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**A CPD MODEL FOR THE DEVELOPMENT OF 4C AMONG
STUDENTS OF LANGUAGE SPECIALTIES:
A DIAGNOSTIC-BASED RATIONALE**

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Abstract. The development of 21st-century skills—critical thinking, creativity, communication, and collaboration (4C) is recognized as a key priority in modern language education and teacher training. However, empirical diagnostic studies addressing the actual level and structure of 4C among students of language specialties remain limited. This study aims to diagnostically assess the level of development of the 4C components among students of language specialties and to provide an empirical foundation for the design of a Continuous Professional Development (CPD) model. A descriptive cross-sectional survey was conducted among 135 students of language faculties majoring in Kazakh Language and Literature, Russian Language and Literature, and Foreign Language: Two Foreign Languages. Data were collected using an author-designed questionnaire based on the 4C framework. Statistical analysis included Cronbach’s Alpha reliability testing, descriptive statistics, level-based classification (low, moderate, high), and Pearson correlation analysis. The results demonstrate acceptable to high reliability of all four 4C scales ($\alpha = 0.676\text{--}0.875$). Descriptive analysis revealed a generally moderate to high level of 4C development, with the highest mean scores observed for Collaboration ($M = 4.77$) and the lowest for Communication ($M = 4.26$). Level-based distribution showed that Communication and Creativity contain the largest proportion of students at moderate and low levels, indicating structurally vulnerable areas. Pearson correlation analysis revealed strong positive relationships among all 4C components ($r = 0.61\text{--}0.75$, $p < 0.01$), confirming their systemic and interdependent nature. The findings indicate a structural imbalance in the development of 4C among students of language specialties and provide strong empirical justification for the design of a holistic CPD model aimed primarily at strengthening communicative and creative competencies while maintaining integrated development of all 4C components.

Keywords: 4C, critical thinking, creativity, collaboration, CPD, language education, diagnostic assessment, soft skills

Introduction

Modern language education is oriented not only toward the development of linguistic competence but also toward the formation of the so-called 21st-century skills: critical thinking, creativity, communication, collaboration [1]. Future language teachers are expected to critically interpret information in both

their native and foreign languages, design creative learning tasks, communicate effectively, and work productively in a team [2].

Recent studies confirm the relevance of the 4C model for foreign language education at both the school and teacher-training levels. In particular, Salybekova et al. demonstrate that the integration of the 4C model into the professional preparation of foreign language teachers significantly improves their methodological readiness, reflective skills, and ability to implement student-centered instruction [3]. However, the authors primarily focus on the pedagogical training process itself, while the issue of large-scale diagnostic assessment of 4C development among students of language specialties remains insufficiently addressed at the empirical level.

At the school level, Berkinbayeva et al. showed that the use of cooperative learning, games, and case studies effectively enhances students' communication, collaboration, critical thinking, and creativity [4]. At the same time, the authors note that the 4C model is still weakly implemented in real educational practice, as curricula remain largely focused on subject knowledge. Moreover, this study is limited to the school context and does not provide a comprehensive diagnostic profile of 4C competencies among university students.

Thus, despite the growing body of research on 4C in foreign language education, there is still a clear lack of large-scale diagnostic studies aimed at identifying the actual level, structure, and interrelationships of 4C components among students of language specialties. This gap determines the relevance of the present research, which focuses on the empirical diagnosis of 4C as a foundation for designing a CPD model.

Under these conditions, diagnostic research becomes particularly important, as it enables the identification of the actual level and structure of 4C development among students in language faculties and to use these data as an empirical basis for the subsequent design of educational programs and professional development models, including CPD. Recent empirical studies convincingly demonstrate that innovative instructional models such as Discovery Learning, Cooperative Learning, and Problem-Based Learning significantly enhance communication and collaboration skills [5]. However, these studies are mainly focused on pedagogical interventions and learning outcomes, whereas systematic large-scale diagnostic assessments of students' initial 4C levels remain limited, especially in higher education and language teacher training.

At the same time, research on Continuous Professional Development confirms its decisive role in improving the quality of teaching and strengthening professional self-awareness. Vadivel and Namaziandost show that CPD promotes reflective teaching, shared professional experience, and teachers' confidence in their own professional growth [6]. Nevertheless, most CPD studies primarily examine teachers' perceptions and attitudes, while the issue of diagnostic justification of CPD through empirical assessment of students' 4C competencies remains insufficiently addressed.

