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PSYCHOLOGICAL FACTORS INFLUENCING LEARNING OUTCOMES IN INCLUSIVE CLASSROOMS

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Abstract: The article discusses the impact of psychological factors on learning outcomes in the framework of inclusive learning environments. It drawing on a pedagogical experiment conducted during a semester. The study is grounded in pedagogical practice with first-year students of the FI-25-2R3 group at Mukhtar Auezov South Kazakhstan University. Rather than different pedagogical methods, the study focuses on psychological conditions for students' involvement, which include emotional safety, motivation, self-confidence, and a feeling of belonging. The research is found from a regular educational process in a language learning class, using qualitative research, and classroom reflection. Classroom observation revealed that that learning outcomes improve in the framework of inclusive educational practices—if the psychological factors are taken into account, then one may certainly say that inclusive pedagogy is a psychological process.

Key words: Inclusive education, learning outcomes, educational psychology, emotional safety, psychological factors

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ИНКЛЮЗИВТІ СЫНЫПТАРДА ОҚУ НӘТИЖЕЛЕРІНЕ ӘСЕР ЕТЕТІН ПСИХОЛОГИЯЛЫҚ ФАКТОРЛАР

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Түйін: Бұл мақала инклюзивті сынып жағдайында оқу нәтижелеріне әсер ететін психологиялық факторларды бір семестрге созылған педагогикалық эксперимент негізінде талдайды. Зерттеу Мұхтар Әуезов атындағы Оңтүстік Қазақстан мемлекеттік университетінің ФИ-25-2Р3 тобының 1 курс студенттерімен жүргізілген нақты аудиториялық тәжірибеге сүйенеді. Мақалада сабақ барысында студенттердің оқу жетістіктері көбіне қолданылған әдістерге емес, олардың оқу процесінде өзін қалай сезінетініне байланысты екені байқалады. Зерттеуде эмоционалдық қауіпсіздік, оқу мотивациясы, өзіндік сенім және топқа тиесілік сезімі сияқты психологиялық жағдайларға ерекше назар аударылды. Эксперимент қалыпты сабақтар аясында өткізіліп, жасанды жағдайлар құрылмады. Тәжірибе сапалық аудиториялық бақылауға, оқытушының рефлексивті тәжірибесіне және студенттердің сабақтағы мінез-құлқындағы біртіндеп байқалған өзгерістерге сүйенген. Нәтижелер инклюзивті білім беру тәжірибесі студенттердің психологиялық қажеттіліктерін ескерген жағдайда олардың оқу процесіне белсенді қатысуы артып, оқу нәтижелерінің жақсарғанын көрсетті. Бұл өзгерістер бірден емес, уақыт өте қалыптасты.

Кілт сөздер: инклюзивті білім беру, білім беру психологиясы, эмоционалдық қауіпсіздік, психологиялық факторлар

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ПСИХОЛОГИЧЕСКИЕ ФАКТОРЫ, ВЛИЯЮЩИЕ НА РЕЗУЛЬТАТЫ ОБУЧЕНИЯ В ИНКЛЮЗИВНЫХ КЛАССАХ

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Аннотация. В статье рассматриваются психологические факторы, влияющие на результаты обучения в условиях инклюзивного класса, на основе педагогического эксперимента, продолжавшегося в течение одного семестра. Исследование опирается на реальную аудиторную практику со студентами первого курса группы ФИ-25-2РЗ Южно-Казахстанского государственного университета имени Мухтара Ауэзова. В ходе работы наблюдалась, что учебные результаты студентов во многом определялись не столько методами преподавания, сколько их психологическим состоянием в процессе обучения. В центре внимания находились такие условия, как эмоциональная безопасность, учебная мотивация, уверенность в собственных возможностях и чувство принадлежности к учебной группе. Эксперимент проводился в рамках обычных учебных занятий без создания искусственных условий и основывался на качественном аудиторном наблюдении, рефлексивной педагогической практике и анализе постепенных изменений в поведении студентов. В эксперименте заметно, что при учёте психологических потребностей обучающихся студенты становились более активными, увереннее включались в учебное взаимодействие, а их учебные достижения улучшались не сразу, а постепенно, по мере формирования доверительной и поддерживающей образовательной среды.

