Basic pedagogical principles of teaching Russian sign language to law enforcement personnel

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Abstract. The article deals with teaching the Russian sign language to certain categories of internal affairs personnel at the higher educational institutions of the Russian Ministry of Internal Affairs under the conditions of time shortage. The authors assess psychological and pedagogical conditions of the Russian sign language teaching and provide some innovative teaching methods to accelerate the learning process. A compulsory requirement to any contemporary professionals, including the professionals in law-enforcement, is the ability to adapt to changing social and economic realities. Nowadays, in conditions of globalization and integrational processes, skills of socio-communicative interaction between a police officer and various categories of citizens are essential and very important as well as other general cultural skills that any professional should have since they provide success and efficiency of any professional activity in modern world. To exercise their professional activities internal affairs personnel have to acquire additional professional competences due to new tasks. These days we witness growing importance for police officers to enjoy such professional skills as the abilities to interact with people with disabilities. Linguo-communicative training of police personnel in the sphere of the Russian sign language is an important component of their professional education and their skills to get in contact with hearing-impaired people using sign language are becoming highly important in contemporary conditions.

1 Introduction

The necessity to adapt to the changing social and legislative environment influences professional training of law enforcement officers. We share Cristina Udrea's opinion who believes that didactic and methodological strategies of police officers’ teaching can be improved by determining current training concepts and analyzing actual needs; as well as setting up continuous training programs that observe adult learning principles [1]. Helping citizens with disabilities, including citizens with hearing impairment, is one of the social policy priorities not only in Russia but also in other countries [2 – 7]. Any extreme situation causes a lot of problems for the citizens mentioned above and, first of all, these are communicative problems. Thus, nowadays the ability to communicate with citizens with hearing impairment using sign language is of highly importance.

In addition, the relevance of the scientific research is due to the requirements for the quality of professional training for internal affairs personnel in the context of the RF Interior Ministry’s reforms. Moreover, it is necessary to develop some didactic materials that will reflect the specific features of the linguo-communicative training of internal affairs personnel of different ranks.

3 Research Questions

The research is aimed at tackling two issues. The first is connected with the basic pedagogical principles of organizing the educational process that facilitate learning and achieve goals that the vocational skills development programme is focused on. The second illustrates innovative methods of the Russian sign language training that can be applied in conditions of time pressure.

4 Purpose of the Study

The purpose of the study is methodical support of the educational process aimed at formation of theoretical knowledge on dactylology, the Russian sign language, at the peculiarities of communication with disabled people with hearing impairment and in development of communicative skills in order to converse with the deaf and hard of hearing people using the sign language.
5 Research Methods

Research methods are based on the system analysis of the scientific and educational literature in the research field. Some relevant video resources on the Russian sign language have been analyzed as well. As an efficient tool for solving the issue under consideration we applied the method of analysis and synthesis of the Russian sign language means. They are necessary for methodological support of internal affairs personnel training in supplementary vocational programs (skills development programs) and in main vocational training programs for internal affairs personnel of various categories (staff training and development programs).

6 Findings

In the process of crime investigation, when receiving reports on an incident or interrogating offenders, police officers come into contact with people of different backgrounds. It is quite natural that many of these people speak different languages. But, at the same time, one shouldn’t expect that police officers must speak any other language but the country’s official one. It is obvious that in cases with the sign language big problems arise. The majority of foreigners and migrants can send a message or make a call to a person who can act on their behalf and help them in the above-mentioned situation. The same is much more difficult for the deaf. It can therefore be assumed that some defense and law enforcement agencies should take a different approach to the sign language as there are some cases when the ability “to say” at least something in the sign language would help both police officers and victims.

In order to improve the situation, special courses of the Russian sign language for police officers were organized. The police officers who take these courses realize numerous advantages of this ability to communicate with people who are physically challenged.

Although there are sign language interpreters who help the deaf during interrogation or in the court, the problems arise when police officers are called for but they cannot communicate with the person who needs their help. Consequently, even a short course of the sign language allows officers to acquire some basic communicative skills of this foreign language and at least makes it possible to settle some elementary everyday issues.

