Analysis of Online Turkish Language Instructor Competencies by Fuzzy Delphi and Analytical Hierarchy Process

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Abstract

Distance and online education have required instructors to acquire new skills and competencies for language teaching. This research aimed to determine online Turkish language instructor competencies. It comprised two stages in which Fuzzy Delphi and Analytical Hierarchy Process (AHP) methods were used. In the first stage, 52 competencies under seven categories were compiled from the literature by applying the Fuzzy Delphi technique. In the second stage, the AHP method was used to determine the significance and weight of the competencies. There were five competencies in the "technical" category, three in the "individual" category, six in the "management and planning" category, three in the "material" category, nine in the "communication" category, eight in the "learner autonomy" category, and four in the "privacy and security" category. The findings suggested that "communication" was essential competence, and that "pedagogical" competence was more critical than "technical" competence. Furthermore, it was revealed that the instructors did not regard "autonomy" as competence. It also can be inferred that the instructors' "individual" competencies were not considered very important.

Keywords: instructor competencies, Turkish language education, Analytical Hierarchy Process, Fuzzy Delphi

1. Introduction

Although distance education is not a new option in language teaching, it has gained importance with the rapid developments in communication technology. Distance language teaching programs were initially asynchronous and subsidiary applications. However, new technologies and the internet have allowed teaching synchronous classes whereby instructors could meet up with learners in video and audio conferences. Online systems that offer simultaneous oral and written interaction opportunities by eliminating physical restrictions have generated considerable potential for language teaching (Hampel & Hauck, 2004; Wang, 2004). Especially the Covid-19 pandemic interrupted the face-to-face programs at educational institutions. For the first time in history, the popularity of distance language teaching outpaced in-class language teaching in 2020.

There is a widespread perception that online courses are cost and time-efficient alternatives. They also offer learners considerable autonomy and flexibility, which has encouraged language learners to prefer online language learning alternatives (Warschauer & Liaw, 2011). In the face of increasing demand for online alternatives, instructors have felt the pressure to reconsider their beliefs and basic assumptions about language teaching and taken-for-granted roles (Wiesenberg & Stacey, 2008). This situation has shifted teachers' positions and the nature of teaching (Bennett & Lockyer, 2004; Compton, 2009; Howell, Saba, Lindsay, & Williams, 2004). Online language teaching has entailed new teaching approaches and skills different from those used in face-to-face language courses. Distance and online language teaching require different skills than those preferred in online teaching in other fields (Hampel & Stickler, 2005). Indeed, the rapid increase in demand for online language learning has exceeded the adaptation capacity of teacher training institutions.

Despite the assumptions suggesting similarities and a transfer between face-to-face language teaching and online teaching, it should be accepted that both are entirely different in terms of the educational environment (Goodyear, Salmon, Steeples, & Tickner, 2001). Nevertheless, those differences and their requirements must be clarified (Compton, 2009). It is far from plausible today to believe that a good classroom teacher can easily teach online (Davis & Rose, 2007). Hubbard and Levy (2006) point out that instructors may be disadvantaged in online language teaching if they are not trained well. In online language teaching, instructors need different skills than those used in classroom language teaching (Bennett & Marsh, 2002; Compton, 2009; Davis & Rose, 2007; Hampel

& Stickler, 2005; Sun, 2011; Wilson & Stacey, 2004). However, it has been observed that most instructors acquire those skills in informal ways or through self-study (Kessler, 2006), which challenges instructors regarding what they should learn and what skills they should have in online language teaching.

1.1 Online Instructor Competencies

It has become inevitable to specify new skills and competencies for online instructors. Various models that propose skills for online language instructors have been developed in this regard. For example, Hampel and Stickler (2005) conducted one of the first comprehensive studies on the pedagogical aspects of online language teaching. Their model lists seven main competence areas essential for online language teaching hierarchically. The first three levels are related to software and hardware knowledge. The fourth and fifth levels encompass online socialization and communicative competencies. The sixth and seventh levels are the top of the pyramid, which involves instructor creativity and teaching style competencies. Compton (2009) showed the limitations of the model and proposed three primary competence areas regarding "technology", "pedagogy", and "evaluation". Guichon (2009) states that online instructors must have specific skills to create opportunities to improve language skills. In their framework, there are three regulation competencies that language instructors should have expertise in socio-affective, pedagogical, and multimedia. The European Union has prepared a general framework for digital competencies for online teaching (Redecker & Punie, 2017). This framework addresses competencies from digital, pedagogical, and instructional management aspects. As understood, technical and pedagogical competencies are specifically emphasized. Besides, Murphy, Shelley White, and Baumann (2011) stress that the individual competencies of online instructors can make distance language teaching considerably effective.

1.2 Technical Competencies

Tait (2000) indicates that instructors should provide cognitive, affective, and systemic support to learners in distance education. Similarly, Murphy, Shelley White, and Baumann (2011) suggest that language instructors should guide learners in using materials and tools in distance education by adopting emotional and guiding roles. Bennett and Marsh (2002) recommend that instructors utilize facilitative techniques and strategies in online courses. Accordingly, the primary goal is to ensure that instructors have sufficient technical skills. Indeed, among the noticeable differences between online and traditional language teaching, online teaching tools that instructors must have distinctive features. Guichon (2009) underlined the importance of instructors' familiarity with the latest technologies during their pedagogical education to acquire technical skills they can use professionally in future careers.

