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Development of Psychological Culture Through Curriculum and Teaching: Evidence from University Students, Educators, and Psychologists

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Abstract

The study explored psychological culture among students, educators, and psychologists at a Kazakhstani university, including curriculum design, teaching methods, extracurricular activities, mentorship, and the wider institutional learning environment. The study employed a mixed-methods research design. The sample comprised 150 participants. Semi-structured interviews were conducted to gather qualitative data, and quantitative data were collected using structured questionnaires measuring psychological culture, perceptions of the university environment, and facilitators/barriers to psychological development. First-year students scored lower on empathy ($M = 3.2$, $SD = 0.5$) than fourth-year students ($M = 4.1$, $SD = 0.4$). ANOVA showed a statistically significant difference in psychological culture scores among the 10 student and professional groups, $F(9, 140) = 6.42$, $p < 0.05$. Multiple regression showed that curriculum support ($\beta = 0.35$), teaching methods ($\beta = 0.30$), and extracurricular activities ($\beta = 0.21$) were positively associated with psychological culture, with 42% variance explained ($R^2 = 0.42$). Qualitative findings indicated that curriculum content, teaching methods, extracurricular activities, mentorship, counselling, and role modelling by teachers, and institutional norms helped foster empathy, self-regulation, and professional values. Psychological culture is considered a personal quality and an educational outcome of curricular, pedagogical, relational, and institutional experiences. Therefore, psychological culture needs to be integrated into curriculum design, teaching, extracurricular activities, mentorship, and institutional activities.

Keywords: emotional intelligence, university environment, empathy, curriculum, mentorship, higher education

1. Introduction

For students training to become educators and psychologists, developing a strong psychological culture is more than just acquiring theoretical knowledge. It's about learning to understand themselves and others, building qualities like empathy, self-awareness, emotional regulation, and effective communication, all of which are essential for human-centered professions (Golubeva, 2023; Rakhimzhanova et al., 2024).

Psychological culture refers to an individual's internalized system of psychological knowledge, emotional intelligence, ethical orientation, and behavior-regulating skills that support reflective, empathetic, and professional engagement in educational or therapeutic relationships (Rakhimzhanova et al., 2024). For educator-psychologists, it forms the psychological foundation to guide others, model emotional competence, and manage interpersonal dynamics effectively (Rakhimzhanova et al., 2024). Thus, psychological culture has a direct dimension in curriculum and teaching: students acquire psychological knowledge in the content of the curriculum, learn interpersonal competencies in the process of pedagogical activity, become acquainted with professional values in the process of the teacher's activity, and develop interpersonal competencies in extracurricular and mentoring activities.

University education plays a vital role in shaping this psychological culture. Developing psychological culture during university studies is essential for fostering self-awareness and a deep appreciation of cultural identity while also enhancing students' capacity to understand, recognize, and respect cultural diversity in educational contexts (Aden et al., 2025). It also supports students planning to become educational psychologists in coping with job-related stress, emotional exhaustion, and job satisfaction (Maksymchuk et al., 2019; Han et al., 2025).

Higher education's growing use of technology has shifted the focus from hard skills to soft skills such as communication, self-regulation, emotional intelligence, and flexibility, essential components of psychological culture that help individuals comprehend and control emotions and successfully navigate social and professional challenges (Tsekhmister et al., 2023). Through classroom learning, reflective practice, and hands-on experience, students begin to form the mindset and emotional readiness they will need in their future careers (Lee et al., 2024). This indicates that the curriculum design and pedagogy must be dealt with as a whole. EI or ethics may be included in a curriculum. Developmental influence may also be influenced by the extent to which teaching fosters discussion, reflection, problem-solving together, seeing the world from the other's point of view, and using classroom situations where there are real problems to be solved.

For instance, emotional intelligence, closely linked with empathy and communication, has been shown to support students' personal growth and their ability to relate to others effectively (Miezah et al., 2023; Xu et al., 2023). When students are encouraged to reflect on their feelings and experiences, they not only build emotional resilience but also learn how they will one day work with others (Golubeva, 2023). Reflective writing, collaborative learning, case discussion, role play, peer interaction, and ethically oriented problem solving can thus be used as curriculum-embedded teaching practices that practise rather than discuss psychological culture.

Supportive and culturally aware university environments also help students grow in empathy and communication. Collaborative projects that promote intercultural engagement and reflective group activities have been shown to strengthen students' capacity to understand diverse perspectives (Golubeva, 2023). This development is particularly critical for educational psychologists preparing to practice in diverse educational or therapeutic contexts (Lee et al., 2024). Globally, university experience offers future teachers and psychologists not just intellectually, but also personally and professionally. By guiding apprentices through involvements that advance both ability and self-awareness, universities lay the basis for a vigorous, moral, and receptive set of psychological values (Rakhimzhanova et al., 2024). Finally, participation in clubs, volunteering, student projects, and peer activities can be a basis for expanding learning opportunities outside of class and for making authentic contexts for practicing psychological culture. Alongside the formal curriculum, the hidden curriculum influences the psychological culture by teaching its implicit lessons, both through the actions of lecturers, the institutional organisation, relationships, mentoring, and inclusion/exclusion processes. Gradually, students are influenced by professional, ethical, and interpersonal attitudes and standards which are modelled, rewarded, tolerated, and discouraged by the university.

Kazakhstan universities are experiencing key fluctuations in how they train future teachers and psychologists. There is a nationwide drive in teacher and educational psychology training through modernized programs, numerical apparatuses, and dynamic educational methods (Aliyeva, 2023; Kapasheva et al., 2024; Yakavets et al., 2023). These variations' goal to advance specialists who are not solitary technically able but too expressively conscious, outgoing, and thoughtful (Li et al., 2025). These changes offer a teaching-and-learning environment in which psychological culture can be viewed as a desired goal of professional training instead of a side-effect of going to university.

