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Including the Sign Language Community in Language Research, Learning and Teaching: Video Reference Grammar of Slovenian Sign Language (SZJ)

Matic Pavlič

University of Ljubljana, Ljubljana, Slovenia

ABSTRACT

Background: Deaf users of Slovenian Sign Language vary in competence between L1, delayed L1 and L2. They follow the grammatical patterns of their language but are unaware of them because the language is neither linguistically documented nor systematically used in the classroom. As a result, the available learning and teaching materials are inadequately prepared in many aspects.

Purpose: The aim of this research was to create a reference grammar of SZJ by (i) using SZJ for metalinguistic descriptions and (ii) training Deaf signers as researchers and teachers. We observed their performance in order to answer the research question of whether it is possible to involve Deaf signers in the process of creating and disseminating a sign language reference grammar.

Method: Training a group of deaf L1 signers to (i) start systematic research of their language within a selected formal approach, (ii) create didactic video materials for learning/teaching Slovenian Sign Language as L1 and L2, and (iii) use these materials in language courses for L1 and L2 deaf signers.

Results: Eleven deaf L1 signers were trained as researchers in a 40-hour course. Five deaf and two hearing L1 signers were trained as language teachers in another 40-hour course and then presented the core concepts of Slovenian Sign Language grammar to 302 members of 12 local Slovenian deaf clubs in 24 editions of a 40-hour language course. For the presentations, they used didactic video materials (duration 5:46 hours). These materials were produced by the five L1 signers and later uploaded to two freely accessible online video platforms.

Conclusion: The approach proved fruitful: signers were actively involved in the creation and dissemination of the first Slovenian Sign Language reference grammar. The available analytics show that the materials are continuously viewed by both deaf and hearing users.

KEYWORDS

Slovenian Sign Language, minority language documentation, first/second language learning, first/second language teaching, sign language popularisation, reference grammar, ethics of working in deaf communities

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Correspondence:
Matic Pavlič,
e-mail: matic.pavlic@pef.uni-lj.si

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INTRODUCTION

In recent years, hearing majorities have recognised the need to acknowledge human rights for deaf communities, particularly in support of sign languages (De Meulder, 2018). Sign languages are insufficiently researched linguistically, especially sign languages with extremely small communities – which also applies to Slovenian Sign Language (*slovenski znakovni jezik*; hereafter SZJ), where only the most basic phenomena have been researched (Pavlič, 2015, 2016a,b, 2018). Although there is work that supports linguists theoretically and practically in the creation of reference grammars for sign languages (Quer et al, 2017) and the number of available reference grammars is slowly growing (Zeshan, 2000; Liddell, 2003; Johnston & Schembri, 2007; McKee, 2015; Branchini & Mantovan, 2020; Kelepir, 2020; Klomp & Pfau, 2020; Proske et al, 2020; Quer & Barberà, 2020;

Proske et al, 2020), sign language linguists from Deaf communities are still extremely rare, meaning that Deaf signers often contribute to such grammars as informants, but not as researchers. However, the most sustainable solution for any disadvantaged community is not to seek outside help (i.e. hearing L2 sign linguists), but to empower community members to take the initiative. In the field of sign languages, such an approach is not trivial, as Deaf communities lack the human resources to carry out the necessary research, summarise the results in a reference grammar and develop teaching and learning materials for their languages on this basis. Deaf communities often try to develop some teaching and learning materials (for SZJ see Podboršek & Moderndorfer, 1984; Podboršek, 1992; Podboršek & Kranjc, 2006; 2010, 2013, 2015; Podboršek, 2010, 2013a, 2013b, 2015; Kranjc et al, 2019, 2020, 2023a,b), but since they are usually not trained as linguists or supported by linguists, they naturally make mistakes and overgeneralisations and often cannot avoid being influenced by the oral language around them. The influence of an oral language is also due to the fact that the previous reference grammars (see above) were written in oral languages instead of being created with a sign language as a metalanguage. As far as I know, no attempt has yet been made to produce a comprehensive reference grammar entirely in the sign language described in the grammar.

This brief introduction and state of the art shows that there is a need not only to write a reference grammar for the under-researched sign languages, but also to use sign languages as a metalanguage and to involve the Deaf community in these processes. To fill this gap, we conducted the project *Handy video grammar of Slovenian Sign Language* (2018–2019), the aim of which was to (i) create a reference grammar of SZJ; use SZJ for metalinguistic descriptions in the grammar, (iii) train Deaf signers as SZJ researchers and teachers and (iv) disseminate the created grammar in the sign language community. In an 18-month project, SZJ signers participated in linguistic training and developed 49 video clips of the SZJ reference grammar, which were integrated into a 40-hour language course. In addition, one third of the entire population of deaf SZJ signers participated in at least one 40-hour language course conducted by the newly trained SZJ teachers. We recruited predominantly Deaf signers for collaborators in the project and observed their performance during the project to answer the research question of whether it is possible to involve Deaf signers in the process of creating a reference grammar to produce appropriate, effective and meaningful didactic materials and organise training for sign language teachers to make informed use of these materials in dissemination.

