

Cross-cultural mediation with refugees in emergency settings: ICT use by language service providers

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Abstract

The paper explores the current state of affairs in the language service providers' attitude and practice regarding the digital tools potential for language and culture mediation with refugees. The issue is considered from the angle of interpreters' awareness of and competency in using up-to-date electronic tools to support refugees' language rights in emergency settings in general and at the border crossing points and temporary settlements, in particular. The current importance of the research rests on the global migration tendencies that map a lot of challenges for cross cultural communication with forced migrants and refugees. The paper aims to explore the language service providers' competence and their aptitude to use digital tools for interpreting in diverse settings, including those related to migration contexts, oral human interaction and language mediation at the border crossing points, in particular. The study integrates desk and field research, includes the analysis of relevant literature and professional sources and further moves to a pilot survey. It involves interpreters with working experience in emergency situations against global migration background. The empirical analysis aims to explore specific preferences and benefits that various tools provide for an interpreter. 111 interpreters from 7 countries were engaged in the survey. The survey strived to identify interpreters' professional background regarding the skills interpreters' awareness of digital tools for interpreting process support and interpreters' attitude to the use of the relevant tools in their professional activities in the settings related to mediation activities for refugees at the stage of their crossing the host country border. The research findings reveal that neither Industry nor Academia fully responds to the society needs in terms of interpreters' awareness of and competency in using up-to-date electronic tools to foster the quality of their professional activities in the socially significant areas, related to emergency contexts in general, and to communication with refugees at the border crossing areas, in particular. The research results lead to the list of recommendations to both Academia and Language Service Providers to enhance the timeliness, scope, adequacy and quality of their activities with a view to fostering the cross cultural communication efficiency in emergency settings.

Keywords: *cross cultural communication, social communication in emergency, ICT-facilitated communication, language and culture mediation with refugees*

Introduction

The third Millennium promotes the development of smart professional communities within specific domains. Centuries-long tradition viewed interpretation from one language into another

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as a purely human activity with no digital devices use except for interpreter's booth equipment.

Nonetheless, the digital society sets up new realities that pave way to digital technologies engagement in the process of interpreting from one language into another.

It goes without saying that iPads, tablets, laptops form part of standard equipment supporting and facilitating the interpreter's work as cross-cultural mediator in the course of interpreting.

Interpreting industry widely uses digital resources in preparation for in-booth activities. There are a lot of up-to date relevant glossaries, dictionaries, and sources that can provide necessary information for interpreter's awareness of specifics in terms of particular professional settings. Moreover, both academic researchers in their scholarly papers and professional interpreters in their blogs mention such tools as LookUp, Interpreter's Wizard etc., that are widely used for glossaries management and the respective data use right in the booth.

Furthermore, there are examples of promising practices regarding ICT and Interpreting Industries cooperation. Scholars confirm the importance of consecutive machine interpreting tools that might be useful in particular domains including healthcare (Kelly, 2009), business (Wahlster, 1993), academic and educational (Byker & Marquardt, 2016), other social and technological settings (Rashid, 2012).

The above list of bright examples does not intend to support the forecast on human interpreters being eventually replaced with digital tools. It is only human interpreters and translators that can ensure quality of language service that is supposed to save human lives and protect human rights. Nonetheless, smart society might help interpreters with enhanced technology in case of stressful professional contexts, that interpreters and researchers mention. For instance, interpreting for long-hours and on diverse topics with no information provided from the client prior to the interpreting service provision, interpreting in disasters, emergencies, rescue operations, conflict zones etc. can be taken into account as well (Bulut & Kurultay, 2001; Chan et al., 2010)

Meanwhile, the authors' informal communication with Academia and Interpreting community representatives makes it possible to state that recent developments in digital support of interpreting are sometimes not in the focus of the academic curriculum or the latter provides just a general introduction to existing tools without focus on their consistent use in line with particular tasks and settings.

Moreover, the authors' engagement in the professional interpreters' community reveals that

not every interpreter is fully aware of the options that technology and electronics provide for oral cross language mediation.

