



The Voice of Silent Classrooms: A Qualitative Study on the Educational Invisibility of Introverted Students

Ethem Gürhan^{1*} 

¹Ministry of National Education, Konya, Türkiye

*Correspondence Author: ethemgurhan@gmail.com

Received: 2025-07-16; **Revised:** 2025-09-29; **Accepted:** 2026-02-24; **Published:** 2026-02-26

How to cite: Gürhan, E. (2026). The Voice of Silent Classrooms: A Qualitative Study on the Educational Invisibility of Introverted Students. *Al-Adzka: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah*, 16(1), 16–28. <https://doi.org/10.18592/aladzkapgmi.v16i1.17724>

This is an Open Access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Abstract: This qualitative study investigates the phenomenon of educational invisibility experienced by introverted students in elementary school classrooms, where participation is often narrowly defined through verbal expression and social assertiveness. Using a case study approach, data were collected through semi-structured interviews with 12 elementary school students and 4 classroom teachers in Türkiye, complemented by unstructured classroom observations conducted over eight weeks. Thematic analysis revealed five key themes: Invisible participation, learning through silence, avoidance of social pressure, teacher attitudes and expectations, and the restrained desire to express oneself. The findings indicate that introverted students are cognitively and emotionally engaged yet frequently marginalised by classroom norms that privilege overt verbal participation. Practical implications include redesigning teacher education programs to address personality-based differences in participation, employing nonverbal assessment tools, and adopting inclusive classroom management strategies in basic education.

Keywords: Introversion; Educational Invisibility; Classroom Participation; Qualitative Research; Pedagogical Equity; Teacher Attitudes

Abstrak: Studi kualitatif ini menyelidiki fenomena ketidakjelasan pendidikan yang dialami oleh siswa introvert di kelas sekolah dasar, di mana partisipasi sering kali didefinisikan secara sempit melalui ekspresi verbal dan keberanian sosial. Menggunakan pendekatan studi kasus, data dikumpulkan melalui wawancara semi-terstruktur dengan 12 siswa sekolah dasar dan 4 guru kelas di Türkiye, dilengkapi dengan pengamatan kelas yang tidak terstruktur selama delapan minggu. Analisis tematik mengidentifikasi lima tema utama: Partisipasi yang tidak terlihat, belajar melalui keheningan, menghindari tekanan sosial, sikap dan ekspektasi guru, serta keinginan yang tertahan untuk mengekspresikan diri. Temuan menunjukkan bahwa siswa introvert secara kognitif dan emosional terlibat, namun seringkali terpinggirkan oleh norma kelas yang mengutamakan partisipasi verbal yang terbuka. Implikasi praktis meliputi merancang ulang program pendidikan guru untuk mengatasi perbedaan kepribadian dalam partisipasi, menggunakan alat penilaian nonverbal, dan mengadopsi strategi manajemen kelas inklusif dalam pendidikan dasar.

Kata Kunci: Introversi, Ketidaknampakan Pendidikan, Partisipasi Kelas, Penelitian Kualitatif, Keadilan Pedagogis, Sikap Guru

Introduction

Classroom participation has long been a central construct in educational discourse, serving as both an indicator of student engagement and a predictor of academic success. Contemporary pedagogical frameworks conceptualise participation as a multidimensional phenomenon encompassing behavioural involvement, emotional investment, and cognitive effort in learning processes (Fredricks et al., 2019; Sinatra et al., 2015; Tuovinen et al., 2020). Kuh, (2009) situates engagement within observable classroom actions such as contributing to discussions, responding to questions, and collaborating with peers. Despite this multidimensional framing, classroom practice frequently operationalises participation through a performative lens that privileges verbal expression, social assertiveness, and public visibility. In many elementary classrooms, students who speak frequently are more readily recognised as engaged learners, while those who participate quietly through observation and reflection may go unnoticed pedagogically (Holly et al., 2024; Tenglet, 2023).

This performative bias reflects an extrovert-normative orientation embedded within instructional interaction structures. Students who dominate verbal exchanges are often perceived as confident and competent, whereas quieter students risk being interpreted as disengaged or lacking ability (Ryder, 2025; Weber, 2019). Such conditions may produce what can be described as educational invisibility, a phenomenon in which learners are cognitively and emotionally present but institutionally overlooked because participation standards equate learning with speech. While engagement theory acknowledges cognitive and affective dimensions of learning, classroom recognition systems often remain disproportionately tied to vocal contribution (Rahmawati & Sholeh, 2021; Sedova et al., 2025; Severe et al., 2024).