The remainder of this article is organised as follows. The literature review presents earlier reference grammars for sign languages and their meta-languages as well as previous descriptions of Slovenian Sign Language (SZJ) and existing SZJ teaching and learning materials. The methodology section explains the four phases of the project: Training of researchers, production of didactic materials, training of teachers and organisation of courses for deaf signers. The results are presented in the following section and discussed in the final section before the conclusion.

LITERATURE REVIEW

Sign Language Reference Grammars

Reference grammars contain descriptions of utterances of a language to document it. They employ an informal, user-friendly metalanguage so that every reader can access the language data independently of the theoretical framework while cross-linguistic comparability is ensured using standard terminology and analytical tools (Nikolaeva, 2015). Reference grammars are often used as teaching aid in various formal and informal educational settings. Historically, they tended to be prescriptive rather than descriptive and focused on lower-order thinking rather than conceptual insights (Berry, 2015). As a result, many language teachers and students still lack sufficient metalinguistic knowledge (Alderson & Hudson, 2013; Sangster et al., 2013). Some scholars have suggested that linking linguistic theory and L1 grammar teaching can solve the problem of limited conceptual understanding of grammar (Carter, 1982; Hudson, 2004), claiming that modern linguistic theory can be used to strengthen traditional grammar teaching. For example, the introduction of semantic roles and valency, which remain undiscussed in traditional grammar (Van Rijt et al., 2018), can be used to distinguish between obligatory and non-obligatory arguments in a sentence (Perini, 2015). Modern reference grammars, therefore, aim at an informed level of language description to make language interesting and meaningful for the reader.

Sign languages are natural human languages that emerge wherever deaf people are in sufficient numbers to form a linguistic community (for a historical overview, see McBurney, 2012). Although sign language research has made great strides worldwide in recent decades, compared to oral languages, most of the world's sign languages remain poorly described or even completely undocumented. There are two main reasons for this: (i) sign language linguistics is a young field of research, and (ii) sign languages do not have a written form, which makes documentation particularly difficult. To overcome these problems, the COST SignGram Action *Unraveling the grammars of European sign languages: pathways to full citizenship of deaf signers and to the protection of their linguistic heritage* has developed the SignGram Blueprint (Quer et al., 2017), a handbook for writing a sign language grammar. It is an innovative guide that describes all components of sign languages comprehensively, systematically, and according to accepted linguistic standards. The work builds on the existing knowledge of descriptive linguistics and the findings of theoretical linguistics. It consists of two complementary parts: the list of grammatical phe-

nomena (phonology, morphology, lexicon, syntax, and semantics) and the accompanying handbook with the relevant background information (definitions, methodological issues, examples, tests and references). Based on this work and as a spin-off project, the SIGN-HUB 2016-2020 was launched to create reference grammars for Catalan Sign Language (Quer & Barberà, 2020), German Sign Language (Proske et al., 2020), Italian Sign Language (Branchini & Mantovan, 2020), Sign Language of the Netherlands (Klomp & Pfau, 2020) and Turkish Sign Language (Kelepir, 2020). In addition to these, there are also a handful of older reference grammars, namely for American Sign Language (Liddell, 2003), Indo-Pakistani Sign Language (Zeshan, 2000), Australian Sign Language (Johnston & Schembri, 2007) and New Zealand Sign Language (McKee, 2015). Since this list is exhaustive, sign language reference grammars are evidently rare.

The Metalanguage

Although all existing sign language reference grammars come with illustrated examples of language use and are often supplemented by video resources, their metalanguage is either *spoken* English or the local *spoken* language (Zeshan, 2000; Liddell, 2003; Johnston & Schembri, 2007; McKee, 2015; Branchini & Mantovan, 2020; Kelepir, 2020; Klomp & Pfau, 2020; Proske et al., 2020; Quer & Barberà, 2020; Proske et al., 2020). As far as I know, no attempt has yet been made to create a comprehensive reference grammar entirely in the sign language described in the grammar. However, at least one multimedia platform channel provides content based on reference grammar to supplement lessons in vocabulary, grammar, culture, and history; one such channel is created by a certified American Sign Language teacher with a degree in sign language linguistics and teaching American Sign Language[1]. In contrast, most channels that offer sign language content focus on vocabulary, idioms, and/or culture rather than linguistics.

Describing Slovenian Sign Language (SZJ)

