

# Competence-Based Readiness of Future Teachers to Professional Activity in Educational Institutions

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Received: September 19, 2021

Accepted: December 1, 2021

Online Published: January 21, 2022

doi:10.5430/jct.v11n2p42

URL: <https://doi.org/10.5430/jct.v11n2p42>

## Abstract

The purpose of the scientific treatise is to investigate and intensify competence-based readiness of future teachers to professional activities in educational institutions, namely, the interrelated competencies of leaders' communication competence (LCC) and communication components of global competence (GC). To do this, jigsaw activities & opinion sharing methods were applied to the educational environment of the students of the experimental group. In the process of achieving the goal of research the following methods were used: qualitative-quantitative and contrastive-comparative analysis of the obtained experimental data, statistical-mathematical interpretation of empirical data and their functional analysis, ascertaining experiment method and educational experiment method. The results of the educational experiment prove that on average the representatives of the experimental group managed to score 11.9 points more (9.6%) in accordance with the developed diagnostic paradigm of advanced communicative traits of modern teacher. The improvement of communicative competencies in the behaviour component was the most noticeable within the communication components of GC. The result is 10.0% higher in the experimental group, especially regarding the Skills component both within the LCC (10.3% higher in the experimental group) and within the communication components of GC (the difference here was 17.5%). The applied methods confirmed the positive effect on the development of vocationally orientated communicative competencies of student teachers.

**Keywords:** advanced communicative traits of modern teacher, competence readiness, future teachers, global competence, leaders' communication competence, jigsaw activities, opinion sharing method

## 1. Introduction

A lot of modern academic papers on the training of student teachers suggest that innovative approaches in professional education of such students should be based on the widespread use of information and communication technologies (Slyter, 2019). The basis of this is the ability to use the latest information tools pragmatically and to provide persistently a qualitative communication support of the entire educational process. While studying in institutions of higher education, it is important for future teachers to self-determine the concepts of professionalism, professional culture, professional identity. All these notions can be summarized in the concept of "professional competence" which reflects the inner essence and external image of a modern teacher, who must be open-minded, professionally mature, be motivated and ready to self-improvement, have profound theoretical knowledge and practical skills in his/her field, well-formed positive cultural teacher's worldview. The urgent task of modern teacher education is to solve the problem of training young teachers who can perform high-quality tasks of teaching young

people in accordance with all stages of the educational vertical following the requirements of the digital age (Musurmanov & Shermatov, 2020).

Organization and management of competency-determined university education of future teachers is possible through constant integration into the educational environment of innovative processes and training tools, which would be based on the latest scientific and technological developments, focus on strategic planning and management of educational processes, development of relevant personal and professional qualities.

Therefore, competence-based readiness of future teachers is the focus of scientific and methodological attention (Eaglesham, 2020; Mohamed, Valcke & De Wever, 2017) with the purpose of finding out and generalizing the theoretical aspects of the problem (content, structure, functionality of the competence, etc.), as well as developing and implementing effective means of achieving competence-based readiness. In particular, the article will discuss LCC and Communication Components of GC (in general – Advanced Communicative Traits of Modern Teacher) in the structure of competence-based readiness of a future teacher. In modern guidelines on education, global competence is said to be “multi-faceted” and it “includes cognitive development, socioemotional skills, and civic learning” (Colvin & Edwards, 2018, p. 7).

## 2. Literature Review

The ability to communicate, explain and deliver complex information to students has always been the main learning tool, regardless of the age of both a teacher and a learner. Equally important is the ability to position oneself among colleagues, to create a positive professional and pedagogical image, which cannot be achieved without communicative competencies and leadership skills. The role of skills to work with a wealth of information, as well as to select reliable sources of information, is constantly growing. That’s why the task of a modern teacher is to instruct how to use different types of information adequately and knowingly, how to transform it with the optimally useful efficiency in the initial stages – with the aim of educating, at the later stages and within lifelong learning – both for education and for the purpose of professional and inventive-innovative activity. Thus, the teacher, except for developing his/her the ability to communicate and to achieve pragmatic goals of communication, must first of all act as a qualified filter and conveyor, interpreter and converter of information, consistently teaching students how to do it. It is important to note that the essence of pedagogical activity is a priori leadership and corresponds exactly to the etymology of the term: “leader is one who leads, one first or most prominent” (Etymonline, 2021). The absence or underdevelopment of leadership qualities in the communication of the teacher automatically affects the quality of his professional activity and in general spoils his/her positive image. Competence communication embodies, nurtures, enriches and implements the abstract category of leadership: “Take away communication, and leadership withers and dies” (Lee, 2011). Teachers cannot implement even simple pedagogical tasks without the ability to communicate convincingly and effectively.

According to the latest research, a modern leader spends 70-80% of his time on communication. For this reason, the quality of communication, measured by the number of effectively completed communicative acts, namely the ones where the teacher-communicant managed to achieve the goal in the process of the performance of duties (by interacting with students, administration, parents, etc.), is the main predictor of leadership effectiveness.