The above situation has led to the **research hypothesis** that neither Academia no Industry fully respond to the Society needs in terms of interpreters' awareness of and competency in using up-to-date electronic tools to enhance their professional activities within humanitarian contexts and emergency situation.

The research statement argues that the use of ICT tools in interpreting should be viewed from the angle of providing interpreting efficiency to satisfy societal needs for language and culture mediation in humanitarian contexts, including the angle of refugees' language rights support at host country border points.

The research goal was to explore the current state of affairs in the Language Service Provision Industry and Academia regarding the use of digital tools for interpreting in diverse settings, including those related to migration contexts (unscheduled human move, as an example), oral human interaction and language mediation at the border crossing points, in particular.

The above goal was reached through a number of tasks. First, relevant literature and professional sources were analyzed to map current trends in the area under study. Next, the survey was conducted with two objectives: first, to analyze interpreters' awareness of digital tools for interpreting process support and, second, to know interpreters' attitude to the use of the relevant tools in their professional activities in the settings related to mediation activities for refugees at the stage of their crossing the host country border. Finally, recommendations were drafted regarding the interpreters' professional development in terms of ICT use.

Research Framework in Terms of Concepts and Theory

The research theoretical background is interdisciplinary in nature and includes concepts from various areas of human knowledge. The paper explores the mediation for refugees whose status is define in the UNO Convention on refugees (Refugee Convention 1951) though bears in mind the fact of unscheduled human migration. The article headline refers to the concept of *emergency* societies that suffer from natural disasters and social unrest, unscheduled human move across borders (Federici, 2016). Regarding the above contexts of human interaction, the present paper uses the wording *emergency/ emergency settings/ humanitarian contexts* in line with recent terminology (Anson et. al., 2017). These situations, among other things, lead to

multilingual repertoires, unpredictable scenarios of interaction among representatives of different language and cultures. The process aims to bridge the diverse communities through the process of cross-cultural mediation that is implemented across continents, in various dimensions, including politics administrative, legal, social, educational, and other settings (Hlavac et.al., 2018, Keating Marshall, Bokhorst-Heng 2018). The present research assumes that mediation uses divers tools, including sound, visual, verbal techniques; interpretation and translation are considered as inherent components of intercultural mediation (Liddicoat 2016). Bearing in mind the digital nature of the modern world the authors of the paper agree that the agenda of human interaction in emergencies may include issues related to computer-aided online (and mobile) applications that “can connect those in need, aid workers, interpreters (CDAC, 2014).

The present research also takes into account the area of research and practice that develops under the umbrella of “computer-assisted interpreting” (CAI) within Translation and Interpreting Studies. Scholars use the CAI term to discuss tools that are specifically designed to support interpreting activities. The respective studies cover three major areas: research, education and professional practice (Russo, et.al 2018). Currently scholars distinguish a number of types for CAI, including software for terminology extraction and glossary building, soft for note-taking in the course of interpreting, CAI tools for training, and other applications (Corpas Pastor, 2017). Researchers state that there is little attention from the language industry, business, universities to the interpreting software capacity and prospects and underline that a lot of theoretical tasks and empirical studies lie ahead (Fantinuoli, 2018). However, it seems possible to follow those scholars who use the wording of *ICT tools for interpreting* (Winteringham, 2010) as this concept choice provides a broader vision of the phenomenon under study and covers the above mentioned subdivisions. Bering in mind the above the concept, interpreters are technology users, and they should be part of empirical and theoretical analysis regarding process, contexts, products, quality issues concerning the ICT use in the interpreting activities. This framework of concepts and theory responds to the research statement, goals and tasks.

