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Validation of a Curriculum Model Based on Students' Social–Emotional Competence for Effective Activity in Cyberspace Using a Structural Equation Modeling Approach

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A B S T R A C T

Purpose: The present study aimed to validate a curriculum model based on students' social–emotional competence for effective activity in cyberspace using a structural equation modeling approach.

Methods and Materials: This study was conducted using a quantitative applied research design based on Partial Least Squares Structural Equation Modeling (PLS-SEM). The statistical population consisted of curriculum planning specialists, heads of sociology and psychology educational groups, and educational counselors in East Azerbaijan Province. Based on Cochran's formula for an unlimited population, a sample size of 384 participants was determined. Participants were selected using stratified cluster random sampling. Data were collected through a researcher-made questionnaire consisting of dimensions related to objectives, content, teaching–learning strategies, teaching–learning opportunities, learning environment conditions, and evaluation. The validity of the questionnaire was confirmed using face validity, content validity, convergent validity, discriminant validity, and exploratory factor analysis. Data analysis was performed using PLS-SEM and included confirmatory factor analysis, path analysis, and structural model evaluation.

Findings: The findings demonstrated that all components of the proposed curriculum model had significant roles in explaining the curriculum structure, as all t-values exceeded the critical threshold of 1.96. The strongest effects on the curriculum model were related to evaluation (β = 0.896), learning environment conditions (β = 0.752), and teaching–learning strategies (β = 0.730). The components of objectives (β = 0.398) and teaching–learning opportunities (β = 0.350) also showed statistically significant effects. The results further indicated acceptable convergent and discriminant validity for all constructs. Cronbach's alpha, composite reliability, and Average Variance Extracted (AVE) values for all constructs exceeded acceptable thresholds, confirming the reliability and validity of the measurement model.

Conclusion: The results indicated that the proposed curriculum model possesses appropriate structural validity and can effectively support the development of students' social–emotional competencies for participation in virtual environments.

Keywords: *Model, validation, curriculum, social–emotional competence, cyberspace*

1. Introduction

The rapid expansion of digital technologies and the extensive penetration of cyberspace into everyday life have transformed educational systems, social interactions, and learning environments worldwide. Adolescents and students constitute one of the most active groups in virtual environments, engaging continuously with social media platforms, online communication tools, digital educational systems, and interactive technologies. Contemporary educational systems are therefore confronted with the challenge of preparing students not only with academic knowledge but also with the competencies necessary for safe, ethical, emotionally balanced, and socially responsible participation in cyberspace (Subrahmanyam & Greenfield, 2008; Twenge et al., 2018). The increasing prevalence of online communication among adolescents has created both unprecedented educational opportunities and substantial psychosocial risks, requiring educational institutions to redefine the goals and structure of curriculum planning in accordance with the realities of digital life (Best et al., 2014; Garrison, 2020).

Cyberspace has become an inseparable component of educational and social experiences among secondary school students. Educational technologies, online learning platforms, social networking applications, and digital communication systems have significantly influenced students' academic engagement, social interactions, emotional regulation, and identity formation (Junco, 2012; Sinai & Mousavi Mashhadi, 2021). Although virtual environments facilitate rapid access to information, collaborative learning, and flexible educational opportunities, they also expose students to cyberbullying, emotional distress, misinformation, social isolation, internet dependency, and online behavioral risks (Khairi Hussein Al-Bouhayami, 2023; Kowalski et al., 2014). Research has shown that ineffective management of online interactions can negatively affect students' psychological well-being, social adjustment, and academic achievement (Mella et al., 2021; Rodriguez-Alvarez et al., 2021). Consequently, educational systems are increasingly expected to provide structured curricular responses that equip students with the social and emotional competencies required for effective and healthy participation in virtual environments.

Social–emotional competence refers to a set of cognitive, emotional, interpersonal, and behavioral abilities that enable individuals to understand emotions, regulate emotional responses, establish positive relationships, make responsible decisions, and interact effectively with others (Brackett et al., 2019; Collaborative for Academic & Emotional, 2020). These competencies have gained central importance in contemporary educational theories because they directly influence students' academic performance, psychological resilience, social adaptation, and behavioral functioning (Greenberg et al., 2020; Parker, 2020). In digital environments, social–emotional competencies acquire even greater significance because online communication lacks many traditional social cues and often increases emotional ambiguity, impulsive behavior, and interpersonal misunderstandings (Cohen, 2021; Driscoll, 2021). Therefore, students who possess stronger social–emotional competencies are generally more capable of navigating online interactions responsibly, managing digital stressors, and avoiding harmful online behaviors.

The CASEL framework identifies five core dimensions of social–emotional learning, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic & Emotional, 2020). These competencies contribute substantially to learners' ability to function effectively in both physical and virtual social contexts. Brackett et al. emphasized that emotional competence enhances classroom learning, interpersonal communication, and emotional regulation among students (Brackett et al., 2019). Similarly, Greenberg et al. argued that integrating coordinated social, emotional, and academic learning into educational systems significantly improves youth development and school functioning (Greenberg et al., 2020). In online learning environments, these competencies support students' engagement, communication quality, self-regulation, and adaptability to digital learning processes (Cohen, 2021; Driscoll, 2021).

Several studies have highlighted the relationship between social–emotional competencies and students' behavior in cyberspace. Rodriguez-Alvarez et al. found that higher socio-emotional competencies reduced the overlap between bullying and cyberbullying behaviors among students (Rodriguez-Alvarez et al., 2021). Likewise, Zych et al. demonstrated that adolescents involved in cyberbullying exhibited weaker social and emotional competencies compared to their peers (Zych et al., 2018). Marin-Lopez et al. also reported significant associations between online emotional content use, socio-emotional competencies, and cyberbullying behaviors (Marin-Lopez et al., 2020). In the Iranian context, Abdollahnejad et al. concluded that effective social–emotional competence plays a critical role

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in reducing cybervictimization and cyberbullying experiences among secondary school students (Abdollahnejad et al., 2022). These findings collectively indicate that strengthening students' social–emotional competencies can function as a protective factor against the psychological and social risks associated with cyberspace.