Ключевые слова: инклюзивное образование, результаты обучения, педагогическая психология, эмоциональная безопасность, психологические факторы

Introduction

Inclusive education is often described through official frameworks and policy documents. In everyday classroom practice, however, it reveals itself differently. I observed this clearly in my own teaching. Inclusion does not begin with instructional techniques. It begins with atmosphere. With the way students enter the room. With the way they look around before speaking.

Students arrive carrying different emotional experiences. Some speak easily; others hesitate, even when they know the answer well. During regular lessons, we noticed that learning outcomes were shaped not only by task difficulty or teaching methods, but by how students felt within the learning space. Sometimes silence did not signal ignorance. It signaled fear. Or uncertainty. Or the simple wish not to be exposed.

Early research in inclusive pedagogy highlights the importance of psychological conditions in shaping student engagement, particularly in mixed-ability classrooms. At first, this idea functioned mainly as a theoretical assumption. Over time, however, it became increasingly visible in everyday classroom interaction, where participation often depended less on ability and more on the emotional climate of the learning space. This observation aligns with Ainscow's view that inclusive education should not be reduced to a set of methodological adjustments but understood as a broader cultural process aimed at ensuring participation and a sense of belonging for all

learners. Seen from this perspective, classroom atmosphere is not a secondary factor; rather, it gradually emerges as a key condition influencing how confidently students engage in academic activity [1, 7-16].

From the perspective of educational psychology, cognitive ability alone does not determine learning behavior. Motivation, emotional regulation, and self-confidence influence how students approach tasks, whether they persist in difficulty, and whether they are willing to share incomplete thoughts. These psychological factors become particularly visible in inclusive settings. Students with diverse learning needs often anticipate evaluation and comparison before they even begin speaking. Theoretical works on inclusive education underline that emotional safety and a sense of belonging function as prerequisites for meaningful participation rather than optional additions to instruction.

Motivation encourages students to take risks, while emotional security allows their voices to emerge more freely, and self-confidence helps sustain effort over time. In practice, these factors rarely function in isolation. They overlap, interact, and at times even collide, gradually shaping not only patterns of participation but also the depth and quality of learning itself. This understanding resonates with the position of Florian and Black-Hawkins, who argue that inclusive pedagogy shifts the focus away from adapting students to instruction and toward adapting teaching environments to learner diversity. From this perspective, the central task of teaching becomes the creation of conditions in which all students feel psychologically safe enough to participate [2, 870-887].

When motivation weakens, even capable students withdraw. When emotional safety is present, hesitant voices begin to surface. I observed how a single encouraging response could alter a student's willingness to continue speaking. Not dramatically. But noticeably. Confidence did not appear suddenly; it accumulated through repeated experiences of being heard without ridicule.

In several lessons, we noticed that students who initially avoided discussion gradually extended their contributions once they sensed that mistakes would not be punished publicly. The psychological climate functioned as a silent regulator of engagement. A tense atmosphere restricted thought. A supportive one expanded it.

These interactions were not linear. At times, confidence fluctuated. One successful discussion did not guarantee the next. Yet over time, the convergence of motivation, emotional security, and self-belief created a steadier foundation for learning. In inclusive classrooms, intellectual growth did not emerge from pressure. It emerged from conditions that allowed students to remain present, even when uncertain.

Research Methods

Qualitative research methods underpinned this study, with an emphasis on observation in naturally operating classrooms. The collection of data extended across one academic semester and unfolded gradually, without artificial interruption. It relied on systematic classroom observation, reflective teaching notes written immediately after lessons, and informal yet meaningful feedback from students — sometimes shared during class, sometimes after it, sometimes unexpectedly in brief conversations.