Literature Review

The review of relevant literature reveals that neither Academia nor Industry produces a unanimous opinion on the technology for interpreters’ support (Costa et al., 2014, Rütten, 2015). Scholars point out rather difficult relationship between interpreters and ICT tools (Drechsel, 2013/2015). Research by D. Berber (2006) revealed a rather serious opposition to the use of ICT

technologies by interpreters through conference interpreting. According to recent studies on interpreters' use of technology during an interpretation, 48.12% of the interpreters answered "yes", whilst 36.84% answered "no", with bilingual dictionaries and glossaries mentioned as first hand aid (Corpas Pastor & May Fern, 2016, p. 34).

Regarding the research field, even monographs that pretend to cover ICT for both translation and interpretation focus mostly on CAT tools for translators and leave little space to descriptions of tools that currently exist at interpreters' disposal (see, for instance Corpas Pastor & Duran Munoz, 2018).

The above situation does not look very surprising. Scholars explain that challenges to ICT developments for interpreters' rest on the ambiguity and vagueness of oral communication, its spontaneous nature that provides limited opportunities in terms of predictability of language forms choice.

Nonetheless, there is a number of research papers regarding software for the interpreters to enhance their professional activities' quality (Beagley, 2016; Mas-Jones, 2016; Silva, 2015).

Serious attention has been drawn to terminology and document management issues for interpreters' activities (Bilgen, 2009; Rodriguez & Schnell, 2009; Will, 2007; Duflou, 2015). Scholars have conducted pilot studies regarding digital pen (Orlando, 2015) and tablet (Goldsmith 2017) use for consecutive interpreting.

Special emphasis is laid on ICT and language localization through interpreters' work. Thus, N. Kelly (2009) describes particular tools for remote interpreters who work with divers national variants.

As technological background for technology-supported interpreting rests on the automatic speech recognition (ASR) there is a trend to consider tools that operate as virtual language assistants. One of the examples is Siri apps that can support language translation (Lucas, 2017). Moreover, scholars look at the prospective of artificial intelligence integration into the interpreting practice (Yu & Deng, 2015).

Although most researchers agree that artificial intelligence development ~~have~~ has not yet reached the level of full scale interpreting capacity, the respective tools provide exciting training resources in terms of databases for training and distance learning (remote) activities (Lim, 2014).

The literature review confirms that both the Academia and Industry focus on the interpreters'

competence and practice regarding ICT use for professional activities (Wang, 2016). There is a considerable number of papers regarding the ICT tools for interpreters' training. Scholars agree on the ICT impact on interpreting environment (Sandrelli 2015). The relevant papers focus on various devices (gadgets), tools for corpora driven interpreters' training and electronic resources (speech repositories, video collections) for interpreters' self- and classroom learning (Fantinuoli, 2017a).

To sum up, in terms of academic publications there is vision for digital potential for interpreters' work support. However, there is no consistent and compatible evidence regarding interpreters' opinions on ICT use through their professional pre-booth, in-booth activities, or during consecutive interpreting. Therefore, despite the present research conceptual vision of interpreters as potential subject for empirical and theoretical analysis regarding ICT use in the interpreting activities, interpreters' voices are still on the sidelines.

Moreover, the issue of ICT use in emergencies (O'Brien, 2016) with regard to specifics of ICT-assisted interpreting in the mentioned context has not become subject to research either.

The literature review confirmed the relevance of the research statement, goal and tasks.

Methodology

The research rested on the qualitative approach to the methodology design as the present study aimed to explore interpreters' opinions and professional practices. Qualitative paradigm has been chosen as it allows researchers to go beyond numbers, explore human behavior in specific contexts, focus on planning and policies (Gaber & Gaber, 2017).

Methods

The methodology combined desk and field studies. The literature review strived to identify current state of affairs and promising practices regarding the use of gadgets and digital software to enhance interpreter's activities to mediate communication among refugees and host country authorities and communities.

The empirical analysis aimed to explore Interpreters' opinions and experience regarding benefits that various ICT tools provide for their professional activities.

The open-ended questionnaire was designed for interpreters' on-line survey. The survey was conducted during October 2017-March 2018.

The open-ended type was selected as it can provide richer and more individual responses. Scholars agree that it is useful in case the researcher is not sure what the responses might be, and

it encourages more detailed feedback (Lupia, 2018).

