the issue as their own; the examined topic was of personal interest. These aspects are also important principles of the inclusive approach (Björnsdóttir & Svendsdóttir, 2008).

While processing the evaluable questionnaires received, I was trying to answer the research questions mainly by summarizing the quantifiable data and analysing the contents of the responses during the interviews (30 interviews altogether). During the data analysis, I took into account the fact that the questionnaire survey was not based on random sampling as it was not a relevant, feasible way during the exploratory research.

²Examples for foreign countries: Australia, Germany, England, Canada, Israel, South Africa.

³Source: own compilation.

The questions outlined in the objectives required the research to be carried out with a complex methodology. The processing of the quantifiable data and the qualitative text analysis were both necessary in the exploratory research. In my dissertation I demonstrated and utilized the complementarity between them.

My research has undergone the review and arbitration procedure of the Research Ethics Committee of Bárczi Gusztáv Faculty of Special Education of Eötvös Loránd University (authorisation number: KEB/2017/012).

2.3. Presentation of the samples

I. International and national questionnaire survey with service dog owners

The sampling subjects of the questionnaire survey may conform to the followings aspects:

1. service dog owners,
2. the respondents were at least 18 years old (in the cases of minors, the parents/guardians respond to the questionnaire),
3. they own a certified/qualified service dog.

I found it important, based on the subjects' ages, to be expected that they have their own independent views and definite conceptions on the topics of the questionnaire. At the same time, I wanted to know how the use of service dogs works out in the case of children, so I involved the parents/guardians in the research (2). I sought the owners of certified/qualified service dogs to fill in the questionnaire. Therapy dogs form a completely different category: it is not their owners who they help directly. The so-called emotional support dogs that are common in the United States in particular, can escort their owners, for instance on flights, even without special preliminary training (1). I was trying to interview the owners of certified service dogs in the first place; however, not every country has a standardized system of exams (e.g. the United States of America does not have it either). In this case, I accepted the criterion that a qualified service dog facilitates the owner's daily life (3).

I endeavoured to send my questionnaires to the potential subjects as widely as possible. I tried to reach as many potential respondents as possible – in accordance with my sampling aspects – through the following “routes”:

- foreign and national training organizations,
- experts (e.g. trainers),
- the public database of MATESZE,⁴
- Facebook groups,
- Internet forums, mailing lists,
- events, service dog camps,
- service dog owners.

So the respondents were addressed similarly to the “snowball method”. I relied heavily on the network relationships and thematic communities available to me. Then the respondents forwarded the questionnaires to several of their acquaintances as well. This method is recommended to use if the preliminary specification of the members of the community proves

⁴On this link, the data of all service dog-owner pairs' who took the exam in Hungary can be found (e.g. name, type of disability, training organization).

difficult or there is no available list/database for sampling. During my research, mainly the latter problem arose (Babbie, 2008; Sajtos & Mitev, 2007).

II. Interviews with service dog owners

In the first part of the interview-based examination, I targeted 15 service dog owners who live in Hungary (individuals applying guide dogs, dogs for the mobility-impaired, seizure alert-dogs and dogs for personal assistance). I expected, even on the basis of my preliminary information, that the subjects constitute quite a heterogeneous group (regarding, e.g. age, the type of dog applied, qualification, place of living, occupation).

As the “society of service dog owners” represents a rather small sample, I tried to reach the interviewees, who satisfied the above-listed sampling criteria, by involving other service dog owners (snowball method).

The design of the final sample was determined by the available people who had relevant information on the topic. I chose 15 of them as interviewees, taking the following criteria into account:

- preferably every service dog type should be represented by two or three adult (18+) owners who have independent opinions on the topic,
- we should preferably be “strangers” to each other so that a stronger relationship between us (e.g. friendship) could not influence the process and outcome of the interview – ideally, I considered one or two superficial exchanges of letters in the past or brief meetings acceptable when including someone in the sample (due to my personal concern, I have attended several service dog-related events and professional forums myself),
- they should have at least 3 years of experience in “life with a service dog”,
- they should preferably live in or near Budapest – I wanted to explore the experiences in Pest county in the first place as there are other influencing effects in further locations in the countryside due to, for instance, the different dog-ownership culture.