Personality psychology provides an important lens for examining this misrecognition. Within Jung typology, introversion represents an inward psychological orientation in which energy is directed toward internal reflection rather than external stimulation (Jung, 2016). Empirical research indicates that introverted learners may demonstrate strong concentration, reflective thinking, and sustained attention (Komarraju et al., 2011; Zhang, 2008). However, reduced verbal participation is frequently interpreted through deficit-based assumptions, leading teachers to equate quietness with passivity or low engagement (Zuffianò et al., 2013). Such interpretations risk obscuring alternative forms of learning involvement that are not publicly performed.

Recent educational scholarship has begun to challenge speech-centred participation paradigms. Mercer & Dawes (2014) caution against equating dialogic interaction with learning itself, arguing that talk represents only one modality of knowledge construction. Alerby & Brown (2021) further reframes silence as a meaningful pedagogical presence rather than an absence of participation. From this perspective, silence may function as a site of cognitive internalisation, emotional regulation, and reflective processing (Hanna, 2021). Wentzel & Miele (2009) additionally emphasises that classroom engagement is relationally mediated, shaped by teacher expectations and recognition practices. Participation, therefore, is not solely an individual attribute but a socially constructed phenomenon embedded within interactional structures.

Despite these conceptual developments, empirical investigations focusing specifically on introverted students' lived participation experiences remain limited. Much of the existing research relies on quantitative trait measurement, prioritising personality assessment over contextual classroom dynamics (Mustoip et al., 2024; Persky et al., 2015; Sanudin et al., 2022). Consequently, less is known about how introverted elementary students interpret participation expectations, negotiate visibility, and position themselves within verbally dominant instructional environments. This gap

is particularly salient in contexts where teacher-directed instruction and oral responsiveness are strongly emphasised, including many elementary and madrasah settings. In such environments, participation norms may implicitly privilege outspoken expression, potentially reinforcing patterns of invisible engagement among quieter learners.

Addressing this gap requires integrating insights from personality psychology with sociocultural learning theory. [Vygotsky \(1980\)](#) conceptualises learning as mediated by social interaction while also emphasising internalisation as a central process of cognitive development. [Markus \(1977\)](#) self-schema theory further suggests that identity representations influence engagement behaviour and self-positioning within social contexts. Bringing these perspectives into dialogue enables a more comprehensive understanding of participation as simultaneously cognitive, relational, and identity-mediated. Within this integrative framework, silence can be examined not merely as behavioural absence but as a mode of epistemic presence shaped by classroom recognition systems.

Unlike prior studies that describe quiet students descriptively or examine introversion solely as an individual trait, this study advances a relational participation framework that positions educational invisibility as interactionally mediated. Rather than treating introversion as a fixed psychological deficit, the research conceptualises invisible participation as emerging from the interplay between inward cognitive orientation and externally structured participation norms. By foregrounding lived classroom experiences of introverted elementary students, this study seeks to reconceptualise silence as a multidimensional form of engagement embedded within pedagogical practice.

Through a qualitative case study conducted in elementary classrooms, the research explores how introverted students experience participation, how teachers interpret silence, and how recognition practices shape visibility within classroom discourse. In doing so, the study contributes to expanding dominant participation discourses beyond speech-centred models toward a more inclusive understanding of engagement, one that acknowledges not only who speaks, but also who thinks, reflects, and participates in less publicly visible ways.

Method

This study employed a qualitative case study design to explore how introverted elementary students experience classroom participation within verbally dominant instructional environments. The case study approach was selected because it enables in-depth examination of complex social and interactional phenomena within their natural educational contexts ([Yin, 2018](#)). Consistent with the interpretivist orientation of the research, introversion was not treated as a measurable psychological trait but as a socially situated participation orientation manifested through recurring classroom interaction patterns. This positioning allowed educational invisibility to be examined as an interactionally mediated phenomenon shaped by recognition practices, participation norms, and pedagogical expectations rather than as an individual deficit.

The research was conducted in two public elementary schools in Konya, Türkiye. These schools were purposively selected because instructional practices emphasised oral responsiveness and teacher-directed interaction, making them suitable contexts for examining speech-centred participation norms. Participants included 12 fourth-grade students identified as demonstrating consistent introverted participation patterns and 4 classroom teachers. Maximum variation sampling ([Patton, 2015](#)) was

used to capture diversity in gender, academic performance, and socioeconomic background, thereby enriching the range of participation experiences represented in the study. Ethical approval was obtained from the relevant institutional authority, written informed consent was secured from school administrators, teachers, and parents, and verbal assent was obtained from all student participants. To protect confidentiality, pseudonyms were used throughout the reporting of findings.