According to Chapelle (2003), technical skills are meant for instructors to acquire new professional skills and enrich learning situations. In this sense, more is needed for a language instructor to turn on the computer or install the software. The seven-level pyramid model designed by Hampel and Stickler (2005) urges an online language instructor to have technical -hardware and software- skills (e.g., Zoom, Skype) and learn about the strengths and weaknesses of online platforms. An instructor's ability to solve fundamental technical problems and guide the learner (Douglas, 2011) also facilitates overcoming the technical problems that hinder communication. In this sense, Warschauer (2002) states that an online instructor should be able to search for information, evaluate critically, produce new media images and audio, and manage online interactions beyond basic computer literacy skills. In addition, an instructor should be able to adapt technology to language teaching and even technically manipulate and incorporate the course materials prepared for traditional teaching (Hubbard & Levy, 2006; Kessler, 2006). To effectively use technical skills in language teaching, prospective instructors should be equipped with pedagogical skills related to online language teaching. Murphy, Shelley, White, and Baumann (2011) concluded that technical skills could be practical and effective with pedagogical and management skills.

1.3 Pedagogical Competencies

Instructors must provide a pedagogical framework for online educational goals. Any online instructor must proficiently use software and solve specific hardware problems. Besides, they should customize online language teaching by blending technical skills with pedagogy. In this sense, management and planning are also critical for the general pedagogical framework of instruction, and instructors should know the limitations and strengths of online language teaching. Learners also should be informed about the limitations of online language teaching (e.g., self-discipline issues, lack of control, hardware, and software problems) (Douglas, 2011; Goodyear, Salmon, Steeples & Tickner, 2001). Such awareness helps instructors respond to learners' instantaneous demands (Hauck & Haezewindt, 1999).

In an online teaching mechanism, instructors perform learning by designing activities and materials (Berber-McNeill, 2015; Berge, 2008). Compton (2009), who modeled Chapelle's (2001) tasking criteria (task, software, evaluation) in computer-assisted language teaching, believes that tasks and evaluations are different

contexts in online platforms. An instructor should know how to facilitate the acquisition of a language. For this reason, within the framework of their skills and competencies, instructors should fulfill the suitability, selection, and adaptation of tasks and materials (Hauck & Stickler, 2006). They should also create online products to evaluate learners through tasks and exams (Berber-McNeill, 2015). Hampel and Stickler (2005) suggest that instructors produce materials and use technological tools creatively. Creativity is an essential part of their model as well. The compatibility between content and technical software and hardware and their co-use depends on an instructor's manipulation skills (Weininger & Shield, 2003). For example, the chat section can be used effectively for planned activities and brief information (such as short explanations, examples, and new words) during a lesson.

An instructor, who adapts a language teaching material to online tools and makes it ready for use, must communicate positively and effectively with learners so that their efforts are not wasted. An instructor must deal with the communication-related challenges in an online environment and accept that online language teaching differs from face-to-face teaching and requires adaptation.

Social adaptation and positive interaction facilitate meaningful learning through instructors' communication competencies. It is vital to convey a sense of trust to ensure learners' active participation in language learning. Thus, Goodyear, Salmon, Spector, Steeples, and Tickner (2001) emphasize that instructors' awareness of learners should be high. Hauck and Haezewindt (1999) suggest that online communication tools may lead to communication anxiety in learners and that instructors should capably manage it and motivate learners. It can also be helpful for learners to feel like a part of a group in maintaining their motivation for online language learning.

In this regard, instructors' communication skills play a role in learners' online socialization. Positive online interaction would help maintain collaboration among learners (Hampel & Stickler, 2005). Creating a common communication platform (such as forums and discussion groups) provides an in-depth language learning experience (Guichon, 2009). Online communities promote socialization, active participation, and collaboration. Instructors can create a learner community (via Facebook, Instagram, or blogs) (Berber-McNeill, 2015; Hampel, 2009). Audio and video conferencing, social media tools, wikis, and blogs offer opportunities for learners to interact with their peers. Such tools can be considered an autonomous space for learners who are equal to instructors and get the chance to show and be appreciated for their work.

Autonomy in online learning refers to learners' engagement in specific tasks. Instructors should support learner autonomy from technical, methodological, and metacognitive aspects (Reinders & White, 2016). Guichon (2009) presumes that online socialization allows for greater equality of status between instructors and learners than in traditional classroom settings. Here, instructors leave their dominant roles over learners and hold other functions such as manager, assistant, classmate, and problem solver (Hauck & Stickler, 2006). Equality between instructors and learners creates more opportunities for cooperation. For instance, they can prepare language learning materials and tasks collaboratively. Instructors should be role models and facilitators in guiding learners (Goodyear, Salmon, Spector, Steeples, & Tickner, 2001). Such challenging tasks can be facilitated by giving appropriate tasks, guidance, and feedback (Hampel, 2009). Developing strategies promoting learners' active participation in learning would encourage them to take risks while using the target language without instructors (Hauck & Haezewindt, 1999; Sun, 2011). The controlled absence of an instructor allows learners to maintain language engagement, especially in asynchronous interaction. In this sense, Douglas (2011) states that instructors should provide learners with synchronous and asynchronous inputs such as e-mail, audio recording, and video.