Only few of each service dog type work in Hungary (e.g. during the research, only 2 certified seizure-alert dogs were working in Hungary). Therefore – despite all my efforts –, apart from the first aspect, not every expectation was met at the same time in all the cases. I found it important to get as diverse an image as possible regarding the application of service dogs (e.g. I also conducted interviews with hearing-impaired owners, owners living with a neurological problem and panic disorder, owner who is hearing and mobility impaired at the same time and the mother of child who is affected by autism).

III. Interviews with representatives of institutions providing (public) services

Beyond the interviews with service dog owners, I had conversations with the operators/employees/managers of 15 open-to-all institutions providing (public) service to become more familiar with the opinion of “the other side”.

The sampling happened with the participation of service dog owners: I asked them first if they had any experience, gained within the past year, of service provider institutions (e.g. accommodation establishments) where they were allowed in without a problem or they were

not allowed in – despite the possibilities defined by law.⁵ Then, one by one, I wrote to the locations on the list I thus created and invited them for an interview.

I had conversations with the representatives of transportation companies, shops, accommodation establishments, hospitals, swimming pools, zoos, the fire department, police department and emergency service. The criteria for selection of institutions are shown in the following chart.

Chart 1: Selection criteria for the interviews with representatives of institutions providing (public) services

	<i>Positive experience when using the service (+)</i>	<i>Obstacles encountered when using the service (-)</i>
TRANSPORTATION	transport company	airline
<i>Respondent</i>	driver	pilot
<i>The service dog owners' accounts</i>	<i>„... The bus driver turned wide eyes on me when I told him that service dogs do not need muzzles. He apologized, and then asked questions kindly. It could clearly be seen that he had a genuine interest in the world of service dogs.”</i>	<i>At a foreign airport, we were heading off to the security check after checking in, when suddenly a fierce-looking female security guard came up to us and strictly told us to leave the line, only guide dogs could board the plane. We were treated as if we were criminals; all eyes were fixing on us. It was quite an unpleasant feeling. We told her that we had a permission to travel with a dog for the mobility-impaired on the flight, we had agreed on it with the airline in advance and we had a written confirmation as well... The customer service back at home was phoned, where they finally said that we surely could not travel with this dog. We asked why we had been taken abroad at all. The answer was that the airline made a mistake that time, but this time they surely would not make one... We were overwhelmed with tremendous panic and despair. We were 1400 km away from our home.</i>
<i>Was my service dog present at the interview?</i>	no	yes

I took with me my service dog to the interviews in the institutions providing services: on the one hand, the reactions were useful examination experiences; on the other hand, they could see such a situation. As the presence of my service dog could have influenced the outcome of the discussion (either in a positive or negative way), I attended only half of the interview with my service dog. I selected these locations on the basis of the experiences of the organisation (e.g. preliminary reactions, feedback from the institutions), agreeing on it with the subjects in advance (so nobody would be taken by surprise by the fact that my service dog was joining).

⁵I did not only ask for the opinion of people using service dogs who I interviewed (15 people) but also that of other people as well.

2.4. The analysis of the results

Thanks to probably my individual concern, I could easily reach and motivate the service dog owners. I could also define those relevant analysis criteria along which I evaluated the data with the **SPSS software** (quantitative research)⁶ and the method of **content analysis** (qualitative research). As I know the world of service of dog owners well, according to my own judgement and the opinion of the experts by experience, too, I managed to highlight the substance from the interviews, on the basis of my criteria, and thus supplement the quantifiable data obtained from the survey (Sajtos & Mitev, 2007).