Thus, despite strong evidence that innovative learning models enhance communication and collaboration, and that CPD contributes to teachers' professional growth, there is still a clear methodological gap between pedagogical effectiveness and diagnostic substantiation. This gap highlights the critical importance of diagnostic studies aimed at identifying the real level, distribution, and interrelations of the 4C components among students of language specialties as a necessary foundation for evidence-based CPD model design.

The present study is devoted to the diagnostic investigation of the level of development of the 4C components among students of language specialties based on a questionnaire survey. The empirical basis of the study consists of survey data from students of language faculties (approximately 135 respondents) enrolled in the programs "Kazakh Language and Literature," "Russian Language and Literature," "Foreign Language: Two Foreign Languages," and related fields.

The aim of the study is to identify the level of development of the 4C components (critical thinking, creativity, communication, collaboration) among students of language specialties on the basis of a questionnaire survey as a diagnostic foundation for substantiating the need to design a CPD model.

The object of the study is the process of professional training of students of language specialties.

The subject of the study is the level of development of the 4C components (critical thinking, creativity, communication, and collaboration) among students of language faculties.

Objectives of the Study;

1. To analyze theoretical approaches to the concept of 4C in the context of language education.
2. To develop and apply a diagnostic questionnaire to assess the level of 4C development among students of language specialties.
3. To determine the level of development of each 4C component (Critical Thinking, Creativity, Communication, Collaboration) based on the survey results.
4. To identify strengths and problem areas in the structure of 4C among students of language faculties.
5. To formulate conclusions and practical recommendations for the development of 4C in the process of language teacher education.

The practical significance of the study lies in the possibility of using the obtained diagnostic data for: adjusting educational programs in language specialties; developing courses and training sessions aimed at enhancing soft skills (4C); designing CPD models for students' professional development; improving the effectiveness of professional training of future language teachers and philologists.

The present study is focused on a diagnostic analysis of the level of development of the 4C components among students of language specialties as an empirical basis for the subsequent design of a CPD model. The following analytical directions were implemented:

1. Reliability of the 4C diagnostic instrument, verified using Cronbach's Alpha coefficients for all four scales (Critical Thinking, Creativity, Communication, and Collaboration).

2. Current level of development of each 4C component, determined through descriptive statistics (Mean, Standard Deviation, Median, Range).

3. Comparative 4C profile, identifying the relative strength of each component, including: the most developed component (Collaboration), the weakest component (Communication), domains with higher variability (Creativity).

4. Structural imbalance in the development of 4C, interpreted as the main empirical rationale for the necessity of implementing a targeted CPD model aimed at strengthening weaker components.

The obtained results are used not to evaluate the effectiveness of CPD, but to empirically justify the need for designing a CPD model for students of language specialties.

Materials and Methods

The study employed a descriptive-analytical (diagnostic) research design based on a questionnaire survey. Its purpose was to identify the level of development of the 4C components (Critical Thinking, Creativity, Communication, Collaboration) among students of language specialties in the Autumn semester 2025.

The sample comprised 135 students of language faculties from Central Asian Innovative University enrolled in the following programs: Kazakh Language and Literature, Russian Language and Literature, Foreign Language: Two Foreign Languages.

The respondents represented different years of study (from the 1st to the 4th year, as well as Master's students) (Figure 1). The sample was purposive, as students of language specialties constituted the direct target group of the diagnostic study.

Year of study:

135 ОТВЕТОВ

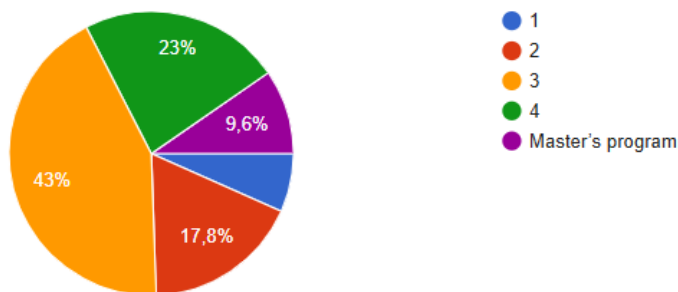


Figure 1 – Distribution of Participants by Year of Study (N = 135)

Participation was voluntary and anonymous, which enhanced the reliability of the obtained data.