The increasing complexity of virtual learning environments has also transformed the concept of curriculum planning. Traditional curricula, which were primarily designed for face-to-face educational contexts, are no longer sufficient for addressing the multidimensional challenges of digital learning environments. Curriculum models must now incorporate digital literacy, emotional regulation, ethical online behavior, communication skills, and social responsibility as essential educational dimensions (Chen et al., 2021; Rogow, 2019). Chen et al. proposed a curriculum framework for secondary education emphasizing emotional and social competencies for digital citizenship, arguing that digital education without socio-emotional dimensions remains incomplete and ineffective (Chen et al., 2021). Similarly, Rogow emphasized that media literacy education should not only focus on technological skills but also cultivate critical thinking, ethical awareness, and responsible digital participation (Rogow, 2019).

The role of curriculum planning in cyberspace has received increasing scholarly attention in recent years. Amini Harandi evaluated the position of after-school curriculum planning in cyberspace and emphasized the necessity of aligning educational programs with the evolving needs of digital learners (Amini Harandi, 2023). Heidari and Dehghani similarly stressed the importance of designing curricula appropriate to cyberspace and argued that educational systems must adapt their pedagogical structures to technological transformations (Heidari & Dehghani, 2021). Enayati Novinfar et al. presented a model for implementing a virtual curriculum based on collaborative learning approaches in higher education and highlighted the importance of interactive learning opportunities in virtual environments (Enayati Novinfar et al., 2018). Pourbaghban et al. further proposed a virtual reality-based curriculum model in science education, emphasizing the integration of advanced technologies into curriculum structures (Pourbaghban et al., 2020). These studies collectively demonstrate that curriculum development in cyberspace requires multidimensional approaches that integrate educational, technological, social, and emotional components simultaneously.

Theoretical perspectives on curriculum also emphasize the significance of learners' experiences and contextual adaptation in educational planning. Nateghi et al. explained that one of the major weaknesses of traditional educational systems lies in neglecting the experienced curriculum and the lived realities of learners (Nateghi et al., 2017). In cyberspace, where students' interactions are dynamic, immediate, and emotionally charged, ignoring students' social and emotional experiences may reduce curriculum effectiveness. Seifi and Abbasi argued that cyberspace simultaneously creates educational opportunities and cultural threats, requiring curricula that can preserve social and cultural values while enabling constructive digital participation (Seifi & Abbasi, 2016). Therefore, curriculum models designed for virtual environments must address both the opportunities and risks associated with online interactions.

The importance of social competence in educational contexts has long been emphasized in developmental and educational psychology. Klickman defined social competence as the ability to establish effective interpersonal relationships, adapt to social norms, and engage in constructive social interactions (Klickman, 2007). In digital contexts, these competencies extend to online communication, digital empathy, conflict management, and ethical online behavior. Subrahmanyam and Greenfield noted that online communication significantly influences adolescents' relationships and social development, often reshaping patterns of interaction and identity formation (Subrahmanyam & Greenfield, 2008). Consequently, educational systems must recognize that students' social development increasingly occurs within digital environments and should therefore incorporate social–emotional learning into virtual curricula.

Empirical evidence also indicates that social–emotional competencies are strongly associated with academic achievement and school adjustment. Mella et al. demonstrated that socio-emotional competencies positively influence school performance and adolescents' adjustment to educational environments (Mella et al., 2021). Fisher et al. further highlighted the importance of formative feedback and motivational support in enhancing students' engagement and learning outcomes (Fisher et al., 2025). In online educational settings, where students frequently experience reduced interpersonal interaction and increased emotional distance, structured opportunities for feedback, collaboration, and emotional support become particularly important (Cohen, 2021; Driscoll, 2021). Therefore,

curriculum models that emphasize social–emotional competencies may contribute not only to students' psychosocial well-being but also to improved academic performance in virtual learning environments.

Despite the increasing recognition of social–emotional learning and digital education, many educational systems continue to lack validated curriculum models specifically designed to develop students' social–emotional competencies for effective participation in cyberspace. Existing curricula often focus primarily on technological skills and cognitive outcomes while neglecting emotional regulation, digital ethics, interpersonal communication, and psychological resilience. This gap is particularly evident in secondary education, where adolescents face significant developmental challenges alongside increasing exposure to online environments (Best et al., 2014; Twenge et al., 2018). Moreover, studies conducted in the Iranian educational context indicate that the integration of social–emotional competencies into digital curriculum planning remains limited and insufficiently structured (Amini Harandi, 2023; Narenji Sani et al., 2021).

Narenji Sani et al. identified multiple competencies required by learners in electronic learning contexts, emphasizing the importance of communication skills, emotional adaptability, self-management, and digital responsibility (Narenji Sani et al., 2021). Khairi Hussein Al-Bouhayami also emphasized the need for strategic educational interventions to counteract the negative effects of cyberspace on adolescents (Khairi Hussein Al-Bouhayami, 2023). Furthermore, DePaoli et al. argued that school leaders and educators increasingly recognize social–emotional learning as a transformative factor capable of preparing students for contemporary social challenges (DePaoli et al., 2017). Fewkes similarly demonstrated the effectiveness of curricula focused on strengthening social–emotional competence among students (Fewkes, 2017). Collectively, these findings suggest that developing validated curriculum models grounded in social–emotional competencies is essential for contemporary educational systems.

Given the increasing influence of cyberspace on adolescents' educational and social experiences, the growing importance of social–emotional competencies in digital environments, and the necessity of designing effective curriculum structures responsive to virtual learning conditions, the present study aimed to validate a curriculum model based on students' social–emotional competencies for effective activity in cyberspace using a structural equation modeling approach.