The identification of introverted students followed a multi-stage interpretive procedure. Initial identification was based on teacher observations of recurring behavioural indicators, including limited voluntary verbal contributions, a preference for individual work, minimal initiation of peer interaction, and visible hesitation during public speaking. To reduce subjective labelling bias, these preliminary observations were cross-validated through sustained classroom observation and semi-structured student interviews conducted across the eight-week data collection period. Behavioural patterns were considered indicative of introverted participation orientation only when they appeared consistently across instructional contexts and over time. The study did not employ standardised psychometric inventories because its purpose was not to diagnose personality traits but to understand lived participation experiences as socially constructed phenomena. Within qualitative inquiry, identity categories function as interpretive descriptors rather than fixed psychological classifications. Accordingly, introversion in this study is conceptualised as a relational participation orientation emerging from narrated and observed classroom practices. While the absence of formal personality measurement is acknowledged as a methodological limitation, this decision was consistent with the study's epistemological commitment to contextual meaning-making rather than trait quantification.

Data were generated through semi-structured interviews and prolonged classroom observations to ensure depth and triangulation. Individual interviews were conducted with all twelve students and four teachers. Student interviews explored perceptions of classroom participation, emotional responses to speaking publicly, experiences of recognition or marginalisation, and preferred learning modalities. Teacher interviews examined expectations for participation, interpretations of student silence, questioning patterns, and pedagogical decision-making processes. Each interview lasted approximately 30 to 45 minutes and was audio-recorded with consent. Interview protocols were piloted and reviewed by qualitative research experts to enhance clarity and alignment with the research focus.

Classroom observations were conducted over an eight-week period, with two observation sessions per week in each school. Each session lasted approximately 90 minutes, yielding approximately 24 hours of observational data. Observational attention extended beyond verbal participation to include nonverbal indicators of engagement such as attentive posture, note-taking behaviour, eye contact, task persistence, and peer interaction patterns. Particular focus was placed on the distribution of questioning opportunities, teacher recognition practices, and classroom response dynamics following student contributions. Field notes were documented systematically after each observation session to preserve contextual detail.

Data analysis followed Braun and Clarke's thematic analysis framework. The analytic process began with repeated reading of interview transcripts and field notes to achieve data familiarisation. Open coding was then conducted to identify recurring meanings of participation, emotional experiences, and interactional patterns. Codes were subsequently grouped into broader conceptual categories and refined into themes through constant comparison across student interviews, teacher interviews,

and observational data. NVivo 12 software was used to support systematic coding, organisation, and retrieval of data segments. Theme development was iterative and reflexive, continuing until conceptual coherence and internal consistency were achieved. The final themes were interpreted through the integrated theoretical lens guiding the study, linking personality orientation, sociocultural mediation, and identity positioning.

To ensure trustworthiness, multiple validation strategies were implemented. Credibility was strengthened through methodological triangulation and member checking with selected participants to confirm interpretive accuracy. Transferability was supported through a detailed description of classroom contexts and participation structures. Dependability was enhanced by maintaining an audit trail documenting methodological and analytical decisions, while confirmability was reinforced through reflexive journaling and peer debriefing sessions that critically reviewed coding and thematic interpretation. Throughout the research process, the researcher maintained a reflexive stance to monitor potential assumptions and ensure transparency in analytical reasoning.

Result and Discussion

Result

1. Invisible Participation

Findings indicated that introverted students frequently experienced invisible participation within classroom interaction. Although observational data showed attentiveness, task completion, and cognitive engagement, their presence remained interactionally peripheral. Participation was more often enacted through listening, observing, and internal processing rather than verbal contribution.

This invisibility was reinforced by asymmetrical recognition practices in teacher questioning and response patterns. Interaction opportunities were more frequently directed toward verbally assertive students, while quieter learners received limited participatory space. Even when introverted students contributed, teacher responses tended to be brief and non elaborative, reinforcing minimal participation cycles.

To provide analytical detail, the sub thematic structure and supporting interview evidence are summarized in Table 1.

Table 1. Sub-Thematic Structure and Interview Evidence of Invisible Participation

Sub-Theme	Descriptive Focus	Analytical Meaning	Interview Evidence
Peripheral Classroom Positioning	Students remain at the margins of classroom discussions despite attentiveness and task engagement	Participation occurs through observation and internal processing rather than verbal expression	<i>"I usually just listen. I follow the lesson, but I do not speak unless the teacher asks me."</i> (Student K5)
Teacher Recognition Asymmetry	Teachers direct questions and interaction more frequently toward outspoken students	Visibility is mediated by recognition practices that privilege verbal assertiveness	<i>"I knew the answer, but I did not say it because no one hears me anyway."</i> (Student K5)
Passive Acknowledgment Patterns	Student contributions receive minimal elaboration or dialogic follow up	Limited pedagogical reinforcement sustains low participation cycles	<i>"When I answer, the teacher just says 'yes' and moves to another student."</i> (Student D9)

Collectively, these patterns demonstrate that invisibility is not simply the result of student quietness but is interactionally produced through unequal recognition structures. Participation visibility emerges as contingent upon teacher acknowledgment rather than solely upon cognitive engagement. Thus, invisibility functions as a relational outcome embedded within classroom discourse practices rather than as an individual deficit.