Kazakh educational morals also play a significant part in how scholars practice education. Esteem for seniors, communal concern, and national uniqueness affect classroom relations and announcement styles. These standards can aid students' compassion, emotional regulation, and moral consciousness, which are essential parts of psychological ethos (Kapasheva et al., 2024). For example, some universities have familiarized digital education components that advance students' discernment and flexibility. These are closely linked to psychological culture (Kapasheva et al., 2024). Consequently, the curriculum and teaching process in Kazakhstan should be understood as operating within a broader sociocultural environment.

Although the importance of psychological culture as a part of professional competence has been gradually recognized, conceptual, contextual, and methodological gaps exist. Constructs like emotional intelligence and emotional competence are often treated separately; emotional competence is a multidimensional construct with cognitive, emotional, behavioral, and ethical aspects of emotional intelligence (Miezah et al., 2023; Xu et al., 2023). Likewise, in teacher education studies, the focus is on general skills rather than empathy, reflective thinking, and ethical orientation (Tuyakova et al., 2022; Talisbayeva & Kalieva, 2024; Akhmetova et al., 2025). As of date, there are not many studies on psychological culture development for future professional educators and psychologists in the

Republic of Kazakhstan, particularly regarding the differences among professional groups and the effects of curriculum, methods of psychological education, mentoring, role modeling, and hidden curriculum (Tulebekova et al., 2023; Xu et al., 2023).

The role of context and institution in psychological and professional development is represented in the Ukrainian context (Gumennykova et al., 2023; López González et al., 2024; Reva & Demchenko, 2024). However, such studies in the Kazakhstan context are scarce. Moreover, the typical cross-sectional quantitative approach does not provide sufficient understanding of the processes in which psychological competencies are formed, internalized, and lived, nor of the lived experiences (Keshishi & Hack, 2023; Golubeva, 2023). The study fills these gaps by conducting a mixed-methods investigation of the psychological culture among students, educators, and psychologists in Kazakhstan.

Therefore, the study aims to examine the development of psychological culture among students, teachers, and psychologists at universities in Kazakhstan and the subjective opinions of the participants in this process. The study pays special attention to the curriculum, the teaching process, the extracurricular activities, mentorship, institutional support, professional role modelling, and implicit messages in the educational culture in university settings.

2. Literature Review

2.1 Psychological Culture of Students, Educators, and Psychologists

Psychological culture is a multifaceted phenomenon, which is represented by the complex of internal capacities and external activities that participate in the activity of moral, emotional, and reflective components. According to Egorova et al. (2021), it is considered personal, communicative, and value competencies. For Rakhimzhanova et al. (2024), it is psychological knowledge, values, attitudes, and self-regulatory skills gained in the educational process. The internalization of socially approved emotional, cognitive, and behavioural reactions promotes the development of empathy, self-awareness, and moral judgment (Chsherbakova et al., 2024).

These views make education and the curriculum a process of psychological culture development. Psychological culture is created through structured learning, pedagogical relationships, reflection, and participation of a professional nature. It can then be integrated into the curriculum: knowledge, skills, learning activities, and testing. From the cognitive aspect, psychological culture, metacognition, self-regulation, and critical reflection can be formed by using an assignment of reflective character, critical analysis, discussion, experiential exercises, and decision-making assessment (Egorova et al., 2021; Rakhimzhanova et al., 2024). Emotional intelligence is the ability to empathize with others and regulate emotions; behavioural intelligence is the ability to behave ethically and effectively use communication, and take responsibility for actions (Chsherbakova et al., 2024; Egorova et al., 2021). Teaching methods are therefore important for translating these qualities into practice through collaboration, feedback, role play, problem solving, and reflection.

Programme content, mentorship, applied training, and the wider psychosocial environment further support development. Respect, ethics, and inclusivity influence students' moral and emotional orientations (Egorova et al., 2021), while peer collaboration and reflective group activities can strengthen psychological safety and empathy in contexts such as Kazakhstan (Talisbayeva & Kalieva, 2024). Digital media analysis and online dialogue may also foster digital empathy and self-regulation (Talisbayeva & Kalieva, 2024). The hidden curriculum is equally important. Whereas the formal curriculum communicates explicit knowledge, competencies, values, and outcomes, the hidden curriculum conveys norms through everyday institutional practices and relationships. Routines, interactions, and classroom assessment practices, peer relationships, and lecturers can implicitly teach values of authority, fairness, respect, communication, and disagreement, thereby reinforcing or challenging the formal values of education.

According to the empirical results, the impact of the emotional intelligence training based on the curriculum on the leadership of the students of Kazakhstan, their management of stress, and interpersonal decision-making is proven (Kireyeva et al., 2024; Chsherbakova et al., 2024). Interpersonal judgment is enhanced by mentorship and ethical reflection (Chsherbakova et al., 2024), and emotional insight is enhanced by peer work (Schürmann et al., 2025). Therefore, thinking about the curriculum, the pedagogy, mentors, extracurricular activities, and institutional practices as interconnected flows, and conceiving the process of the formation of psychological cultures through these flows is important.

2.2 Curriculum, Teaching, and the Hidden Curriculum in Psychological Culture Development

From a curriculum and teaching perspective, psychological culture is an educational outcome which is created by curriculum, pedagogy, participation and institutional experience. Curriculum: Learning outcomes, teaching and

assessment, practice and relationships. According to international evidence, there is a relationship between the use of AI-supported learning and reflection, digital competence, emotional awareness and empathy, and leadership development, and psychological support online and emotional stability, learning engagement, emotional intelligence and resilience, and self-efficacy and well-being (Belkina et al., 2025).

