

The Status and Disparities of Social-Emotional Competence in University Students: Evidence from a Large-Scale Survey in China

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ABSTRACT

This study investigates the overall level and demographic disparities of social–emotional competence (SEC) among Chinese university students within a culturally grounded relational framework. Drawing on a large-scale survey of 2,876 undergraduates, SEC was assessed using the 26-item Social–Emotional Competence Scale for Chinese University Students, which measures four dimensions: self-relation, other-relation, collective-relation, and responsible decision-making. Descriptive statistics indicated that students' SEC was generally high, with all dimension means exceeding the scale midpoint. However, a clear structural imbalance emerged: other-relation, collective-relation, and responsible decision-making were consistently higher than self-relation. Independent-samples *t* tests revealed significant advantages for only-child students across all four dimensions. Gender analyses showed dimension-specific effects: males scored higher on self-relation, whereas females scored higher on collective-relation; no significant differences were found in other-relation or responsible decision-making. One-way ANOVA indicated that grade-level differences were significant only for self-relation, with seniors outperforming freshmen, sophomores, and juniors, suggesting a late-stage gain rather than linear growth. These findings highlight both the strengths and developmental bottlenecks of SEC in higher education and underscore the need for culturally responsive, system-wide SEL design, particularly with earlier and more explicit cultivation of self-relation capacities.

KEYWORDS

Social-emotional competence; University students; Demographic disparities; Gender and grade differences; Only-child status; China

1 Background

In the post-industrial and intelligent era, educational goals are shifting from a singular emphasis on “knowledge and skills” toward a holistic paradigm that integrates cognitive and non-cognitive development. Internationally, Social and Emotional Learning (SEL), as an important pathway for promoting students' overall growth, well-being, and social adaptation, has increasingly become a shared trend in global educational reform (Zhang, 2025).

On the one hand, social transformation—characterized by value pluralism, intensified competition, and digitally mediated lifestyles—has markedly increased psychological stress and interpersonal adjustment challenges among university students. Prior research indicates that rapid material expansion coupled with an imbalance in spiritual and emotional life can trigger conflicts in individuals' relationships with the self, with others, and with society; college students are a particularly high-risk group in this regard (Zhu, 2023). In other words, the university years constitute not only a critical period for professional competence formation, but also a key developmental window for socialization and personality maturation, which calls for systematic attention to the structure and developmental level of students' social-emotional competence.

On the other hand, a substantial body of international and domestic evidence demonstrates that SEL and social-emotional competence can significantly enhance individuals' emotion management, prosocial behavior, rule awareness, and academic engagement, while reducing problem behaviors and interpersonal conflict (Cao, 2012; Quan & Yao, 2014). Although these positive effects have been well established in adolescent populations, university students—situated in emerging adulthood—face more complex developmental tasks: they must pursue highly autonomous academic and career exploration while reconstructing intimate relationships, social responsibility, and moral judgment beyond the family context (Chen et al., 2023).

Therefore, in the context of the massification of higher education and the deepening of moral education “cultivating virtue and nurturing people” in China, examining university students' social-emotional competence through measurement and group-difference analyses is not only driven by pressing real-world concerns, but also provides an empirical foundation for curriculum-based moral education, campus governance, and student development support systems in universities (Chen et al., 2023; He, 2025).

2 Literature Review

2.1 Conceptual Roots and Definitional Contours

Emotional competence (SEC), often referred to as social-emotional skills, is not a standalone construct but rather an educational reframing of long-standing psychological traditions in social intelligence and emotional intelligence. Early scholarship centred on emotional intelligence and EQ assessment, highlighting individuals' capacity to perceive, understand, and regulate emotions, and to mobilise emotional information in interpersonal encounters. As these ideas migrated into educational research, SEC gradually shifted from a trait-oriented psychological lens to a developmental and intervention-oriented educational paradigm, where it is treated as teachable, learnable, and assessable within institutional contexts (Liu, 2025).