However, I encountered difficulties when approaching “the other side”, that is, the institutions providing (public) services, probably due to the topic and my disability: at the beginning, they did not really “feel a sense of ownership” of the research. As I was not competent in their fields either and found it important to get to know their viewpoints as objectively as possible, I did not find it enough to define the analysis criteria myself (as in the case of the service dog owners), so I carried out the coding of the responses with the **MAXQDA software** (Sántha, 2013).

III. THE SUMMARY OF THE RESULTS

3.1. Answering the research questions – formulating new scientific results

I summarized the results of the research based on processing the questionnaires and interviews in the following theses which answer the questions formulated at the beginning of the research and concern the new questions (see especially Thesis 2, 7, 8).

Thesis 1: In the case of owners using certified service dogs, the dogs highly facilitate their social integration (e.g. communication, transportation, participation in community programmes).

Based on the analysis of the questionnaires and interviews, the owners themselves attributed several additional impacts – facilitating integration – to their dogs. According to the respondents, their four-legged helpers provide them with emotional and social support – in addition to the physical help already identified clearly in the reference scientific literature. A high proportion of respondents of the survey marked the following features as true: they feel less lonely, they are usually happier, they confidence has increased, they feel more independent, their social relationships have strengthened, they are calmer, get more attention from people, go out more, they are more optimistic about their situation. The interviewees also reported similar experiences. Therefore, the service dog is a rehabilitation possibility that facilitates the owner’s well-being on all sides (physical, mental, social) of the “health triangle” (Loványi, 2018a, 2018b, 2018d).⁷

⁶In addition to the demonstration of frequency distributions, I found the interlink between each variable through cross-tabulation analysis and correlation analysis using a computer software. During the cross-tabulation analysis, I used Pearson’s Chi-square (χ^2) test, Cramer’s V correlation coefficient out of the statistical indicators. In cases when the χ^2 test was not applicable, I applied Fischer’s test (Sajtos & Mitev, 2007).

⁷Well-being or wellness? Both expressions are correct with a slight difference in meaning. According to the 1948 definition of the WHO, “*health is the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*”, so I used the term “well-being” myself and in my dissertation, I discussed the further evolution of the WHO models (Balogh et al., 2015; Huber et al., 2011; Morgan, 2009).