2. Methods and Materials

2.1. Study Design and Participants

The present study was conducted using a quantitative approach based on the Partial Least Squares Structural Equation Modeling (PLS-SEM) method in order to validate a curriculum model grounded in the social–emotional competencies of secondary school students for effective activity in cyberspace. The statistical population consisted of all heads of sociology and psychology educational groups as well as curriculum planning specialists in East Azerbaijan Province. Due to the indeterminate size of the statistical population, Cochran's formula for an unlimited population was employed, and the sample size was determined to be 384 participants. Sampling was carried out using a stratified cluster random sampling method in such a way that the city of Tabriz was selected as the primary unit, and among the five educational districts, three districts were selected based on accessibility. This approach provided the possibility of generalizing the findings to the target population and evaluated the adequacy of the model through model fit indices.

2.2. Data Collection Tools

The data collection instrument was a researcher-made questionnaire consisting of items in the dimensions of objectives, content, teaching–learning strategies, opportunities, environmental conditions, and evaluation. The validity of the questionnaire was assessed through face validity, content validity, convergent and discriminant validity, and exploratory factor analysis. Reliability was evaluated using Cronbach's alpha coefficient and composite reliability.

2.3. Data Analysis

Data analysis was conducted using PLS-SEM software in the inferential section, including confirmatory factor analysis to examine structural relationships and predictive variables, while descriptive statistics including mean, standard deviation, and variance were used to describe participants' responses.

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3. Findings and Results

Table 1 presents the descriptive statistics, including means and standard deviations, for cognitive fusion, cognitive defusion, quality of life, and anxiety across the pre-test, post-test, and follow-up stages in the acceptance and commitment therapy group, the quality of life therapy group, and the control group.

Table 1

Factor Loadings of Questionnaire Items

Element	Dimensions and Indicators	Factor Loading
Objectives	1. According to this model, the objectives designed for the curriculum should address students' emotional needs in cyberspace.	0.218
	2. According to this model, the objectives are aligned with students' social needs.	0.795
	3. According to this model, the specified objectives are measurable and assessable.	0.815
	4. According to this model, emphasis is placed on social–emotional competencies in cyberspace.	0.817
Content	5. This model teaches students to respect opposing opinions.	0.221
	6. In the designed model, respect for others' rights in cyberspace has been considered.	0.219
	7. Empathy in online interactions is strengthened by this model.	0.865
	8. According to this model, students' ability to establish effective communication in cyberspace is strengthened.	0.808
	9. Active listening in online interactions is one of the key content skills in this model.	0.825
	10. This model helps students recognize their emotions in different situations.	0.799
	11. This model enhances awareness of the characteristics of cyberspace and digital identity.	0.674
	12. Observance of ethics and regulations in cyberspace is one of the principal axes of this model.	0.805
	13. This model teaches students to respect others' copyright in cyberspace.	0.823
	14. This model emphasizes the protection of students' privacy and online security.	0.833
	15. Awareness of the importance of internet security is specifically taught in this model.	0.877
Teaching–Learning Strategies	16. The model uses interactive and technology-based teaching methods.	0.845
	17. In this model, social–emotional skills are taught through collaborative games.	0.819
	18. Conducting workshops for stress management is one of the key strategies of this model.	0.862
	19. This model uses visual and written tools and resources to strengthen social–emotional competencies.	0.674
	20. Online educational games are one of the primary learning tools in this model.	0.644
Teaching–Learning Opportunities	21. Online group activities are designed as one of the learning opportunities in this model.	0.916
	22. According to this model, online group projects strengthen students' interaction and collaboration abilities.	0.846
Learning Environment Conditions	23. The learning environment of the model helps students improve their communication skills in cyberspace.	0.997
	24. Security and privacy in the learning environment of this model are given special attention.	0.997
Evaluation	25. This model helps students manage their negative emotions in cyberspace.	0.808
	26. Methods for coping with digital stress and anxiety are taught in this model.	0.808
	27. Evaluation of students' performance in emotion management is part of the evaluation program of this model.	0.314

Examination of the factor loadings in the research model demonstrates that all items possessed an appropriate explanatory power for their corresponding constructs. In general, a desirable factor loading is considered to be above 0.70, and in this model, the vast majority of items, including all indicators of the constructs "learning environment conditions," "objectives," "evaluation," and "opportunities," showed very high factor loadings, mostly above 0.80, indicating excellent convergent validity. Only a limited number of items, including Items 1, 5, 6, and 27, had factor loadings below 0.40 and were therefore removed from the model. Consequently, it can be concluded that the research measurement model is in a desirable condition in terms of convergent validity, and the items adequately represent their corresponding constructs.

The following table presents the Cronbach's alpha values for each of the six constructs under study. Cronbach's alpha is a classical indicator used to measure the reliability or internal consistency of the items within a construct.

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Table 2

Cronbach's Alpha Values of the Studied Constructs

Construct	Cronbach's Alpha
Evaluation	0.768
Objectives	0.737
Teaching–Learning Strategies	0.840
Learning Environment Conditions	0.995
Teaching–Learning Opportunities	0.719
Content	0.930

According to the results presented in the table, all six constructs demonstrated acceptable reliability. The Cronbach's alpha values for all constructs exceeded the common threshold of 0.70, indicating appropriate internal consistency and correlation among the items of each construct. Among these, the construct "learning environment conditions" with an alpha coefficient of 0.995 showed the highest level of reliability, while the construct "teaching–learning opportunities" with an alpha coefficient of 0.716 demonstrated the lowest level of reliability, although this value still remained within the acceptable range. Overall, these results confirm that the research measurement instrument possesses the necessary stability and reliability for measuring the intended concepts.

Composite reliability is a modern indicator for evaluating the internal consistency of construct items. This criterion is considered superior to Cronbach's alpha because it assigns different weights to each item based on its factor loading, and values above 0.70 are regarded as acceptable.