The survey list included the following questions.

- What ICT tools do you use in your interpreting practice? (please, write down concrete the soft)
- What are the reasons for choice? (please, provide free style comments)
- Did your university course focus on ICT tools for interpreting? (yes/no, provide free style comments , if any)
- What ICT tools for interpreting were you told about and used during your university studies? (yes/no, provide free style comments , if any)
- What is your opinion on your degree program regarding the awareness of and competence in the use of ICT for interpreting? (please, provide free style comments)
- How did you use ICT tools in the course of your r mediation activities for refugees and host country authorities at the border crossing points, temporary shelter camps, etc.? (please, provide free style comments)

The Typeform tool was used as the soft allows researchers to design surveys through conversational data collection methods thus, creating quasi real-life interviewing process, and offers a simple user friendly interface

Cluster, factor, discriminant types of analysis were implemented to identify statistically significant variables. The SPSS was used for data processing.

Respondents Profile

Professional interpreters engaged in the survey. The respondents' team was built up through on-line announcement and invitation to take part in the empirical research. The respondents' pool combined professionals who hold university degree and professional certification in interpreting. The invitation particularly underlined that pilot study required those who had experience in working with refugees just making their first steps on the territory of the host country.

The variables included age, gender, country origin, length of professional activities, the mode of employment (in- house or freelancer), experience in various interpreting settings (business, academic, public service, emergency).

The selection procedure aimed to balance the mentioned variables. Totally 111 respondents participated in the experiment. They represented 7 countries, including Austria, Afghanistan,

Greece, Italy, Russia, Spain, Turkey. The respondents asked to treat their personal data regarding the name and surname, the university they graduated from, the employer's details as strictly confidential.

The proportion of participants to the survey also accounted for the balanced distribution of the above mentioned variables.

Research Results and Discussion

The research moved forward with mapping the respondents' awareness of up-to-date tools to support their professional activities.

The interpreters have provided their personal lists of software they use for enhancing their professional activities quality. The respective clusters were identified and are shown in Table 1.

Table 1

Clusters characterizing respondents' views on choosing digital tools for interpreting

Clusters	Percentage of respondents who mentioned the tool
LookUp	79%
Interpreter's Wizard	71%
InterpretBank	63%
Intragloss	56%
Interplex UE	54%
Apalon Apps	43%
Google Speech Translator	41%
Microsoft Translator Speech	41%
Real-Time Voice Translation (Translate Your World)	32%

The links to the above tools are mentioned in the reference list. The factors that influenced the respondents' opinions covered the interpreters' opinion on the level of service quality provision for multiple settings ranging from pre-interpreting activities to consecutive and simultaneous interpreting. The factor was mentioned by 100% of respondents (0, 989). Another factor covered the tools dependence on the platform. The factor was mentioned by 87% of respondents (0, 876).

To comment on the interpreters' opinions, it is useful to explain a number of points.

LookUp provides services for commercial use, it allows for management of multilingual glossary management tool for Windows. It can be used with visual support during simultaneous interpreting.

Interpreter's Wizard is a free iPad application that helps to manage and visualize bilingual

glossaries in a booth. The above mentioned tools are up-to date and differ in terms of platform dependence. This factor explains a slight dominance of *LookUp* over *Interpreter's Wizard* due to *Interpreter's Wizard* free iPad application.

Further discussion provides comments on *InterpretBank*, *Intragloss*, and *Interplex UE* use.

The three tools focus on terminology management functions. Nonetheless, they differ in terms of service scale provision. Thus, *InterpreterBank* has some preferences in interpreters' views due to three modes it provides: the creation and management of multilingual glossaries (*TermMode*), the analysis of the mentioned glossaries (*MemoryMode*), and the opportunity to use the above data during interpreting in a booth (*ConferenceMode*).

Intragloss provides particular grounds for interpreters' pre-booth activities regarding the performance and comparison of documents and terminology. Scholars specify that it is extremely useful to draft and manage glossaries for particular events.