The formal foundations are developed through curriculum content and psychology, ethics, communication, emotional intelligence, diversity, professional responsibility and reflection, and taught using various teaching methods such as collaboration, case analysis, role play, problem-based learning and guided discussion, providing opportunities for practical application. The development of emotional competence and leadership potential among future educators has been found to be correlated with educational interventions in Kazakhstan (Kireyeva et al., 2024; Chsherbakova et al., 2024; Tulebekova et al., 2023). Cooperation and responsibility, conflict resolution, and professional values are extended extracurricular activities, and mentoring links the curriculum and professional practice by means of mentoring, modeling, and feedback. In line with the sociocultural perspective Vygotsky (1978) developed, the skilled mentor can extend what students do on their own.

In addition, the hidden curriculum creates psychological culture by shaping the implicit norms transmitted by lecturers, including norms regarding disagreement, fairness, participation, mistakes, authority, communication, institutional relationships, and assessment systems. Consequently, competencies are made explicit in the curriculum; teaching involves practice; extracurricular activities extend teaching; mentoring provides guidance; and the hidden curriculum encompasses professional and ethical norms. Although there is research on emotional intelligence, empathy, reflection, and pedagogical competence, there is little research that describes the psychological culture as a single, integrated emotional, cognitive, behavioral, and ethical construct, nor that studies students, educators, and psychologists in the same institutional setting, as it does in the present interdisciplinary research.

2.3 Theoretical Background (Vygotsky's Sociocultural Theory)

The Sociocultural Theory of Vygotsky (1978) offers insights into the sociocultural nature of psychological culture, which is shaped by social interaction, cultural context, guided learning, and communication. In the Sociocultural Theory of Vygotsky (1978), psychological culture is seen to develop through social interaction, cultural context, guided learning, and communication. In this view, curriculum is a collection of cultural resources and learning experiences, and teaching, mentoring, collaborative activity, reflection, and professional interaction form the linkage between the culture and the ways that students think, feel, communicate, and act. Thus, education is a way to engage in practices that are embedded in the social and cultural context in all aspects, from knowledge, identity, emotional intelligence, to behavior (Keshishi & Hack, 2023).

The Zone of Proximal Development (ZPD) also describes students' development by means of support from a lecturer, mentor, professional, and/or more advanced peers (Aliyeva, 2023; Rigopouli et al., 2025). An additional important idea is incorporation, where social communications progressively transform into individual cognitive and emotional experiences. For instance, students who are involved in collaborative discourse and emotional reproduction often start to internalize these approaches autonomously over time, conducive to the development of their own mental culture, shaped by emotional guidelines, ethical alignment, outgoing capability, and reflective thinking (Rakhimzhanova et al., 2024).

In the context of Kazakhstan, this perspective is crucial because it can affect students' identity and relational behavior, which is rooted in respect for the elders, collectivism, community orientation, and culture-specific interaction (Kapasheva et al., 2024; Talisbayeva & Kalieva, 2024). This is done in the formal and informal curriculum. The study proposed that curriculum is cultural and pedagogical content; teaching content is mediated participation; extracurricular is extra-social content; mentorship is guided participation; and hidden curriculum is the implicit norms through which students observe and internalize professionals' ways.

3. Materials and Methods

3.1 Research Design

The study employed a mixed-methods design (Zhou et al., 2023). The study involved students, educators, and psychologists at a Kazakhstani university. Integrating quantitative and qualitative data provided a more comprehensive understanding of the phenomenon and enhanced the validity and interpretation of the findings.

The quantitative sample comprised 150 participants (90 students, 40 educators, and 20 practicing psychologists). The sample was selected from academic and professional stages relevant to the development of psychological culture. This sample size allows for possible non-response and is adequate for performing fundamental statistical analyses,

including descriptive and inferential statistics (Wutich et al., 2024). Purposive sampling was employed to select 15 participants for the qualitative phase of the study, ensuring representation across diverse academic backgrounds and levels of study. This sampling method was appropriate because it allowed the deliberate selection of individuals who had direct engagement with or implemented online teaching platforms. Their perspectives provided firsthand insights into the practical use and acceptance of digital tools in education, thereby enriching the depth and contextual relevance of the qualitative data (Yin et al., 2023). The qualitative sample size was consistent with established guidance for qualitative research, which suggests that thematic saturation, the point at which additional interviews yield few or no substantially new insights, may be reached within approximately 12–15 participants in relatively focused and homogeneous groups (Fusch et al., 2023).

3.2 Ethical Considerations

Participants were fully informed about the study's purpose and procedures and provided written informed consent before participation. Confidentiality and anonymity were ensured throughout. Ethical clearance was obtained from the university's Research Ethics Committee, in line with international research standards (Karampatakis et al., 2023; Onyiaorah & Ezugwu, 2025).

3.3 Data Collection

To provide a comprehensive understanding of psychological culture development, this study uses a convergent parallel design to gather quantitative and qualitative data simultaneously. A structured 25-item questionnaire was used to collect quantitative data. The items were adapted from the relevant Emotional Intelligence Scale and contextualized to the local university setting. The adapted instrument was structured to assess key components of psychological culture, including self-awareness, emotional self-regulation, empathy, interpersonal communication, and social interaction (Tulebekova et al., 2023). Participants responded using a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." To enhance participation, the survey was distributed via Google Forms (Van Dyk & Kugbey, 2025). For the qualitative aspect, semi-structured interviews were conducted with 15 students selected through purposive sampling. These interviews were conducted in English and lasted 50 minutes each, allowing students, educators, and psychologists to share personal reflections on their educational journey and emotional growth. Each interview was audio-recorded with consent and later transcribed for analysis. To guide the conversation and elicit rich, reflective responses, the following open-ended questions were asked as presented in Table 1.