Slovenian Sign Language (slo. *Slovenski znakovni jezik*, SZJ) is a minority language of the deaf community in Slovenia. Despite using it in everyday communication, deaf signers master SZJ at different levels due to different ways of acquiring/learning the language. Only a small proportion of the signing population grows up in an environment that enables them to acquire SZJ without delay as their L1. Although it is recognised as an official language by the Act Regulating the Use of Slovenian Sign Language[2], SZJ is extremely endangered: it has a small number of users, it is not well documented linguistically, and it is not used systematically in the classroom. From the 1980s, informal SZJ research was conducted by members of the SZJ community. SZJ interpreters, special educators, teachers, and deaf signers who are actively engaged in the deaf community attempted to describe linguistic phenomena in SZJ, while a group of L1 deaf signers started developing a 'growing' online Slovenian-SZJ dictionary in 2003 and continued with their work to this date. In their pioneering efforts, these language enthusiasts were not supported by linguists; consequently, they naturally made errors and overgeneralisations and were unable to avoid being influenced by the surrounding oral language (Slovenian). In addition to diglossic language contact with the oral language, this encouraged both deaf and hearing L1 and L2 signers to resort to the rules of the grammar whose description they knew: Slovenian. As a result, a manually coded variety of SZJ/Slovenian emerged, namely Signed Slovenian. Because of its similarity to the more highly valued Slovenian language, this variety is paradoxically considered the more prestigious variety of SZJ and is often preferred in public discourse even by L1 SZJ deaf signers – which is not unusual in signing communities (see Rowley & Cormier, 2023 for British Sign Language). Until recently, much of the academic research on SZJ aimed at comparing SZJ and Slovenian from a spoken language perspective. Some works aimed at standardising SZJ (Bešter, 1994; Globačnik, 2001; Žele & Bauman, 2015), while others focused on Slovenian language literacy in deaf adolescents compared to their hearing peers (Kuplenik, 1999; Pfipfer, 2016). This research tended to be conducted without defined frameworks or vaguely based on the traditional structuralist language analysis used for Slovenian, using the same tools to describe SZJ. In the last decade, however, SZJ has received more linguistic attention. The Slovenian Research Agency funded a project to build a representative corpus of Slovenian Sign Language (Vintar et al., 2012; Vintar, 2015). The first steps towards a coherent reference grammar were taken by analysing the SZJ sign order in the formal framework of Generative Grammar (Pavlič, 2016a). In addition, selected phenomena, such as the linguistic use of space and agreement (Pavlič, 2015) and locative constructions (Pavlič, 2016b; 2018), have been described.

SZJ Teaching and Learning Materials

The lack of a reference grammar made it less likely that professional teaching and learning materials could be produced. Insufficient human resources lead to sporadic and unprofessional materials for teaching and learning SZJ as L1 or L2. After initial attempts (Podboršek & Moderndorfer, 1984; Podboršek, 1992), three textbooks (Podboršek & Kranjc, 2006; 2010; 2013; 2015) and corresponding picture dictionaries (Podboršek, 2010; 2013a; 2013b; 2015) have been published in recent decades, but they do not use SZJ as a metalanguage (which does not correspond to modern L1/L2 teaching); they do not meet the standards of the linguistic profession as they were not created by linguists (they often provide inadequate or contradictory descriptions without

[1] LearnHowtoSign (2023). https://www.youtube.com/@LearnHowtoSign (Accessed 9-11-2023).

[2] Act Regulating the Use of Slovenian Sign Language (2002). Official Gazette of the Republic of Slovenia 96(2).

reference to the data source); they do not deal with grammar but mostly present only vocabulary; they do not follow modern approaches to language teaching (real everyday situations and dialogues, attractive exercises, design). In all these respects, the new textbook series (Kranjc et al., 2019; 2020, 2023a,b) follows modern standards but has a very limited scope, as it is intended for students aged 6 to 8 in the first and second years of primary school education. Note that these textbooks are bilingual, as the same content is presented in both Slovenian and SZJ. The simultaneous learning of sign and spoken language is a 'legacy' of the total communication model (Mayer et al., 2016), but a clear distinction is made in these textbooks so that the approach does not create confusion but rather stimulates metalinguistic awareness within the lines of a modern approach called *Translanguaging* (Beres, 2015). The student books are also complemented by SZJ video materials and a teacher's book with linguistic explanations and pedagogical information for teachers.

METHOD

Background

Linguistic knowledge about many aspects of SZJ is inadequate; furthermore, due to the lack of theoretical foundations, there is also a lack of informational clarity in both the teaching and learning of SZJ as L1 and L2. The *Handy video grammar of Slovenian Sign Language* project (2018–2019) aimed to address this gap. It was led by the *Association of the Deaf and Hard of Hearing in Slovenia* and funded by the *European Social Fund* and the *Ministry of Culture of the Republic of Slovenia*. This section presents the participants, the materials, and the phases of the project. Our approach to language research, teaching, and learning was in line with the ethical principles of sign language research, particularly the Sign Language Communities' Terms of Reference Principles developed by Harris, Holmes, and Mertens (2009). Deaf signers were involved in every stage of the research project (as researchers, presenters, editors, and multimedia technicians) so that they could understand and influence the whole process to create relevant knowledge about their own language. It was important that a group rather than individuals were involved in this project to encourage interaction in grammar learning, which supports the development of their metalinguistic skills according to some approaches (Ribas et al., 2014). Active participants were recruited based on their integration into the deaf community (active membership in deaf clubs), experience in video production, or involvement in previous SZJ projects, such as the creation of the SZJ dictionary. They were paid for their participation. Both active and non-active participants gave their informed consent before being included in the project.