The communication channel significantly influences success of communication. Thus, according to research, only 56% of information transmitted through online channels, including e-mail, are successful and are perceived by communication partners successfully. At the same time, the principles of modern pedagogics, based on the pedagogy of partnership (Felten, 2017; Peters & Mathias, 2018), perceive communication technologies as the main implementation tool (in the system of “student-teacher” or in the ternary “teacher (also the administration of educational institutions)-teacher-parents”). It is communication that drives the process of innovations, helping to implement and coordinate communicative intentions and strategies of the subjects of communication.

Leadership skills in regulations for a competent teacher are comprehensive and belong to the range of teachers’ competencies in almost all countries. Quite often in education standards they are listed along with managerial and administrative competencies (Bourgonje & Tromp, 2011). Decision making, communication skills, teamwork and management are also integral to professional standards and vocational training programmes around the world which proves the global demand for a competent and communicatively skilful teacher. In particular, the current official OECD directives is discussing a need to “outline the teaching methods that are relevant to developing students’ global competence” (Colvin & Edwards, 2018, p. 7). However, LCC is a transitional competence, which, on the one hand, tends to domain-specific competencies within a discipline, and on the other hand, has distinct features of generic competencies, which “are needed in all content domains and can be utilized in new professional

situations” (Bourgonje & Tromp, 2011, p. 22). LCC can also be defined as “life skills”, which refers to the range of the most basic “capabilities for life today, within and outside the teaching profession” (Bourgonje & Tromp, 2011, p. 22).

The concept of “communicative leadership” is used to analyse and develop LCC (Johansson, Miller & Hamrin, 2014). Typical behaviours of a communicative leader are the involvement and encouragement of other members of the pedagogical community into dialogue, active exchange of views, seeking feedback, the practice of participatory solutions, the ability to present himself/herself as an open and concerned teacher.

The basis for our interpretation of the LCC concept is the scientific work of Wilcox (2016), which deals with current issues in the HR field and current problems of personnel management. These same qualities were previously published by MACPA (2007) as six traits of a leader according to the generalization, MADE by Judith H. Jones as a Communications Director for the New York Times.

It is important that LLC is system-forming and primary for GC, which is functionally fundamental in the 21st century especially for the profession of a teacher (Colvin & Edwards, 2018; Ramos, Wolf, & Hauber-Özer, 2021). Traits of both competencies, the content of which is close and intercomplementary (if we consider communicative aspects of GC), are the centre of mutual development and enrichment of these competencies, as will be discussed below. Given the closeness and complementary nature of LCC and GC, in the context of this article it was decided to consider them comprehensively – as Advanced Communicative Traits of Modern Teacher.

The analysis of contemporary literature on the development of communicative competencies (Halimah & Sukmayadi, 2019; Intan, 2020; Nurbianta & Dahlia, 2018; Nusrath et al., 2019; Yoshida, 2018), particularly in the context of university training of future teachers, shows that in recent years jigsaw activities and opinion sharing method have been used more commonly. Halimah & Sukmayadi (2019) reported that the jigsaw strategy “as a Form of Cooperative Learning is one of the efficient ways to learn the course material in a cooperative learning style” (p. 4). Therefore, the scientists positively estimated “roles of the jigsaw type of cooperative learning in supporting the prospective teachers’ understanding toward the pedagogical content knowledge and developing their verbal communication competence” (Halimah & Sukmayadi, 2019, p. 5). At the initiative of Professor Elliot Aronson and the Social Psychology Network in 2000, “The Jigsaw Classroom” (2021) was created – a special website, dedicated to the specifics of jigsaw activities integration into the learning process. Yoshida (2018) notes the advantages of using jigsaw strategies to organize group work with classmates for solving challenging tasks. Such application of the jigsaw method allowed all students, including communicatively passive ones, to take an active part in the process of finding solutions to solve special communication puzzles. Communication jigsaw tool was developed in order to teach and encourage scholarly communication and it has had a positive effect both in terms of finding effective solutions and in terms of acquiring communicative competencies and demonstrating leadership communication strategies by participants, which is important for our study.

Nurbianta and Dahlia (2018) write about the use of jigsaw method for improving English reading comprehension in senior high school and the effectiveness of stimulation of motivation. Positive motivational effect of the jigsaw method is also discussed in the work of Marisa et al. (2020). Halimah and Sukmayadi (2019) in their academic paper successfully test the jigsaw model in order to stimulate future teachers’ understanding of pedagogical knowledge and the ways to integrate it with communicative learning skills. Intan (2020) studies jigsaw communicative possibilities for training within the English Education Study Program. One of the factors that deter from using jigsaw is the difficulty *to share opinion* because of limited vocabulary – some students confessed feeling insecurity, fear of shame or of making mistakes.

It should be noted that the methods of jigsaw activities & opinion sharing are closely linked by the principles of continuity and mutually beneficial synthesis. Jigsaw activities as a method used mainly for the organization of group forms of educational interaction (according to the options discussed above) cannot be implemented at all, let alone with positive dynamics outside the methodological procedure of opinion sharing as a means to make command consensus decisions.