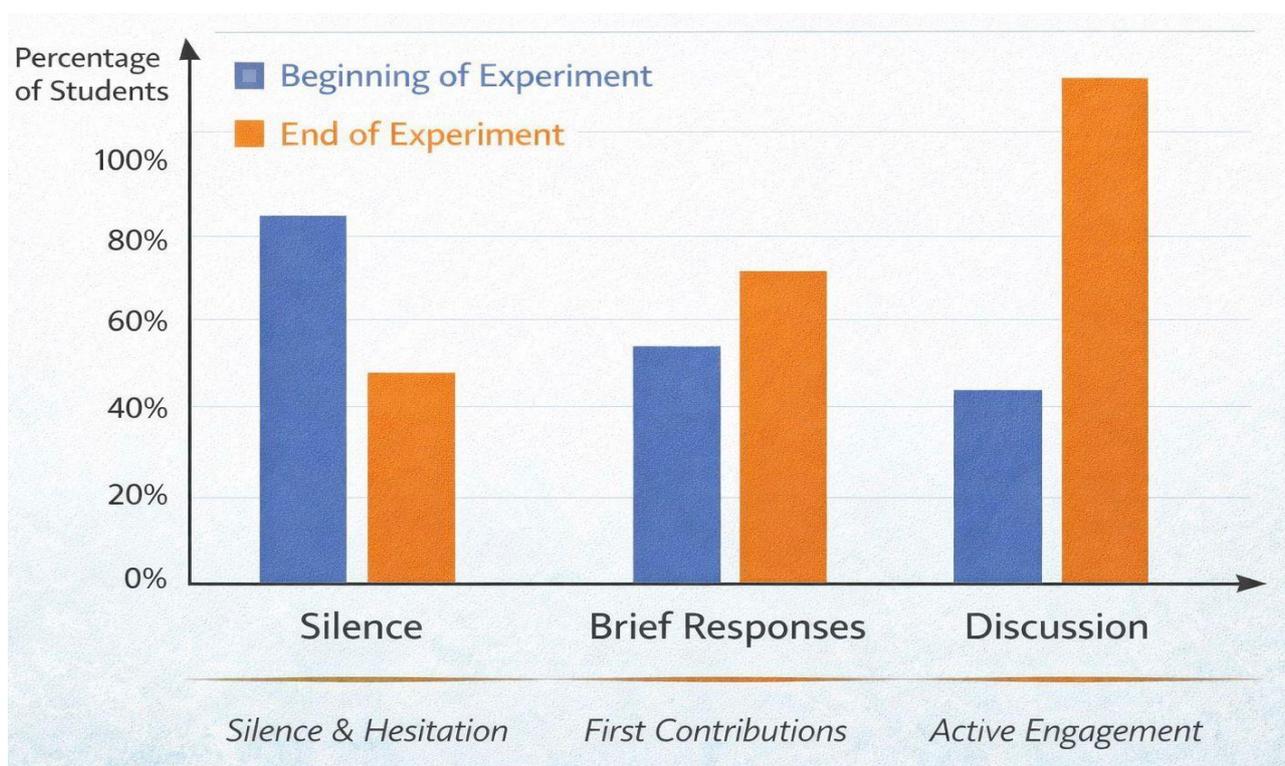
No standardized tests or structured questionnaires were used in this study. The intention was not to measure performance numerically but to understand processes as they unfolded in real classroom conditions — to notice pauses, to observe shifts in tone, and to see how hesitation gradually transformed into participation. Qualitative observation makes it possible to capture subtle psychological dynamics that often remain invisible within purely quantitative frameworks, allowing development to be followed as happens rather than reduced to fixed indicators. This approach corresponds with Creswell's view that qualitative research explores educational processes within natural settings, focusing on meanings and lived experiences instead of

numerical data, and it was this perspective that ultimately justified the observational design adopted in the present study [3, 488].