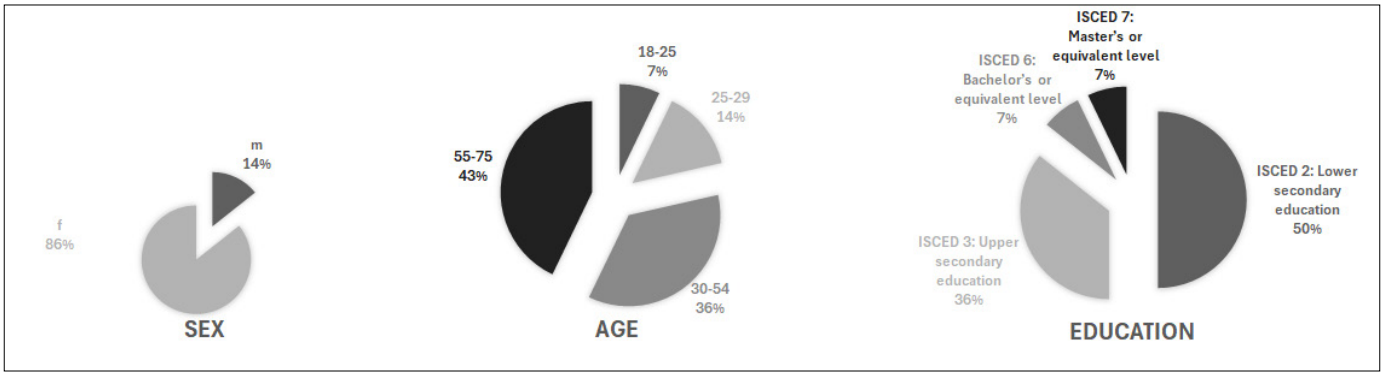
Table 1

Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Researchers

Age group	N of signers	Education level	N of signers
18-25	1	ISCED 2: Lower secondary education	7
25-29	2	ISCED 3: Upper secondary education	5
30-54	5	ISCED 6: Bachelor's or equivalent level	1
55-75	6	ISCED 7: Master's or equivalent level	1

Figure 1

Sex, Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Researchers



Participants

Eleven deaf and two hearing L1 signers (m=2, f=12) were included in the training of the language researchers; their demographic details are in Table 1.

Instruments

Participants in the language researcher training received basic background information on 40 selected topics about language structures and phenomena (Table 3).

Relevant terminology was suggested, and missing vocabulary was constantly identified and completed by the participants. A standardised experimental procedure, the Picture Description Task, was chosen as the predominant data collection method. It was developed by Volterra et al. (1984) specifically for sign languages. In addition to the Picture Description Task, two other procedures were used: the Repetition Task (informants repeat grammatical and ungrammatical utterances) and the Grammaticality Judgement Task (informants discuss grammatical and ungrammatical utterances of a language). It was found that individual participants judged examined utterances consistently either as grammatical or ungrammatical and that all were able to reproduce the utterances of the others exactly as they were originally signed. Furthermore, the grammaticality judgments for the utterances examined did not differ between the participants.

Didactic Materials Production and Procedure

Four deaf and two hearing L1 signers were involved in the creation of the SZJ learning and teaching material. They had previously completed researcher training and were also participating in instructor training at the time. Only the deaf participants presented the materials in the videos and in the next phase the same deaf also took part in the teacher training. The raw material for the didactic materials was developed by a sign language linguist and reviewed by three other linguists. It then served as the basis for the training sessions for the deaf and hearing L1 sign language researchers and future language teachers. As the training sessions were filmed, they formed the first version of the didactic video material. The content produced in the training sessions for the researchers was supplemented with new observations, comments, and examples from deaf L1 signers so that the material could be better understood and accepted by the community at large (not as a prescriptive grammar dictated by the hearing community, but as a coherent description of the linguistic competence of deaf L1 signers). In the production phase, the filmed training sessions, the examples of language use, and the textual scripts were examined in parallel. The content was divided into eight chapters: one chapter on phonology, three chapters on morphology (sign formation, agreement, classifiers), and four chapters on syntax (sign order, locative clauses, negation, questions). There was also an introductory chapter explaining what language is and what grammar is, as well as instructions on how to use the didactic materials. For the comprehensive list, see Table 3. Four deaf sign language teachers were selected as presenters, each of whom was assigned a certain number of chapters. They prepared for the recording individually and in groups. The presenters rehearsed their chapters and created a draft video, which was discussed by all presenters and the linguists to find the most comprehensible explanations and vocabulary solutions. The final recording was made in the presence of all presenters and the sign language linguist, who all provided feedback. In this manner, errors, redundancies, or repetitions could be recognised immediately and corrected if necessary. After recording the final script, the video editor received the raw visual material and the recording script for the first edition of the video. Together with the sign language linguist, he visualised the entire video to detect recording errors and make the first cuts in the material according to the accompanying script. In post-production, the edited material was handed over to the graphic designer for the videography and animation process. In this phase, static images such as illustrations, photos, diagrams, tables, and maps were inserted, as well as the animations and signed examples of SZJ in use.