Opinion sharing in a number of scientific works is conceptualized in different ways: as active learning strategy (Mumtaz & Latif, 2017), class discussion strategy / classroom talk technique (Kerslake & Sarah, 2017), communicative language teaching means (Richards, 2006), and Think Talk Write (Imran, Firman & Raudhatunnisa, 2019). However, the main didactic advantages of the method are the stimulation of communication and critical thinking.

Thus, modern scientific and pedagogical literature actualizes each of the key concepts of our research, which proves its timeliness and pedagogical and implementation prospects. However, all these concepts altogether have not become the research subject and have not been generalized in terms of their effectiveness and practice of application in university training of future teachers.

### 3. Aims

Respectively, the *purpose* of research is to study and intensify competence-based readiness (namely the interrelated competencies of leaders' communication competence (LCC) and GC – Communication Components of global competence) of future teachers to professional activities in educational institutions by the methods of jigsaw activities & opinion sharing.

The specified goal involves implementation of the following *tasks*:

- 1) to develop a diagnostic model of individual assessment of a student of pedagogical specialty, which would contain the criteria for the formedness of communication traits in accordance with the LCC & GC as fundamental prerequisites for successful professional communication of future teachers (Advanced Communicative Traits of Modern Teacher) in the learning environment;
- 2) to select a respondent sample and to separate a control group and an experimental group of Students of Pedagogical Specialty;
- 3) to implement jigsaw activities & opinion sharing methods into the training of the experimental group all the way through; to conduct preliminarily special training sessions for the teachers of the faculty, within which the experiment will take place;
- 4) in accordance with the diagnostic model to start the journals for monitoring the development of Communication Traits of Students of Pedagogical Specialty and to make diagnostic cross-sections-generalizations quarterly (except for the summer period);
- 5) to perform final diagnostics and to compare the results of control and experimental groups, determining the effectiveness of the use of methods of jigsaw activities & opinion sharing for the stimulation of Advanced Communicative Traits of Modern Teacher;
- 6) to define prospects for further support of Students of Pedagogical Specialty in achieving their competency-based readiness through the systematic work on shaping their Advanced Communicative Traits of Modern Teacher.

### 4. Material and Methods

#### 4.1 Preliminary Preparation for the Study

A theoretical background and the even fundamental idea of the current study corresponds to OECD guidelines about “fundamental changes” that “require in education to develop young people who are globally competent and are more likely to become integral to everything that relates to the processes of learning and studying”. In addition, “the global competence is an explicit priority of entire systems of education across a community, a state, a nation, or a region” (Colvin & Edwards, 2018, p. 6). Besides, it is said that “changes have to shape the design of the curriculum as well as the pedagogical approach” (Colvin & Edwards, 2018, p. 6).

156 students from 6 academic groups of the II-III courses of the Faculty of Pedagogy, Psychology and Social Work of Yuriy Fedkovych Chernivtsi National University were selected to participate in the research. They were divided randomly (but according to the academic groups) into the control group (3 academic groups) and the experimental group (3 academic groups). Thus, the control group numbered 74, and the experimental group – 82 Students of Pedagogical Specialty.

Prior to the organization of the main research, as a part of the preparation process, a survey was conducted among the teachers of (1) the Department of Pedagogy and Psychology of Primary Education of Yuriy Fedkovych Chernivtsi National University, (2) the Department of Foreign Languages of Khmelnytsky Humanitarian and Pedagogical Academy, (3) the Department of German Philology and Translation Studies of Khmelnytsky National University and (4) Ternopil Volodymyr Hnatiuk National Pedagogical University, the Department of Pedagogy and Methods of Primary and Preschool Education of Ternopil Volodymyr Hnatiuk National Pedagogical University. The purpose of the survey was to obtain assessments of the formation of competence readiness of graduate students to professional activities in educational institutions. The closed-type questionnaire was structured according to the

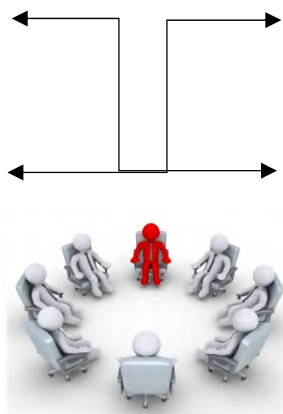
competence readiness components. Most teachers assessed the level of formedness of Advanced Communicative Traits of Modern Teacher in graduate students as transitional between Satisfactory and Moderately Good. This was the impetus for further development of the content of Advanced Communicative Traits of Modern Teacher and their stimulation in the environment of Students of Pedagogical Specialty.

From among the teachers of the above-mentioned departments we selected 10 members of the expert group: 2 teachers of Yuriy Fedkovych Chernivtsi National University; 3 teachers of Khmelnytsky Humanitarian and Pedagogical Academy; 3 teachers of Khmelnytsky National University and 2 teachers of Ternopil Volodymyr Hnatiuk National Pedagogical University. Using the Delphi Assessment technique, the experts agreed on the benefits of using jigsaw activities & opinion sharing to experimentally stimulate the Advanced Communicative Traits of Modern Teacher within the experimental group of respondents.