In practice, this meant paying attention to moments that could easily be overlooked. A student lowering their voice. Another student is leaning forward for the first time. A pause that lasted longer than expected. These were not data points in a statistical sense, yet they carried meaning. They indicated movement — sometimes slight, sometimes significant.

I found that qualitative observation required patience. It resisted quick conclusions. One lesson rarely revealed a full pattern. Change became visible only across time, through repetition and comparison. What appeared as silence in one week could become tentative engagement in the next.

Rather than categorizing students according to predefined scales, the focus remained on emerging behavior within real interaction. The aim was to understand how psychological comfort, motivation, and confidence intertwined with learning tasks. In this way, the research design



remained flexible, responsive to context, and attentive to the lived experience of the classroom.

Figure- 4. Structure of the Qualitative Research Design in the Inclusive Classroom Experiment.

The figure outlines the qualitative research structure applied during the semester-long classroom experiment with first-year students of the FI-25-2R3 group. The study relied on systematic classroom observation, reflective teaching notes, and informal student feedback collected in natural instructional settings. I acted simultaneously as instructor and observer, allowing authentic classroom interaction to remain intact while maintaining reflective awareness. The diagram demonstrates how these elements were interconnected rather than isolated procedures. The research design did not aim to measure outcomes numerically but to understand psychological dynamics as they unfolded in real time.

The researcher simultaneously assumed the roles of instructor and observer, a dual position that demanded continuous attentiveness and reflective awareness. While guiding classroom

discussion, I listened differently — not only to what students said, but also to how they expressed themselves and when they chose silence. Authentic interaction remained intact, yet teaching decisions were constantly made in real time and later reconsidered, adjusted, and refined. Gradually, the classroom became more than a space for instruction; it evolved into a field of careful, ongoing inquiry where learning processes could be observed as they unfolded. From the perspective of self-determination theory, Ryan and Deci emphasize that learning motivation is closely linked to students' sense of psychological security and perceived competence, which helps explain why supportive classroom climates often lead to deeper and more active participation [4, 14-26].

At times, this dual role felt demanding. Explaining a concept while noticing hesitation in a student's posture required divided attention. Responding to a question while sensing a shift in group energy required restraint. I learned to observe small details: those who leaned forward, who avoided eye contact, who waited until the last moment to speak. These details did not appear in formal records. Yet they shaped the direction of the lesson.

After each class, I returned to my notes. Not to evaluate performance alone, but to reflect on atmosphere. Which moments encouraged participation? Which moments created tension? Sometimes a minor change in tone altered the entire rhythm of discussion. Sometimes a pause did more than an explanation.

This ongoing reflection directly influenced subsequent teaching decisions. Tasks were redesigned, instructions simplified, and time extended — not because the content itself required modification, but because the psychological tempo of the group demanded a different pace. In this way, research and teaching did not function as separate processes; they unfolded together within the lived reality of the classroom, each continuously informing and reshaping the other. This understanding resonates with Nilholm's view that contemporary research on inclusive education increasingly approaches participation as a dynamic process shaped by social and psychological factors, rather than by instructional strategies alone [5, 358–370].

Experimental Section

The conducting of a pedagogical experiment took place at Mukhtar Auezov South Kazakhstan University, specifically with first-year students belonging to the FI-25-2R3 group. A new stage of life. A new academic environment. A new rhythm of thinking and speaking. For many of them, university itself was unfamiliar, and discussion in a foreign language felt even more uncertain.

The experiment was integrated into daily language classes and unfolded under authentic conditions rather than controlled or artificially structured settings. In the first phase, participation patterns were uneven. Some students responded spontaneously and even eagerly, while others avoided eye contact and declined to comment altogether. Their silence was not uniform; it had different tones- hesitation, caution, self-doubt.