The study employed an author-designed/adapted questionnaire consisting of four blocks corresponding to the 4C model components:

Critical Thinking – assessment of the ability to critically analyze information in a foreign language, identify logical errors and contradictions, ask clarifying questions, justify one’s position, and compare different viewpoints.

Creativity – assessment of the ability to generate multiple solutions in a foreign language, experiment with language, propose non-standard ideas, tolerate mistakes, and adapt ideas to different conditions.

Communication – assessment of the ability to express ideas clearly in oral and written forms in a foreign language, consider audience characteristics, use paraphrasing for comprehension control, and speak in front of a group.

Collaboration – assessment of attitudes toward group work, willingness to take responsibility, ability to distribute roles, provide tactful feedback, and support peers.

All items were rated on a six-point Likert scale (from 1 – *strongly disagree* to 6 – *strongly agree*).

The questionnaire also included a socio-demographic block:

- year of study,
- field of specialization,
- previous participation in soft skills development courses or trainings.

To provide a more detailed interpretation of the diagnostic results, integral scores for each 4C scale were additionally transformed into level-based categories. Individual mean scores for Critical Thinking, Creativity, Communication, and Collaboration were classified into three levels:

Low (1.00–2.99), Moderate (3.00–4.49), High (4.50–6.00).

This classification made it possible to determine the percentage distribution of students across different levels of each 4C component, identify skill gaps and relative strengths, and provide a diagnostic basis for designing a targeted CPD model for the development of vulnerable soft skills.

The main limitations of the study include:

- reliance on self-assessment data, which may involve subjective bias;
- absence of experimental intervention and repeated measurements;
- confinement of the sample to one educational institution.

These limitations were taken into account in the interpretation of the results and in the formulation of the conclusions.

The data were processed using Cronbach’s Alpha to assess internal consistency, Pearson correlation to examine the relationships between the 4C components, and descriptive statistics to calculate mean values and variability indicators.

Results

To assess the internal consistency of the diagnostic questionnaire, a reliability analysis was conducted using Cronbach’s Alpha coefficient (Table 1). The analysis included four scales corresponding to the components of the 4C model: Critical Thinking, Creativity, Communication, and Collaboration. Each scale consisted of five items.

Table 1. Reliability Coefficients of the 4C Scales

Scale	Number of Items (N)	Cronbach’s α	Reliability Level
Critical Thinking	5	0.676	Acceptable
Creativity	5	0.844	Good
Communication	5	0.875	Good
Collaboration	5	0.860	Good

The Critical Thinking scale demonstrated a Cronbach’s Alpha value of $\alpha = 0.676$, which corresponds to an acceptable level of internal consistency. Although this value is slightly below the commonly desired threshold of 0.70, it is considered methodologically acceptable in social and educational research, especially in exploratory studies and when measuring complex cognitive constructs such as critical thinking. The obtained coefficient indicates that the items of this scale are generally consistent, though further refinement of this scale may improve its reliability in future studies.

The Creativity scale showed a reliability coefficient of $\alpha = 0.844$, indicating a good level of internal consistency. This suggests that the questionnaire items reliably measure students’ creative abilities in the context of foreign language learning.

The Communication scale demonstrated a Cronbach’s Alpha value of $\alpha = 0.875$, which reflects a high level of reliability and confirms strong internal coherence among the items assessing students’ communicative skills in a foreign language.

Similarly, the Collaboration scale yielded $\alpha = 0.860$, indicating a good and stable level of internal consistency. This result confirms the reliability of the items used to assess teamwork, responsibility, and cooperative interaction among students.

Overall, the obtained Cronbach’s Alpha coefficients indicate that the diagnostic instrument is sufficiently reliable and methodologically sound for assessing the level of development of the 4C components among students of language specialties. The reliability values support the use of this questionnaire for further descriptive and interpretative statistical analysis.