Interplex allows users to group all terms relating to a particular subject or field into multilingual glossaries that can be searched in an instant.

The last four tools (*Apalon Apps*, *Google Speech Translator*, *Microsoft Translator Speech*, *Real-Time Voice Translation*) provide real-time voice translation (Speech-to-Speech, and Speech-to Text) into dozens of languages, depending on a concrete tool.

The discriminant analysis identified the respondents' length of professional activities, ($\lambda = 0,243$, $\chi^2 = 4,65$, $p < 0,01$), their mode of employment as statistically significant – only in-house interpreters with 5+ yearlong working experience strongly and consistently differentiated the above tools ($\lambda = 0,341$, $\chi^2 = 3,65$, $p < 0,02$). Moreover, 98% of the respondents with experience of working in emergency settings mentioned oral speech recognition tool as compared with only 5% of the interpreters without working experience in such a domain. In this contexts particular emphasis was laid on speech recognition software.

As the table shows, the respondents mentioned *Apalon Apps*, *Google Speech Translator*, *Microsoft Translator Speech*, *Real-Time Voice Translation* (*Translate Your World*) tools. Regarding the respondents' reference to these tools, the discriminant analysis identified the respondents' experience of working in interpreting in emergency settings without any pre-interpreting paper support as the statistically significant variable ($\lambda = 0,241$, $\chi^2 = 4,68$, $p < 0,02$).

The above data bring to light evidence related to the automatic speech recognition (ASR) incorporation in the interpreting practice regarding humanitarian and emergency settings. Earlier

studies underlined the timeliness of ASR inclusion in the agenda of language specialists' training (Yu, Deng, 2015) and computer-assisted interpreting software (Fantinuoli, 2017b).

Further, the research focused on respondents' reasons for choosing tools for interpreting. The survey resulted in the list of clusters that are specified in Table 2.

Table 2

Clusters characterizing respondents' reasons for choosing tools for interpreting

Clusters	Percentage of respondents who mentioned the item
The opportunity to use the tool for multiple/single tasks	100%
The opportunity to use the tool for the required working language pair	100%
The level of complexity to use the tool	73%
The price of the tool	43%

The above data confirms that interpreters value the tool efficiency with regard to the level of service quality in various contexts, the opportunity to use the tool for one or for many purposes and the opportunity to use the tool for the required working language pair. The factor was mentioned by 100% of the respondents (0, 989).

With regard to Table 2 data it is important to take into account the fact that interpreters can be differently ranked in terms of their digital competence. The easier the tool is, the more it is preferred for professional use. This factor was mentioned by 78% of the respondents (0,776).

Another factor covered the cost of using the listed tools. The factor was specified by 43% of those interviewed (0, 428).

The discriminant analysis identified as statistically significant the respondents' length of professional activities, ($\lambda = 0,547$, $\chi^2 = 4,65$, $p < 0,03$) and the mode of employment – only in-house interpreters mentioned the item ($\lambda = 0,413$, $\chi^2 = 3,65$, $p < 0,03$).

The present findings lay grounds for the argument on the timeliness of moving from the general corpus-based terminological preparation for interpreting (Xu, 2018) to specific multilingual corpora for interpreting in humanitarian contexts and emergencies.

Furthermore, the above data correlates with scholars' assumptions regarding the importance of multifunctional nature of digital tools for interpreters (Prandi, 2017), the idea of digital platform that that could integrate diverse functions and operations supporting interpreters' work in

various settings (Fantinuoli, 2017b). The present survey results confirm the timeliness of this criterion regarding the design and selection of digital tools for cross-cultural mediation in the contexts under study.

The next step of the present research was taken to identify the respondents' views on their degree programs efficiency regarding the incorporation of digital tools for interpreters' support in the academic curriculum.

The findings of the mentioned research stage look rather disappointing (see Table 3). The majority of the respondents failed to recall positive input of the university programs they graduated from regarding the respective program relevance. Only 21% of the respondents acknowledged their degree program relevance regarding students' awareness of software and tools that the modern interpreter can integrate into his/her professional activities.