2. Learning Through Silence

Findings revealed that silence functioned not merely as the absence of speech but as an intentional learning modality for introverted students. Participants described quietness as facilitating concentration, comprehension, and reflective thinking during instructional processes. Observational data supported these accounts, showing that introverted learners remained attentive, completed written tasks carefully, and demonstrated sustained cognitive engagement even without verbal participation.

Silence also operated as a strategy for managing classroom stimulation. Speaking publicly was often perceived as disruptive to thought organization, leading students to prefer internal processing over immediate verbal expression. To provide analytical detail, the sub thematic structure and supporting interview evidence are presented in Table 2.

Table 2. Sub-Thematic Structure and Interview Evidence of Learning Through Silence

Sub-Theme	Descriptive Focus	Analytical Meaning	Interview Evidence
Silence as Cognitive Regulation	Students remain quiet to maintain concentration and comprehension	Silence functions as a strategy for regulating attention and processing information	<i>"I understand better when I stay quiet. I cannot think in a noisy environment."</i> (Student N7)
Reflective Internal Processing	Learners prefer thinking before speaking and processing ideas privately	Learning occurs through reflection and internal meaning construction	<i>"I like to think first in my head before saying anything."</i> (Student R3)
Noise Avoidance for Comprehension	Verbal interaction and classroom noise disrupt focus	Silence helps sustain deep cognitive engagement	<i>"When the class is loud, I cannot focus. I learn more when I just listen."</i> (Student T4)

Taken together, these findings indicate that silence operates as an intentional cognitive strategy rather than a passive absence of engagement. Introverted students utilize quietness to regulate attention, process information deeply, and sustain comprehension within stimulating classroom environments. Silence, therefore, represents an alternative modality of learning participation grounded in reflective internalisation.

3. Avoidance of Social Pressure

Findings indicated that students' silence was not solely shaped by cognitive preference but also by emotional considerations related to classroom social dynamics. Many introverted participants described reluctance to speak as a response to prior experiences of ridicule, correction, or negative peer reactions. Verbal participation was perceived as exposing them to evaluative risk, particularly when responses might be incorrect.

Classroom observations confirmed that moments of peer laughter, whispering, or visible reaction following incorrect answers had lasting effects on students' willingness to participate. Silence therefore functioned as a protective strategy aimed at minimizing social vulnerability. To elaborate this pattern, the sub thematic structure and supporting interview evidence are presented in Table 3.

Table 3. Sub-Thematic Structure and Interview Evidence of Avoidance of Social Pressure

Sub-Theme	Descriptive Focus	Analytical Meaning	Interview Evidence
Fear of Peer Ridicule	Students hesitate to speak due to fear of being laughed at by classmates	Silence operates as a defense against social embarrassment	<i>"Everyone laughed when I answered wrong. I never volunteered again."</i> (Student T1)
Error Exposure Anxiety	Concern about giving incorrect answers discourages participation	Verbal participation is perceived as high risk public evaluation	<i>"I am afraid of saying the wrong thing in front of the class."</i> (Student S6)
Defensive Withdrawal Behavior	Students intentionally withdraw from discussions to avoid attention	Silence becomes a protective adaptation to interactional pressure	<i>"I prefer staying quiet so no one notices me."</i> (Student L2)

These patterns suggest that silence also serves as a protective adaptation within evaluative classroom climates. Participation decisions are shaped not only by knowledge possession but by perceived emotional safety and social risk. Consequently, withdrawal from verbal interaction reflects affective risk management rather than disengagement from learning.

4. Teacher Attitudes and Expectations

Findings revealed that classroom participation visibility was strongly mediated by teacher attitudes and expectation framing. Introverted students reported that teachers often held implicit assumptions regarding their participatory capacity, which influenced how interaction opportunities were distributed. Quiet learners were less frequently invited into discussion and were sometimes perceived as lacking readiness or competence.

Observational data further indicated that questioning patterns and interaction allocation were unevenly distributed, with teachers directing more attention toward verbally assertive students. Such practices reinforced participation hierarchies and contributed to the normalization of introverted silence. The sub thematic structure and supporting interview evidence are summarized in Table 4.