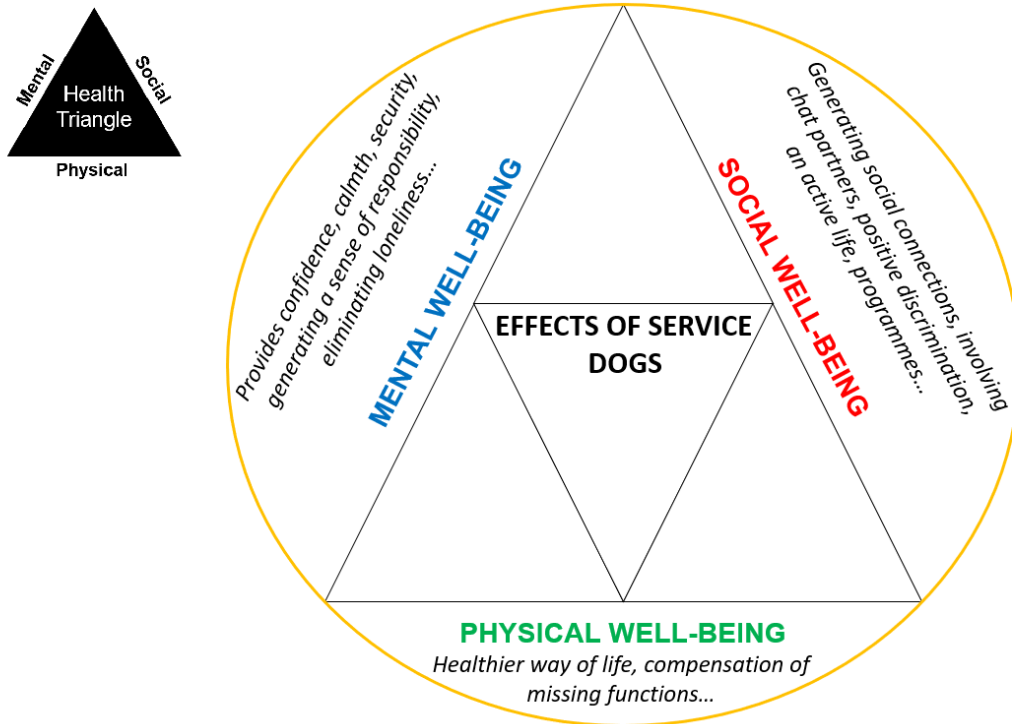


Fig.2: The examination of the effects of service dogs – physical, mental and social well-being⁸

Thesis 2: With the development of technology, new supportive devices (e.g. homeware robots, robot dogs) appear, although they are not able to support all the three sides of the “health triangle” sufficiently.

The specialist literature that I have processed does not discuss the solutions provided by the new technological devices and the service dogs together since the authors are representatives of disciplines that are far from each other (e.g. engineer or remedial teacher). “Only” the target groups to be supported and the problems to be solved are common. Approaching from the applicability of service dogs, but taking the results of both fields into account, I suggest combining the technology with the rehabilitation possibilities provided by service dogs –to deliver the *synergy effects*: “technology-aided service dog” or “service dog-aided technology”. Based on this realization, in cooperation with the NEO Hungarian Non-Profit Service Dog Association and the Budapest University of Technology and Economics, we worked out the functional design of a “smart collar” (Loványi, 2014).

Thesis 3: In the service dog owners’ view, the acceptance of service dogs has improved in Hungary in the past three years.

Only 62.9% of the owners who live in Hungary saw an improvement. This is not a convincingly high proportion, which indicates that we have a lot more to do as far as obtaining acceptance for service dogs is concerned (I have made exact proposals for these in my dissertation). As it is demonstrated by the summarizing flowchart, the action plan has to be evaluated from the point of view of the service dog owners and society *equally* – reasonably in the frame of the new criteria set developed by me (Loványi, 2018d).

⁸Source: own compilation.