Table 1. Open-ended Questions for Qualitative Data

S/N	Open-ended Questions
1	How has your university experience contributed to your emotional or psychological growth?
2	Can you describe a moment in your academic life that helped you understand your professional values more deeply?
3	What role have your teachers or mentors played in shaping your empathy or communication skills?
4	In what ways do you think the university environment supports or hinders the development of self-awareness and reflection?
5	How have group projects or class discussions influenced your emotional regulation or ethical thinking?
6	What challenges have you faced in becoming more emotionally aware or professionally reflective?

These questions are designed to tap into the internalisation of psychological culture, how students experience, interpret, and apply key emotional and interpersonal skills over time.

The questionnaire consisted of 25 items organized around three dimensions of psychological culture: empathy, self-regulation, and professional values. These dimensions were selected based on previous emotional intelligence and psychological culture studies. The items were adapted from validated emotional intelligence instruments and modified to reflect the educational and cultural context of Kazakhstani higher education institutions.

3.4 Data Analysis

In this study, both quantitative and qualitative data will be analysed and then integrated to offer a comprehensive understanding of how psychological culture develops among students, educators, and psychologists in a Kazakhstani university.

For the quantitative data, analysis was done using SPSS. Descriptive statistics such as means, standard deviations, and frequency distributions summarised psychological culture scores across dimensions like empathy and self-awareness. To compare differences across academic levels, particularly between year groups, Analysis of Variance (ANOVA) was used to identify statistically significant variations.

Qualitative data were analysed using NVivo software, applying thematic analysis following the six-phase method of Braun and Clarke (Braun et al., 2019), as further clarified and expanded in recent work (Ahmed, 2024). After initial familiarisation with the transcripts, codes were developed and grouped into themes such as curriculum influence, mentorship support, and peer learning dynamics. This procedure encouraged deeper reflection about their lived involvements in their psychological development.

Results from both approaches were combined during clarification in a convergent design. Quantitative outcomes, e.g., stages of emotional regulation, were associated with qualitative findings, e.g., how students label emerging emotional regulation through mentorship or peer debates. This triangulation of statistics provides richer clarification and advances the trustworthiness and pertinence of the results (Tashakkori & Teddlie, 2022). This combined approach balances clarity with narrative complexity by conceptualizing psychological culture as an outcome of curriculum and teaching, shaped through curriculum design, teaching methods, extracurricular activities, mentorship, and the hidden curriculum, and expressed through students' measurable development as well as their social, emotional, and educational experiences.

3.5 Reliability and Validity

Internal consistency was assessed using Cronbach's alpha, with a pilot test of 40 respondents separate from the main sample. The resulting coefficient ($\alpha = .89$) indicated strong reliability. Qualitative trustworthiness was established through triangulation, member checking, and independent coding by two researchers, with discrepancies resolved through discussion and consensus (Ahmed, 2024). To enhance trustworthiness, two researchers independently reviewed and coded the interview transcripts. Any differences in coding were discussed until consensus was achieved.

4. Results

For the quantitative data, 150 participants were recruited through online administration using Google Forms. Their demographic characteristics included role, gender, age group, academic discipline, current year of study, and year of experience (see Table 2).

The study participants comprised 90 students (60%), 40 educators (26.7%), and 20 psychologists (13.3%), as shown in Table 2. Participants ranged from 18 to 50 years, with 53.3% female and 46.7% male. From the 90 students selected for the study, 33.3% were in their first year, 25.5% in second, 18.8% in third, and 22.2% in fourth year. Also, the professional experience of 60 educators and psychologists was 41.7% in early-career, 33.3% in mid-career, and 25.0% in senior-career professionals.

Table 2. Demographic Characteristics of Participants (Quantitative Data, N = 150)

Variable	Category	Frequency (n)	Percentage (%)
Role	Students	90	60.0
	Educators	40	26.7
	Psychologists	20	13.3
Age Group	18–24 years	65	43.3
	25–34 years	45	30.0
	35–44 years	25	16.7
	45+ years	15	10.0
Gender	Male	70	46.7
	Female	80	53.3

Table 2. Demographic Characteristics of Participants (Quantitative Data, N = 150)(continued)

Variable	Category	Frequency (n)	Percentage (%)
Academic Discipline	Education/Pedagogy	55	36.7
	Psychology	30	20.0
	Natural Sciences	25	16.7
	Humanities & Social Sci.	20	13.3
	Engineering/Tech	20	13.3
Year of Study (Students only)	Year 1	30	33.3
	Year 2	23	25.5
	Year 3	17	18.8
	Year 4	20	22.2
Years of Experience (Educators & Psychologists only)	0–5 years	25	41.7
	6–10 years	20	33.3
	11 years and above	15	25.0

The demographic data for the 15 participants selected for the in-depth interview are presented in Table 3. The participants comprised 6 students (4 female, 2 male), 6 educators (3 female, 3 male), and 3 psychologists (2 female, 1 male). Ages ranged from 17 to 50 years, and educators and psychologists had 5 to 18 years of experience. The student participants included one first-year student, two second-year students, two third-year students, and one fourth-year student, ensuring representation across all academic levels (see Table 3).

Table 3. Demographic Characteristics of Participants (Qualitative Data, N = 15)

Participant ID	Role	Age	Gender	Department/Discipline	Year of Study	Years of Experience
P1	Student	17	Female	Psychology	1	-
P2	Student	22	Male	Natural Sciences	3	-
P3	Student	23	Female	Education	3	-
P4	Student	20	Male	Engineering	2	-
P5	Educator	35	Female	Education	-	10
P6	Educator	42	Female	Psychology	-	15
P7	Educator	29	Female	Natural Sciences	-	5
P8	Educator	38	Male	Education	-	12
P9	Psychologist	30	Female	University Counseling Unit	-	6
P10	Psychologist	36	Male	Student Support Services	-	10
P11	Psychologist	33	Female	Psychology Department	-	8
P12	Educator	50	Male	Social Sciences	-	18
P13	Student	24	Female	Social Sciences	4	-
P14	Student	18	Female	Psychology	2	-
P15	Educator	45	Male	Education	-	14

Note: - means not relevant to the participants

4.1 What Is the Level of Psychological Culture Among Students, Educators, and Psychologists Across Different Years of Study in a Kazakhstani University?