Table 4. Sub-Thematic Structure and Interview Evidence of Teacher Attitudes and Expectations

Sub-Theme	Descriptive Focus	Analytical Meaning	Interview Evidence
Pre Labeled Participation Capacity	Teachers assume certain students are unlikely to respond	Participation expectations are shaped by prior labeling	<i>"The teacher thinks I will not answer, so she asks other students."</i> (Student R8)
Selective Questioning Distribution	Interaction opportunities are directed toward outspoken learners	Visibility is structured through unequal questioning patterns	<i>"The teacher usually calls the active students first."</i> (Student M4)

Reinforcement of Extrovert Norms	Verbal assertiveness is treated as the primary indicator of engagement	Classroom participation standards of extroverted expression	privilege	“If you talk a lot, the teacher thinks you are smart.” (Student H6)
----------------------------------	------------------------------------------------------------------------	-------------------------------------------------------------	-----------	---------------------------------------------------------------------

The findings reveal that participation visibility is structurally mediated through teacher expectation framing and questioning distribution. Recognition practices privilege verbally assertive students, thereby reinforcing participation hierarchies that normalise introverted silence. In this way, invisibility becomes institutionally reproduced through everyday pedagogical routines.

5. Suppressed Desire to Express

Findings revealed that silence among introverted students did not necessarily reflect absence of communicative intention. Many participants expressed an internal desire to contribute during classroom discussions but felt inhibited by anxiety, hesitation, or lack of confidence. This created a tension between participatory intention and expressive inhibition.

Students described moments in which they wished to respond yet felt physically and emotionally constrained. Observational data supported these accounts, showing visible signs of readiness such as hand movement, eye contact, or note preparation that did not culminate in verbal participation. The sub thematic structure and supporting interview evidence are summarized in Table 5.

Table 5. Sub-Thematic Structure and Interview Evidence of Suppressed Desire to Express

Sub-Theme	Descriptive Focus	Analytical Meaning	Interview Evidence
Internal Communicative Intention	Students possess the desire to participate verbally	Silence coexists with latent participatory motivation	“Sometimes I want to answer, but I keep it to myself.” (Student Z8)
Expressive Inhibition Tension	Emotional hesitation prevents verbal contribution	Participation is constrained by anxiety and self doubt	“I want to speak, but I feel nervous when everyone looks at me.” (Student F3)
Somatic Manifestations of Anxiety	Physical sensations accompany speaking reluctance	Silence is embodied through physiological tension	“Sometimes I want to talk, but it feels like my hands and feet are tied.” (Student Z8)

These findings highlight a critical tension between internal communicative intention and expressive inhibition. Silence coexists with participatory desire, indicating that lack of speech does not equate to absence of engagement. Instead, silence reflects identity-mediated negotiation within socially evaluative interactional spaces.

Across the five thematic domains, a coherent relational pattern becomes visible. Educational invisibility does not originate from introverted disposition alone but emerges through the dynamic interplay between structural recognition practices, emotionally evaluative classroom climates, and identity-mediated participation negotiation. Teacher-directed questioning asymmetries shape interactional visibility; social risk intensifies expressive inhibition; and silence functions simultaneously as cognitive strategy, emotional protection, and identity positioning. Taken together, these findings suggest that invisibility is not a static student characteristic but a processually produced outcome within speech-centered pedagogical systems. Participation, therefore, must be understood as relationally constructed rather than individually possessed.

Discussion

This study set out to interrogate how introverted students experience classroom participation within verbally dominant instructional environments. The findings challenge conventional participation paradigms by demonstrating that silence does not necessarily signify disengagement but instead reflects complex cognitive, emotional, and interactional processes. Rather than functioning as absence, silence emerges as an alternative modality of pedagogical presence. This reconceptualisation extends prior scholarship that has begun to question speech-centred participation norms in contemporary pedagogy (Alerby & Brown, 2021; Mercer & Dawes, 2014).

From a structural standpoint, the phenomenon of invisible participation illustrates how classroom interaction systems privilege extrovert normative expressions of engagement. Introverted students were cognitively attentive and academically engaged, yet remained interactionally peripheral due to recognition asymmetries embedded in questioning patterns and participation expectations. Such findings reinforce the argument that participation visibility is institutionally mediated rather than purely student-driven. Within sociocultural learning theory, participation is co-constructed through interactional opportunities, discourse positioning, and recognition practices shaped by more knowledgeable others (Bossér & Lindahl, 2019; Sedova et al., 2025; Vygotsky, 1980). When recognition is unevenly distributed, engagement becomes differentially visible.