Online interaction, by its nature, is possible through technical means, and both sides share their information, especially images and audio. Additionally, online tasks and activities yield written, oral and visual outputs. Therefore, instructors should reassure learners about online data security and privacy. They should have ethical awareness and technical skills to protect online privacy (Hauck & Stickler, 2006). Learners should also be asked their opinions about a session's video or audio options (Goodyear, Salmon, Spector, Steeples & Tickner, 2001). Regarding privacy and security, instructors should be able to recognize and deal with cyberbullying (Douglas, 2011) that can be prevalent in online communities, social media, and forums. At this point, an instructor's knowledge and problem-solving skills facilitate recognizing any problem in online teaching and provide a safe virtual learning and socialization environment for learners.

1.4 Individual Competencies

Instructors can acquire technical and pedagogical competencies through specific training. Online communication also has a humanistic dimension which refers to the individual competencies of an instructor. Murphy, Shelley White, and Baumann (2011) indicate that individual competencies are essential to understand learners well. Accordingly, the presence of a common language between an instructor and learners, in addition to the target language, would help both sides better understand each other, enabling instructors to communicate with learners in

other languages when needed. It can deepen communication between instructors and learners. Additionally, an instructor's tolerance and acceptance of different cultures are critical in intercultural communication in language teaching. Lastly, Hampel and Stickler (2005) draw attention to instructors' ability to guide learners in determining rules as a part of online socialization.

1.5 Aim and Research Questions

The views mentioned above on the essential competencies that online language instructors need to outline a clear list of the relevant competencies. There are also various thoughts on the ideal hierarchy among those competencies. In terms of the relevant literature, this research attempted to create a hierarchical model of online language instructor competencies. Pilanci, Saltık, and Çalışır Zenci (2020) proposed a checklist for basic principles for online language instructors. Nevertheless, teaching Turkish as a foreign language has not been studied extensively. Therefore, this research aimed to determine language instructors' competencies and sought answers to the following questions:

1) What competencies should instructors have in online language teaching?

2) What is the hierarchical order of those competencies in online language teaching?

2. Research Design and Implementation

2.1 Methodology

This research was conducted with the approval of the Ethics Committee of Amasya University dated 12.09.2022. It was separated in two stages: a literature review by the Fuzzy Delphi method and Analytical Hierarchy Process (AHP) method. In the first stage, a comprehensive literature review was performed to determine the competencies that online instructors should possess. Then, the Fuzzy Delphi method was applied to get expert opinions and create the final list version. In the second stage, the AHP method determined the significance and weight of the competencies in the list.

2.1.1 Fuzzy Delphi Method

This method was developed by Ishikawa, Amasaga, Shiga, Tomizawa, Tatsuta, and Mieno (1993) by combining the traditional Delphi technique with fuzzy set theory. The method allows for flexible evaluation of experts' common ideas (Hsu, Lee, & Keng, 2010), so it was preferred in the first stage. Then, the Fuzzy Delphi method was applied as follows (Dweiri, Kumar, Khan, & Jain, 2016; Singh & Sarkar, 2020):

Step 1: Various relevant criteria were specified and tabulated.

Step 2: A survey including the specified criteria was administered to the experts who were asked to evaluate it using the scale shown in Table 1 below. For each measure, the experts' inputs were converted to fuzzy numbers.

Table 1. Linguistic variables and fuzzy numbers

Language Variable	Ratio	Triangular Fuzzy Number
Very Insignificant	1	(0.1,0.1,0.3)
Insignificant	2	(0.1,0.3,0.5)
Normal	3	(0.3,0.5,0.7)
Significant	4	(0.5,0.7,0.9)
Very Significant	5	(0.7,0.9,0.9)

Step 1: The fuzzy number corresponding to the evaluation of the expert i for criterion j is shown as follows: (n=number of experts, m= criteria number):

$$z_{ij}=(p_{ij},q_{ij},r_{ij}) \text{ i=1,2,3....n and j=1,2,3......m (1)}$$

Step 2: The fuzzy weight of the $\tilde{p}_j$ criterion is calculated as follows:

$$\tilde{p}_j =(p_j,q_j,r_j); \ p_j =\min(p_{ij}) \text{ i=1,2,3....n and j=1,2,3......m (2)}$$

$$q_j = (\textstyle\prod_{i=1}^{n}(q_{ij}))^{1/n} \text{ i=1,2,3....n and j=1,2,3......m (3)}$$

$$r_j=\max(r_{ij}) \text{ i=1,2,3....n and j=1,2,3......m (4)}$$

Step 3: The average method given below is used to calculate the defuzzification value:

$$S_j=(p_j + q_j + r_j)/3 \text{ j=1,2,3......m (5)}$$

A threshold value of α is set to accept or reject the criteria. If $S_j \geq \alpha$, the criterion is accepted. If $S_j \leq \alpha$, it is rejected. In the literature, the α value is calculated by averaging the maximum value (0.7) of the "normal" language variable and the minimum value (0.5) of the "significant" variable (Dweiri, Kumar, Khan & Jain, 2016; Singh & Sarkar, 2020). Accordingly, values greater than 0.6 and equal weight are accepted, while those less than 0.6 are rejected.