Ten items were used to determine the level of psychological culture among students, educators, and psychologists. These items measured the three sub-components (empathy, self-regulation, and professional values) of psychological culture and were scored on a 5-point response scale. The response options are: strongly agree = 5, agree = 4, neutral=

3, disagree = 2, strongly disagree=1, with a criterion mean of 3.5 as a benchmark. Scores below the criterion mean are adjudged a low level of psychological culture, while scores above the criterion mean are adjudged a high level of psychological culture. The descriptive statistics for the level of psychological culture among students, educators, and psychologists across different years of study are presented in Tables 4 and 5, respectively. A criterion mean of 3.5 was adopted because it represents a score above the neutral midpoint of the five-point Likert scale. Scores above 3.5 therefore indicate a relatively strong presence of psychological culture characteristics, whereas scores below 3.5 suggest lower levels of development.

Table 4. Descriptive Statistics for the Psychological Culture of Students across Years of Study

Year	Subscale	Mean	SD	Min	Max
1st	Empathy	3.20	0.50	2.2	4.1
	Self-Regulation	3.10	0.45	2.3	4.0
	Professional Values	3.40	0.55	2.5	4.5
	Overall PC	3.23	0.47	2.5	4.2
2nd	Empathy	3.60	0.40	2.9	4.3
	Self-Regulation	3.50	0.48	2.8	4.3
	Professional Values	3.80	0.50	3.0	4.6
	Overall PC	3.63	0.46	2.9	4.4
3rd	Empathy	3.90	0.35	3.2	4.5
	Self-Regulation	3.80	0.42	3.1	4.6
	Professional Values	4.00	0.45	3.2	4.7
	Overall PC	3.90	0.41	3.2	4.6
4th	Empathy	4.10	0.40	3.3	4.7
	Self-Regulation	4.00	0.38	3.4	4.8
	Professional Values	4.20	0.36	3.5	4.9
	Overall PC	4.10	0.38	3.6	4.8

The lowest psychological culture was identified among first-year students, with a mean score of 3.23 (SD = 0.47) as presented in Table 4. Second-year students showed moderate growth in psychological culture, with an average score of 3.63 (SD = 0.46). Third-year students demonstrated a high level of psychological culture (M = 3.90, SD = 0.41), while fourth-year students recorded the highest level of psychological culture (M = 4.10, SD = 0.38). This pattern indicates a progressive increase in students' psychological culture across the years of study. The highest score for fourth-year students suggests that they have developed strong socio-emotional and ethical capacities over their academic years.

Table 5. Descriptive Statistics for the Psychological Culture of Educators and Psychologists across Years of Experience

Role	Experience (Years)	Subscale	Mean	SD	Min	Max
Educators	0–5	Empathy	3.80	0.42	3.0	4.5
		Self-Regulation	3.90	0.36	3.2	4.6
		Professional Values	4.00	0.40	3.3	4.7
		Overall PC	3.90	0.39	3.2	4.6
	6–10	Empathy	4.00	0.34	3.4	4.6
		Self-Regulation	4.10	0.33	3.5	4.7
		Professional Values	4.20	0.30	3.6	4.8
		Overall PC	4.10	0.32	3.5	4.7

Table 5. Descriptive Statistics for the Psychological Culture of Educators and Psychologists across Years of Experience (continued)

Role	Experience (Years)	Subscale	Mean	SD	Min	Max
	11 and above	Empathy	4.20	0.30	3.7	4.8
		Self-Regulation	4.30	0.28	3.9	4.9
		Professional Values	4.40	0.26	4.0	4.9
		Overall PC	4.30	0.28	3.9	4.9
Psychologists	0–5	Empathy	4.10	0.35	3.5	4.7
		Self-Regulation	4.20	0.33	3.7	4.8
		Professional Values	4.30	0.30	3.9	4.9
		Overall PC	4.20	0.32	3.7	4.8
	6–10	Empathy	4.30	0.28	3.9	4.7
		Self-Regulation	4.40	0.25	4.0	4.8
		Professional Values	4.50	0.22	4.2	4.9
		Overall PC	4.40	0.25	4.0	4.8
	11 and above	Empathy	4.50	0.22	4.1	4.8
		Self-Regulation	4.60	0.20	4.2	4.9
		Professional Values	4.70	0.18	4.3	5.0
		Overall PC	4.60	0.20	4.2	4.9

Psychological culture increased progressively with educational or professional experience across students, educators, and psychologists. Among educators, mean scores increased from 3.90 (SD = 0.39) for early-career educators to 4.10 (SD = 0.32) for mid-career educators and 4.30 (SD = 0.28) for those with 11 years of experience and above. A similar increasing pattern was observed among psychologists, with mean scores rising from 4.20 (SD = 0.32) to 4.40 (SD = 0.25) and 4.60 (SD = 0.20), respectively. Overall, the findings indicate that psychological culture increases with study or professional experience, as shown in Figure 1.