The findings further expand understandings of participation by foregrounding silence as a cognitive learning modality. Students described quietness as facilitating concentration, reflective processing, and comprehension. This aligns with (Colelli et al., 2025; Le Cornu, 2009; Odii et al., 2024) conceptualisation of internalisation as a core mechanism of knowledge construction, wherein learning occurs through inward meaning-making before external articulation. Silence, therefore, operates as a regulatory cognitive strategy that enables sustained attention and deep processing. This perspective resonates with personality research indicating that introverted learners often demonstrate high levels of self-regulation and intrinsic motivation (Komarraju et al., 2011).

At the affective level, silence also functioned as a protective response to evaluative classroom climates. Experiences of peer ridicule and fear of public error shaped students' willingness to participate verbally. This pattern reflects affective risk management within socially evaluative learning environments. Participation decisions were not determined solely by knowledge possession but by perceived emotional safety. Li & Xue (2023); Wentzel & Miele, 2009) emphasises that relational classroom contexts significantly shape student motivation and engagement behaviour. When participation exposes learners to social vulnerability, withdrawal becomes an adaptive strategy rather than a deficit response.

Teacher attitudes emerged as a critical mediating factor shaping participation visibility. Expectation framing, selective distribution of questioning, and implicit labelling practices contributed to reinforcing introverted silence. These findings echo research highlighting how teacher perception influences student engagement, identities, and interaction positioning (Bossér & Lindahl, 2019; Havik & Westergård, 2020; Zuffianò et al., 2013). Participation visibility is therefore structured not only by students' dispositions but also by pedagogical recognition systems that privilege certain communicative styles.

Importantly, the study also reveals an internal tension between participatory desire and expressive inhibition. Many students expressed a latent wish to contribute yet felt constrained by anxiety, hesitation, or self-doubt. This dynamic reflects what self-

schema theory conceptualises as identity-mediated participation behaviour, where individuals' self-representations shape engagement choices (Huang, 2025; Markus, 1977). Silence thus becomes a site of identity negotiation rather than communicative absence. From a personality psychology perspective, introversion represents an inward psychological orientation that directs energy toward reflection rather than external expression (Jung, 2016). The suppression of outward voice does not negate cognitive presence but reflects differences in expressive orientation.

Taken together, these findings suggest the need to broaden prevailing understandings of classroom participation. Existing pedagogical discourse has largely equated engagement with vocal contribution, collaborative talk, and public responsiveness (Kuh, 2009). However, the evidence presented here supports a multidimensional participation model encompassing structural positioning, cognitive processing, emotional security, institutional mediation, and identity expression. Silence, within this framework, is repositioned as epistemic presence rather than participatory deficiency.

The implications for educational practice are significant. Classroom environments must expand recognition systems to include nonverbal and reflective forms of engagement. Written responses, observational participation, and alternative interaction modalities should be legitimised as indicators of learning involvement. Teachers must also critically examine the distribution of questioning and participation expectations to avoid reproducing extrovert normative hierarchies. Such shifts align with calls for culturally and psychologically responsive pedagogy that acknowledges diverse expressive styles in learning environments (Gay, 2002; Karataş & Oral, 2015; Wang, 2024).

These insights are particularly relevant to values-based educational contexts, including religious schooling environments, where silence may carry moral and contemplative significance. Practices such as reflective listening, humility, and inward contemplation closely align with the participatory orientations observed among introverted learners. Recognising silence as pedagogically meaningful, therefore, not only advances inclusivity but also resonates with philosophical traditions that position reflection as a pathway to knowledge.

In theoretical terms, this study contributes to participation scholarship by integrating personality psychology with sociocultural learning theory. By situating introversion within interaction structures rather than treating it solely as an individual trait, the research advances a relational understanding of engagement. Silence is reframed as a multidimensional construct shaped by cognition, emotion, identity, and institutional practice.

Ultimately, expanding participation discourse beyond speech-centred paradigms invites educators to shift from performative visibility toward epistemic recognition. Engagement must be understood not only in terms of who speaks, but also in how students think, process, and position themselves within learning environments.

Conclusion

This study has reconceptualised classroom participation by foregrounding the experiences of introverted students within verbally dominant instructional environments. The findings demonstrate that silence does not signify disengagement but reflects multidimensional forms of engagement encompassing cognitive processing, emotional regulation, interactional positioning, and identity negotiation. Educational invisibility emerges not from a lack of participation but from recognition systems that privilege extrovert normative expressions of learning. By illuminating

invisible participation, learning through silence, social evaluative avoidance, teacher-mediated visibility, and suppressed communicative desire, the study advances a more inclusive understanding of how engagement is enacted in classroom contexts.