The overall pattern of results demonstrates that students of language specialties show a moderately high level of development across all four components of 4C (Table 2). The components are ranked as follows based on mean scores:

1. Collaboration (M = 4.77) – highest

2. Critical Thinking ($M = 4.57$)
3. Creativity ($M = 4.51$)
4. Communication ($M = 4.26$) – lowest

Table 2. Descriptive Statistics of the 4C Components ($N = 135$)

Scale	Mean (M)	Std. Deviation (SD)	Min	Max
Critical Thinking	4.57	0.72	2	6
Creativity	4.51	0.90	2	6
Communication	4.26	1.00	1	6
Collaboration	4.77	0.86	2	6

The mean score for Critical Thinking was $M = 4.57$ ($SD = 0.72$) on a six-point Likert scale, which indicates a relatively high level of critical thinking among the students. The median value (4.60) and mode (5) further confirm that most respondents assessed their critical thinking skills above the average level. The distribution shows a slight negative skewness (-0.44), suggesting that a larger proportion of students tended to choose higher response categories. The minimum and maximum values ranged from 2 to 6, which indicates some individual variation in this competence. Students generally demonstrate a well-developed ability to critically evaluate information, although individual differences remain noticeable.

The Creativity scale yielded a mean value of $M = 4.51$ ($SD = 0.90$), which also corresponds to a moderately high level of creative skills. The standard deviation is higher than in Critical Thinking, showing greater variability in students' creative self-assessments. The distribution is moderately negatively skewed (-0.39), and the range extends from 2 to 6. While the majority of students perceive themselves as creative, the dispersion of scores suggests that creativity is developed unevenly across the sample.

The lowest mean among the four components was observed for Communication ($M = 4.26$, $SD = 1.00$). Although the average value remains above the midpoint of the scale, the relatively large standard deviation indicates considerable individual differences in communicative competence. The median (4.20) is slightly lower than in other scales, and the minimum score reaches 1, which points to the presence of students experiencing serious difficulties in communication. Communication appears to be the most vulnerable component of 4C in this sample, requiring targeted pedagogical support, especially in speaking and public performance.

The highest mean score was obtained for Collaboration ($M = 4.77$, $SD = 0.86$). The median and mode both equal 5, indicating a strong concentration of responses at high values. The minimum score is 2, and the maximum is 6, which shows that almost all students rate their collaboration skills positively. Collaboration is the strongest component among the 4C's in the studied group, reflecting students' readiness for teamwork, mutual support, and shared responsibility.

In particular, the fact that 56.3% of students do not reach a high level of Communication and 45.2% do not reach a high level of Creativity constitutes a strong empirical justification for the development of a targeted CPD model. The proposed CPD model should primarily focus on:

- enhancing productive and public communication in a foreign language,
- developing creative language use, divergent thinking, and flexible problem-solving.

The level-based distribution of the 4C components revealed a heterogeneous pattern of skills development among students of language specialties (Table 3).

Table 3. Distribution of 4C Levels Among Students (N = 135)

Scale	Low (%)	Moderate (%)	High (%)
Critical Thinking	1.5	41.5	57.0
Creativity	5.9	39.3	54.8
Communication	9.6	46.7	43.7
Collaboration	3.7	24.4	71.9

For Critical Thinking, the majority of students demonstrated a high level of development (57.0%), while 41.5% were classified at the moderate level, and only 1.5% at the low level. This indicates a generally strong analytical foundation, although a substantial group remains at an intermediate stage of critical thinking development.

In the Creativity scale, 54.8% of students reached a high level, 39.3% were at a moderate level, and 5.9% demonstrated a low level. These results confirm that creative potential is present in most students; however, the relatively large moderate group reflects uneven development of divergent thinking and idea generation skills.

The most vulnerable distribution was observed for Communication. Only 43.7% of students reached a high level, while nearly half (46.7%) remained at a moderate level, and 9.6% were classified at a low level. This indicates that communicative competence—particularly in productive and public communication—constitutes the weakest component of the 4C profile.

In contrast, Collaboration demonstrated the most favorable distribution, with 71.9% of students showing a high level, 24.4% a moderate level, and only 3.7% a low level (Figure 2). This confirms that teamwork, mutual support, and shared responsibility are well developed among students.