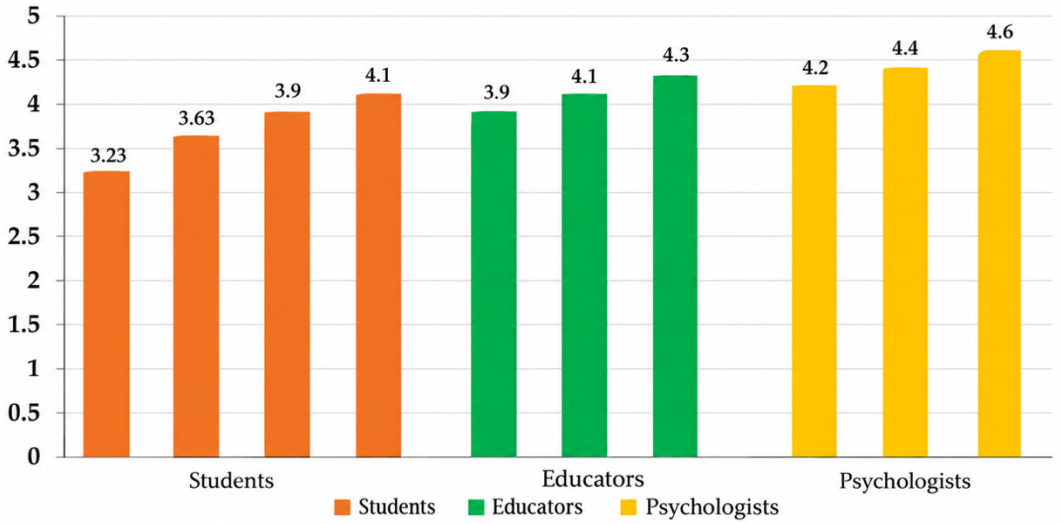


Figure 1. Mean Psychological Culture Score for Students, Educators, and Psychologists across Study Year and Years of Experience

Furthermore, a one-way ANOVA was conducted to examine differences in psychological culture across role and year of study/experience. This result is shown in Table 6.

Table 6. ANOVA Test of the Psychological Culture Across Role and Year of Study/Experience

Source	SS	df	MS	F	p-value
Between Groups	15.76	9	1.75	6.42	0.001
Within Groups	38.45	140	0.27		
Total	54.21	149			

Results showed a statistically significant difference in psychological culture scores among the 10 groups, $F(9, 140) = 6.42$, $p < 0.05$. This implies that psychological culture levels vary among students in different years and professionals (educators and psychologists) at different stages of experience.

4.2 How Does the University Environment (Curriculum, Teaching Methods, Extracurricular Activities) Influence the Development of Psychological Culture, as Perceived by Students?

4.2.1 Quantitative Findings

To answer this research question, 8 items were used to determine the perception of the university environment by students. These items measured the three sub-components (curriculum, teaching methods, extracurricular activities) of the university environment and were scored on a 5-point response scale. Multiple regression analysis was used to determine the influence of the university environment on psychological culture development. The regression results and model fit are shown in Table 7.

Table 7. Multiple Regression Results of the Influence of University Environment on Psychological Culture

Predictor	Unstandardized Coeff. (B)	SE	Standardized Beta (β)	p-value	LL (95% CI)	UL (95% CI)
(Constant)	2.10	0.25	–	0.001	1.61	2.59
Curriculum Support (CUR)	0.28	0.07	0.35	<.001	0.14	0.42
Teaching Methods (TM)	0.22	0.06	0.30	0.001	0.10	0.34
Extracurricular Activities (ECA)	0.15	0.06	0.21	0.013	0.03	0.27
Model Summary						
N	Adjusted R-square		R-square	F-value	p-value	
150	0.41		0.42	34.56	0.001	

The regression analysis showed positive associations between the three measured university educational factors and psychological culture. Curriculum support had the largest standardized coefficient ($\beta = .35$, $p < .001$), followed by teaching methods ($\beta = .30$, $p = .001$) and extracurricular activities ($\beta = .21$, $p = .013$). The overall model was statistically significant, $F(3, 146) = 34.56$, $p < .001$, and explained 42% of the variance in psychological culture ($R^2 = .42$; adjusted $R^2 = .41$), as shown in Table 7. These results indicate that curriculum support, teaching methods, and extracurricular activities were important correlates of psychological culture within the study sample. In particular, the results suggest that psychological culture is connected not simply to students' exposure to university education but to the educational experiences created through curriculum and pedagogy.

4.2.2 Qualitative Findings

The in-depth interview with participants on the influence of the university environment (curriculum, teaching methods, extracurricular activities) on the development of psychological culture is multifaceted, resulting in four main themes. These themes are discussed in detail, and participants' significant information is highlighted.

Theme 1: Curriculum as a vehicle for psychological development: Students perceived curriculum content as contributing not only to academic learning but also to emotional awareness, self-reflection, and personal development. Participants reported that particular topics and assignments encouraged them to reflect on their values, emotions, relationships, and professional responsibilities (P1, P2, P3, P13, and P14). Thus, the curriculum provided opportunities to develop psychological and ethical awareness alongside disciplinary knowledge.

Theme 2: Teaching methods as mediated psychological learning: Students emphasized that the way teaching was

conducted influenced their psychological development. Group discussions, collaborative activities, reflective tasks, and supportive teacher–student interactions encouraged active listening, empathy, mutual respect, and consideration of different perspectives (P1 and P14). These approaches help students to practise interpersonal communication, manage differences, and develop emotionally and ethically responsive behaviours.

Theme 3: Extracurricular and experiential learning: Participation in extracurricular activities was perceived as extending psychological learning beyond formal classroom instruction. Students reported that such activities strengthened cooperation, interpersonal understanding, emotional intelligence, and a sense of ethical responsibility (P1, P2, P4, and P14). These experiences provided practical contexts in which students could apply and develop psychological competencies acquired through formal learning.

Theme 4: Complementary influence of institutional support and role modelling: Students also identified mentoring, counselling, and lecturers' behaviour as supportive influences on psychological development. For example, one participant stated, “Knowing there's someone to talk to when I'm stressed helps me control my emotions better,” illustrating how accessible support can contribute to emotional regulation and resilience. These findings suggest that psychological culture develops through both explicit educational experiences and students' everyday interactions within the university environment.