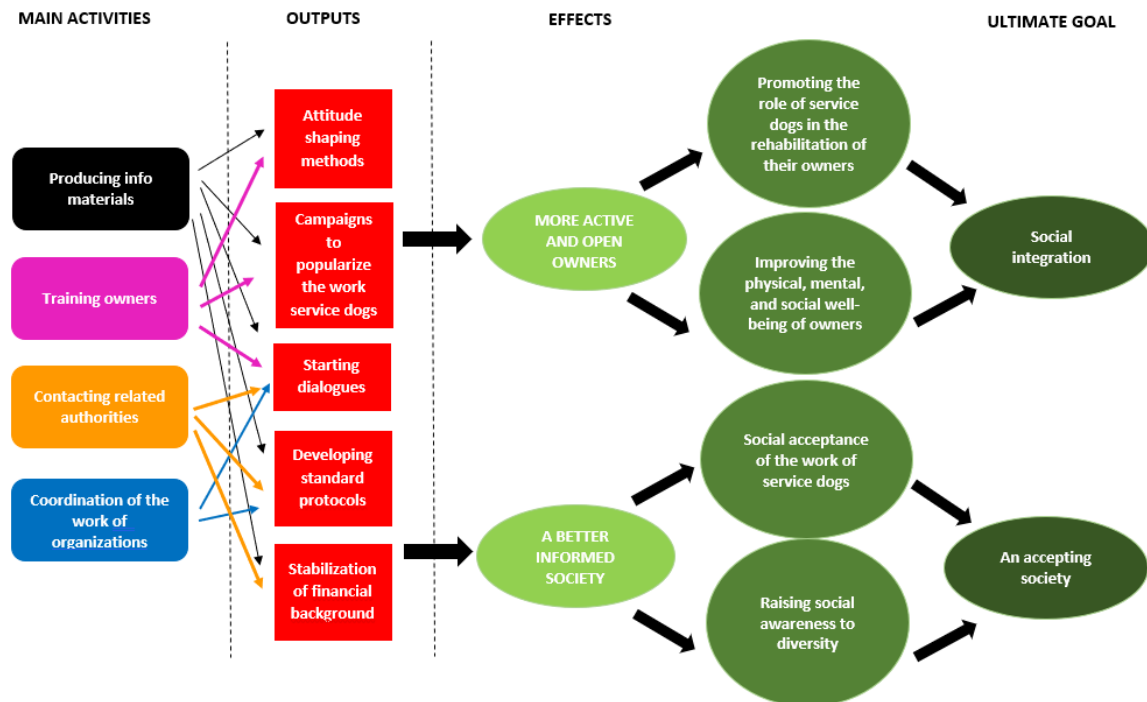


Fig. 3: The impact pathway map of activities facilitating the acceptance of service dogs⁹

Thesis 4: The different international practices vary considerably – regarding mainly the social acceptance of service dogs, their owners’ access to (public) services.

According to my examination there are different practices in different countries – mainly in the results I got when I compared the United States and Hungary. What I did not expect during the initial study of specialized literature and on the basis of my own consideration, though, was that Hungary is moving ahead of the USA regarding the aspects highlighted in the thesis. It can be attributed to the different examination systems since while in Hungary every service dog takes a centrally defined exam, the United States does not have such a standard test, which makes their situation uncertain (e.g. the appearance “fake” service dogs and emotional support dogs). During the analysis of the questionnaire, I noticed that, regarding the type of service dog, I managed to reach owners in a considerably different proportion from both countries. This is also due to the fact that in Hungary, the spread of guide dogs exceeds that of the other service dog types multiple times, while the United States puts emphasis on other areas as well (e.g. the training of seizure-alert dogs or dogs for the mobility-impaired) (Loványi, 2018c, 2020). That is why the mutual knowledge of the best practices and the unification of the different protocols is important (e.g. this is an unavoidable issue at airlines in the international traffic).

Thesis 5: Disabled people using service dogs still face the fact that their rights to equal access to (public) services are infringed in daily life.

90.7% of the respondents responded that they had been in a situation when they could not use a service because of the presence of their service dogs. It is related to several causes that indicate the importance of awareness-raising and better information flow (e.g. the operators of the institutions are not familiar with the legal background, the lack of experience with disabled people, negative attitude to animals) (Loványi, 2019, 2020).

⁹Source: own compilation.

Thesis 6: The interviewed representatives of (public) service providers typically are not familiar exactly with the different types of service dogs and the legal background concerning them.

On the basis of the results of the interviews with the representatives of institutions providing (public) services, the people in charge, in fact, are not aware of the service dog types and the legal background in question. The interviewees did not typically refer to the fact that disabled people, other than the ones using guide dogs can also use service dogs. Furthermore, out of the 15 interviewees, only 5 subjects were familiar with the laws regarding service dogs (Loványi, 2019). On the basis of these results, I have drawn up an action plan.

Thesis 7: Service dog owners are easier to motivate to participate in surveys on equal opportunities than the employees of institutions providing (public) services. In general, the methodology of such surveys has to be adapted to the features (e.g. number of cases, demand for a case-oriented survey) of the target group – along a pre-developed target-specific set of criteria.

For instance, as I expected, the service dog owners (“my world”) responded to my request with great enthusiasm, they reacted to it quickly (filling in the questionnaire, interviews). In cooperating with the service providers (“the other side”), there were initial difficulties (they did not agree to participate in the research, reactions and organisation were slow). Therefore, it is necessary and advisable to adapt the research method to the external circumstances (e.g. sample size, the motivation of the sample), taking various aspects into account (Loványi, 2020).