And only 17% of the interpreters confirmed their degree program relevance in terms of students' awareness of settings/tasks for which the tool can be used (see Table 3 data).

Table 3

Clusters characterizing respondents' views on their degree programs support regarding the use of digital tools for interpreting settings

Clusters	Percentage of respondents who mentioned the item
The degree program relevance regarding students' awareness of software and tools that the modern interpreter can integrate into his/her professional activities	21%
The degree program relevance regarding students' awareness of settings/tasks for which the ICT tools can be used	17%

The factor analysis of the above clusters revealed that the above data confirm interpreting industry's assumptions that graduate interpreters lack both knowledge and skills regarding efficient tools for interpreters' activities support. Moreover, the survey results let the authors argue for stronger requirements to interpreter's degree program curriculum. The factor was mentioned by 100% of the respondents (0,979).

The survey results made it possible to state that interpreters' classroom activities within the Academia environments should be linked to real-life practice. The factor was mentioned by 100% of the respondents (0, 989).

The discriminant analysis did not identify any variables as statistically significant. This means

that currently most university degree programs fail to respond to the Interpreting Industry realities in terms of raising students' awareness and expertise in the area of digital tools application in interpreters' professional practice.

Similar thoughts were mentioned earlier by J. Pan (2016), who argued for "situated simultaneous interpreting". The present research findings confirm the importance of this approach regarding ICT use in cross-cultural mediation with refugees in emergency and humanitarian contexts.

Furthermore, the present survey results support scholars' statements on the importance of designing specific digital platforms for interpreters' training and professional development. Earlier pilot tools (see, for instance so-called "3D Virtual World for interpreter training" in Braun et al., 2013) should be taken into account and enriched through integration of empirical data

The final stage of pilot experiment focused on interpreters' use of digital tools and gadgets during their mediation activities in emergency settings including the situations when they had to mediate among refugees and host country authorities at the border crossing points, temporary shelter camps, etc.

The survey results made it possible to identify clusters regarding the ways interpreters use the tools under study for language and culture mediation in the above settings (see Table 4).

Table 4

Clusters characterizing respondents' views regarding the ways interpreters use the tools under study for language and culture mediation in the discussed settings

Clusters	Percentage of respondents who mentioned the item
Terminology management and bilingual glossaries	97%
Translation of required documents	91%
Oral cross language communication	42%

The above data confirms that interpreters consider the relevance of digital tools used primarily in terms of their professional support at the pre-interpreting stage. The factor was mentioned by 97% of the respondents (0, 961).

It is interesting to mention that discriminant analysis revealed as statistically significant the following variables:

- the length of professional experience ($\lambda = 0,263$, $\chi^2 = 3,61$, $p < 0,01$), interpreters with less

than 5+ years of working experience made a part of all three clusters, while professionals with over 5+ years of working experience formed mostly the first and the second clusters;

- the mode of employment ($\lambda = 0,321$, $\chi^2 = 2,78$, $p < 0,02$), freelancers made a part of all three clusters, while in-house mediators confirmed the ICT use within the first two clusters;

- type of professional certification ($\lambda = 0,351$, $\chi^2 = 2,61$, $p < 0,001$), interpreters with professional certification without university degree were present in all three clusters, while interpreters with university degree confirmed the ICT use mostly within the first two clusters.

The research findings enhance previous data concerning interpreters' views on technology (Corpas Pastor, May Fern, 2016) with latest updates on meaningful variables that explain interpreters' attitudes to computer-assisted interpreting. Among these variables, the type of interpreting settings plays a significant role. This goes in line with the recent statement on the arguments for settings-oriented approach to studies of computer-assisted interpreting (Fantinuoli, 2018) that laid general theoretical grounds hereto. The present research findings have shown promise for further discussion on ICT use specifics regarding cross-cultural mediation in humanitarian and emergency settings.