Applying innovative teaching methods of the Russian sign language (the RSL) is necessary under the conditions of time shortage. A teacher should determine a set of methods depending on the trainees’ level of education, their mental and emotional state and on the level of communication in the group. First of all, it is necessary to prepare a special classroom for the RSL lessons [8]. The maximum number of trainees should not exceed 12-14 people. The desks in the room should be arranged in two opposite lines so that the trainees can sit facing each other. It is advisable to practice dactyl speech and the RSL skills. The desks should be big enough to put everything they need for studying. The chairs should be soft and comfortable as trainees will study up to 6-8 hours a day. The room should be equipped with a video projector and means of multimedia. It is also desirable to have mini-players with headphones. Posters on the walls are optional. But we consider posters can have negative impact on the process of education in the case with the sign language. For instance, posters with Fingerspelling often make trainees look for a forgotten sign in the posters avoiding mental efforts. This negatively affects the process of memorizing dactyl or gestures [9].

Teachers should consider creating comfortable conditions for trainees to communicate. As a rule, the trainees have not met before and do not know each other. It may make them feel shy and unwilling to communicate. It affects the sign language acquisition, as many trainees do not want to show gestures that might be sometimes inappropriate and quite funny for hearing people. That is why a teacher should achieve such level of communication among trainees when the trainees communicate effectively and consequently it allows each trainee to practice and master gestures and dactyl irrespective of one’s physical and/or mental features.

One of the ways to increase the level of trust and improve the level of communication is to play group games [10]. We recommend blending studying new information and teamwork. All the trainees must participate including a teacher. In one room there can be trainees of different age.

As a rule the younger trainees were impulsive and indolent, they had not come across with hearing impaired people and they think that such trainings will not be helpful. The older ones have problems with memorizing and they do not want to study at all because they think it is a waste of time as they are on the verge of retirement and they just want to work peacefully until they retire. Involving all trainees into games might allow erasing age boundaries, presenting training not as a must but as an opportunity to get new interesting knowledge and skills. Games such as Activity and charades (so called Crocodile-game) bring the importance of visual cues that is one of the main elements in the RSL training. The necessity to play games while training is preconditioned by the specific features of the RSL training. Thus, both games and the sign language contain a lot of similar gestures. These gestures are difficult to describe for an unexperienced person; different configurations of hands cause trainees’ rapid fatigability and a decrease in their learning ability.

Teachers should determine on their own how much time they will devote to each lesson constituent, depending on trainees’ needs. Moreover, it is advisable to rotate visual, audio and kinesthetic tasks as often as possible trying to diversify methods of teaching. Games allow trainees to trust each other, to unite and to develop team-working skills. Gradually, it is necessary to introduce the gestures that have already been learnt into the games (Activity and charades) and this will show the trainees practical benefit of the RSL’s skills when they explain words and phrases. Game “Mafia” allows the teacher and trainees to familiarize themselves with other players’ personal
traits, track different reactions to negative and positive events of the game that will provide personal approach to the educational process. Moreover, this game may help relieve psycho-emotional and physical exertion caused by learning a new domain – the Russian sign language.

At the initial stage of studying Dactyl or Fingerspelling the teacher should provide handouts with finger configurations for each letter of the Russian alphabet to each trainee. The handouts will provide a visual aid while practicing the sign language individually. It enables the trainees to find the equivalent signs without their peers’ or teacher’s hints [11]. We recommend taking away graphic training aids after two or four hours of the sign language practicing. By this time trainees usually manage to memorize all dactyl development.

One of the negative impact on memorizing and motor skill caused by learning a new domain – the Russian sign language. Together trainees determine the order of the extracts and reconstruct the content of the story.