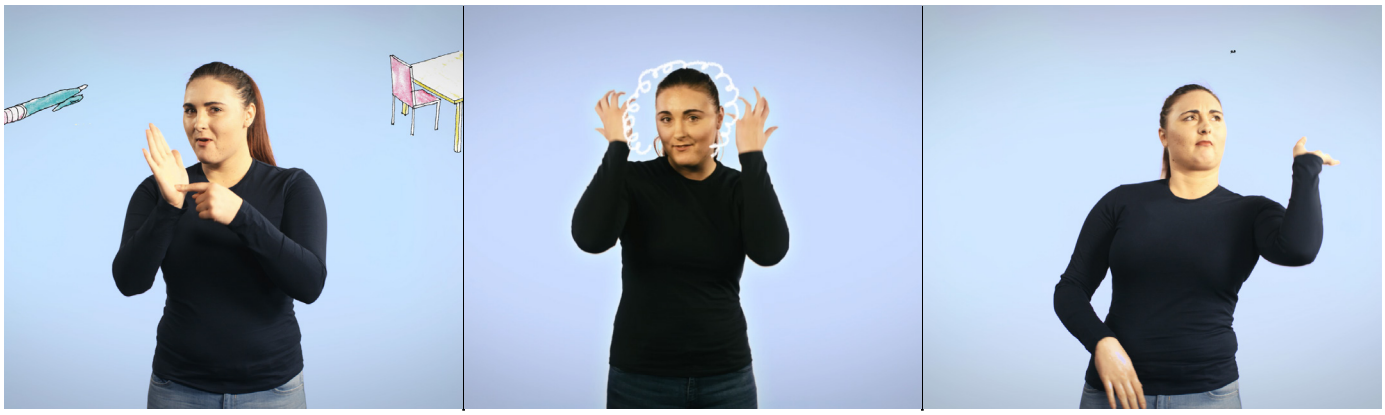
The complete video grammar was uploaded to an SZJ platform (with teaching materials, colouring sheets, SZJ stories, and various dictionaries: SZJ-Slovenian, etymological, SZJ-international sign and baby sign), which is run by Zveza društev gluhih in naglušnih Slovenije (the Association of the Deaf and Hard of Hearing in Slovenia), as well as to a dedicated YouTube channel 'Slovnica SZJ' (SZJ grammar). The SZJ platform was chosen because it is a reliable and established source of SZJ materials with stable funding and a regular pool of users who can access it via PC or smartphone applications. However, it does not provide services to monitor usage metrics, does not allow the sharing of specific content via social media, and is unlikely to be visited by a user unfamiliar with it. For this reason, we have complemented this traditional distribution with a YouTube channel, which is an accessible, familiar, user-friendly, and shareable service. However, it is generally not considered a reliable source. The quality of videos can vary greatly; some videos contain misinformation, false information, or even inappropriate content, and there are issues with advertising and privacy. These common pitfalls could lead users to perceive SZJ Grammar as an unprofessional or questionable source while simultaneously attracting new users.

Teacher Training

The training for language teachers was attended by five deaf and two hearing L1 signers. They had previously received training as researchers and their demographic details are given in Table 2. The participants of the training for language teachers were trained to learn and teach their

Figure 2

Different types of inserted graphics: static illustrations (the image on the far left) and animations (the images in the centre and far right).



Note. When the theory was illustrated, the colour of the screen was blue.

Figure 3

The Two Video Frames Show How the Short Clips that Served as Examples of How to Use SZJ Were Inserted into the Explanations

Note. Green (the screen and the presenter's clothing) indicates well-formed utterances (left frame), while red marks the illicit utterances (right frame). The examples were always shown to the right of the presenter. The presenter paused, looked to the left, and froze when the screen darkened. If necessary for the comparison, up to three examples were shown in succession (left frame) so that the presenter could later refer to them when explaining linguistic phenomena.

Table 2

Sex, Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Teachers

Participant	Sex	Age group	Education
1	f	25-29	ISCED 6: Bachelor's or equivalent level
2	f	18-25	ISCED 3: Upper secondary education
3	m	30-54	ISCED 3: Upper secondary education
4	f	30-54	ISCED 3: Upper secondary education

language independently, to work with language resources, and to prepare didactic materials for teaching and learning SZJ. During the course, the participants used the materials prepared in the previous phases so that the materials could be tested. The comments and guidelines proved useful for the final editing.

SZJ Courses for L1 Deaf Signers

A total of 302 deaf L1 and delayed L1 and L2 signers participated in at least one 40-hour language course held in the premises of 12 local Slovenian deaf clubs (in the following Slovenian cities: Celje, Dravograd, Kranj, Maribor, Murska Sobota, Slovenske Konjice, Velenje, Novo Mesto, Koper, Kranj, Ljubljana-Center, Ljubljana-Zadobrova, and Nova Gorica). Five deaf and two hearing L1 signers trained as language teachers used the prepared didactic video materials to conduct 24 editions of a 40-hour course, twice in each deaf club. Since the project aimed to disseminate the didactic materials produced, the SZJ reference grammar was disseminated directly to deaf L1 and L2 SZJ signers via 12 deaf clubs, mostly during their regular weekly meetings. The duration of a session was 30 to 45 minutes.

RESULTS

This section presents the results of the project *Handy video grammar of Slovenian Sign Language:* two training phases, a production phase, and a dissemination phase. A total of 49 video segments were produced (total duration of 5:46 hours). They contained clips presenting eight linguistic topics (phonology, morphology and sign formation, agreement, classifiers, sign order, locative expressions, negation, and question formation) and one general topic (on writing and using a reference grammar). The explanations were entirely in SZJ and included examples of SZJ in use, drawings, and schematics. See Table 3 for additional information on the titles, presenters, and duration of each video.