Table 3

Composite Reliability of the Studied Constructs

Construct	Composite Reliability (CR)
Evaluation	0.790
Objectives	0.850
Teaching–Learning Strategies	0.881
Learning Environment Conditions	0.997
Teaching–Learning Opportunities	0.875
Content	0.942

The results of the composite reliability table indicate highly desirable reliability for all research constructs. The composite reliability (CR) values for all six constructs were significantly above the minimum threshold of 0.70, demonstrating that the items of each construct adequately measured a single unified concept. The construct "learning environment conditions" with a CR value of 0.997 exhibited the highest reliability, indicating nearly complete consistency among its indicators. Even the construct "evaluation," which had the lowest reliability among the constructs with a value of 0.790, still demonstrated a satisfactory level of reliability. Overall, this indicator confirms the high validity and trustworthiness of the measurement instruments employed in this study.

Convergent validity indicates the extent to which the items of a construct are correlated with one another in measuring a common concept. The key indicator for assessing convergent validity is the Average Variance Extracted (AVE), whose value should exceed 0.50.

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Table 4

Convergent Validity of the Studied Constructs

Construct	AVE
Evaluation	0.653
Objectives	0.655
Teaching–Learning Strategies	0.599
Learning Environment Conditions	0.995
Teaching–Learning Opportunities	0.778
Content	0.644

The results presented in the table indicate highly appropriate convergent validity for all constructs under study. The Average Variance Extracted (AVE) values for all six constructs were significantly higher than the threshold value of 0.50, confirming that each construct explains, on average, more than half of the variance of its items. Among the constructs, "learning environment conditions" with an AVE value of 0.995 exhibited the highest level of convergence, while "teaching–learning strategies" with a value of 0.599 demonstrated the lowest level of convergence. Nevertheless, all values were within the completely acceptable range and strongly confirmed the convergent validity of the research measurement model.

Discriminant validity examines whether a construct in the model measures a unique concept distinct from other constructs. The Fornell–Larcker criterion is one of the classical methods for assessing this type of validity. According to this criterion, the square root of the Average Variance Extracted (√AVE) for each construct must be greater than the correlation value between that construct and all other constructs.

Table 5

Correlation Matrix and Examination of Discriminant Validity Based on the Fornell–Larcker Criterion

Variables	Evaluation	Objectives	Teaching–Learning Strategies	Learning Environment Conditions	Teaching–Learning Opportunities	Content
Evaluation	—					
Objectives	0.808	—				
Teaching–Learning Strategies	0.088	0.709	—			
Learning Environment Conditions	0.805	0.266	0.774	—		
Teaching–Learning Opportunities	0.658	0.203	0.192	0.802	—	
Content	0.042	0.333	0.372	0.839	0.139	—

This indicates that the correlation of each construct with its own indicators is greater than its correlation with other constructs. The results related to this criterion are presented in Table 5, which demonstrates the appropriate validity of the constructs.

In examining the structural model, the significance coefficients of the items (t-values), as well as the R^2 and Q^2 criteria, were calculated and interpreted.

The first criterion for assessing the structural model fit is the significance coefficient (t-value), the results of which are presented in the following figure.

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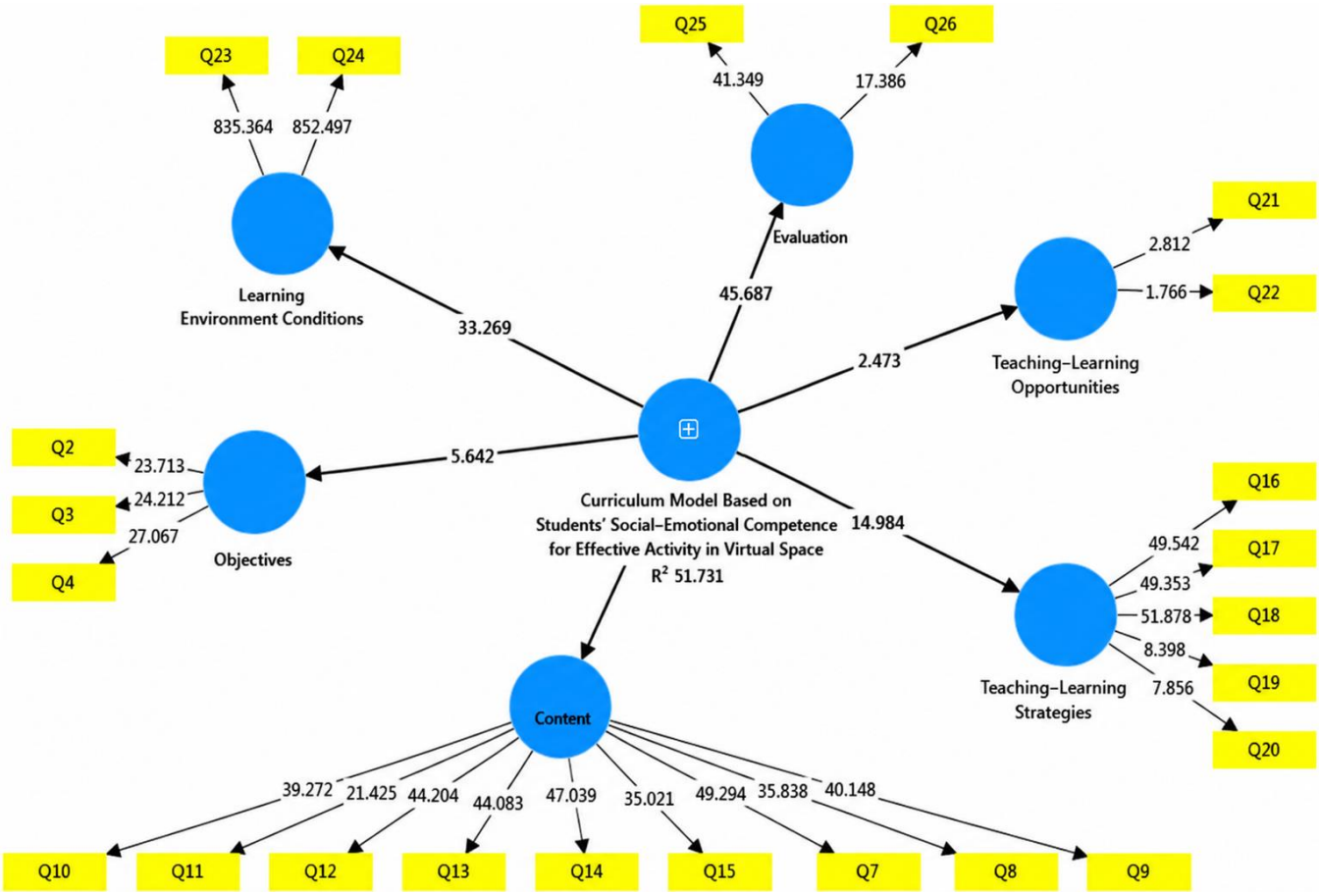
Figure 1