Nowadays there are about 3000 spoken languages and 100 sign languages. A sign language has a status of the state language in many countries but in Russia, the Russian sign language received this status only at the end of 2012. Sign languages have some specific features. One of them is that a sign language has synchronic structure (i.e. several information flows are transmitted simultaneously). As for the sound language, it functions sequential (information flows are transmitted one by one). Sign communication is divided into two systems: sign language (SL) itself and calque sign speech (CSS). SL, and particularly the Russian sign language, is a complete linguistic system with its own rules that differ from the ones of the sound language. The sign language is a visual kinetic linguistic system and as a result teaching RSL and development of sign speech are mostly based on the visual basis.

It should be noticed that in the USSR the sign language was not recognized as a language. The Pravda published an article by I.V. Stalin who wrote that the sign language, in fact, was not a language and even not a surrogate of a language that could somehow replace the sound language. He mentioned that the sign language was an auxiliary with a very limited range of communicative means and people used it to emphasize certain information in their speech. The sign language interpretation was based on the sound language. Later that phenomenon was called “calque sign speech” (CSS). Thus, CSS is a secondary sign system of communication. CSS is a form of communication when sign gestures substitute oral words, and the sentence structure is equivalent to that one of the oral speech. CSS is often used by people with hearing impairment or with late-onset hearing loss who failed to learn a real sign language. CSS is indispensable for rendering oral songs into the sign language. Thus, gesture songs are considered to be a CSS variety. Gesture song is a specific genre that helps to learn the culture of kinetic speech. Gesture singing at the lessons of kinetic speech is a new form of teaching that helps develop correct and expressive kinetic speech. Listening to songs and at the same time rendering them into the sign language enables trainees not only to change an activity, release the tension and increase motivation, but also practice signs while the teacher can verify how trainees assimilate signs. At present, sign singing is an easily accessible training tool and on the Internet a variety of clips with gesture songs are available (the most popular singers are Dmitry Bitulin, Victoria Konilova, the Ivanovs brothers, Ilya Aksenov and others). The genre of gesture songs has broad representation. While analyzing songs by various singers the teacher helps trainees to understand and recognize how beneficial the sign language is in transmitting different contents. The teacher also demonstrates various possibilities of different styles of the sign language. For example, different songs can be used for teaching vocabulary within relevant topics (Five Minutes by Alyona Moloskova can be practiced while studying Seasons and Time, Calmness-harmony by Mariana Lyukhanova relates to Feelings, Emotions and Conditions, The Trial by Maksim Sheinin is valuable in teaching professional vocabulary). It would be helpful to
build a video library to stimulate interest in learning the Russian sign language and understanding its expressiveness and beauty.

At the initial learning stage, analyzing and rendering songs into the sign language are a most efficient educational means. Using songs at the lessons could be beneficial in several ways:
1. It builds phonetic skills, i.e. the ability to distinguish components of a sign or so-called chereme (shape and orientation of the hand, location and movement). At this stage we use the following activities: watching songs, their re-watching and making comments on familiar signs, repeating signs after a performer.
2. It develops vocabulary. At this stage, trainees distinguish and memorize lexical phrases.
3. It makes us be more patient and more compassionate to other cultures and mentality.

Teaching gesture songs can involve several stages. The first stage is preparation. At this stage, trainees are familiarized with a song, watch the video and how it is performed in the sign language. At the second stage, trainees learn the song and signs. And, thirdly, trainees finalize their work. This stage supposes an artistic performance of the song. This approach stimulates positive dynamics in increasing trainees’ vocabulary.

Thus, a gesture song at the lessons of the sign language is a good means of forming motivation as well as developing sociocultural and cross-cultural competences.

7 Conclusions

The research draws us to the conclusion that specific features of teaching the Russian sign language to internal affairs personnel in educational institutions of the Russian Ministry of Internal Affairs determine the necessity to use relevant professionally oriented methodological support and various forms of creating educational programs.