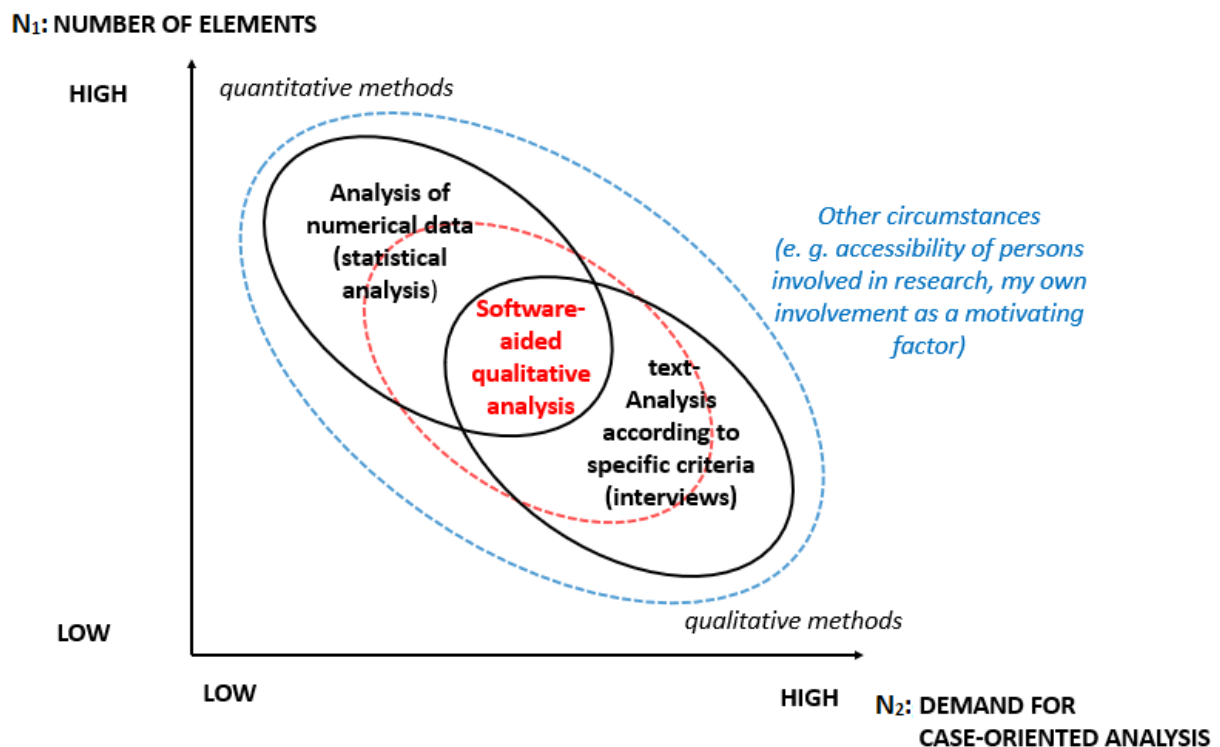


Fig. 4: The interconnection of the methods applied in the thesis¹⁰

¹⁰Source: own compilation.

Thesis 8: When examining the role of service dogs in society, the participatory/emancipatory approach should be applied.

On the basis of processing the specialised literature, I found that the organizations, research teams publishing in this topic did not usually apply this approach, but they might not have had a “not far to seek” possibility to involve an expert by experience within the institution. Therefore, they might not have been aware of this demand, and consequently, no ad hoc effort was made in this direction.