Significance Coefficients (t-values)



The t-value model report obtained through bootstrapping analysis confirmed the statistical significance of all model paths with a high degree of confidence. In the measurement model section, all factor loadings had t-values substantially greater than the threshold of 1.96, and in most cases higher than 20, indicating that all items measured their corresponding constructs in a completely significant manner. In the structural model section, the results demonstrated that the component "evaluation" with the highest level of significance (T = 45.687), followed by "learning environment conditions" (T = 33.269), played a highly significant and critical role in the formation of the "curriculum model." Other components, including "strategies" (T = 14.984), "objectives" (T = 5.642), and "teaching–learning opportunities" (T = 2.473), were also statistically significant, as their t-values exceeded the critical threshold of 1.96. Overall, this analysis demonstrates that the structure of the model and its hypothesized relationships are strongly supported statistically, although the t-value for the "content" path was not specified in the figure, making it impossible to judge its significance level from the available image.

The second criterion of the structural model is the R^2 criterion. R^2 relates to the endogenous (dependent) latent variables of the model. R^2 is an indicator of the effect of an exogenous variable on an endogenous variable, and the values of 0.19, 0.33, and 0.67 are interpreted as weak, moderate, and strong values, respectively. According to Henseler et al. (2009), if only one exogenous variable influences the constructs in a model, an R^2 value above 0.33 indicates a strong relationship.

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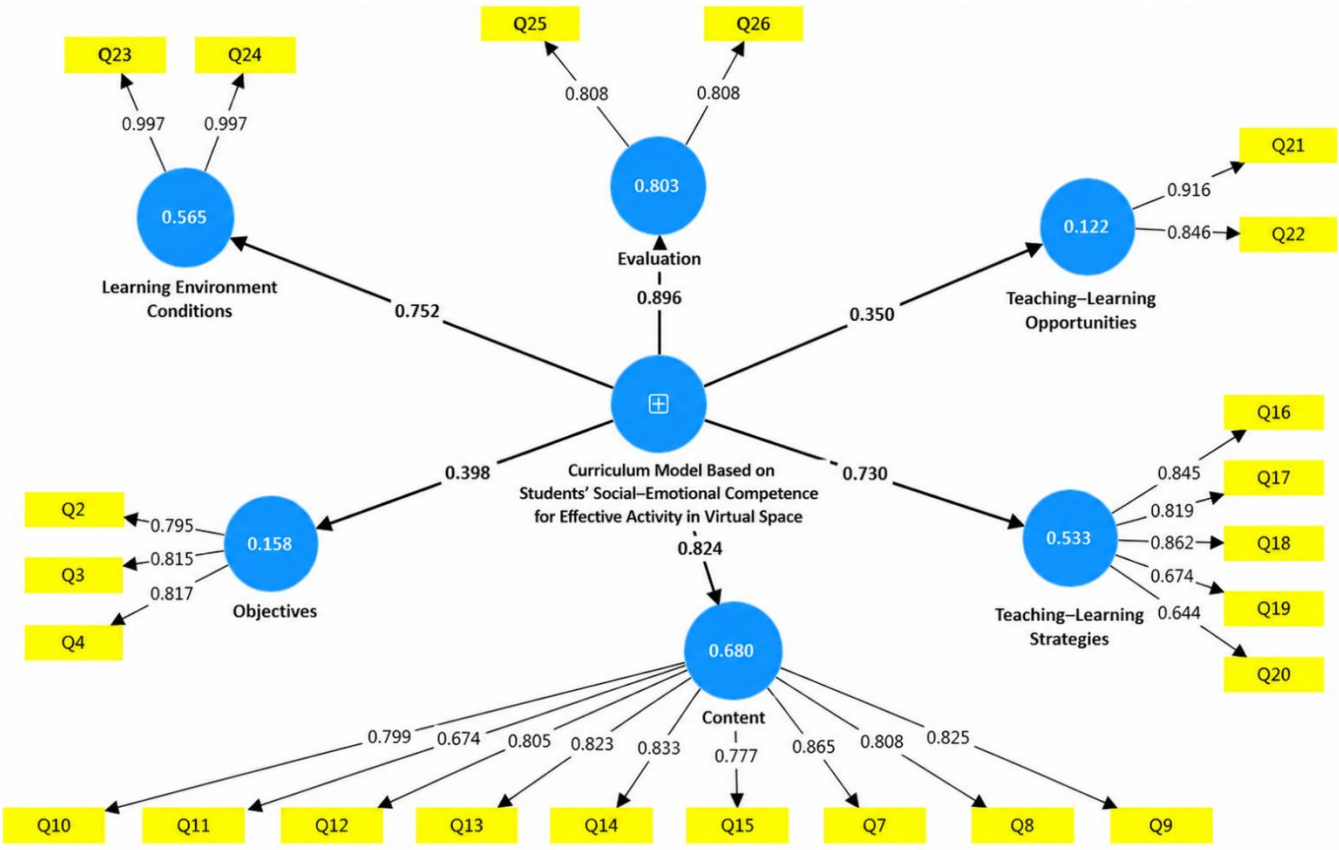
Figure 2

Structural Model in Standardized Coefficients Model



Evaluation of the standardized coefficient model demonstrated the acceptable validity of the research model. In the measurement model section, most factor loadings of the items exceeded the desirable threshold of 0.70, confirming appropriate convergent validity for the six reflective components of the model. In the structural model section, which examined the formation of the "curriculum model," the results revealed that the component "evaluation" with the highest path coefficient (β = 0.896) played the strongest and most decisive role in shaping the model. Subsequently, the components "learning environment conditions" (β = 0.752) and "teaching–learning strategies" (β = 0.730) also demonstrated high levels of importance and influence, whereas "objectives" (β = 0.398) and "teaching–learning opportunities" (β = 0.350) showed moderate but significant effects.