We observed that several students demonstrated strong analytical and written abilities yet remained silent during oral activities. They clearly understood what could be said, but hesitated to voice their ideas, suggesting that the barrier was psychological rather than cognitive, as confidence in writing did not automatically transfer into spoken participation. In response, inclusive strategies were introduced gradually: group discussions alternated with individual reflection, peer dialogue was encouraged, and no student was compelled to speak publicly. Silence was not treated as failure; instead, it was acknowledged as a natural part of the learning process, sometimes functioning as a protective pause before engagement. This interpretation aligns with Hattie's view that learning outcomes improve when students perceive the classroom as a supportive space where mistakes are accepted as part of learning, reinforcing the observed role of emotional safety within the experiment [6, 389].

One incident remains particularly vivid. A student completed the written exercise accurately and thoughtfully, yet refused to read his response aloud. When invited to share privately, he lowered his voice and said, “I am afraid to be wrong.” That statement revealed more than reluctance. It exposed vulnerability. The difficulty was not intellectual limitation but fear of public evaluation.

After that moment, classroom dynamics shifted subtly. We began to observe participation emerging in smaller steps - brief comments, quiet agreements, cautious clarifications. The environment was not transformed instantly. But it softened. Over time, students who once avoided speaking began to test their voices in short contributions. Five words. Then ten. Eventually, full arguments.

This progression did not occur because the tasks became easier. It occurred because the atmosphere changed. Psychological safety preceded verbal risk-taking. And once that safety was felt, learning extended beyond performance into genuine engagement. Gradual changes in students' analytical skills, learner autonomy, and engagement level became observable throughout the semester-long experiment. Figure 1 depicts an overview of these dynamics:

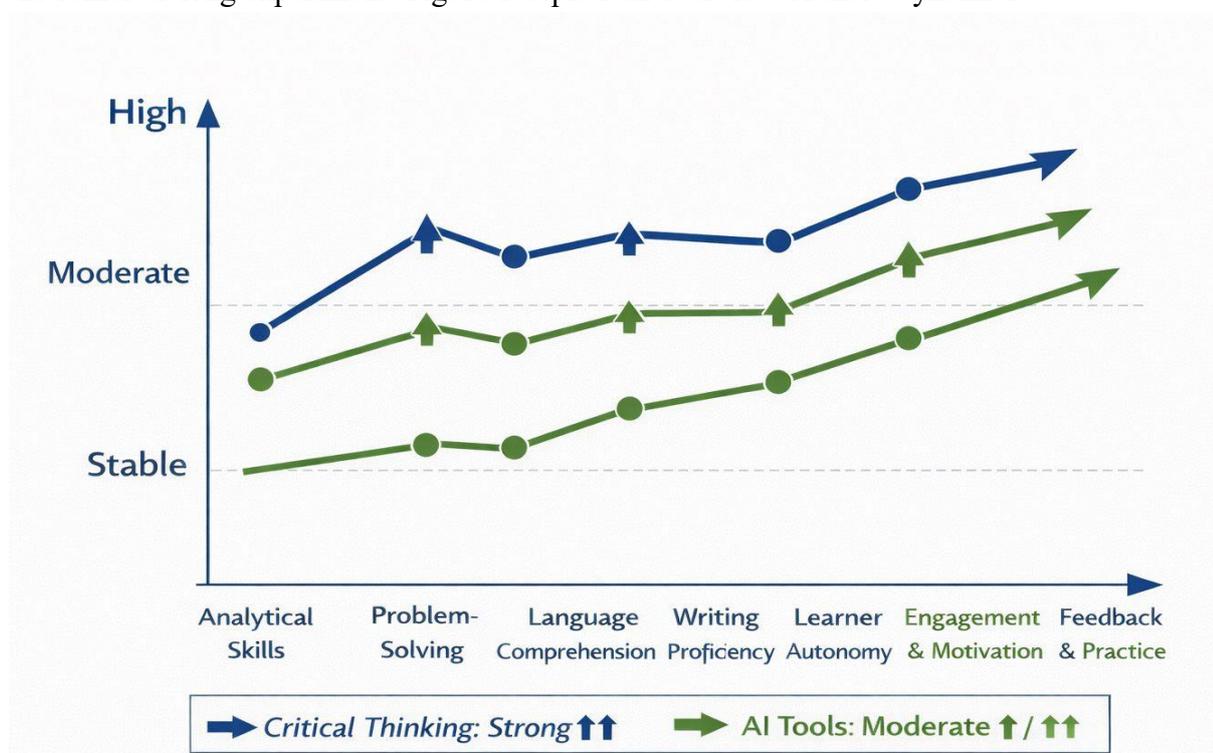


Figure - 1. Dynamics of learning development during inclusive instruction among first-year students.