Overall, the qualitative findings suggest that curriculum, teaching methods, and extracurricular activities jointly provide interconnected opportunities for developing psychological culture. The findings are consistent with evidence that emotional intelligence, emotional awareness, and reflective learning contribute to students' resilience, well-being, and professional development (Shengyao et al., 2024; López González et al., 2024). The qualitative evidence therefore complements the quantitative findings by showing how students perceive the university environment as a context for developing psychological awareness, interpersonal competence, emotional regulation, and ethical behaviour.

4.3 What Are the Key Factors Facilitating or Hindering the Formation of Psychological Culture Among Students, Educators, and Psychologists?

4.3.1 Quantitative Findings

To answer this research question, 7 items were used to examine students’, educators', and psychologists' perceptions of facilitators and hindrances to psychological culture. These items were scored on a 5-point response options ranging from 1- strongly disagree to 5-strongly agreed. Descriptive statistics were used to identify and rank the most influential facilitators and barriers, as illustrated in Table 8.

Table 8. Descriptive Statistics of the Facilitators and Barriers of Psychological Culture

S/N	Items	Type	Mean	SD	Rank
1	There are people I can talk to when emotionally overwhelmed.	Facilitator	4.30	0.55	1st
2	Mentorship has helped shape my personal and ethical values.	Facilitator	4.22	0.60	2nd
3	Supportive academic staff promotes psychological growth.	Facilitator	4.10	0.63	3rd
4	Lack of emotional support reduces my motivation and growth.	Barrier	3.95	0.70	4th
5	Stress from workload hinders my self-regulation.	Barrier	3.88	0.75	5th
6	Group assignments improve my empathy and collaboration skills.	Facilitator	3.72	0.80	6th
7	There are limited programs that build emotional competence.	Barrier	3.60	0.82	7th

The results show that all items 1 to 7 have a mean score above the criterion mean of 3.5. This implies that all the items were accepted and perceived by the participants (students, educators, and psychologists) as facilitators (e.g., supportive relationships, institutional support, emotional learning opportunities) and barriers (e.g., stress, lack of

support, academic pressure). Moreover, the most predominant facilitator and barrier were supportive relationships and lack of support, respectively.

4.3.2 Qualitative Findings

The interview explores the perceived facilitators and barriers, revealing four main themes from participants' responses. These themes are discussed as follows:

Theme 1: Supportive relationships and mentorship as facilitators: Participants emphasized mentorship, counselling, and supportive peer relationships as facilitators for psychological culture. Guidance, active listening, and positive role modelling were supported by empathy, patience, emotional awareness, self-regulation, and professional responsibility (P14).

Theme 2: Institutional stress and emotional strain as barriers: High workload, performance pressures, low levels of emotional support, and limited opportunities for reflection as barriers to psychological development (P9, P12). Participants may be experiencing the negative effects of persistent institutional stress and emotional neglect that are restricting emotional control and personal growth.

Theme 3: Educator and professional role modelling: The participants pointed out the importance of the teachers' behavior and professional psychologists' behavior in how they were dealing with emotional and ethical situations. Consistent and empathetic behaviour was considered a good example, while inconsistent or emotional behaviour was seen as a lack of development of empathy and self-control.

"I attempt to handle conflicts in collaborative assignments in the same composed manner that I observe my lecturer handling them in class." (P7)

For institutions to train and support educators, this theme suggests that it is crucial for these educators to embody the values that they want to pass on to others.

Theme 4: Curriculum and learning design: There was a feeling that learning design is a facilitator and could also be a hindrance. Learners were allowed to consider their behaviours, decisions, and interpersonal relationships (P1, P2, P3) in courses which included reflection, emotional intelligence, and ethics. In contrast, there was not much of a reflective aspect seen for psychological development (P5, P7).

The overall results indicate that supportive relationships, positive role modelling, reflective curriculum, and personal development opportunities contribute to the formation of psychological culture, whereas institutional stress, emotional neglect, and lack of reflective learning opportunities impede formation of psychological culture.

5. Discussion

The study examined psychological culture as the object of study, as well as the development of psychological culture in Kazakhstan, focusing on the educational processes through which the development of the psychological culture of students, educators, and psychologists can be realized. The results do not narrow the definition of psychological culture to an individual personality trait, but rather see it as a variable linked to curriculum experiences, pedagogical actions, extracurricular activities, mentoring, role modelling, and institutional culture.

The results indicated a positive descriptive trend of psychological culture as per the students' academic years. Overall, the first-year students had the lowest psychological culture score, while the fourth-year students had the highest score. The results of the one-way ANOVA test showed that there were statistically significant differences between the 10 groups. The findings are from a curriculum and teaching perspective, as psychological culture is formed gradually by the educational and professional experiences the person has had. The cross-sectional design of the comparison, however, makes it difficult to determine whether the increased scores for the senior students and for the professionals are due to superior knowledge and skills from further education or years of experience. These differences could be due to exposure to curriculum, quality of teaching, engagement in extracurricular activities, mentoring, professional socialization, and other factors of the person or group. The results, therefore, are a reflection of the learning processes that accompany the learning progress, but not of the year itself.

The results of the regression allow for direct conclusions about educational processes. Psychological culture was positively related to curriculum support, teaching methods, and extracurricular activities, and the overall model accounted for 42% of the variance. The standardized coefficient for the curriculum support variable is especially important for curriculum studies; it suggests that the organization and relevance of the educational content could be linked to students' psychological development. However, the coefficients do not indicate causality, and they are not percentage contributions. The qualitative findings provide a further understanding of the significance of these

curriculum and teaching variables in students' real learning experiences. Courses with reflective, ethical, and emotional components were described by participants as exploring personal behaviors, values, and interpersonal relationships. This implies that curriculum content may foster psychological culture when students connect theoretical content to their personal and/or professional experiences. The findings align with the concept of psychological culture as the formation of psychological knowledge, values, attitudes, and self-regulatory skills in educational processes (Rakhimzhanova et al., 2024).