2.1.2 Analytical Hierarchy Process Method (AHP)

In the second stage of the research, the AHP method was used to rank the criteria determined by the experts. The steps are as follows (Jeou-Shyan, Hsuen, Chih-Hsing, Lin, & Chang-Yen, 2011; Saaty, 1990).

Step 1: After identifying the research purpose, a hierarchy is set for the main and sub-criteria (Saaty, 1990).

Step 2: A survey is prepared to collect pairwise comparison data. Pairwise comparison matrices of criteria and alternatives for each hierarchy level are created and compared using relative importance degrees (from 1 to 9). For example, if the communication and technical criteria are equally important, the pairwise comparison value is set at "1". On the other hand, if the communication criterion is far more important than the technical criteria, then the pairwise comparison matrix is as follows:

Table 2. Matrices of criteria

	Communication	Technical
Communication	1	9
Technical	1/9	1

Step 3: Eigenvalues and eigenvectors are calculated to determine the criteria weights at different levels. The actual relative weights (W = $[w_i]_{nx1}$) should be calculated for the percent distributions. Accordingly, the pairwise comparison matrix is as follows:

W = $(W_1, W_2, ..., W_n)^T$, where W is the vector of actual relative weights and n is the number of elements.

$$AW = \begin{bmatrix} \frac{W_1}{W_1} & \cdots & \frac{W_1}{W_n} \\ \vdots & \ddots & \vdots \\ \frac{W_n}{W_1} & \cdots & \frac{W_n}{W_n} \end{bmatrix} \times \begin{bmatrix} W_1 \\ \vdots \\ W_n \end{bmatrix}$$

In matrix algebra, n and W in (1) are called the eigenvalue and the right eigenvector of matrix A. Thus, the observed matrix A contains inconsistencies. The estimation of W denoted $\overline{W}$, could be obtained similarly to (1) from $\overline{A} \times \overline{W} = \lambda max \times \overline{W}$ where $\overline{A}$ is the observed matrix of pairwise comparisons, max is the largest eigenvalue of $\overline{A}$, and $\overline{W}$ is its right eigenvector.

Step 4: The relative weights obtained in Step 3 are added together to get a vector of composite weights. According to Saaty (1990), the composite relative weight vector of elements at the Kth level can be calculated as follows:

$$C[1, K] = \prod_{i=1}^{k} D_1$$

where C[l, K] is the vector of composite weights of elements at level k for the element on level 1, and D_1 is the n_{i-1} by n_i matrix with rows of estimated $\overline{W}$ vectors.

The consistency ratio (CR) is calculated to ensure reliability using the formula CR = CI/RI. If the CR value is less than 0.10, the level of inconsistency is acceptable (Dweiri, Kumar, Khan, & Jain, 2016). RI shows the random value. Since the experts participated in the second stage of the research, the RI value was measured as 1.49 (Saaty, 2007).

2.2 Research Tool

Fuzzy Delphi and AHP surveys were created after an extensive literature review (e.g., Berber-McNeill, 2015; Douglas, 2011; Goodyear, Salmon, Steeples, & Tickner, 2001; Hampel, 2009; Hampel & Stickler, 2005; Hauck & Haezewindt, 1999; Hauck & Stickler, 2006; Kessler, 2006; O'Dowd, 2015; Reinders & White, 2016; Sun, 2011; Weininger & Shield, 2003). First, the opinions of three field experts were taken to confirm the validity of the competencies in the surveys. Then the final version of the list, a Likert-type form with 52 competencies, was prepared for the Fuzzy Delphi method. Researchers added questions to this form, including demographic and professional information about the participants. Appendix A shows the competencies.

The AHP method generated pairwise comparison matrices for seven main categories and 38 sub-competencies, considering the hierarchical structure. An AHP comparison form was prepared to evaluate the competencies. The evaluation process was carried out face-to-face and online. First, the geometric mean of the pairwise comparison matrices determined by the experts for each category and competence was calculated, which yielded the mean values of the comparisons. Then, the weights of categories and competencies were calculated using the mean values and the Expert Choice 11 program.

2.3 Participants

In the first stage, based on the Fuzzy Delphi method, twelve doctoral graduates, seven females and five males, who specialized in teaching Turkish as a foreign language at universities in Turkiye, participated in the study. According to Dalkey (1969), when there are more than eleven experts, satisfactory results can be obtained in the Delphi method. The experts had 10-12 years of professional experience. They were asked to complete the survey with a list of competencies. In the second stage in which the AHP method was applied, ten instructors, eight females and two males with master's or doctorate degrees who taught Turkish as a foreign language online participated in the study. They had 5-7 years of professional experience. The optimal number of participants in the AHP method is between five and fifteen (Jeou-Shyan, Hsuen, Chih-Hsing, Lin, & Chang-Yen, 2011; Moslem, Ghorbanzadeh, Blaschke, & Duleba, 2019).