On the basis of the analysis and generalization of the Russian sign language means which are necessary for methodological support of educational process for internal affairs personnel the authors made the following conclusions:
1. As sign speech is perceived visually it is important to base teaching the Russian sign language on the principle of visual methods (introduction of signs by the teacher, using technical means of teaching in order to show the sign vocabulary). Visual teaching makes the educational process much easier as it is accompanied simultaneously by describing a sign and explaining the structure of the sign by the teacher. Moreover, hand movements and simultaneous articulation, when dactyl and sign speech are accompanied by articulation, involve in the studying process four physiological functions: sight, hearing, speech, and hand movement. In addition, they stimulate different memory types such as visual, auditory, speech and motor ones.
2. The suggested forms of work involve active interaction of all participants of the educational process. The proposed system of handling the material provides implementation of didactic principles that are applied to the process of forming communicative competence: principles of systematicity, consistency, increasing difficulties, dosing the information and principles of the availability of the course material.

8 References

1. C. Udrea, Pedagogical Strategies for Continuous Training in the Police System. Procedia - Social and Behavioral Sciences. Volume 142. 597-602. (2014)
2. J.L. Bianco, Ideologies of sign language and their repercussions in language policy determinations. Language & Communication. Volume 75. 83-93. (2020)
3. C.K.M. Lee, K.H. Ng. Kam, C.-H. Chen, H.C.W. Lau, S.Y. Chung, T. Tsoi, American sign language recognition and training method with recurrent neural network. Expert Systems with Applications. Volume 167. (2021). Retrieved from: https://doi.org/10.1016/j.eswa.2020.114403
4. K. Wangchuk, P. Riyamongsol, R. Waranusast Real-time Bhutanese Sign Language digits recognition system using Convolutional Neural Network. ICT Express. (2020). Retrieved from: https://doi.org/10.1016/j.ictexp.2020.08.002
5. R. McKee, D. McKee, Globalization, hybridity, and vitality in the linguistic ideologies of New Zealand Sign Language users. Language & Communication. Volume 74, 164-181. (2020).
6. B. Braithwaite, Ideologies of linguistic research on small sign languages in the global South: A Caribbean perspective. Language & Communication. Volume 74, 182-194. (2020).
7. V. Adithy, R. Rajesh, Hand gestures for emergency situations: A video dataset based on words from Indian sign language. Data in Brief. Volume 31, 106016. (2020).
8. Y. Motamedi, M. Schouwstra, K. Smith, J. Culbertson, S. KirbyEvolving artificial sign languages in the lab: From improvised gesture to systematic sign. Cognition. Volume 192. 103964. (2019).
9. K. Emmorey, R. Bosworth, T. Kraljic, Visual feedback and self-monitoring of sign language. Journal of Memory and Language. Volume 61, Issue 3. 398-411. (2009).
10. J. Gamo, T. Cardoso, Y. Rybarczyk, Kinect-Sign, Teaching Sign Language to “Listeners” through a Game. Procedia Technology. Volume 17. 384-391. (2014)
11. S. Rojas-Murillo, A.B. Pancho, M.J. Cariaso, A. Speicher, Mato, A., Segal, O. (2021), Visual learning curves for American sign language (ASL) alphabet. International Journal of Industrial Ergonomics. Volume 81. 103027
12. N. Bailey, P. Kaarto, J. Burkey, D. Bright, M. Sohn, Evaluation of an American Sign Language cocurricular training for pharmacy students. *Currents in Pharmacy Teaching and Learning.* **Volume 13**, Issue 1. 68-72. (2021)

13. J. Langer, Modern Trends in the Teaching the Vocabulary of Czech Sign Language. *Procedia - Social and Behavioral Sciences.* **Volume 55**, 635-644. (2012)

14. D. Vinson, R.L. Thompson, R. Skinner, G. Vigliocco, A faster path between meaning and form? Iconicity facilitates sign recognition and production in British Sign Language. *Journal of Memory and Language.* **Volume 82**, 56-85. (2015)

15. Q. Deng, F. Gua, S.X. Tong, Lexical processing in sign language: A visual mismatch negativity study. *Neuropsychologia.* **Volume 148**, 107629. (2020)