Results and Discussion

As the semester continued, changes began to appear in the classroom. Not suddenly. And not evenly either. At times they were almost imperceptible — small shifts rather than clear breakthroughs. Students started to speak more often, although confidence did not always follow immediately. Many contributions were brief, sometimes only a few words, yet even these short responses marked an important step forward. I noticed that such moments often opened the door to deeper engagement later. Participation seemed to grow gradually, through repetition and emotional safety, rather than through instant transformation. This observation echoes Biesta’s idea that education should not be reduced to measurable outcomes alone but should support students’ presence, voice, and engagement within the learning process, which closely reflects the dialogic

nature of participation observed in inclusive classrooms [7, 168].

We noticed that learning outcomes improved when inclusive strategies addressed emotional needs alongside academic objectives. Reduced psychological pressure created space for students to think aloud without fear of immediate evaluation. Motivation grew gradually, and classroom discussions lost their urgency. They became slower, more reflective, and notably more meaningful. A comparison of the initial and final stages of the experiment revealed clear progress in critical thinking indicators, as illustrated in Figure 2. The difference was visible not only in the content of student responses but also in the dynamics of interaction itself. As the semester progressed, students began to interrupt one another more naturally, challenge ideas, and occasionally reconsider their own positions in the middle of speaking. These moments suggested that discussion was becoming more authentic and intellectually engaged rather than merely performative. What had once been cautious participation gradually transformed into a more dialogic exchange, where disagreement was not avoided but accepted as part of collective thinking. Silence also changed its role within the classroom. At the beginning of the experiment, it often signaled hesitation or uncertainty; later, it increasingly appeared as thinking time — a reflective pause before contributing to the discussion. This shift indicated growing psychological comfort and a willingness to engage cognitively without fear of immediate judgment. In this sense, the development of critical thinking was closely connected with changes in the emotional climate of the classroom. Such observations resonate with UNESCO reports emphasizing that inclusion extends beyond simple access to education and requires meaningful participation, emotional belonging, and a sense of safety within learning environments [8, 512]. Together, these factors reinforce the idea that the psychological dimension of inclusive practice is not secondary but central to the development of active, reflective, and intellectually confident learners.