3. Findings

3.1 The Online Language Instructor Competencies

The first stage of the research involves defining the online language instructors' competencies. The Fuzzy Delphi method was applied to determine the competencies. Accordingly, 52 competencies were divided into seven categories and were submitted to expert opinion. Following the assessment of expert views according to the Fuzzy Delphi method, 14 competencies with a defuzzification value (Sj) of less than 0.6 were eliminated, and 38 were selected for the second stage. The findings regarding the Fuzzy Delphi method are shown in Appendix A.

Regarding online instructors' technological competencies, experts thought instructors did not need to inform learners about software and hardware. Regarding instructors' characteristics, the experts concluded that instructors did not have to be language learners as well in terms of sympathizing with learners about the language learning experience. Besides, according to experts, speaking the target language as a native does not have to be one of the individual characteristics that online language instructors should have.

The experts indicated that online assessment could not be treated as an instructor competency in online language teaching. In terms of the management and planning of online lessons, the item referring to instructors' ability to meet the immediate demands of learners in an online class was also excluded. In addition, the items related to online socialization and social media tools were removed from the competencies under the communication title. The experts also reported that individual study strategies to support learners' autonomy and the items related to co-planning and co-evaluating could be within the online language instructor competencies. Regarding the privacy and security of instructions, experts indicated that the items suggesting open communication channels between instructors and learners and those leaving the decision to choose the online session type (i.e., audio or video recording) to learners could not be considered instructor competencies.

3.2 The Hierarchy Among Instructor Competencies

After determining the competencies essential for online language teaching, the ranks and order of importance of the given competencies were described in the second stage. A hierarchical structure was generated with 38 competencies under seven categories. Accordingly, there were five competencies in the "technical" category, 3 in the "individual" category, 6 in the "management and planning" category, 3 in the "material" category, 9 in the "communication" category, 8 in the "autonomy" category, and 4 in the "privacy and security" category.

According to the analysis results, "communication" (w_{Main}=0.173) was the most important competency category, which respectively followed by "management and planning" (w_{Main}=0.166), "material" (w_{Main}=0.162), "individual" (w_{Main}=0.147), "privacy and security" (w_{Main}=0.145), "autonomy" (w_{Main}=0.117) and "technical" (w_{Main}=0.091) that was the least important competency category. Figure 1 shows the category weights below.
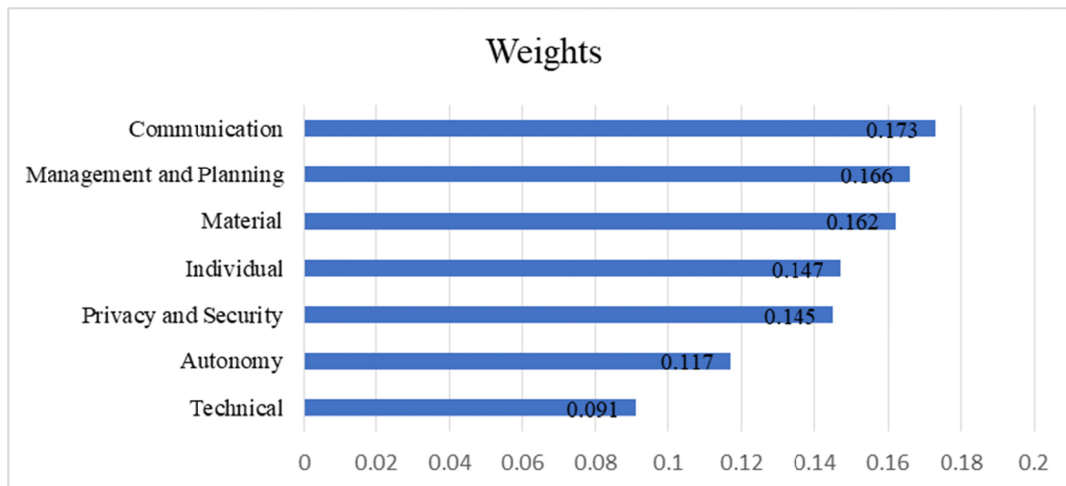
Figure 1. The category weights by AHP method

After measuring the category weight, the AHP method was applied to calculate the domain, overall ranking, and competency weights. Appendix B shows the calculations. Under the category of "communication", the competencies of "An instructor constantly communicates with learners in an online session." and "An instructor always motivates learners in language learning." were the most rated among the 38 competencies. They were followed by the competency of "An instructor keeps learners' interest in online language teaching alive." (w_O =0.036), and it was considered among the five most important competencies. Under the category of "management and planning", "An instructor uses time efficiently in an online session." (w_O=0.037) was the third most important competency. Another important competency under the category of "management and planning" was the seventh competency: "An instructor designs tasks considering learners' goals." (w_O=0.033). Under the category of "material", "An instructor produces materials suitable for online language teaching." (w_O =0.036) was among the top five most important competencies. Similarly, in this category, the competency of "An instructor adapts face-to-face teaching materials to online language teaching" (w_O=0.032) was among the other crucial competencies. Under the "individual" category, "An instructor is tolerant to other cultures." (w_O=0.032) was among the essential competencies. Another important competency in this category was "An instructor is careful about internet etiquette (netiquette)." (w_O= 0.031). Although "privacy and security" was the least considered category, "An instructor protects the privacy of learners." (w_O=0.032) was the main competency as well. The competencies under the categories of "autonomy" and "technical" were considered less important than those in other categories. However, the competency of "An instructor encourages learners to use the target language during sessions." (w_O=0.026) in the "autonomy" category and "An instructor has sufficient digital literacy." (w_O =0.02) in the "technical" category were among the leading ones.