Theoretically, this research contributes to participation scholarship by integrating personality psychology with sociocultural learning perspectives, positioning silence as epistemic presence rather than participatory deficit. Practically, the findings call for expanded pedagogical recognition frameworks that value reflective, nonverbal, and internally mediated forms of engagement. Classrooms must move beyond speech-centred participation models toward interaction systems that acknowledge diverse expressive orientations. Such shifts are particularly relevant in values-based educational contexts where reflection and attentive listening hold pedagogical significance. Ultimately, reimagining participation through the lens of introverted experience invites educators to recognise not only who speaks, but who thinks, processes, and engages in less visible yet equally meaningful ways.

References

- [1] Alerby, E., & Brown, J. (2021). Silent and invisible students: The importance of listening to the silence and seeing the invisible. *Journal of Silence Studies in Education*, 1(1), 19–31. <https://doi.org/10.31763/jsse.v1i1.2>
- [2] Bossér, U., & Lindahl, M. (2019). Students' Positioning in the Classroom: A Study of Teacher-Student Interactions in a Socioscientific Issue Context. *Research in Science Education*, 49(2), 371–390. <https://doi.org/10.1007/s11165-017-9627-1>
- [3] Colelli, J., Di Bernardo, M., & Verde, F. (2025). Toward a patterned theory of inner speech: Rethinking Vygotsky through 4E cognition and phenomenology. *Mind & Society*, 24(1), 91–107. <https://doi.org/10.1007/s11299-025-00319-y>
- [4] Fredricks, J. A., Reschly, A. L., & Christenson, S. L. (2019). *Handbook of Student Engagement Interventions*. Elsevier. <https://doi.org/10.1016/C2016-0-04519-9>
- [5] Gay, G. (2002). Preparing for Culturally Responsive Teaching. *Journal of Teacher Education*, 53(2), 106–116. <https://doi.org/10.1177/0022487102053002003>
- [6] Hanna, A. (2021). Silence at school: Uses and experiences of silence in pedagogy at a secondary school. *British Educational Research Journal*, 47(5), 1158–1176. <https://doi.org/10.1002/berj.3719>
- [7] Havik, T., & Westergård, E. (2020). Do Teachers Matter? Students' Perceptions of Classroom Interactions and Student Engagement. *Scandinavian Journal of Educational Research*, 64(4), 488–507. <https://doi.org/10.1080/00313831.2019.1577754>
- [8] Holly, C., Porter, S., Vitale, T. R., & Echevarria, M. (2024). Grading participation in the classroom: The assumptions, challenges, and alternatives. *Teaching and Learning in Nursing*, 19(1), 27–33. <https://doi.org/10.1016/j.teln.2023.06.020>
- [9] Huang, W.-C. (2025). Transforming Self-Identity in EMI: The Interplay of Behavioral Engagement, Motivational Intensity, and Self-Efficacy. *Education Sciences*, 15(4), 429. <https://doi.org/10.3390/educsci15040429>
- [10] Jung, C. (2016). *Psychological Types* (0 ed.). Routledge. <https://doi.org/10.4324/9781315512334>
- [11] Karataş, K., & Oral, B. (2015). Teachers' Perceptions on Culturally Responsiveness in Education. *Journal of Ethnic and Cultural Studies*, 2(2), 47–57. <https://doi.org/10.29333/ejecs/39>
- [12] Komarraju, M., Karau, S. J., Schmeck, R. R., & Avdic, A. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and*