In order to generalize the theoretical analysis of communicative qualities of the future teacher and to develop a structured and diversified diagnostic model of individual assessment of a student of pedagogical specialty, *advanced communicative traits of modern teacher* were identified and distributed according to LCC & Communication Components of GC as fundamental prerequisites for successful professional communication of future teachers in the educational environment.

The primary and final assessment of students was based on the same prototype plan as Table 1: that is, all the above-mentioned positions of LCC and GC were subject to assessment with the corresponding conditional diversification into Behaviour, Values, Skills. According to the structure of Table 1, the journals for monitoring the development of Communication Traits of a Students of Pedagogical Specialty (Appendix A (please, use [https://drive.google.com/file/d/1iz8YRaFf10\\_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing](https://drive.google.com/file/d/1iz8YRaFf10_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing))) were also compiled. As planned, diagnostic cross-sections-generalizations were made quarterly for the students of the experimental group. The evaluation was carried out by a group of experts formed earlier and unchanged throughout the experiment. The grading scale is given in Table 2. For each of the positions presented in Table 1, it was possible to obtain 1-4 points depending on the formedness of a particular Advanced Communicative Trait of Modern Teacher (1 = Poor, 2 = Satisfactory, 3 = Good, 4 = Advanced).

**Table 1.** Diagnostic Model of Individual Assessment of a Student of Pedagogical Specialty based on Interrelations of LCC and Global Competence in the Paradigm of Advanced Communicative Traits of Modern Teacher

<b>ADVANCED COMMUNICATIVE TRAITS OF MODERN TEACHER</b>	
<p><b>LEADER'S COMMUNICATION COMPETENCE (LCC)</b></p> <p><i>Interpreted by the authors based on Lee (2011)</i></p> <p><b>BEHAVIOR</b></p> <p>(1) Choosing an appropriate style and determining the appropriate substance of communication for optimal engagement.</p> <p>(2) Refraining from interrupting others and from multitasking while others are speaking.</p> <p>(3) Making appropriate eye contact.</p> <p>(4) Nurturing a healthy culture of</p>	<div style="text-align: center;">  </div> <p><b>COMMUNICATION COMPONENTS OF GLOBAL COMPETENCE (GC)</b></p> <p><i>Interpreted by the authors based on Soppelsa and Manise (2015)</i></p> <p><b>BEHAVIOR</b></p> <p>(1) Proactive life-positions and applying to understanding of multiple perspective ways to problem-solving and decision-making processes.</p> <p>(2) Develop opinions through exploration and evidence analysing.</p> <p>(3) Knowledge sharing and discourse encouraging.</p>
<p><b>JIGSAW ACTIVITIES</b></p> <p><i>(jigsaw-type cooperative learning method)</i></p> <p>– a strategy of co-education based on group dynamics and</p>	

communication. Showing respect for diverse viewpoints.

(5) Eagerly sharing the role and responsibilities of leadership with others (groupmates or colleagues / students in the future profession as a framework for student government).

(6) Avoiding assumptions that marginalize and minimize others, clichés and boilerplate rhetoric.

**VALUES & ATTITUDES**

(1) Communication (=richly collaborative dialogue) as the energy of leadership.

(2) Criticism as an opportunity to refine owns style and enhance impact as a leader.

(3) Regarding leadership not merely as influencing people to behave in a predetermined way, but as inspiring them to think for themselves and to act constructively on behalf of a central purpose.

**SKILLS**

- (1) Affirmative listening.
- (2) Encouraging subordinates to speak up without fear of favour or reprisal.
- (3) Delivering unfortunate news with candour, dispatch, and sensitivity. Objecting to humour.
- (4) Speaking and behaving in accord with the organization's values and with commonly accepted norms of decency.

social interactions.

**OPINION-SHARING METHOD**

– is activity based on the exchange of knowledge and opinions on a particular problematic issue, the purpose of which is to activate students' speaking skills through the effect of constructive creative excitement, enthusiasm, active involvement in the work during the conversation.



Didactic bases of use of jigsaw activities and opinion sharing method both by content, and by procedure of implementation within classroom work are completely based on  
**LEADER'S COMMUNICATION TRAITS & GLOBAL COMPETENCE COMMUNICATION TRAITS**

(4) Translating and modifying, interpreting and implementing ideas, concepts into appropriate pedagogical actions in order to update educational outcomes to constantly modernized world.

(5) Understanding and acting collaboratively but with individual incentives and responsibility.

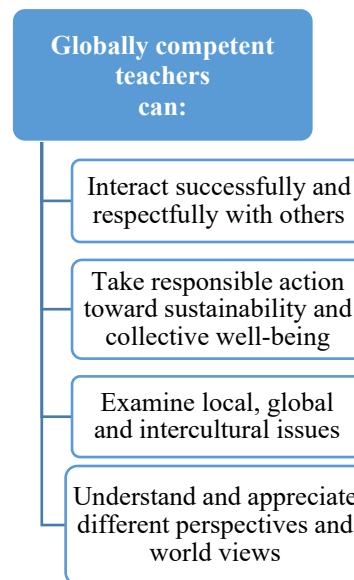
**VALUES & ATTITUDES**

- (1) Openness and readiness to adopt new opportunities, ideas, and ways of thinking.
- (2) Desire to engage with others.
- (3) Valuing multiple perspectives.
- (4) Comfort with ambiguity & unfamiliar situations.