4. Discussion and Conclusion

The findings suggested that pedagogical competencies were more important than technical ones, which overlaps with the models proposed by Hampel and Stickler (2005) and Compton (2009). "Autonomy", acknowledged as a vital pedagogical competence was found less critical by the participants. This finding diverges from the relevant literature (Guichon, 2009; Hauck & Stickler, 2006; Reinders & White, 2016).

The findings suggested that communication is the most critical competency area. Communication competencies constitute the fifth step of the pyramid proposed by Hampel and Stickler (2005); Stickler and Hampel (2007) and are superior to other pedagogical and technical competencies. Sun (2011) emphasizes that despite all advantages of communication technologies, it is challenging to motivate learners. The items under the "communication" category are correlated with arousing learners' interest, motivation, active participation, and establishing a positive communication environment. Murphy, Shelley White, and Baumann (2011) argue that instructors should have competent communication skills to motivate learners in distance language teaching. In addition, an instructor should encourage socialization, collaboration, and active participation (Compton, 2009; Hampel & Stickler, 2005). Goodyear, Salmon, Steeples, and Tickner (2001) state that an instructor's communication competencies play critical roles in motivating learners.

Although the management and planning of online language teaching seem mainly related to time and technical tools, it also includes multi-dimensional pedagogical skills. According to the participants, "management and

planning" was the second most important category and involved the items suggesting proper management and planning considering the limitations of online teaching. An instructor is expected to play a facilitating role in the planning and management of online lessons. Hauck and Haezewindt (1999) define this role as a coordinator and co-learner in a new learning environment. Therefore, an instructor should be able to manipulate learning resources and organize learning activities. Considering the findings, we can infer those instructors prioritize designing tasks according to academic goals and limitations. Under the "management and planning" category, time management was also considered an essential instructor competency. Comas-Quinn (2011) showed that online instructors had problems with scheduling. Accordingly, setting the right goals and designing appropriate tasks can help them plan an online session well.

Material is a tool for achieving goals in language teaching and is necessary for a teaching setting. Today instructors have a great deal of material. They can develop new materials, adapt existing materials, and use ready-made materials. According to the findings, the "material" category was the third important competency area, and the item "An instructor produces materials suitable for online language teaching." was also considered critical. Material development depends on an instructor's creativity (Hampel & Stickler, 2005). In this sense, our finding underlying the significance of material development and adaptation overlaps with the literature. Instructors should be proficient in designing multimodal activities stimulating creativity (Hampel, 2009; Lai, Ni, & Zhao, 2012).

According to the findings, the participants emphasized an instructor's ability to develop academic products, such as tasks, software, and exams, to evaluate learners. Compton (2009) stresses that instructors should develop assessment tools suitable for online language teaching. Similarly, Berber-McNeill (2015) states that instructors must have competence in designing assessment tools and adapting existing ones.

In the research, some individual competencies were considered the fourth important category. One of those individual competencies was an instructor's intercultural communication competence which facilitates healthy communication in business, education, and social life. Learners make intercultural exchanges with both their instructors and members of other cultures via technological tools. In many online learning activities, an instructor cooperates with learners in a different cultural context, which requires instructors to acquire intercultural skills and attitudes to coordinate collaboration. O'Dowd (2015) indicates that intercultural communication skills should reflect more online teacher competencies. Online intercultural communication helps shareholders understand other cultural perspectives.

Another essential individual competence is "netiquette", which refers to rules that make instructors and learners follow specific protocols in online communication (Hampel & Stickler, 2005). Netiquette provides a proactive effort against communication problems. Netiquette is like maintaining discipline in the classroom, and it assists instructors create a sense of group and trust. In this sense, online rules are instructive for both instructors and learners. Instructors should be able to guide learners in using a target language and behaving in an online environment.

Online communication is realized in a virtual environment via technical tools, which entails data security and protection. In this part of the research, the instructors' views on their pedagogical competencies in preventing and coping with possible problems in a virtual environment were asked. According to the participants, privacy and security were the fifth critical pedagogical competency. Communication in a virtual environment is vulnerable to hiding identities and intentions. Thus, instructors must display a reassuring approach to teaching safety (Goodyear, Salmon, Steeples, & Tickner, 2001; Hauck & Stickler, 2006). Security is also one of the basic steps in teacher-learner and learner-learner interaction (Douglas, 2011). Bullying in traditional educational settings is a negative behaviour transferred to the virtual environment. Therefore, instructors must be capable of preventing cyber abuse, cyberbullying, and privacy breaches.

According to the research findings regarding the sixth important category, instructors must provide autonomy for learners. Specifically, redefining the role of an instructor in online language teaching would offer much autonomy to learners. Benson and Voller (1997) recommend that instructors assume a facilitating and guiding role. However, the item about instructor roles had minor importance under "autonomy" and encouraging learners to express their expectations was ranked high.