- Individual Differences*, 51(4), 472–477.
<https://doi.org/10.1016/j.paid.2011.04.019>
- [13] Kuh, G. D. (2009). What Student Affairs Professionals Need to Know About Student Engagement. *Journal of College Student Development*, 50(6), 683–706.
<https://doi.org/10.1353/csd.0.0099>
- [14] Le Cornu, A. (2009). Meaning, Internalization, and Externalization: Toward a Fuller Understanding of the Process of Reflection and Its Role in the Construction of the Self. *Adult Education Quarterly*, 59(4), 279–297.
<https://doi.org/10.1177/0741713609331478>
- [15] Li, J., & Xue, E. (2023). Dynamic Interaction between Student Learning Behaviour and Learning Environment: Meta-Analysis of Student Engagement and Its Influencing Factors. *Behavioral Sciences*, 13(1), 59.
<https://doi.org/10.3390/bs13010059>
- [16] Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35(2), 63–78.
<https://doi.org/10.1037/0022-3514.35.2.63>
- [17] Mercer, N., & Dawes, L. (2014). The study of talk between teachers and students, from the 1970s until the 2010s. *Oxford Review of Education*, 40(4), 430–445. <https://doi.org/10.1080/03054985.2014.934087>
- [18] Mustoip, S., Al Ghozali, M. I., Fadhlullah, M. Z. F., & Assenhaji, S. A. Y. (2024). Influence of Introverted and Extroverted Personalities on English Learning Interaction for Elementary School Students. *Elsya : Journal of English Language Studies*, 6(1), 33–45. <https://doi.org/10.31849/elsya.v6i1.14291>
- [19] Odii, B. C., Huang, Y., & Harder, M. K. (2024). Understanding the mechanisms of meaning-making for transformations toward sustainability: Contributions from Personal Knowledge Theory. *Sustainability Science*, 19(3), 865–881.
<https://doi.org/10.1007/s11625-023-01454-6>
- [20] Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (Fourth edition). SAGE Publications, Inc.
- [21] Persky, A. M., Henry, T., & Campbell, A. (2015). An Exploratory Analysis of Personality, Attitudes, and Study Skills on the Learning Curve within a Team-based Learning Environment. *American Journal of Pharmaceutical Education*, 79(2), 20. <https://doi.org/10.5688/ajpe79220>
- [22] Rahmawati, L., & Sholeh, M. (2021). Classroom Management in Creating Effective Learning in MIS Al-Ashriyah Banjarmasin. *Al-Adzka: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah*, 11(2), 76–85.
<https://doi.org/10.18592/aladzkapgmi.v11i2.4644>
- [23] Ryder, M. (2025). The Quiet Learner of the UK Art Classroom. *International Journal of Art & Design Education*, 44(2), 447–461.
<https://doi.org/10.1111/jade.12549>
- [24] Sanudin, S. R., Rahmat, H., Chee Din, M. A., & Akeb-Urai, N. (2022). The influence of extrovert and introvert personality types on the acceptance of virtual learning during the COVID-19 pandemic: A survey. *F1000Research*, 11, 87. <https://doi.org/10.12688/f1000research.73611.1>
- [25] Sedova, K., Sedlacek, M., Salamounova, Z., Lintner, T., Svaricek, R., Vlcek, J., Malikova, K., & Rozmahel, I. (2025). Let them all talk: Equitable participation in classroom dialogue as a result of an intervention programme. *Language and Education*, 39(6), 1471–1489.
<https://doi.org/10.1080/09500782.2025.2454637>
- [26] Severe, E., Stalnaker, J., Hubbard, A., Hafen, C. H., & Bailey, E. G. (2024). To participate or not to participate? A qualitative investigation of students' complex motivations for verbal classroom participation. *PLOS ONE*, 19(2), e0297771.
<https://doi.org/10.1371/journal.pone.0297771>

- [27] Sinatra, G. M., Heddy, B. C., & Lombardi, D. (2015). The Challenges of Defining and Measuring Student Engagement in Science. *Educational Psychologist*, 50(1), 1–13. <https://doi.org/10.1080/00461520.2014.1002924>
- [28] Tenglet, E. (2023). Quiet in class? Exploring discourses on verbal participation. *Educational Research*, 65(2), 230–247. <https://doi.org/10.1080/00131881.2023.2203138>
- [29] Tuovinen, S., Tang, X., & Salmela-Aro, K. (2020). Introversion and Social Engagement: Scale Validation, Their Interaction, and Positive Association With Self-Esteem. *Frontiers in Psychology*, 11, 590748. <https://doi.org/10.3389/fpsyg.2020.590748>
- [30] Vygotsky, L. S. (1980). *Mind in Society: Development of Higher Psychological Processes* (M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>
- [31] Wang, Y. (2024). The Influence of Cultural Factors on Learning Styles. *Journal of Education, Humanities, and Social Research*, 1(1), 1–9. <https://doi.org/10.70088/ra42wn16>
- [32] Weber, S. (2019). Performance for Introverts? *Scenario: A Journal of Performative Teaching, Learning, Research*, 136–153. <https://doi.org/10.33178/scenario.13.2.9>
- [33] Wentzel, K. R., & Miele, D. B. (Eds.). (2009). *Handbook of Motivation at School* (0 ed.). Routledge. <https://doi.org/10.4324/9780203879498>
- [34] Yin, R. K. (2018). *Case study research and applications: Design and methods* (Sixth edition). SAGE.
- [35] Zhang, L.-F. (2008). Thinking Styles and Emotions. *The Journal of Psychology*, 142(5), 497–516. <https://doi.org/10.3200/JRLP.142.5.497-516>
- [36] Zuffianò, A., Alessandri, G., Gerbino, M., Luengo Kanacri, B. P., Di Giunta, L., Milioni, M., & Caprara, G. V. (2013). Academic achievement: The unique contribution of self-efficacy beliefs in self-regulated learning beyond intelligence, personality traits, and self-esteem. *Learning and Individual Differences*, 23, 158–162. <https://doi.org/10.1016/j.lindif.2012.07.010>