In order to see the pros and cons of a specific choice beyond the difficulties of the participatory research and the advantages of emancipatory methods, I developed a benchmarking methodology, which may go far beyond the topic of my dissertation.¹¹

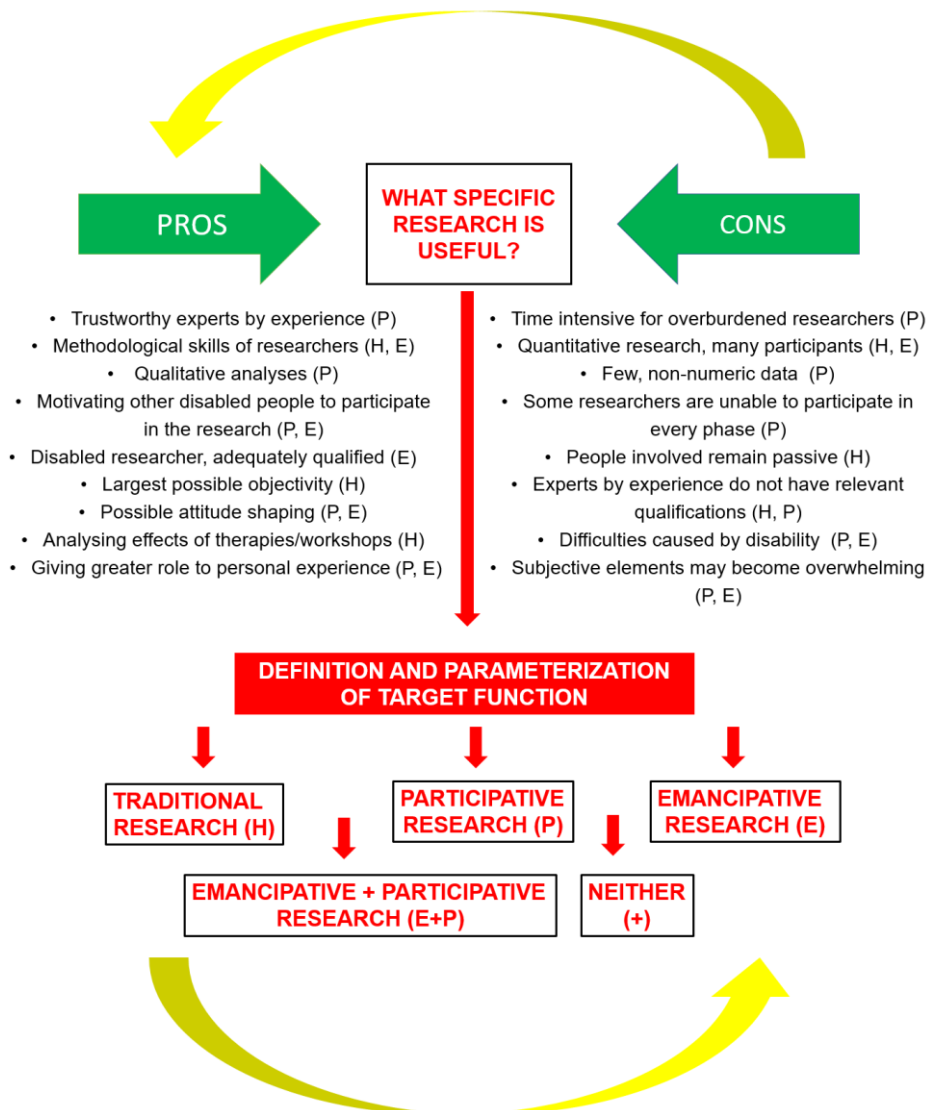


Fig.5: The benchmark parameters of selecting the research method¹²

¹¹Although this procedure is frequently used in other fields (e.g. engineering tasks, the HR department of a company), it is not really common in remedial teaching yet. Benchmark means comparing: we can think of comparing the speed of a computer software to other reference software or the economic activity of a government can be measured against the performance of other countries, then, based on the findings, it can be developed further according to pre-defined priorities. In my case as well, it is important to define an “objective function” from the outset, that can lead to a relevant result in “maxing it out” during my work. The competitiveness or product of different companies can also be compared to other organizations in the market by “benchmarking”, thus we can benefit from the good practices (Kyrö, 2003; Rihoux, 2006).

¹²Source: own compilation.

The figure above demonstrates my key question: what kind of research should be carried out in the specific cases and what are their advantages and disadvantages? With the yellow arrows, I presented that what is “ground for exclusion” in one methodology, can be a significant criterion in case of another one, so these are application-specific factors (Loványi, 2020).