Learner autonomy, associated with online socialization, planning, and new teacher roles in the model proposed by Hampel and Stickler (2005) and Compton (2009), is considered one of the main pedagogical competencies in new language teaching models. However, the research findings showed that the participants found it less important, which can be interpreted as instructors having problems adapting to the new pedagogy models and not leaving an instructor-centered understanding.

New challenges for instructors accompany new technologies in language teaching. This situation requires

instructors to adapt to new technological tools beyond traditional course materials. Indeed, technical competencies include the introductory skills necessary for online language teaching (Bennett & Marsh, 2002; Chapelle, 2003; Hampel & Stickler, 2005; Kessler, 2006; Warschauer, 2002). Research findings indicate that technical competencies were less critical than pedagogical or individual competencies. The spread of new technologies would underlie the role of technical competencies in education. Today, communication programs and shared documents used in online language teaching have become a part of daily communication. Thus, it would benefit instructors to gain competence in designing course materials for learners through software and online applications.

Developing teacher/instructor training programs would be worthwhile considering appropriate instructor competencies and introducing a standard model. In this regard, the education faculty programs of teaching Turkish as a mother tongue and a foreign language should be reviewed, and the necessary professional support should be offered to prospective instructors.

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Appendix A

Table A1. The Expert Opinions by the Fuzzy Delphi Method

	No	Competencies	Fuzzy Weight			Defuzzification	Accepted/ Rejected	Studies
			Min	Mid	Max			
Technical - T	1	An instructor uses up-to-date software and applications in language teaching.	0.3	0.682	0.9	0.627	Accepted	Douglas (2011), Hauck & Stickler (2006), Kessler (2006), Sun (2011)
	2	An instructor shares course materials (e.g., audio recordings, vocabulary cards, grammar exercises) with students on software and applications.	0.3	0.728	0.9	0.643	Accepted	
	3	An instructor solves basic software and hardware-related problems.	0.3	0.683	0.9	0.628	Accepted	
	4	An instructor knows the strengths and weaknesses of the software and hardware they use or recommend.	0.3	0.652	0.9	0.617	Accepted	
	5	An instructor informs learners about software and hardware when necessary.	0.1	0.599	0.9	0.533	Rejected	
	6	An instructor has sufficient digital literacy.	0.5	0.726	0.9	0.709	Accepted	
Individual - I	7	An instructor is also a language learner.	0.1	0.628	0.9	0.543	Rejected	Hampel & Stickler (2005), O'Dowd (2015), Sun (2011)
	8	An instructor has proficiency in a language that learners know well.	0.3	0.624	0.9	0.608	Accepted	
	9	An instructor is very fluent and proficient in the language they teach.	0.1	0.483	0.9	0.494	Rejected	
	10	An instructor is tolerant of other cultures.	0.3	0.752	0.9	0.651	Accepted	
	11	An instructor is careful about internet etiquette (netiquette).	0.3	0.728	0.9	0.643	Accepted	
Management and Planning - MP	12	An instructor designs activities considering learners' goals.	0.3	0.716	0.9	0.639	Accepted	Berber-McNeill (2015), Douglas (2011), Goodyear et al. (2001), Hauck & Haezewindt (1999)
	13	An instructor quickly responds to the spontaneous demands of learners.	0.1	0.637	0.9	0.546	Rejected	
	14	An instructor knows the limitations of online language teaching.	0.3	0.672	0.9	0.624	Accepted	
	15	An instructor uses time efficiently in an online session.	0.5	0.750	0.9	0.717	Accepted	
	16	An instructor informs learners about the limitations of online language teaching (e.g., self-discipline issues, lack of control, hardware and software limitations).	0.3	0.672	0.9	0.624	Accepted	
	17	An instructor knows the strengths of online teaching.	0.3	0.683	0.9	0.628	Accepted	
	18	An instructor provides learners with detailed information about the activities and materials used in the session.	0.3	0.693	0.9	0.631	Accepted	

Material - M	19	An instructor prepares online instructional tasks and exams that evaluate learners.	0.1	0.627	0.9	0.542	Rejected	Berber-McNeill (2015), Hauck & Stickler (2006), Weininger & Shield (2003)
	20	An instructor effectively uses the chat section (for sharing short explanations, examples, and new words).	0.3	0.683	0.9	0.628	Accepted	
	21	An instructor produces materials suitable for online language teaching.	0.3	0.695	0.9	0.632	Accepted	
	22	An instructor adapts face-to-face teaching materials to online language teaching.	0.3	0.646	0.9	0.615	Accepted	
Communication - C	23	The tutorial activates the learner in the online language teaching process.	0.5	0.763	0.9	0.721	Accepted	Berber-McNeill (2015), Douglas (2011), Goodyear et al. (2001), Hampel (2009), Hauck & Haezewindt (1999)
	24	The tutorial creates a learner-centered learning environment.	0.3	0.695	0.9	0.632	Accepted	
	25	The tutorial addresses the learner's anxiety about communicating online.	0.5	0.726	0.9	0.709	Accepted	
	26	An instructor promotes the active participation of learners.	0.5	0.726	0.9	0.709	Accepted	
	27	An instructor creates a learner-centered learning environment.	0.3	0.706	0.9	0.635	Accepted	
	28	An instructor relieves learners' anxiety about online communication.	0.3	0.695	0.9	0.632	Accepted	
	29	An instructor constantly communicates with learners in an online session.	0.3	0.641	0.9	0.614	Accepted	
	30	An instructor always motivates learners in language learning.	0.5	0.750	0.9	0.717	Accepted	
	31	An instructor keeps learners' interest in online language teaching alive.	0.1	0.568	0.9	0.523	Rejected	
	32	An instructor is very responsive to learners during sessions.	0.1	0.557	0.9	0.519	Rejected	
	33	An instructor's awareness of learners is high.	0.1	0.498	0.9	0.499	Rejected	
	34	An instructor responds to learners' concerns about hardware and software issues.	0.3	0.661	0.9	0.620	Accepted	
Autonomy - A	35	An instructor considers learners' individual characteristics, learning styles, and goals in the online language teaching process.	0.3	0.683	0.9	0.628	Accepted	Douglas (2011), Goodyear et al. (2001), Hampel & Stickler (2005), Hauck & Stickler (2006), Reinders & White (2016), Sun (2011)
	36	An instructor collaboratively plans the online language teaching process with learners.	0.1	0.581	0.9	0.527	Rejected	