**SKILLS**

- (1) Investigates the world by framing questions, analysing, synthesizing relevant evidence, and drawing reasonable conclusions that lead to further inquiry.
- (2) Selects and applies appropriate tools and strategies to communicate and collaborate effectively.
- (3) Listens actively and engages in inclusive dialogue.
- (4) Is fluent in 21st-century digital technology.
- (5) Applies critical, comparative, creative thinking, and problem-solving.

- (5) Asking open & reflective questions.
- (6) Being able to speak with confidence, grace, and clarity, true before sizable groups.
- (7) Balancing your own dignity with humility and self-effacing tribute to others.
- (8) Allowing for silence to give people time to think deeply.



Source: developed by the authors based on OECD (2018).

**Table 2.** Students’ grading scale according to Advanced Communicative Traits of Modern Teacher

ADVANCED COMMUNICATIVE TRAITS OF MODERN TEACHER	
LEADER’S COMMUNICATION COMPETENCE (LCC)	COMMUNICATION COMPONENTS OF GLOBAL COMPETENCE (GC)
BEHAVIOR	
6 traits × 4 points max	5 traits × 4 points max
VALUES	
3 traits × 4 points max	4 traits × 4 points max
SKILLS	
8 traits × 4 points max	5 traits × 4 points max
<b>68 points max</b>	<b>56 points max</b>
<b>124 Points Max as a Total</b>	
<i>31-45 points – Poor Level</i>	
<i>46-75 points – Satisfactory Level</i>	
<i>76-105 points – Good Level</i>	
<i>106-124 points – Advanced Level</i>	

Thus, after the stage of primary diagnostics, the students of the control group studied in the ordinary course, while the students of the experimental group – according to the research tasks implementation model.

**4.2 Implementation of the Experimental Model of Future Teachers’ Professional Training**

According to the research plan, special training sessions were also preliminarily conducted for the teachers who work with the II-III courses of the Faculty of Pedagogy, Psychology and Social Work of Yuriy Fedkovych Chernivtsi National University on the peculiarities of implementing jigsaw activities & opinion sharing methods for professional training of future teachers.

Then the jigsaw activities & opinion sharing methods were thoroughly implemented into the training of the experimental group.

For example, in the process of teaching a foreign language the following methods were widely used:

- jigsaw reading (example – British Council (2021), Appendix B (please, use [https://drive.google.com/file/d/1dRps8f-Sqb-WSIMTXWxWZR8C4\\_0gkT4U/view?usp=sharing](https://drive.google.com/file/d/1dRps8f-Sqb-WSIMTXWxWZR8C4_0gkT4U/view?usp=sharing)) and Appendix C (please, use [https://drive.google.com/file/d/1jTi7krCW8KaaN\\_UGg1L84VmXgmDpvFob/view?usp=sharing](https://drive.google.com/file/d/1jTi7krCW8KaaN_UGg1L84VmXgmDpvFob/view?usp=sharing)));
- think-pair-share activity (according to the principles of Think-Pair-Share (2021));
- method of problem situations in order to force opinion sharing (Kaplinskyi, 2015).

Also, in accordance with the above-mentioned relevance of skills to transform communication strategies depending on the communication channel, the ability to implement professionally oriented communication intentions for face-to-face, phone, e-mail formats were used extensively (three variants of a message were created and tested within the classroom). For example, these methods were used to solve a simulated problem situation with a pupil's parents. Such communicative exercises were especially relevant and beneficial both in terms of learning a foreign language and for the implementation of research tasks.

The experiment went on for 2 academic years: autumn 2017 – autumn 2019.

## 5. Results

### 5.1 The Results of Primary Diagnostics of Advanced Communicative Traits of Modern Teacher

Prior to the experiment, an experimental group of independent experts was invited as observers of the learning process of the control and experimental groups. As a result of observations and based on group discussions in accordance with the structure of Appendix A (please, use [https://drive.google.com/file/d/1iz8YRaFf10\\_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing](https://drive.google.com/file/d/1iz8YRaFf10_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing)) and the grading scale from Table 2, the experts evaluated each student individually. Then the results were processed and averaged in order to determine the representation of advanced communicative traits of modern teacher by the categories of behaviour, values, & skills at the group level.

Thus, after the primary diagnostics of the control and experimental groups, the following results were identified (Table 3).