Internationally, the most influential definitional anchor is the CASEL framework. CASEL positions SEC as a core set of capacities supporting self-adaptation and social functioning, operationalised through five interrelated components: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Liu, 2025). This framing has helped to legitimate SEC as a foundational educational outcome beyond academic attainment, with demonstrated benefits for behavioural adjustment, learning engagement, and well-being (Mao & Yu, 2024). Crucially, CASEL also embeds SEC within a developmental logic: competencies are cultivated through repeated participation in structured social and emotional learning opportunities, rather than presumed to be stable dispositions.

In China, SEC theorisation has increasingly foregrounded cultural and developmental specificity. Chen et al. (2023), drawing on a relational view of "threefold self-construction", argue that university students' SEC is best understood as an integrated capacity for negotiating relationships with the self, with others, and with the collective, culminating in responsible decision-making. This yields a four-dimensional model: self-relation, other-relation, collective-relation, and responsible decision-making (Chen et al., 2023). Zhu and Gao (2023) similarly conceptualise SEC as the synthesis of knowledge, skills, and dispositions acquired through emotional experiences in managing self–other–collective relations, positioning it as a key foundation for healthy personality development and social adaptation in emerging adults (Zhu & Gao, 2023).

Synthesising these strands, SEC can be defined as a multidimensional competence system enabling individuals to recognise and regulate emotions, understand others, sustain constructive relationships, enact collective responsibility, and make ethically grounded choices in authentic learning and social contexts.

2.2 From Non-cognitive Skill to Culturally Situated Relational Competence

SEC is commonly grouped within "non-cognitive" or "soft skill" domains. Yet its significance lies precisely in how it bridges the cognitive and the social: it is not reducible to knowledge or intelligence, but it consistently shapes learning behaviour, mental health, social engagement, and longer-term developmental trajectories. From an international standpoint, SEL emerged as a corrective to the historical privileging of cognitive outcomes in schooling, with explicit aims to prepare learners for complex futures characterised by uncertainty, diversity, and relational demands (Mao & Yu, 2024).

Importantly, SEL is not a narrow skills-training programme. It operates as a developmental ecology that uses social interaction and emotional experience as the learning medium, orienting towards whole-person formation rather than discrete behavioural outcomes (Zhang & Jin, 2025). This implies that SEC contains both visible skill elements (e.g., emotion regulation, empathic communication) and deeper value-personality structures (e.g., moral orientation, social responsibility). In other words, SEC is as much about who students become as it is about what they can do.

Chinese scholarship extends this view by emphasising relationality as an ontological core. Chen et al. (2023) contend that SEC among university students functions as an integrated relational system rather than a fragmented checklist of competencies. The self–other–collective triad is not merely thematic but structural, and "responsible decision-making" acts as the moral-behavioural endpoint through which relational capacities are enacted (Chen et al., 2023). This "relation–decision" architecture resonates with collectivist ethics and moral cultivation traditions, while also aligning with the psychosocial tasks of emerging adulthood, when identity integration, role negotiation, and responsibility expansion become central.

2.3 Competing Frameworks and the Case for Contextual Dimensionality

Current SEC dimensional frameworks are dominated by two major systems. The first is CASEL's education-embedded five-competency model. CASEL conceptualises SEC as contextualised learning outcomes cultivated through school-based practice, making the model highly compatible with curricular and institutional design (Liu, 2025). Its strengths lie in educational operability and developmental coherence.

The second is OECD's SSES framework, which derives SEC dimensions from Big Five personality theory. It identifies five higher-order domains—openness, extraversion, conscientiousness, agreeableness, and emotional regulation—further

operationalised into approximately fifteen measurable skills (e.g., perseverance, cooperation, empathy) to enable large-scale cross-national comparison (Zhang, 2021). Grounded in trait logic, OECD measures show high stability and comparability, yet they often translate competencies into quasi-personality features, which may dilute pedagogical specificity and underrepresent culturally distinctive moral-relational dimensions.

Localised models in China, especially Chen et al.'s (2023) four-dimensional scheme, offer an alternative by embedding SEC in university-stage developmental tasks and Chinese sociocultural realities. Self-relation targets self-awareness and emotional self-regulation; other-relation captures empathy and cooperative communication; collective-relation reflects collective identity, rule consciousness, and civic responsibility; and responsible decision-making emphasises values-based judgment and action in real-life contexts (Chen et al., 2023). Zhu and Gao (2023) reinforce that relational governance—across self, others, and collective—is the scaffolding that holds SEC together for Chinese university students.