4. Discussion and Conclusion

The present study aimed to validate a curriculum model based on students' social–emotional competencies for effective activity in cyberspace using a structural equation modeling approach. The findings demonstrated that all major components of the proposed model, including objectives, content, teaching–learning strategies, learning opportunities, learning environment conditions, and evaluation, played significant roles in the formation of the curriculum model. The results further indicated that the components of evaluation, learning environment conditions, and teaching–learning strategies exerted the strongest influence on the overall structure of the model. In general, the findings confirmed that effective activity in virtual environments requires a multidimensional curriculum framework that integrates educational, social, emotional, ethical, and technological dimensions simultaneously. These results support the growing theoretical perspective that educational systems can no longer focus solely on cognitive outcomes and technical digital skills, but must also emphasize students' emotional adjustment, social interactions, and responsible digital behavior (Chen et al., 2021; Driscoll, 2021).

One of the most important findings of the study was the strong effect of the evaluation component in shaping the

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curriculum model. The high path coefficient and significance level of this component indicate that assessment processes in virtual environments should move beyond traditional academic measurement and incorporate students' emotional regulation, social communication skills, ethical online behavior, and digital responsibility. This finding is consistent with the work of Fisher et al., who emphasized that formative and timely feedback significantly enhances student motivation and engagement in educational settings (Fisher et al., 2025). In virtual learning environments, continuous and multidimensional evaluation helps students become aware of their emotional reactions, communication patterns, and behavioral strengths and weaknesses in online contexts. Furthermore, the findings align with the perspective of Cohen, who argued that online education requires emotional and social assessment approaches alongside academic evaluation because digital learning environments influence students' emotional experiences and interpersonal interactions differently from traditional classrooms (Cohen, 2021). The strong role of evaluation in the present study also reflects the increasing importance of reflective and feedback-oriented assessment in modern curriculum theory, especially in cyberspace where self-regulation and responsible digital participation are essential competencies.

Another important finding concerned the significant role of learning environment conditions in the curriculum model. The results demonstrated that secure, supportive, and interaction-oriented virtual learning environments substantially contribute to students' effective participation in cyberspace. This finding is theoretically understandable because virtual learning environments directly influence students' sense of safety, belonging, communication quality, and emotional stability. Garrison emphasized that e-learning effectiveness depends heavily on the quality of interaction, social presence, and educational support available in digital learning systems (Garrison, 2020). Similarly, Driscoll highlighted that virtual learning environments must foster emotional engagement, social interaction, and collaborative learning opportunities to support effective learning outcomes (Driscoll, 2021). The findings of the current study are also consistent with the work of Heidari and Dehghani, who stressed the importance of designing curricula appropriate to cyberspace and adapting educational structures to technological environments (Heidari & Dehghani, 2021). In the context of secondary school students, virtual environments characterized by psychological safety, privacy protection, collaborative interaction, and emotional support may reduce online anxiety and improve students' willingness to engage constructively in cyberspace.

The significant influence of teaching–learning strategies also represented a central finding of the study. The results indicated that interactive, technology-based, and collaborative instructional approaches are essential elements of curricula designed for effective activity in virtual environments. This finding is consistent with educational theories emphasizing active learning, student engagement, and collaborative knowledge construction in digital contexts. Enayati Novinfar et al. similarly found that collaborative learning approaches play a critical role in the effectiveness of virtual curricula in higher education (Enayati Novinfar et al., 2018). Interactive strategies such as online collaborative projects, digital workshops, problem-solving activities, and emotionally supportive communication practices appear to strengthen students' social–emotional competencies and enhance their adaptability to cyberspace. Furthermore, Brackett et al. emphasized that emotional competence develops more effectively when learning processes include emotionally responsive and participatory educational strategies (Brackett et al., 2019). The current findings therefore suggest that curriculum models for cyberspace should prioritize interactive and learner-centered instructional approaches rather than passive content transmission.

The findings related to curriculum objectives also demonstrated that clearly defined social–emotional goals contribute significantly to the effectiveness of curricula in virtual environments. This result supports the idea that educational objectives in contemporary digital education should extend beyond academic achievement and technological literacy to include emotional awareness, interpersonal competence, ethical behavior, and digital citizenship. The CASEL framework similarly identifies social awareness, relationship skills, responsible decision-making, and self-management as central educational goals necessary for student development (Collaborative for Academic & Emotional, 2020). In cyberspace, students constantly encounter emotionally charged situations, social conflicts, and ethical dilemmas that require advanced emotional and interpersonal skills. Consequently, curriculum objectives emphasizing empathy, emotional regulation, responsible online communication, and digital identity awareness are particularly important for adolescents. This interpretation is further supported by Chen et al., who proposed that emotional and social competencies

should constitute a foundational dimension of digital citizenship education (Chen et al., 2021).