On August 30, 2019, the final versions of the video material were uploaded to two online video platforms (YouTube channel and *Spletna TV* (Web TV), operated by the Association of the Deaf and Hard of Hearing in Slovenia). It is encouraging that the uploaded materials created as part of the project are still being viewed after the project has ended. This is suggested by the web analytics available for one of the two channels through which the materials are disseminated, namely YouTube (accessed August 30, 2023). From August 2019 to August 2023, there were a total of 6830 views (monthly average=139.39; SD=127.68), 4399 with subtitles (monthly average=89.78; SD=89.70) and 2423 without subtitles (monthly average=49.45; SD=49.90). The total viewing time amounted to 298.76 hours (monthly average=6.10; SD=7.15), 258.94 with subtitles (monthly average=5.28; SD =6.50), and 39.71 without subtitles (monthly average=0.81; SD=0.94). Figure 4 shows the development of monthly views and viewing time for the observed period, while Figures 5 and 6 show the monthly views for the same period by views with and without subtitles.

DISCUSSION

In this study, we have asked ourselves the question of whether (i) SZJ signers can be actively involved in the creation of an SZJ reference grammar that (ii) is accessible to the whole community. We have tried to answer this question by launching a project to create such a grammar: A group of L1 sign language learners were trained as sign language researchers and teachers; they participated in the creation of selected chapters of an SZJ reference grammar and presented these materials in language courses for the deaf SZJ community. Therefore, the simple answer to the research question is positive: to my knowledge, there has never been a comparable sign language learning project involving predominantly members of the deaf community, and, more remarkably, this is the first time that sign language has been used as a metalanguage in a sign language reference grammar. Although this grammar is based on a handbook for authors of sign language grammars, namely SignGram Blueprint (Quer et al., 2017), it differs from the other reference grammars that have emerged from it and have been published for Catalan Sign Language (Quer & Barberà, 2020), German Sign Language (Proske et al., 2020), Italian Sign Language (Branchini & Mantovan, 2020), Sign Language of the Netherlands (Klomp & Pfau, 2020) and Turkish Sign Language (Kelepir, 2020). The main goal of these reference grammars is to describe the language linguistically, while the SZJ Handy grammar specifically aims to help deaf SZJ users discover their language (the grammar) on a conscious and metalinguistic level. With this in mind, I would like to discuss the impact this grammar might have on the signers involved and the community. Note that this discussion is speculative, as no formal evaluation of the process as an integral part of the project has been undertaken.

First, it is known that deaf people have historically developed internalised negative attitudes towards sign languages (see Ladd, 2007 for British Sign Language) and that this is primarily due to the attitudes of the hearing majority towards sign languages (see Krausneker, 2015). More recent studies have shown that the attitudes of deaf people toward sign languages are becoming more positive (Hill, 2012; Supalla & Clark, 2014). There are several reasons for this change (De Meulder, 2018). The official recognition of sign languages in many countries has made sign languages more visible in society so that even hearing people are learning sign languages in many countries. However, the decisive turning point was the research that showed that sign languages are human languages (Brennan, 1975; Stokoe, 1960). Slovenian Deaf people have been claiming that SZJ is a language since at least the 1980s, but now, with the reference grammar, their claims have finally been confirmed. Moreover, the linguistic status of SZJ, which this grammar confirms, seems to be even more important to the community at the moment than the content of the grammar. Note, however, that hearing people also tend not to appreciate the content of reference grammars, presumably because they have historically been prescriptive rather than descriptive (Berry, 2015). However, the SZJ Handy Grammar is not prescriptive: it aims to provide an informed level of language description to make language interesting and meaningful to users. This

Table 3

The List of All Video Clips within the SZJ Reference Grammar

	Title	URL	Duration	Presenter
1	0.1 Introduction	https://youtu.be/qcZPQvZTiu0	03:52	1
2	0.2 What is human language?	https://youtu.be/Lpmj16IoTEU	06:20	1
3	0.3 What is the grammar of human language?	https://youtu.be/DQnVIMmIG7Y	06:51	1
4	0.4 How to use this reference grammar?	https://youtu.be/50gABKTEGnw	05:70	1
5	1.0 Introduction to phonology	https://youtu.be/1yDRzTQug6g	05:14	2
6	1.1 Place of articulation	https://youtu.be/wPcdzd15FYk	10:27	2
7	1.2 Handshapes and the selected fingers constraint	https://youtu.be/0mpCaf-0Mlw	08:56	2
8	1.3 Phonological features	https://youtu.be/vp_etW_P5Fw	06:22	2
9	1.4 Movement	https://youtu.be/1WW6poU1zd0	06:29	2
10	1.5 Non-manual markings	https://youtu.be/_6suNXwERUY	11:59	2
11	2.0 Introduction to morphology and sign formation	https://youtu.be/4L5LGpI3GJk	03:15	4
12	2.1 Sign etymology	https://youtu.be/wKf6jaVPcHg	07:50	4
13	2.2 Noun and verb	https://youtu.be/zryIp4k8c4s	04:18	4
14	2.3 Expressing event time and aspect	https://youtu.be/xxlLVRGnbaM	10:8	4
15	2.4 Adjective	https://youtu.be/S51N0i8DuPg	06:24	4
16	2.5 Pronouns	https://youtu.be/-zF8vQ8lCA4	06:12	4
17	3.0 Introduction to agreement	https://youtu.be/n-XxSAlfDxA	03:60	4
18	3.1 Signing space	https://youtu.be/YCdT51NceJo	06:70	4
19	3.2 Thematic roles	https://youtu.be/3cE9pOiFhe0	08:30	4
20	3.3 Manual agreement	https://youtu.be/7zqwEhLKiQk	07:36	4
21	3.4 Agreement auxiliary	https://youtu.be/HNjaJyjGq30	07:44	4
22	3.5 Irregular verbs	https://youtu.be/oq7WQpfgz3M	09:11	4
23	4 .0 Introduction to classifiers	https://youtu.be/8Fn86Uo-YZM	02:37	1
24	4.1 Iconic signs	https://youtu.be/IMrnRFhFPlc	07:46	1
25	4.2 Classifier predicates	https://youtu.be/y4qdB4_pmRw	06:39	1
26	4.3 Whole-entity, body-part, and handling classifiers	https://youtu.be/oZ-7DIyV4j8	06:50	1
27	4.4 Classifiers and sign order	https://youtu.be/KXDCWoAhAGY	06:41	1
28	4.5 Sign formation	https://youtu.be/Ew-PE3x0PBY	07:10	1
29	5.0 Introduction to sign order	https://youtu.be/JtWRtM-8HoE	05:44	3
30	5.1 Sign phrase	https://youtu.be/w63vPjGKZOo	08:49	3
31	5.2 Copular clauses	https://youtu.be/xudppLGEWC4	08:58	3
32	5.3 Unmarked sign order	https://youtu.be/q0wer4DXE0Q	10:20	3
33	5.4 Marked sign order	https://youtu.be/paAMVmpmDm0	10:39	3
34	6.0 Introduction to expressing location	https://youtu.be/ne35VZ1xmdo	01:56	4
35	6.1 Locative sentences	https://youtu.be/VnZ1YMPrqbI	07:23	4
36	6.2 Figure and Ground	https://youtu.be/Ymrs7AcK5zA	05:50	4
37	6.3 Non-dominant hand perseveration	https://youtu.be/SP7cGt3AMFk	07:45	4
38	6.4 Locative adverbials and expressing existence	https://youtu.be/3WdxDvHqNQ4	09:50	4