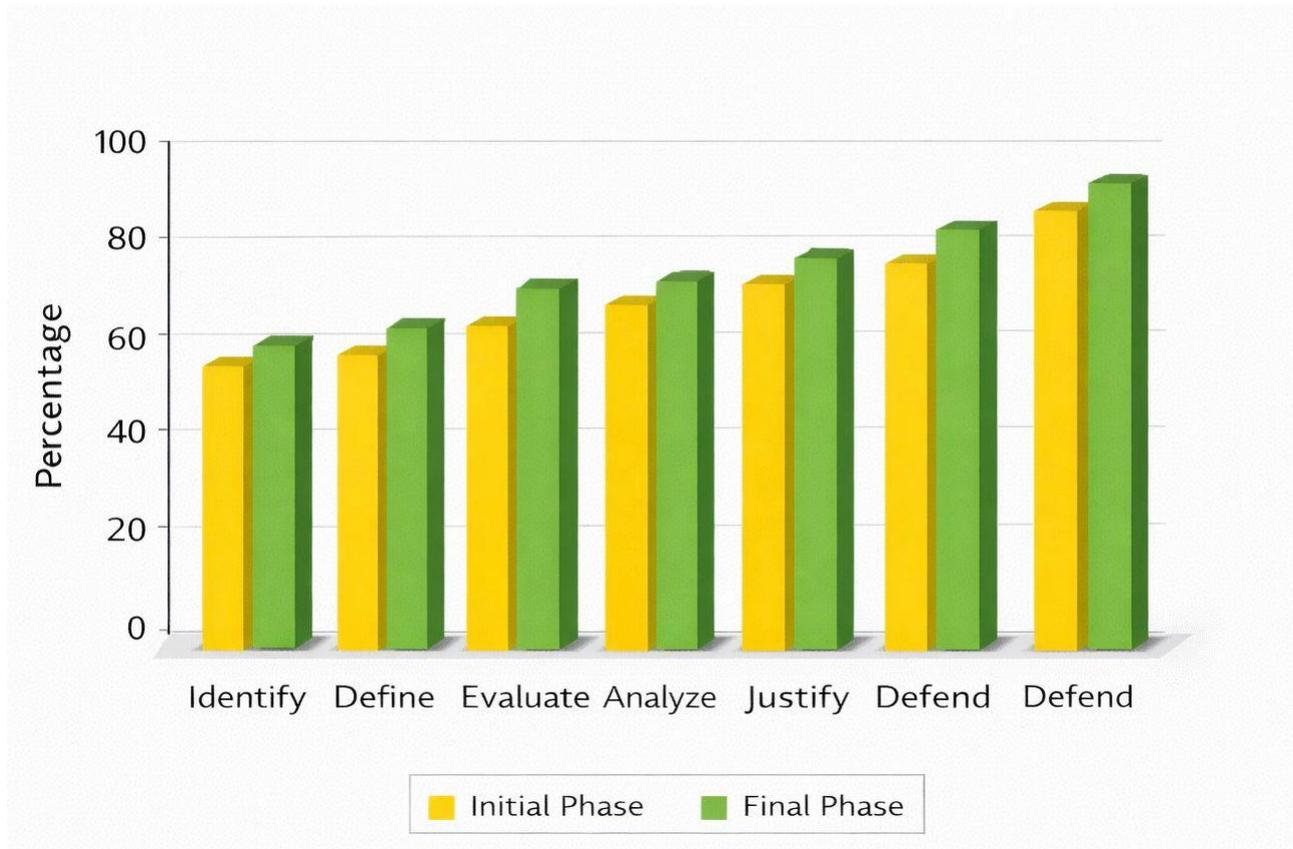


Figure - 2. Growth of critical thinking skills from the initial to the final phase of the experiment.

These observations suggest that sustained psychological support, rather than constant

modification of teaching strategies, plays a decisive role in fostering meaningful participation and cognitive growth.

Results and discussion

This experiment revealed how learning in an inclusive classroom was closely linked with students' sense of belonging. I observed that participation changed once students felt that the classroom was a place where uncertainty was tolerated. When students felt safe enough to take risks, they did so willingly. They spoke. They tried. They tested ideas aloud. When students felt judged, however, even subtly, they pulled back, often without explanation. Their silence was not absence. It was self-protection.

Beyond participation itself, several psychological factors appeared to influence the quality of learning in noticeable ways. Students gradually became more reflective in their responses and more attentive to the ideas expressed by their peers. Confidence grew, yet it was not always visible through louder speech or constant activity; more often, it revealed itself through clarity, persistence, and a greater willingness to stay with an idea until it was fully expressed. Over time, students showed an increasing tendency to defend their positions, revise arguments when challenged, and justify their interpretations with greater care. Learning, therefore, began to unfold as a dialogic process rather than a simple sequence of tasks to be completed. What mattered was not only the final answer but the process of thinking together. These observations suggest that inclusive education cannot be reduced to methodological adaptations alone. It requires sustained attention to the psychological conditions that shape how students think, speak, and remain present within the learning process. This interpretation resonates with OECD research emphasizing that students' emotional well-being significantly influences academic engagement, particularly during periods of uncertainty, and highlights the strong connection between psychological climate and meaningful learning outcomes [9, 98].