The content component of the curriculum model also demonstrated acceptable validity and significance in explaining effective activity in cyberspace. The findings indicated that content emphasizing empathy, communication skills, online ethics, digital identity awareness, internet security, and respect for others' rights contributes meaningfully to students' social–emotional competence in cyberspace. This finding aligns with the work of Rogow, who argued that media literacy education should incorporate ethical awareness, critical thinking, and responsible participation rather than focusing exclusively on technological skills (Rogow, 2019). Similarly, Seifi and Abbasi highlighted the dual role of cyberspace as both an educational opportunity and a cultural threat, emphasizing the need for curriculum content capable of preserving social and ethical values in digital environments (Seifi & Abbasi, 2016). The present findings suggest that effective virtual curriculum content should not merely transfer information but should also cultivate emotional sensitivity, ethical awareness, and constructive online interaction patterns among students.

The significance of teaching–learning opportunities in the model further demonstrates the importance of creating practical and collaborative digital experiences for students. Online group activities, collaborative projects, and participatory learning experiences appear to strengthen students' interaction skills and social engagement in cyberspace. This finding is consistent with the work of Greenberg et al., who emphasized that coordinated social, emotional, and academic learning enhances youth development through active participation and social interaction (Greenberg et al., 2020). In digital learning contexts, collaborative opportunities allow students to practice empathy, communication, conflict resolution, and teamwork within authentic online environments. These opportunities may also reduce feelings of isolation and passivity that are sometimes associated with virtual learning systems.

The present findings also support previous studies concerning the relationship between social–emotional competencies and cyberbullying behaviors. Research by Rodriguez-Alvarez et al. demonstrated that stronger socio-emotional competencies reduce students' involvement in bullying and cyberbullying behaviors (Rodriguez-Alvarez et al., 2021). Similarly, Zych et al. reported that adolescents involved in cyberbullying often display weaker emotional and social competencies (Zych et al., 2018). Marin-Lopez et al. also found significant relationships between socio-emotional competencies and online emotional content use among adolescents (Marin-Lopez et al., 2020). The current findings extend this literature by showing that curriculum design itself can function as a preventive and developmental mechanism through which educational systems strengthen students' emotional regulation and responsible online behavior. The inclusion of emotional management, digital ethics, empathy, and online communication skills within curriculum structures may therefore help reduce cyberbullying, digital aggression, and online interpersonal conflicts among students.

The findings can also be interpreted in light of developmental theories concerning adolescent identity formation and social interaction. Adolescence represents a developmental period characterized by heightened emotional sensitivity, social comparison, identity exploration, and peer influence. Subrahmanyam and Greenfield noted that online communication environments significantly shape adolescents' social relationships and identity development (Subrahmanyam & Greenfield, 2008). Twenge et al. further documented the increasing dominance of digital media in adolescents' daily lives and highlighted the resulting transformation in social interaction patterns (Twenge et al., 2018). Therefore, the integration of social–emotional competencies into virtual curriculum models appears developmentally necessary because students increasingly construct their emotional experiences, social identities, and interpersonal relationships within digital environments.

The findings of the present study are also consistent with Iranian studies emphasizing the importance of adapting educational systems to cyberspace realities. Amini Harandi stressed the necessity of curriculum planning responsive to digital educational conditions and students' online learning experiences (Amini Harandi, 2023). Narenji Sani et al. similarly identified emotional adaptability, communication competence, and digital responsibility as essential learner competencies in electronic learning environments (Narenji Sani et al., 2021). Khairi Hussein Al-Bouhayami also emphasized the necessity of strategic interventions for reducing the negative effects of cyberspace on adolescents (Khairi Hussein Al-Bouhayami, 2023). The current study contributes to this body of research by presenting and validating a comprehensive curriculum model capable of integrating social–emotional competencies into virtual education.

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Another important implication of the findings concerns the relationship between social–emotional competence and academic functioning. Mella et al. demonstrated that socio-emotional competencies positively influence school adjustment and academic performance among adolescents (Mella et al., 2021). Parker also reported significant relationships between social–emotional learning and school disciplinary outcomes (Parker, 2020). The present study suggests that virtual curriculum models emphasizing emotional competence may improve not only students' psychosocial well-being but also their engagement, participation, motivation, and academic performance in digital learning environments. Since cyberspace learning frequently requires higher levels of self-regulation, emotional control, and communication skills, students possessing stronger social–emotional competencies may adapt more successfully to online educational systems.

Overall, the findings of the present study demonstrate that effective participation in cyberspace requires educational systems to adopt comprehensive curriculum models integrating emotional, social, ethical, technological, and pedagogical dimensions simultaneously. The validated curriculum model emphasizes that students' successful functioning in virtual environments depends not only on technological literacy but also on emotional regulation, social competence, collaborative interaction, ethical awareness, and psychologically supportive learning conditions. These findings reinforce the growing educational consensus that social–emotional learning should constitute a fundamental dimension of curriculum planning in contemporary digital education.

One of the limitations of the present study was that the statistical population was restricted to educational specialists, curriculum planners, and educational group heads in East Azerbaijan Province, which may limit the generalizability of the findings to other educational contexts and geographical regions. Another limitation was the use of self-report questionnaires, which may be influenced by participants' subjective perceptions and social desirability bias. In addition, the cross-sectional nature of the study limited the possibility of examining long-term changes in students' social–emotional competencies and curriculum effectiveness in virtual environments.

Future research is recommended to examine the effectiveness of the proposed curriculum model through experimental and longitudinal studies involving students directly in virtual learning settings. Comparative studies across different educational levels, cultural contexts, and demographic groups may also provide deeper insights into the adaptability and applicability of the model. Researchers may further investigate the relationship between social–emotional curriculum components and specific educational outcomes such as academic achievement, digital citizenship, psychological well-being, and cyberbullying prevention. Qualitative studies exploring students' lived experiences in virtual learning environments could additionally enrich understanding of curriculum effectiveness in cyberspace.