Therefore, dimensional divergences should not be framed as technical disagreements but as reflections of different epistemologies and uses: OECD models prioritise comparability for international monitoring, whereas relational local models prioritise cultural validity and educational interpretability.

3 Research Method

3.1 Research Instrument

This study did not use the OECD SSES scale. Instead, we adopted the Social–Emotional Competence Scale for Chinese University Students developed by Chen et al. (2023). The OECD instrument is relatively lengthy (often 60+ items), which may increase response burden and weaken data quality in large-sample university surveys (Chen et al., 2023). More importantly, its Big Five–based, individualistic framework does not adequately capture culturally salient competencies for Chinese students, such as collective belonging, relational ethics, and collective responsibility, raising risks of structural misfit (Chen et al., 2023).

Chen et al.'s (2023) 26-item scale offers a culturally appropriate and psychometrically sound alternative. Grounded in threefold self-construction theory and emerging-adulthood features, it measures four dimensions—self-relation, other-relation, collective-relation, and responsible decision-making—with supported factorial validity and satisfactory reliability (Chen et al., 2023). Therefore, this instrument was selected to ensure both measurement rigor and contextual fit for Chinese university students.

3.2 Participants

A total of 2,876 undergraduate students participated in the survey. Participants reported key demographic information, including gender (male = 584, female = 2292), year level (freshman, sophomore, junior, and senior), and only-child status (only child vs. non – only child). These variables were used to profile the sample and to examine group differences in social–emotional competence across demographic categories. All responses were collected anonymously and analyzed at the aggregate level.

4 Results

4.1 Overall Status (Descriptive Statistics)

Based on the sample of 2,876 university students, overall social–emotional competence was at a relatively high level. The mean scores of the four dimensions, in descending order, were: other-relation (InterAve, $M = 4.373$, $SD = 0.704$), responsible decision-making (RespAve, $M = 4.301$, $SD = 0.706$), collective-relation (ColAve, $M = 4.297$, $SD = 0.719$), and self-relation (IntraAve, $M = 4.040$, $SD = 0.763$). All dimension means were well above the scale midpoint of 3.00, indicating that participants generally possessed a solid foundation of social–emotional competence.

At the item level, means across the 26 items ranged from 3.94 to 4.41. The highest-scoring items primarily reflected respect for and understanding of others, commitment to collective values, and maintaining a positive learning climate. The lowest-scoring items were concentrated in areas related to self-goal setting and persistence under pressure, suggesting room for further development within the self-relation dimension.

4.2 Only-Child Differences

Independent-samples t tests revealed that only-child students scored significantly higher than non – only-child students across all four dimensions: self-relation ($t = 5.356$, $p < .001$), other-relation ($t = 3.421$, $p = .001$), collective-relation ($t = 2.526$, $p = .012$), and responsible decision-making ($t = 3.942$, $p < .001$). These findings indicate a consistent advantage

for only-child students in self-adjustment, interpersonal interaction, collective belonging, and responsible decision-making.

4.3 Gender Differences

Gender-based *t* tests showed significant differences in two dimensions. Males scored higher than females in self-relation ($t = 3.474, p = .001$), whereas females scored higher than males in collective-relation ($t = -2.373, p = .018$). No significant gender differences were found for other-relation or responsible decision-making ($ps > .05$). Overall, the results suggest a structural pattern of “male advantage in self-relation and female advantage in collective-relation.”

4.4 Grade-Level Differences

One-way ANOVA results indicated a significant grade-level effect only for self-relation ($F = 3.381, p = .018$). Grade differences were not significant for other-relation, collective-relation, or responsible decision-making ($ps > .05$).

Post-hoc LSD comparisons further showed that seniors (fourth-year students) scored significantly higher than freshmen, sophomores, and juniors on self-relation, while no significant differences emerged among the other year levels. This suggests a “late-stage increase” in self-relation as students progress through university, whereas the other dimensions remain relatively stable across grade levels.