Besides, the research shows that interpreters who have experience in working with refugees in humanitarian or emergency contexts related to unscheduled human move to other countries due to natural or human-made crisis integrate various tools to enhance their communication productivity. This point enhances earlier data on language technologies use in disaster aid (Rogl, 2017).

To sum up, the interpreters' survey confirmed the background interpreting community principle according to which technology should matter to interpreters only to the extent it helps interpreters to add value to their clients (Downie, 2016), support the interpreter in the face of emerging challenges.

Winding up the description of the results and their discussion, the findings confirmed the research hypothesis. Neither Academia nor the Interpreting Industry considers interpreters' awareness of and competency in using up-to-date ICT tools from the angle of societal needs. The Above communities do not consistently integrate ICT tools in the institutional discussion on interpreters' professional capacity in the course of interpreting in socially significant areas, related to humanitarian and emergency contexts in general, and to communication with refugees at the border crossing areas and temporary shelters, in particular.

The pilot survey findings helped to specify current state of affairs in the Language Service Provision Industry and Academia regarding the use of ICT for interpreting in diverse settings, including migration contexts, oral human interaction and language mediation at the border crossing points and temporary shelters, in particular.

The research on technology-assisted interpreting makes it possible for the authors to specify the following points:

- there are ICT tools that language service providers use to communicate with refugees in emergency contexts
- there is urgent need for language service providers' awareness of ICT tools for language and culture mediation in emergency settings in general, and for communication with refugees at the border crossing points, in particular
- it is timely to consider specific language service providers' skills to use ICT tools that are vital for human efficiency in social communication in emergency settings
- there is lack of Academia's focus on ICT tools for interpreting
- it is timely to revise Academia's vision at technology use for interpreting as oral mediation in emergency contexts
- recommendations should be drafted regarding specific content for language service providers' training to enhance their professional capacity at the border crossing points (as example of emergency contexts).

Conclusions and Limitations

The research results made it possible to make some recommendations to the education policy makers, university faculty who deal with Academia-based interpreter /mediator training, to the Language Service Provision Industry, and Interpreters' Community, as well.

The university faculty and management should bear in mind the latest developments in digital tools that can be of use and support for interpreters' work. The research results confirmed the relevance of the analyzed tools inclusion in the academic curriculum for interpreters-to-be. Consequently, course directors should renew the educational aids not only regarding the date of their publication but also taking into account the technological advance in the area under study. Constant consultation with the Industry representatives (or even their involvement in the training process) should become a standard practice for academic training.

Moreover, the research findings allow for specifics of the curriculum particular requirements

regarding interpreters' training. Thus, we would like to offer the development of a course on the Latest Developments in the Software for Interpreters. The course should go beyond generalized narrations on the new digital tools. The above course is expected to provide a specific list of software that can support interpreting process and train students in using the relevant tools. Such a vision requires higher and up-to-date level of the trainers' professional competence.

The research findings confirmed the importance of the curriculum that should integrate technology-enhanced training, research, and the Industry requirements. Specific emphasis should be laid on integrating high-efficiency and multi-functional digital solutions for interpreters into the list of educational aids. The relevant tools are expected to be easily tailored for various event settings. Particular attention should be drawn to those tools that can provide for the interpretation being delivered straight to mobile devices.

The research outcomes have theoretical relevance and practical value. The theoretical importance results from the research contribution to the methodological instruments for further studies of social communication in emergency settings of multicultural community members' interaction. The research data provides broader understanding of the concept of social communication in emergency settings with regard to emerging communication practices and contexts, including ICT –facilitated interaction with refugees at border crossing points.

The practical importance stems from the fact that research materials can be used by national Agencies that deal with refugees for designing guides to use digital tools for professional activities regarding refugees' arrival and settlement management, possible use of the data obtained for the development of training courses for language service providers, etc.

The present research mapped preliminary trends and general tendencies regarding the ICT use for communication with refugees in emergency settings. Further research is required in terms of different target audiences involved, software used in different geographical regions and communication settings, for interpreting within different particular language pairs.

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