**Table 3.** The Results of Primary Diagnostics of Advanced Communicative Traits of Modern Teacher

ADVANCED COMMUNICATIVE TRAITS OF MODERN TEACHER					
CONTROL GROUP			EXPERIMENTAL GROUP		
Leader's Communication Competence (LCC), %	Communication Components of Global Competence (GC), %	Communication Components of Global Competence (GC), %	Leader's Communication Competence (LCC), %	Communication Components of Global Competence (GC), %	Communication Components of Global Competence (GC), %
<b>BEHAVIOR</b>					
13,6 points / 56,7%		12,2 points / 61,0%	13,2 points / 55,0%		12,3 points / 61,5%
<b>VALUES</b>					
6,4 points / 53,3%		11,3 points / 70,1%	6,8 points / 56,7%		10,0 points / 62,5%
<b>SKILLS</b>					
20,1 points / 62,8%		11,2 points / 56,0%	19,7 points / 61,5%		11,1 points / 55,5%
<b>40,1 points / 58,9%</b>		<b>34,7 points / 69,6%</b>	<b>39,7 points / 58,4%</b>		<b>33,4 points / 59,6%</b>
<b>74,8 points</b>			<b>73,1 points</b>		
<b>46-75 points – Satisfactory Level</b>			<b>46-75 points – Satisfactory Level</b>		

Thus, according to the primary diagnostics, students of both the control and experimental groups showed results at the level of 75.1 and 73.1 points, respectively, which is within the upper positions of Satisfactory Level. Given that the students lack only 0.3 points (control group) and 1.9 points (experimental group) to the next Good Level, the results can be described as transitional between Satisfactory and Good Levels.

In addition, the results of the primary diagnostics showed that the least developed position in the control group is the Values Component within the Leader's Communication Competence and the Behaviour Component within the



Leader's Communication Competence in the experimental group. This provides insights for the organization of the strategy for further work within the implementation of the experimental content of this study.

According to the levels of advanced communicative traits of modern teacher, the students were divided within the groups, as shown in Table 4.

**Table 4.** Distribution of the Students of Control & Experimental Groups by the Levels of Advanced Communicative Traits of Modern Teacher

Level of advanced communicative traits of modern teacher	Control Group		Experimental Group	
	AofS	%	AofS	%
<i>31-45 points – Poor Level</i>	6	8,1%	7	8,5%
<i>46-75 points – Satisfactory Level</i>	33	44,6%	36	43,9%
<i>76-105 points – Good Level</i>	28	37,8%	31	37,8%
<i>106-124 points – Advanced Level</i>	7	9,5%	8	9,8%

The largest number of students in both groups focused on Satisfactory & Good Levels, which in general led to the transitional nature of the overall result for the group. The students, who demonstrated Poor Level, had very poorly developed Behaviour and Values criteria, which is the basis for building qualitative communication skills both within the LCC and within the GC. In contrast, Advanced Level students demonstrated high level of Values component, which became decisive for the other two related components: Behaviour and Skills. Thus, for LCC and GC formation, the value orientation of a future teacher is crucial. By emphasizing the development of the value component within the experimental group, it is potentially possible to improve the overall indicator of advanced communicative traits of modern teacher.

### 5.2 Results of Auxiliary Diagnostics of Advanced Communicative Traits of Modern Teacher

After the scattered implementation of jigsaw activities & opinion sharing methods into the learning process of the experimental group, auxiliary diagnostics was performed. This covered the period of winter 2018 – spring 2018 – autumn 2018 – winter 2019 – spring 2019 (at each of these stages interim diagnostics was performed and the results were filled into the individual report form (Appendix A (please, use [https://drive.google.com/file/d/1iz8YRaFf10\\_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing](https://drive.google.com/file/d/1iz8YRaFf10_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing))). It should be noted that although the period of active classroom use of jigsaw activities & opinion sharing did not cover summer months, when academic classes were not held, for summer holidays the students of the experimental group were given some individual additional instructions on personal and professional communicative development of future teachers.

Auxiliary diagnostics of Advanced Communicative Traits of Modern Teacher of control and experimental groups showed the results shown in Table 5.

**Table 5.** The Results of Auxiliary Diagnostics of Advanced Communicative Traits of Modern Teacher

ADVANCED COMMUNICATIVE TRAITS OF MODERN TEACHER					
CONTROL GROUP			EXPERIMENTAL GROUP		
Leader's Communication Competence (LCC), %	Communication Components of Global Competence (GC), %	Communication Components of Global Competence	Leader's Communication Competence (LCC), %	Communication Components of Global Competence (GC), %	Communication Components of Global Competence
<b>BEHAVIOR</b>					
14,1 points / 58,7%	12,9 points / 64,5%		15,4 points / 64,2%	14,9 points / 74,5%	
<b>VALUES</b>					
7,5 points / 62,5%	12,8 points / 80,0%		7,9 points / 65,8%	14,2 points / 88,8%	
<b>SKILLS</b>					
22,4 points / 70,0%	11,1 points / 55,5%		25,7 points / 80,3%	14,6 points / 73,0%	
<b>44,0 points / 64,7%</b>	<b>36,8 points / 69,6%</b>		<b>49,0 points / 72,1%</b>	<b>43,7 points / 78,0%</b>	
<b>80,8 points</b>			<b>92,7 points</b>		
<i>76-105 points – Good Level</i>			<i>76-105 points – Good Level</i>		

As the averaged results within the groups of respondents show, in two years' time both groups managed to improve their communication skills, having overcome the borderline state between Satisfactory Level and Good Level and having consolidated on the latter. However, the quality of changes is better in the experimental group, which is expressed in successful acquisition of communication skills, important for the future teacher. According to the grading scale (Appendix A (please, use [https://drive.google.com/file/d/1iz8YRaFf10\\_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing](https://drive.google.com/file/d/1iz8YRaFf10_4qH8yfvRq72lwzhDDAmCW/view?usp=sharing))), on average the representatives of the experimental group managed to score 11.9 points more than the students of the control group. The latter have also improved their communication skills, but only in the process of mastering a typical academic programme – without any special tools / methods of intensifying communication skills. In percentage terms, the result of the experimental group is 9.6% higher compared to the result of the control group. Obviously, it may not be interpreted as the best possible result, but it is still the one that demonstrates positive dynamics.