	37	An instructor guides learners on self-study strategies in language learning. (e.g., cognitive, metacognitive, memory, compensatory, and affective strategies).	0.1	0.678	0.9	0.559	Rejected	
	38	An instructor encourages learners to use the target language during sessions.	0.5	0.750	0.9	0.717	Accepted	
	39	An instructor knows other roles in the online teaching process (e.g., teacher, manager, assistant, classmate, problem solver).	0.5	0.715	0.9	0.705	Accepted	
	40	An instructor becomes a role model for learners in the activities.	0.5	0.726	0.9	0.709	Accepted	
	41	An instructor allows learners to practice what they have learned during sessions.	0.3	0.752	0.9	0.651	Accepted	
	42	An instructor allows learners to express their wishes and expectations in online language teaching.	0.5	0.788	0.9	0.729	Accepted	
	43	An instructor allows learners to share their out-of-session learning experiences during the online session.	0.1	0.667	0.9	0.556	Rejected	
	44	An instructor offers learners not only synchronous inputs but also asynchronous inputs such as e-mail, audio recording, and video.	0.3	0.674	0.9	0.625	Accepted	
	45	An instructor evaluates the teaching process together with learners.	0.1	0.636	0.9	0.545	Rejected	
	46	An instructor encourages learners with low technological literacy.	0.3	0.704	0.9	0.635	Accepted	
	47	An instructor allows learners to express their wishes and expectations in online language teaching.	0.5	0.788	0.9	0.729	Accepted	
Privacy and Security - PS	48	An instructor knows how to deal with cyberbullying.	0.3	0.674	0.9	0.625	Accepted	Douglas (2011), Goodyear et al. (2001), Hauck & Stickler (2006)
	49	An instructor is familiar with virtual security.	0.3	0.651	0.9	0.617	Accepted	
	50	An instructor reassures learners about data security and privacy.	0.3	0.663	0.9	0.621	Accepted	
	51	An instructor protects learners' privacy (including the images, audio, and chat texts).	0.5	0.788	0.9	0.729	Accepted	
	52	Learners quickly contact an instructor (e.g., via Skype, WhatsApp, and e-mail).	0.1	0.619	0.9	0.540	Rejected	
	53	An instructor leaves the decision to make a video or audio session for learners.	0.1	0.560	0.9	0.520	Rejected	

Appendix B

Table B1. Weights and Ranks of Competencies

Competency Number	AHP				
	Domain			Overall	
	Category	Weight	Rank	Weight	Rank
29	C	0.13	1	0.038	1
30	C	0.13	1	0.038	1
15	MP	0.208	1	0.037	3
21	M	0.368	1	0.036	4
31	C	0.123	3	0.036	4
26	C	0.118	4	0.034	6
12	MP	0.187	2	0.033	7
10	I	0.426	1	0.032	8
22	M	0.326	2	0.032	8
27	C	0.108	5	0.032	8
33	C	0.108	5	0.032	8
51	PS	0.316	1	0.032	8
11	I	0.403	2	0.031	13
28	C	0.107	7	0.031	13
20	M	0.306	3	0.03	15
18	MP	0.169	3	0.03	15
14	MP	0.166	4	0.029	17
17	MP	0.151	5	0.027	18
32	C	0.091	8	0.027	18
50	PS	0.27	2	0.027	18
38	A	0.151	1	0.026	21
42	A	0.151	1	0.026	21
47	C	0.086	9	0.025	23
49	PS	0.249	3	0.025	23
41	A	0.143	3	0.024	25
44	A	0.133	4	0.023	26
16	MP	0.119	6	0.021	27
35	A	0.122	5	0.021	27
6	T	0.227	1	0.02	29
1	T	0.216	2	0.019	30
2	T	0.215	3	0.019	30
40	A	0.106	6	0.018	32
46	A	0.103	7	0.018	32
48	PS	0.166	4	0.017	33
4	T	0.185	4	0.016	35
39	A	0.092	8	0.016	35
3	T	0.156	5	0.014	37
8	I	0.171	3	0.013	38

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