This experiment revealed how learning in an inclusive classroom was closely linked with students' sense of belonging. I observed that participation changed once students felt that the classroom was a place where uncertainty was tolerated. When students felt safe enough to take risks, they did so willingly. They spoke. They tried. They tested ideas aloud. When students felt judged, however, even subtly, they pulled back, often without explanation. Their silence was not absence. It was self-protection.

Beyond participation, several psychological factors influenced the quality of learning itself. Students became more reflective in their responses and more attentive to one another's ideas. We noticed growing confidence, not expressed through volume, but through clarity and persistence. Students were increasingly inclined to defend their positions, revise arguments, and justify interpretations. Learning, in this context, unfolded as a dialogic process rather than a sequence of tasks. These observations suggest that inclusive education cannot be reduced to methodological adaptations alone; it requires sustained attention to the psychological conditions that shape how students think, speak, and remain present in the learning process.

Over time, I began to notice another shift — subtle, yet persistent. Students who initially avoided eye contact began to initiate discussion. Those who once limited themselves to short responses gradually extended their arguments. Not dramatically. Not all at once. But enough to change the rhythm of the classroom. Participation became less performativity and more authentic. There was less fear of being wrong. More willingness to reconsider.

We observed that when belonging was experienced not as a formal declaration but as a living condition, students' cognitive effort noticeably intensified. They invested more attention in tasks, listened more carefully to one another, and often paused before responding, as if giving themselves permission to think rather than reacting. Even disagreement began to change its tone. It became less defensive and more exploratory, allowing ideas to be examined rather than

protected. Importantly, this atmosphere did not emerge from the introduction of new instructional techniques alone. It developed gradually through consistency, predictability, and mutual respect within everyday classroom interaction. In this sense, the findings resonate with Slee's critical argument that inclusive education should move beyond formal policy language and become a lived classroom reality shaped by daily relationships and relational practices [10, 224].

In such an environment, evaluation lost its threatening edge. Feedback was interpreted not as judgment but as guidance. The psychological climate began to support intellectual risk-taking. And it was precisely within this space — quiet, attentive, sometimes imperfect — that deeper learning began to take shape.

Conclusion

The pedagogical experiment conducted with first-year students of the FI-25-2R3 group once again confirmed that psychological factors play a decisive role in shaping learning outcomes in inclusive classroom settings. I observed that academic progress was rarely determined by instructional content alone. Emotional safety, learning motivation, and students' confidence in their own abilities consistently influenced how actively they engaged with tasks and discussions. When these factors were present, learning unfolded more freely and with greater depth.

The findings reinforce the importance of integrating psychological awareness into pedagogical practices in higher education. Inclusive teaching cannot function effectively if emotional and motivational dimensions are ignored, even when methodological frameworks appear well designed. We noticed that students responded not only to what was taught, but to how the learning space made them feel.

Inclusive education, therefore, should be understood not merely as a pedagogical practice, but as an ongoing psychological process. What mattered most was not the method itself. It was the environment.

As the semester progressed, this environment began to stabilize. Students entered the classroom with less visible tension. Participation no longer felt forced. In some lessons, discussion emerged spontaneously, without direct prompting. In others, it required time. Silence. Waiting. I learned not to interrupt these pauses. Often, they preceded the most thoughtful responses.

We observed that once students trusted the learning space, they were more willing to confront difficulty. Complex questions no longer resulted in avoidance. Instead, they led to collective reasoning. Errors were voiced openly. Ideas were revised publicly. Learning became less about correct answers and more about shared understanding.

This shift did not eliminate differences between students. Nor did it equalize performance. What it changed was orientation. Students remained present, even when uncertain. They stayed in the process. And in inclusive classrooms, this persistence — quiet, sometimes invisible — proved to be one of the most meaningful indicators of learning taking place.

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