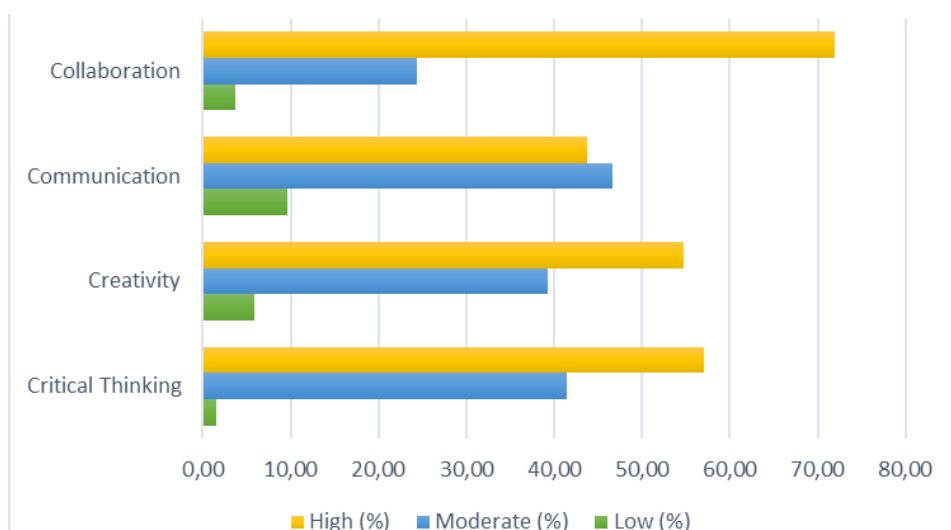


Figure 2 – Students' 4C Profile by Skill Level

To examine the interrelationships between the components of the 4C model, a Pearson correlation analysis was conducted using the total scores for Critical Thinking, Creativity, Communication, and Collaboration ($N = 135$).

The results revealed statistically significant strong positive correlations between all components of the 4C model ($p < 0.01$), indicating a high level of interdependence among the examined skills (Table 4).

A strong positive correlation was found between Critical Thinking and Creativity ($r = .619$, $p < 0.01$), suggesting that students with higher analytical and evaluative abilities also tend to demonstrate higher levels of creative thinking.

Critical Thinking was also strongly related to Communication ($r = .641$, $p < 0.01$), indicating that students who are better at analyzing and evaluating information are also more effective in expressing their ideas in a foreign language.

The strongest relationship was observed between Communication and Collaboration ($r = .750$, $p < 0.01$), which reflects a very strong association between communicative competence and teamwork skills. This result confirms that successful collaboration is highly dependent on effective communication.

A strong positive correlation was also found between Creativity and Collaboration ($r = .698$, $p < 0.01$), indicating that students with higher creative potential tend to be more active and productive in cooperative learning environments.

Table 4. Pearson Correlations Between 4C Components ($N = 135$)

Scale	CT	CR	COM	COL
Critical Thinking (CT)	1	.619**	.641**	.615**
Creativity (CR)	.619**	1	.730**	.698**

Communication (COM)	.641**	.730**	1	.750**
Collaboration (COL)	.615**	.698**	.750**	1

Note. $p < 0.01$ (two-tailed).

The presence of consistently strong and statistically significant correlations among all 4C components provides empirical evidence that these skills develop in an integrated manner. Consequently, CPD interventions aimed at strengthening only one component are unlikely to produce sustainable results. Instead, the findings justify the design of a holistic CPD model that simultaneously targets Critical Thinking, Creativity, Communication, and Collaboration through integrated pedagogical strategies.

Discussion

The results indicate that students are most confident in teamwork and cooperative interaction, whereas communicative skills, particularly productive and public communication, represent the main area of difficulty. The results confirm the heterogeneity of 4C development and underline the necessity of targeted interventions to strengthen weaker components, especially Communication and Creativity.

The results are consistent with the research of Salybekova et al. [3]. Integrating the 4C framework into the professional training of future foreign language teachers improves methodological readiness. Their study differs from the current one in its diagnostic profile of 4C competencies prior to the model's implementation. This generates empirical data for identifying specific competencies requiring further development.

The overall level-based profile of 4C indicates a structural imbalance in students' soft skills development. While Collaboration and Critical Thinking demonstrate predominantly high-level distributions, Communication and Creativity reveal a substantial proportion of students at moderate and low levels.