It should also be taken into account that individually some of the students in the experimental group showed higher rates of progress. According to the levels of advanced communicative traits of modern teacher, the students within the groups were divided, as shown in Table 6.

**Table 6.** Distribution of Students in Control & Experimental Groups by the Levels of Advanced Communicative Traits of Modern Teacher

	Level of advanced communicative traits of modern teacher	Control Group		Experimental Group	
		AofS	%	AofS	%
1	31-45 points – Poor Level	7 (+1)	9,5%	5 (-2)	6,1%
2	46-75 points – Satisfactory Level	28 (-5)	37,8%	31 (-5)	37,8%
3	76-105 points – Good Level	31 (+3)	41,9%	36 (+5)	43,9%
4	106-124 points – Advanced Level	8 (+1)	10,8%	10 (+2)	12,2%

AofS = Amount of Students

If we analyse the trends at the personal levels of advanced communicative traits of modern teacher within groups, it will become noticeable that the dynamics is clearly positive for the experimental group. Here, as many as 7 students improved their levels, having overcome the zones of underdevelopment of advanced communicative traits of modern teacher (poor level, satisfactory level) to the zone of improved development (good level, advanced level). In the control group 4 respondents managed to significantly improve the level of advanced communicative traits of modern teacher, having reached good and advanced levels and having overcome the previous poor and satisfactory levels. However, one student, on the other hand, from the satisfactory level, who had previously occupied the borderline position between poor and satisfactory levels, on the contrary, eventually dropped to the poor level. It was later found out that this was due to low academic progress and frequent non-attendance in classes. The specified student was even nominated for expelling from the university. However, such situation, in general, gives interesting insights, as not only in this case, but also across the groups in general (both the control and the experimental groups) it became obvious that those students worked better during the classes, who had prepared carefully for the classes and consciously and proactively took their own learning.

This was particularly evident within the experimental group, especially during active opinion sharing, when the students' speech was more substantial, full of facts, rich in accurate turns of speech and stylistically correct oral and written speech. Comparison of journals for monitoring the development of Communication Traits of Students of Pedagogical Specialty in dynamics also make it possible to track proportional changes between the improvement of advanced communicative traits of a modern teacher and the increase in the level of academic progress. Therefore, in further studies, it will be appropriate to perform correlation analysis in order to assess the relationship between the development of Communication Traits of Students of Pedagogical Specialty and their academic progress.

The discussion and summation of the experiment by the participants of the expert group gave even much clearer insights for evaluating the results of the experiment, than it was possible with the help of quantitative and statistical data processing. Compared to the students of the control group, who also worked on the development of Communication Traits of Students of Pedagogical Specialty, but without any special instruments of education such as intensively implemented methods of jigsaw activities and opinion sharing, professionally determined peculiarities of communication of the students of the experimental group were as follows:

- communicative initiative of the students who previously remained passive during classes increased significantly;
- vocabulary size and targeted speech skills expanded and improved;
- students' confidence in the methods of discussion and collective search for correct decisions has increased, which is very useful for the teaching staff;
- in the context of a 2-year experiment, the effectiveness of team and individual problem solving in a short time by jigsaw activities and opinion sharing methods has increased; the argumentativeness of statements, the quality of teamwork has increased (if at the beginning of the experiment the opinions of some participants were ignored, even for subjective reasons, later the opinion of each participant became important, although the opinions of students-informal leaders were decisive);
- the need for directive activity of the teacher has decreased as students have acquired skills of independent activities and self-organization.

Thus, both quantitative and qualitative analysis of the results of the final stage of the study proved the effectiveness of enhanced comprehensive (in teaching of all educational disciplines) application of jigsaw activities and opinion sharing in order to stimulate advanced communicative traits of modern teacher.

## 6. Discussion

The problem of formation of professional competencies and, accordingly, the implementation of principles of competence-based teaching of future teachers, universally recognized and approved at the level of official international and local educational and policy documents, is urgent due to the need for constant adaptation of the educational and professional environment to modern realities. University training with its initiative and innovation must be at least one step ahead as modern students at the beginning of their professional activity will have to teach the representatives of other generations with different worldviews.

Communicative competencies of student teachers are crucial, as transition to the “knowledge society” is possible only under the conditions of high-quality emotional and cognitive exchange between different categories of society (Gupta et al., 2021). Proper communicative interpretation of the material allows you to qualitatively and quickly implement pedagogical intentions, the teacher will be able to acquire the functions of a facilitator and to catalyse the learning process.