A second mechanism was teaching methods. Group activities, discussion, reflection, group assignments, and supportive classroom interaction were highlighted by participants. The results confirm the differences between teaching psychology culture and teaching that enables psychological culture to be practiced. These can become visible in a curriculum through empathy or ethics, creating opportunities for students to practice listening, perspective-taking, negotiation, emotional control, and ethical educational decision-making. This interpretation aligns with the findings on the correlation between reflective learning and emotional intelligence, as well as interpersonal skills (Golubeva, 2023; Miezah et al., 2023; Xu et al., 2023). Other learning opportunities were offered in the extracurricular program. The participants said they learned to be cooperative, empathetic, communicate, and responsible through clubs, group activities, volunteering, etc. These experiences highlight the value of out-of-class learning. Extracurricular activities, also viewed from a curriculum perspective, are complementary educational settings where students can use and demonstrate skills acquired in formal learning.

Supportive relationships and mentorship were also important facilitators. The quantitative results confirmed that mentorship influenced students' personal and ethical values, with a high level of agreement between the respondents. The qualitative results revealed that students appreciated the guidance and role model of mentors and positive faculty members. The results support Vygotsky's (1978) sociocultural theory, which focuses on learning through others' knowledge and expertise in a guided way. Mentorship can then bridge the gap between the formal (academic) curriculum and the social aspects of the profession by enabling students to observe, discuss, practise, and reflect on professional behaviours and receive feedback. The results also show the under-taught curriculum.

The participants reported learning from the conduct of the lecturers, expectations of the institution, and the daily interaction with lecturers. P7 responds that they behave in the same composed manner as a lecturer when handling conflict situations, showing that they can learn such behaviour. In this sense, psychological culture can be reinforced by educators interacting with each other and with children, provided that the attributes that are officially promoted by the curriculum are exemplified in the educator's interpersonal interaction. Emotionally reactive and inconsistent behaviour, on the other hand, may send mixed messages. Thus, the hidden curriculum is an important but relatively invisible aspect of curriculum and teaching. In addition, it does not differ from the findings of Lee et al. (2024), who stated that educational institutions have a very basic responsibility for students' self-perception and social relations. This study builds upon this understanding by exploring institutions' curriculum design, pedagogy, extracurricular learning, mentoring, and hidden curriculum processes in a Kazakhstani university.

Findings are relevant to curriculum development. Psychological culture can be explicitly defined in the learning outcomes of the programme, in addition to being treated as an incidental outcome. Reflective activities, ethical scenarios, interpersonal practice and collaborative activities can be integrated into the curriculum where appropriate. The development of teaching needs to be geared towards making teachers role models for the communication and emotional regulation, fairness and reflection that programmes encourage. Learning opportunities in extracurricular activities can be planned to link to programme learning outcomes, allowing students to practise psychological skills and professional competencies outside the classroom. Structures for mentorship can provide ongoing guidance as students link theory and practice. Institutions are also encouraged to explore their hidden curriculum by analysing the institution's policies, assessment procedures, interactions between teachers and students, and norms to see if they embody the values that are explicitly stated in programme documents.

There are some limitations of the study. It was carried out at one university in Kazakhstan, which restricts the possibilities of generalization of the results to other universities. The study also used self-report measures extensively that can be influenced by social desirability or response bias. Furthermore, the cross-sectional comparison of academic years and professional experience does not capture individual developmental trajectories, and the regression analysis shows associations, but not causalities. In addition, mentorship, role modelling, and the hidden curriculum are identified in the qualitative analysis results, but not as independent predictors in the reported regression model. Longitudinal or quasi-experimental designs and direct measures of curriculum quality, pedagogical practices, mentorship, and hidden curriculum experiences could then be used in future studies.

6. Conclusions

The psychological culture is considered in this study as an individual trait and an educational result that is formed by the curriculum, the process of teaching, professional communication, and life in the university. The students' years of study and educators' and psychologists' years of experience were descriptively positively related and yielded significant differences in empathy, self-regulation, and professional values across the 10 groups in psychological culture. The cross-sectional design, however, does not provide the ability to draw conclusions about the causes of the differences, as it cannot exclude the fact that they may be the result of academic and/or professional growth. The psychological culture had a significant connection with the curriculum support and teaching methods, and extra-curricular activities. Qualitative results also indicated that reflective curriculum, supportive and participatory teaching, extra-curricular activities, mentorship, and professional role modelling provided opportunities to build up psychological and ethical competencies. However, the barriers that were perceived were institutional stress, emotional neglect, and lack of reflection time.

The study also uncovers one of the aspects of the hidden curriculum that should be taken into account in forming psychological culture. In addition to communication, conflict management, error handling, appeals to authority, and professional values, students learn about institutional relations and from everyday practice from educators. These experiences could reinforce or challenge values delivered in the formal curriculum. Therefore, it is necessary to introduce the psychology culture consciously, with empathy, self-regulation, reflection, ethics, and communication into the curriculum and teaching in universities. Opportunities to develop these competencies, collaborative learning, reflective tasks, case-based activities, role play, extra-curricular activities, mentorship, and role modelling by the educators, and institutional practices can reinforce formal education values.

In general, the psychological culture should be considered as the process that is conducted through the curriculum, supported by pedagogy, embedded in the social context, and embedded in a certain culture, which is the basis for preparing future teachers and psychologists to use psychological knowledge, ethical values, competencies of emotions and reflectiveness in various professional situations.

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Available upon request: The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Use of Artificial Intelligence

The authors used ChatGPT 5.6 and Grammarly solely for language editing and grammar improvement. The authors reviewed and verified all AI-assisted revisions and take full responsibility for the final content of the manuscript. The authors declare that no generative artificial intelligence (AI) tools were used in the analysis, interpretation, or writing of this manuscript.

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