The prevalence of collaboration over communication also confirms the findings of Berkinbaeva et al. [4] on how cooperative learning, educational games, and approaches promote communication, collaboration, creativity, and critical thinking. Our results extend this finding to higher education, showing that communication and creativity remain relatively underdeveloped even among students.

The obtained diagnostic results provide a solid evidence-based foundation for designing a CPD model aimed at systematically strengthening the weaker components of 4C among students of language specialties.

Overall, the correlation matrix confirms that the four components of the 4C model are not isolated constructs but form a tightly interconnected system of competencies, where the development of one component reinforces the others.

Conclusion

The conducted diagnostic study of the 4C components among students of language specialties provided a comprehensive picture of the current level of key 21st-century skills development in foreign language education.

The reliability analysis using Cronbach's Alpha demonstrated that all scales of the questionnaire possess acceptable to high internal consistency, confirming the methodological validity of the diagnostic instrument and its suitability for further empirical research.

The results of descriptive statistics revealed a generally moderate to high level of development of all 4C components, with the highest mean scores observed for Collaboration and the lowest for Communication. This indicates that students tend to perform more confidently in teamwork than in productive and public communication in a foreign language.

The level-based distribution showed that a substantial proportion of students remains at the moderate level of Critical Thinking, Creativity, and especially Communication, whereas Collaboration is predominantly represented at a high level. The largest share of low-level students was identified in the Communication component, which allows it to be considered the main deficit area.

The correlation analysis revealed strong statistically significant positive relationships among all 4C components, confirming their systemic and interdependent nature. The strongest association was found between Communication and Collaboration, emphasizing the critical role of communicative competence in effective teamwork.

Taken together, the findings indicate a structural imbalance in the development of 4C, where collaborative skills are more developed than communicative and partially creative ones. This imbalance provides strong empirical justification for the design and implementation of a holistic CPD model, primarily focused on enhancing Communication and Creativity while maintaining an integrated approach to all 4C components.

Thus, the results of this study serve as a diagnostic foundation for the development of a CPD model for students of language specialties, aimed at fostering 21st-century skills and improving the quality of professional training of future language teachers and philologists.

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ТІЛДІК МАМАНДЫҚТАР СТУДЕНТТЕРІНДЕ 4С ДАҒДЫЛАРЫН ҚАЛЫПТАСТЫРУҒА АРНАЛҒАН ҮЗДІКСІЗ КӘСІБИ ДАМУ (СРД) МОДЕЛІ: ДИАГНОСТИКАЛЫҚ НЕГІЗДЕМЕ

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Түркістан, Қазақстан

Аңдатпа. ХХІ ғасыр дағдыларын — сыни ойлау, креативтілік, коммуникация және ынтымақтастықты (4С) дамыту қазіргі заманғы тілдік білім беру мен педагог кадрларды даярлаудың негізгі басымдықтарының бірі болып табылады. Алайда тілдік мамандықтар студенттерінде 4С компоненттерінің нақты қалыптасу деңгейі мен құрылымын айқындауға бағытталған эмпирикалық диагностикалық зерттеулер әлі де жеткіліксіз. Осы зерттеудің мақсаты — тілдік мамандықтар студенттерінде 4С