	Title	URL	Duration	Presenter
39	7.0 Introduction to negation	https://youtu.be/IFHZxBImecQ	03:20	3
40	7.1 Sentential negation	https://youtu.be/la9WZZD0HRY	08:27	3
41	7.2 Affirmative and negated sentences	https://youtu.be/31E5-DF6Rpo	08:39	3
42	7.3 Negative particles	https://youtu.be/3yoNs26n5lo	09:44	3
43	7.4 Negative pronouns and non-manual markings	https://youtu.be/4_tF8oDZ98	09:00	3
44	7.5 Negative verbs	https://youtu.be/6Tqy4DForVc	10:15	3
45	8.0 Introduction to question formation	https://youtu.be/kVAO68VnX9U	03:90	3
46	8.1 Content and polar questions	https://youtu.be/d0Mn3XjjyYY	06:17	3
47	8.2 Non-manual markings in questions	https://youtu.be/L7x4cL-8xbU	05:56	3
48	8.3 Sign order and agreement in questions	https://youtu.be/jdpzMF0MYcs	07:37	3
49	8.4 Scene-setting questions	https://youtu.be/nLOOQm5woWw	08:58	3
		Total duration	**05:46:20**	

Note. Uploaded to the two online video platforms on August 30, 2019, with the corresponding universal reference link, duration and presenter.

Figure 4

The Views and Viewing Time Per Month for 49 YouTube video Clips from August 2019 to August 2023