5 Discussion and Implications

The findings indicate that Chinese university students possess generally strong SEC, consistent with prior evidence (Zhu, 2023). Yet the dimensional profile reveals a persistent structural imbalance: self-relation is comparatively weaker than other-relation, collective-relation, and responsible decision-making. University environments inherently provide rich social and collective experiences—collaborative coursework, student organizations, internships, and service learning—facilitating outward-oriented competencies. By contrast, self-relation capacities such as self-awareness, self-acceptance, resilience, and inner emotion regulation depend on sustained reflection and psychological support, making them more vulnerable to underdevelopment (Chen et al., 2024). This implies that implicit university socialization alone cannot guarantee balanced SEC growth and that self-relation requires earlier and more explicit curricular cultivation.

Gender analyses show dimension-specific rather than overall differences. Males’ higher self-relation may reflect socialization emphasizing independence, autonomy, and goal persistence, strengthening self-efficacy and self-regulation. Females’ higher collective-relation aligns with socialization that prioritizes relational sensitivity, communal responsibility, and norm internalization. Such patterns echo existing studies noting that gender effects in SEC are typically bounded to particular dimensions (Zhu, 2023). Therefore, SEL in higher education should adopt gender-responsive designs, targeting distinct developmental needs.

The grade results further confirm that SEC development is not linear. Only self-relation improved significantly in the senior year, likely due to emerging-adulthood tasks intensifying near graduation: identity consolidation, vocational commitment, competence appraisal, and higher emotional demands in transition to employment or further study. These tasks may act as catalysts for self-relation growth. At the macro level, higher education’s contribution to SEC remains heterogeneous and depends on institutional learning ecologies and quality of developmental support (Liu, 2025). This strengthens the case for front-loading self-relation cultivation throughout the undergraduate trajectory.

Only-child students’ consistent advantage across dimensions suggests enduring family-structure effects. Concentrated parental resources and emotional responsiveness may foster secure attachment, self-esteem, and self-efficacy, benefiting self-relation. Sustained parental guidance and social modeling may also enhance collective adaptation and responsible decision-making. Additionally, compensatory peer socialization may push only-child students toward earlier and deeper engagement in collective contexts, sharpening interpersonal and civic competence over time. These differences imply that universities should provide additional relational resources and psychosocial empowerment for non-only-child students.

6 Recommendations for SEL in Higher Education

First, universities should institutionalize a whole-campus SEL system with explicit competence standards, cross-departmental coordination, resource support, and continuous evaluation to avoid fragmented or symbolic implementation (Li et al., 2024; Tian et al., 2021). Second, SEC should be embedded into curricula—especially through front-loaded self-relation and responsible decision-making training in first-year seminars, career education, and mental-health courses—supported by reflective and experiential pedagogy (Zhu, 2023). Third, high-impact practices (e. g.,

research participation, internships, service learning, student leadership) should be expanded and designed with explicit SEL goals to deepen other- and collective-relation competence and promote career clarity (Cui, 2025). Fourth, teacher–student interaction needs strengthening through mentoring, empathic classroom communication, and collaborative pedagogy to support all four dimensions (Sun et al., 2025). Fifth, supportive campus ecologies—respectful climates, peer-support networks, and engagement-enhancing learning environments—should be cultivated to provide long-term competence nourishment (Chen et al., 2024; Zhang, 2023). Finally, tiered interventions should be implemented because disparities are systematic: enhance women’s self-relation and stress-regulation supports; strengthen men’s collective responsibility training; prioritize self-relation in lower years; and provide additional relational scaffolds for non-only-child students.

7 Conclusion

Using a culturally adapted SEC framework and large-scale Chinese data, the study demonstrates high overall SEC but a stable dimensional imbalance, with self-relation as the most vulnerable component. SEC varies significantly by only-child status and shows dimension-specific disparities by gender and grade. These findings support culturally responsive, developmentally sequenced SEL in higher education and offer evidence for system-wide institutional, curricular, and ecological strategies to foster balanced SEC growth.

Funding

Shaanxi Provincial Education Science "14th Five - Year Plan" 2022 Annual Project "Research on the Current Situation and Improvement Strategies of College Students' Social Emotional Competence" (NO: GH22Y1882)

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