Since my answers to my initial research questions and additionally, the new connections explored during later work are not based on the experiences of the “objective” and subjective processing of random sampling, – although such tendencies can be detected in the smaller samples –, they cannot be generalised and have to be treated with moderation.

3.2. Conclusion: the summary of research experiences, formulation of proposals

In the final proposals of my dissertation, I focused primarily on processes facilitating the social acceptance of service dogs. The factors that influence the effectiveness of service dog owners’ social integration can be approached from two sides as not only the individual’s aspirations to be better integrated are necessary for this, but the appropriate environmental elements as well.

The research results showed that the following identified internal and external factors have a joint effect on the recognition of the service dogs and their owners’ rights and the effectiveness of the practical application.

- Individual factors (examined from disabled people’s side):
 - openness,
 - conflict management skills,
 - knowledge of the legal background and asserting interests,
 - experiences and activity with a service dog (how long has the person been living with the dog and how often they go out).
- Environmental factors (examined from the side of facilities, institutions providing services):
 - knowledge of the legal background regarding service dogs,
 - knowledge of the different types of service dog (beyond guide dogs),
 - direct experience with disabled people (e.g. family member, friend, colleague concerned),
 - participation in awareness-raising programmes, educational trainings, further trainings (e.g. sign language course, service dog shows),
 - attitude towards animals, experience with dogs (e.g. whether the institution is dog-friendly),
 - the types of the activities of the workplaces or institutions providing (public) services (e.g. spa, hospital, zoo).

Three directions of progress were outlined after overviewing the package of proposals (action plan) I prepared based on the experience gained by my research:

1. As the research results confirmed that service dogs facilitate their owners’ rehabilitation and social integration on all sides of the “health triangle” (physical, mental and social well-being), it would be a good thing to have a **more stable background for financing the training of service dogs.**

2. **Promoting dialogue** between the different organizations is essential in support of the social acceptance of service dogs. The representatives of institutions providing services are often worried about letting service dogs in due to false information and the lack of information. In my opinion, appropriate communication could contribute to the service dog owners' equal opportunities to access. We (training organizations and owners) could help to eliminate unrealistic fears.
3. Last but not least, I find the **cooperation** and **collaboration** of the different organizations necessary. As the assembled proposals demonstrate, at the NEO Hungarian Non-Profit Service Dog Association, we have implemented several activities (e.g. awareness-raising sessions), however, together all of our work could be even more effective since there are several places where we have to spread the reputation of service dogs and the idea of tolerance.

3.3. Further plans, research directions

I intend to continue the work I demonstrated in my dissertation, further reflection on the circle of questions of the research tools applied, testing them on a larger sample in order to get more reliable data and consequences from the new investigations.

I am planning to continue to develop the topics going beyond the framework of my doctoral thesis work in the following directions:

- presenting the research results to the members of the majority society and the organizations concerned (e.g. operators of institutions providing services, principals),
- preparing a summary available in an accessible form (e.g. audio narrated, accompanied by sign language interpretation, easy to understand version),
- generating and testing a software-aided version of the questionnaire survey assessing the institutions providing (public) services, carrying out research on the basis of a larger sample,
- developing an examination method for minor owners to get to know directly the opinions of children living with service dogs,
- examining the effect of the presence of a service dog with an eye-tracker device,
- examining new, more effective applications derived from the complementary cooperation between service dogs and technological innovations (e.g. smart collar, social robot).

I hope that my research demonstrated in this dissertation will contribute to us facilitating the training of service dogs, the popularization of their work and the owners' better integration into society by knowing and exploring the key nerve centres. Hence, my doctoral thesis work also contributes towards the training of service dogs receiving stable financing (e.g. State aid, grant assistance) and the application of service dogs becoming more well-known, widespread and accepted in Hungary. I trust that this field will become easier to research by comparing the different methods applied during my work.

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