Developments in ICT and other challenges that arise from increased globalization heavily influence our thinking about teacher quality, i.e. what we as society expect from teachers (Bourgonje & Tromp, 2011, p. 22). Competence in communicating through various modern channels is crucial for this purpose (Eaglesham, 2020). The base of this competence is the ability to see the purpose of communication, to understand the psychology of perception the speech by a potential recipient, the skills of organizing targeted speech. This is an integral part and the actual goal of the development of advanced communicative traits of modern teacher. Qualitative formation of personal and professional competencies of a teacher is possible only if he/she acquires fundamentally important communication skills through the methods of general communicative competence development of the future teacher on the verge of intersection, the synergy of LCC and Communication Components of GC. Thus, a competent educator with developed LCC and Communication Components of GC will most likely meet the principles of active, participatory teaching (Bourgonje & Tromp, 2011, p. 22).

In our research we managed to realize positive potential of application of jigsaw activities and opinion sharing methods for LCC and Communication Components of GC. Jigsaw activities and opinion sharing as types of group work required the ‘dialogue’ approach – defined as “a shared inquiry, a way of thinking and reflecting together” (Isaacs, 1999). The technique of achievement of respectful inquiry between the participants of communicative interaction took a prominent place in improving competence readiness of future teachers. This is a communicative technique based on the process of open questioning and attentive and tolerant listening to the answer, that is one of the means of stimulating openness and dialogics in communication (Van Quakebeke & Felps, 2018).

The experiment has shown that jigsaw activities, like other information gap activities, are a multifunctional way of combining content and language teaching effectively and providing an opportunity for purposeful communication (Akimov et al., 2021; Swain & Lapkin, 2000). They help to improve communication strategies by encouraging paraphrasing, asking for clarification of complex information (the best way to learn something is to teach others), asking informative and problematic questions, giving simple clear instructions and following them, etc. (Halimah &

Sukmayadi, 2019; Nurbianta & Dahlia, 2018; Yoshida, 2018). Since both the jigsaw activities and the opinion sharing methods assume that the success of the whole task depends on the success of doing each part of the task by each group of experts and within the group – by each of its members (Marisa et al., 2020), this makes it possible to consolidate leadership potential of more initiative students and to enhance the leadership potential of emotionally more passive ones. In addition, from the process and results of integrating these activities into students' classroom work, it can be concluded that implementation of jigsaw activities and opinion sharing methods can be especially beneficial for inclusive classrooms. This may be the subject of further research.

At the same time, solving problem situations through opinion sharing not only allowed to develop an algorithm for finding effective collective solutions to pedagogical and other problems (Nusrath et al., 2019), but also prepared future teachers to undergoing internships in schools, which they later mentioned in their reports.

## 7. Conclusion

The problem of readiness of student teachers to their future professional activity is especially acute due to the need to adapt constantly to the professional responsibilities of teaching and educating new generations of students with new educational needs and worldviews. Professional competence of the future teacher is the main indicator of his/her readiness to work in educational institutions and prerequisite for creative attitude to the profession and personal development.

As a result of empirical research among the students of pedagogical specialties we managed to achieve positive effect from the use of jigsaw activities and opinion sharing method. Both the control and experimental groups overcame the initial marginal state between Satisfactory and the Good Levels of Advanced Communicative Traits of Modern Teacher, consolidating at the Good Level. The experimental group scored 11.9 points more (9.6%) according to the developed diagnostic scale. The most noticeable improvement in communicative competencies was in the behaviour component within Communication Components of Global Competence (10.0% higher in the experimental group) and especially in the Skills component within Leader's Communication Competence (10.3% higher in the experimental group), and within Communication Components of Global Competence (difference in 17.5%).

The paper only briefly presents the implementation procedure of jigsaw activities and opinion sharing method during the study of a foreign language by students. However, we emphasized that the integration of these techniques was comprehensive.

Further research may be dedicated to the study of procedure, qualitative and quantitative indicators of the effectiveness of jigsaw activities and opinion sharing method within specific disciplines.

## 8. Recommendations

For correctness of obtaining relevant empirical data and in order to compare the results of initial and final assessment of students, which allows to clearly prove the level of effectiveness of jigsaw activities and opinion sharing methods in the formation of leaders' communication competence (LCC) and communication components of global competence (GC) reproduced in the research procedure proposed in the materials and methods paragraph (Table 1). In particular, it is important to evaluate the standardized fixed list of positions – Communication Traits of a Student of Pedagogical Specialty. In our version - all LCC and GC positions with the corresponding conditional diversification into generalized blocks Behavior, Values, Skills. According to the research model, it is also strongly recommended to compile a special Communication Traits of a Student of Pedagogical Specialty Journal, as presented in our sample (Appendix C (please, use [https://drive.google.com/file/d/1jTi7krCW8KaaN\\_UGg1L84VmXgmDpvFob/view?usp=sharing](https://drive.google.com/file/d/1jTi7krCW8KaaN_UGg1L84VmXgmDpvFob/view?usp=sharing))). Quarterly diagnostic generalization sections are appropriate to check the dynamics of LCC and GC in the students of the experimental group.

## 9. Conflicts of Interest

The authors declare that there is no conflict of interest.

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