компоненттерінің даму деңгейін диагностикалық тұрғыдан бағалау және үздіксіз кәсіби даму (Continuous Professional Development, CPD) моделін жобалауға арналған эмпирикалық негіз қалыптастыру. Зерттеу барысында «Қазақ тілі мен әдебиеті», «Орыс тілі мен әдебиеті» және «Шетел тілі: екі шетел тілі» білім беру бағдарламалары бойынша білім алатын тіл факультеттерінің 135 студенті қатысқан сипаттамалық көлденең (cross-sectional) сауалнама жүргізілді. Деректер 4С тұжырымдамасына негізделген авторлық сауалнама көмегімен жиналды. Статистикалық талдау Кронбах альфасы арқылы сенімділікті бағалауды, сипаттамалық статистиканы, деңгейлік жіктеуді (төмен, орта, жоғары), сондай-ақ Пирсонның корреляциялық талдауын қамтыды. Зерттеу нәтижелері 4С-тің барлық төрт шкаласының сенімділігі қолайлы және жоғары деңгейде екенін көрсетті ($\alpha = 0,676-0,875$). Сипаттамалық талдау 4С дағдыларының жалпы алғанда орташа және жоғары деңгейде қалыптасқанын анықтады, бұл ретте ең жоғары орташа көрсеткіштер «Ынтымақтастық» компоненті бойынша ($M = 4,77$), ал ең төменгі көрсеткіштер «Коммуникация» компоненті бойынша ($M = 4,26$) тіркелді. Деңгейлік талдау коммуникация мен креативтілік компоненттерінде орта және төмен деңгейдегі студенттердің үлесі жоғары екенін көрсетті, бұл олардың құрылымдық тұрғыдан әлсіз тұстар екенін айқындайды. Пирсонның корреляциялық талдауы 4С компоненттерінің барлығы арасында күшті оң өзара байланыстардың бар екенін анықтады ($r = 0,61-0,75$, $p < 0,01$), бұл олардың жүйелік және өзара тәуелді сипатын дәлелдейді. Алынған нәтижелер тілдік мамандықтар студенттерінде 4С дағдыларының дамуында құрылымдық теңгерімсіздіктің бар екенін көрсетеді және барлық 4С компоненттерінің интеграцияланған дамуын сақтай отырып, ең алдымен коммуникативтік және креативтік құзыреттерді нығайтуға бағытталған кешенді CPD моделін әзірлеудің берік эмпирикалық негізін қамтамасыз етеді.

Тірек сөздер: 4С, сыни ойлау, креативтілік, коммуникация, ынтымақтастық, CPD, тілдік білім беру, диагностикалық бағалау

МОДЕЛЬ НЕПРЕРЫВНОГО ПРОФЕССИОНАЛЬНОГО РАЗВИТИЯ (CPD) ДЛЯ ФОРМИРОВАНИЯ 4С У СТУДЕНТОВ ЯЗЫКОВЫХ СПЕЦИАЛЬНОСТЕЙ: ДИАГНОСТИЧЕСКОЕ ОБОСНОВАНИЕ

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Аннотация. Развитие навыков XXI века — критического мышления, креативности, коммуникации и сотрудничества (4С) — признаётся одним из ключевых приоритетов в современном языковом образовании и подготовке педагогических кадров. Однако эмпирические диагностические исследования, посвящённые фактическому уровню и структуре сформированности компонентов 4С у студентов языковых специальностей, остаются ограниченными. Целью данного исследования

является диагностическая оценка уровня развития компонентов 4С у студентов языковых специальностей и формирование эмпирической основы для проектирования модели непрерывного профессионального развития (Continuous Professional Development, CPD). Описательное поперечное исследование было проведено среди 135 студентов языковых факультетов, обучающихся по образовательным программам «Казахский язык и литература», «Русский язык и литература» и «Иностранный язык: два иностранных языка». Сбор данных осуществлялся с использованием авторской анкеты, разработанной на основе концепции 4С. Статистический анализ включал оценку надёжности шкал с использованием коэффициента альфа Кронбаха, описательную статистику, уровневую классификацию (низкий, средний, высокий уровни), а также корреляционный анализ Пирсона. Результаты исследования продемонстрировали приемлемую и высокую надёжность всех четырёх шкал 4С ($\alpha = 0,676–0,875$). Описательный анализ выявил в целом средний и высокий уровень сформированности навыков 4С, при этом наибольшие средние значения были зафиксированы по компоненту «Сотрудничество» ($M = 4,77$), а наименьшие — по компоненту «Коммуникация» ($M = 4,26$). Уровневое распределение показало, что именно коммуникация и креативность характеризуются наибольшей долей студентов со средним и низким уровнями сформированности, что указывает на их структурную уязвимость. Корреляционный анализ Пирсона выявил сильные положительные взаимосвязи между всеми компонентами 4С ($r = 0,61–0,75$, $p < 0,01$), что подтверждает их системный и взаимозависимый характер. Полученные результаты свидетельствуют о структурном дисбалансе в развитии навыков 4С у студентов языковых специальностей и обеспечивают убедительное эмпирическое обоснование для разработки целостной модели CPD, ориентированной прежде всего на усиление коммуникативных и креативных компетенций при сохранении интегрированного развития всех компонентов 4С.

Ключевые слова: 4С, критическое мышление, креативность, коммуникация, сотрудничество, CPD, языковое образование, диагностическая оценка

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