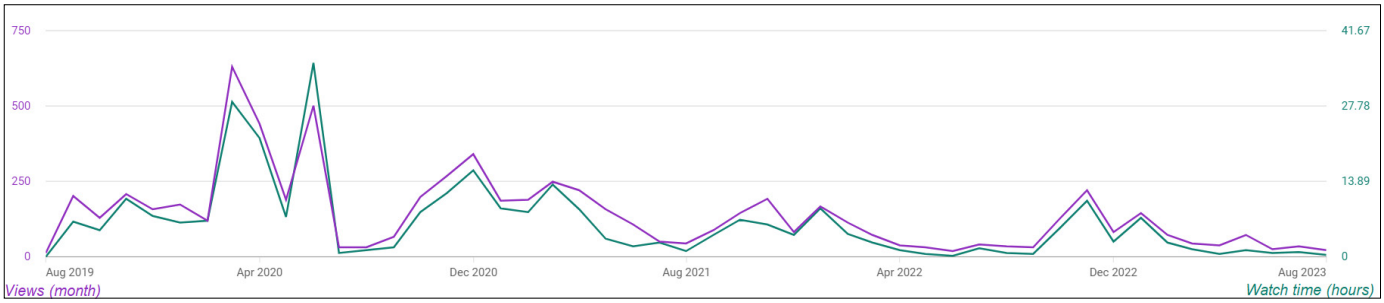


Figure 5

49 YouTube Video Clips from August 2019 to August 2023 by Views with and without Subtitles

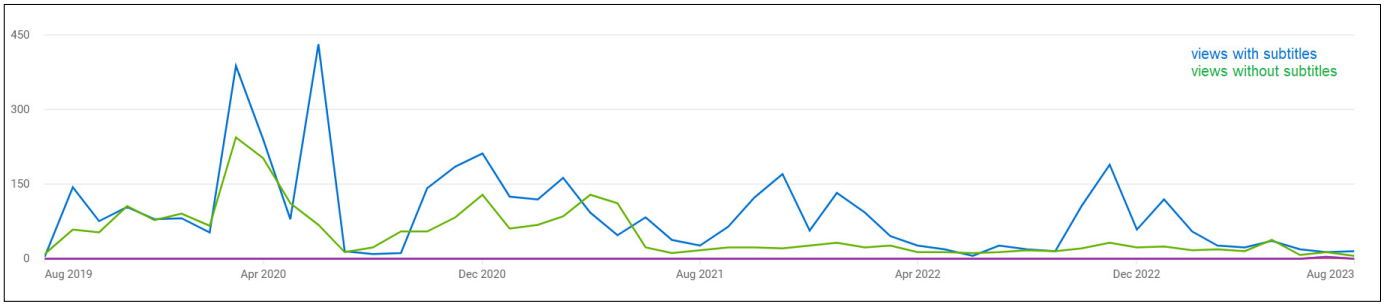
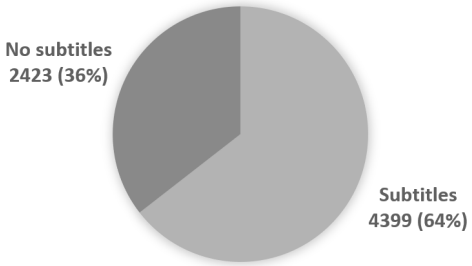


Figure 6

The Total of 6830 Views: 4399 with and 2423 without Subtitles from August 2019 to August 2023



function of a grammar was new to the signers involved in the creation of the grammar. Some of them who have been involved in the creation of SZJ dictionaries are used to discussing lexical variation in SZJ signs, but they have probably never thought about the underlying syntactic rules they follow when using their language in everyday situations. Therefore, four introductory clips have been added to the grammar, explaining what human language is, what the grammar of human language is, and how to use this reference grammar. In this way, users begin to understand the descriptive function of a grammar.

Second, the grammar recording sessions were perceived by the deaf sign language users as a formal situation, which is reflected in their tendency to occasionally switch to a variant of manual communication that reflects the grammar of the surrounding spoken Slovenian. The influence of spoken Slovenian is thus quite large, even among the deaf signers with high metalinguistic awareness. We have tried to avoid this by taking several steps, such as using SZJ as the metalanguage of the project, encouraging discussions, using graphic stimuli for data collection (instead of translating utterances from Slovenian which is otherwise a common practice), and including a larger number of deaf signers than hearing signers in a project. Involving the deaf SZJ community in the project under these conditions led to a positive attitude towards SZJ so that SZJ competence can gradually become a valued skill in the community (note that deaf signers were also paid for their participation).

Third, the materials are continuously viewed by SZJ users even after the end of the project. The monthly views for all 49 video clips included in the SZJ Reference Grammar can be interpreted as follows. The videos can be viewed with or without subtitles: out of 6830 views, there were 4399 (64%) with subtitles and 2423 (36%) without subtitles; note that views with subtitles amounted to 298.76 hours while views without subtitles were only 39.71 hours. It can be assumed that the materials without subtitles are viewed by L1 signers who have mastered their language and want to be informed about its structure and metalinguistic concepts, while the views with subtitles represent L2 signers who have not mastered the language and want to learn the language. Note, however that both quantitative and qualitative analysis of the use of the reference grammar is beyond the scope of the project and this article: a partial quantitative data presented in section (3) do not actually reflect the use of the materials – and certainly cannot provide information about the viewer's engagement with the material. Nevertheless, it can be said that the materials produced have great potential for use in formal and informal education even though they only contain explanations of SZJ linguistics without engaging exercises, signed texts, and references to deaf culture. In the future, the materials could be expanded and upgraded to a modern sign language textbook in the form of a video tutorial that covers not only grammar but also other aspects of language competence that are relevant and useful for teaching and learning SZJ as L1 and L2. This would encourage both individual signers and SZJ teachers to engage more frequently and thoroughly with SZJ Handy grammar.

Fourth, the negative attitude towards sign languages mentioned above does not change overnight. It is, therefore, important that the SZJ Handy grammar remains accessible to signers even after the end of the project, especially as no further promotion and maintenance of the materials is planned. For this reason, the entire grammar has been uploaded to two video broadcasting services whose existence on the Internet is guaranteed: a popular free platform, namely YouTube (where 'new' signers might come across it), and a platform run by the Association of the Deaf and Hard of Hearing in Slovenia (where 'old' signers know they will find it).

CONCLUSION

This article presented a method by which deaf people can meaningfully participate in learning and teaching sign language, benefiting themselves and the community. Recruiting and training SZJ signers to create an SZJ video reference grammar proved successful, as one-third of the total population of deaf SZJ signers participated in at least one language course developed and presented by the newly trained SZJ instructors. Furthermore, the available analytics show that the materials are continuously viewed by both L1 (mostly deaf) and L2 (mostly hearing) SZJ users even after the end of this innovative project. The project did not directly monitor the actual impact of the training of researchers and teachers and the dissemination of the reference grammar in the Deaf community, as there are no language tests for SZJ as L1 and L2. An important step in future research is to develop such materials and use them to more accurately assess the language performance of sign language users, especially as the subject of language support as presented in this study.

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DECLARATION OF COMPETITING INTEREST

None declared.

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