From a practical perspective, educational policymakers and curriculum developers should integrate social–emotional learning components systematically into virtual and blended learning curricula. Schools and educational institutions should provide structured opportunities for emotional skill development, collaborative online interaction, digital ethics education, and responsible technology use. Teacher training programs should also emphasize instructional strategies for fostering social–emotional competencies in digital learning environments. Furthermore, educational systems should design psychologically supportive virtual learning environments that promote communication, empathy, emotional safety, and constructive online participation among students.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

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Ethical Considerations

All procedures performed in studies involving human participants were under the ethical standards of the institutional and, or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

References

Abdollahnejad, A., Maarefvand, M., & Latifian, M. (2022). Effective Social-Emotional Competence in the Cyberbullying-Cybervictimization Experience Among Iranian Secondary School Students. *Social Work Quarterly*, *11*(4), 44-52.

Amini Harandi, M. (2023). Evaluation of the Position of After-School Curriculum Planning in Cyberspace for Students. Sixth International Conference on New Approaches to Management, Psychology and Humanities in the 21st Century, Tehran.

Best, P., Manktelow, R., & Taylor, B. (2014). Online Communication, Social Media and Adolescent Wellbeing: A Systematic Narrative Review. *Children and Youth Services Review*, *41*, 27-36. https://doi.org/10.1016/j.childyouth.2014.03.001

Brackett, M. A., Rivers, S. E., & Salovey, P. (2019). Emotional Intelligence and Learning: The Importance of Emotional Competence in the Classroom. *Educational Psychologist*.

Chen, M., Wang, Y., & Shen, G. (2021). Emotional and Social Competencies for Digital Citizenship: A Curriculum Framework for Secondary Education. *Journal of Educational Technology Development*, *23*(2), 45-60.

Cohen, J. (2021). Emotional and Social Competencies in Online Education. *Journal of Distance Education*, *35*(1), 102-119.

Collaborative for Academic, S., & Emotional, L. (2020). *CASEL's SEL Framework*. https://casel.org/fundamentals-of-sel/what-is-the-casel-framework/

DePaoli, J. L., Atwell, M. N., & Bridgeland, L. (2017). *Ready to Lead: A National Principal Survey on How Social and Emotional Learning Can Prepare Children and Transform Schools*.

Driscoll, J. (2021). *Social and Emotional Learning in Virtual Environments*. Routledge.

Enayati Novinfar, A., Gholamali, M., & Seraji, F. (2018). Presenting a Model for Implementing a Virtual Curriculum Based on a Collaborative Learning Approach in Higher Education. *Educational Measurement and Evaluation Studies*, *8*(23), 117-152.

Fewkes, C. N. (2017). *The Effectiveness of Strong Start Curriculum on the Social Emotional Competence of Second Grade Students* Rowan University].

Fisher, D. P., Brotto, G., Lim, I., & Southam, C. (2025). The Impact of Timely Formative Feedback on University Student Motivation. *Assessment & Evaluation in Higher Education*, 1-10. https://doi.org/10.1080/02602938.2025.2449891

Garrison, D. R. (2020). *E-Learning in the 21st Century: A Framework for Research and Practice*. Routledge.

Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2020). Enhancing School-Based Prevention and Youth Development Through Coordinated Social, Emotional, and Academic Learning. *American psychologist*, *58*(6-7), 466. https://doi.org/10.1037/0003-066X.58.6-7.466

Heidari, M., & Dehghani, N. (2021). Review and Evaluation of Curriculum Design Performance Appropriate to Cyberspace. National Conference on Professional Research in Psychology and Counseling with a Teacher-Perspective Approach, Minab.

Junco, R. (2012). Too Much Face and Not Enough Books: The Relationship Between Multiple Indices of Facebook Use and Academic Performance. *Computers in human Behavior*, *28*(1), 187-198. https://doi.org/10.1016/j.chb.2011.08.026

Khairi Hussein Al-Bouhayami, J. (2023). *Strategies for Countering the Negative Effects of Cyberspace on Adolescents from Experts' Perspectives* University of Religions and Denominations].

Klickman, M. S. (2007). *Social Competence in Children and Adolescents*. Avaye Noor.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the Digital Age: A Critical Review and Meta-Analysis of Cyberbullying Research Among Youth. *Psychological bulletin*, *140*(4), 1073-1137. https://doi.org/10.1037/a0035618

Marin-Lopez, I., Zych, I., Ortega-Ruiz, R., Hunter, S. C., & Llorent, V. J. (2020). Relations Among Online Emotional Content Use, Social and Emotional Competencies and Cyberbullying. *Children and Youth Services Review*, *108*, 104647. https://doi.org/10.1016/j.childyouth.2019.104647

Mella, N., Pansu, P., Batruch, A., Bressan, M., Bressoux, P., Brown, G., & Desrichard, O. (2021). Socio-Emotional Competencies and School Performance in Adolescence: What Role for School Adjustment? *Frontiers in psychology*, *12*, 640661. https://doi.org/10.3389/fpsyg.2021.640661

Narenji Sani, F., Pourkarimi, J., & Tizhoosh Jalali, F. (2021). Identifying and Examining the Competencies Required by Learners in an Electronic Context. *A New Approach in Educational Management*, *12*(2), 1-22.

Nateghi, F., Aroufi, Y., & Heidari, S. (2017). Explaining the Neglected Level of the Experienced Curriculum in the Course Methods and Techniques of Teaching. *Research in Curriculum Planning*, *14*(28), 39-51.

Parker, S. B. (2020). *A Comparative, Relational Study of Social-Emotional Learning and School Discipline by Race* American College of Education].

Pourbaghban, S., Mahmoudi, F., Fathi Azar, E., & Kouhestani, B. (2020). A Virtual Reality-Based Curriculum Model in Science Education. *Theory and Practice in Curriculum*, *8*(16), 41-118.

Rodriguez-Alvarez, J. M., Yubero, S., Navarro, R., & Larranaga, E. (2021). Relationship Between Socio-Emotional Competencies and the Overlap of Bullying and Cyberbullying Behaviors in Primary School Students. *European Journal of Investigation in Health, Psychology and Education*, *11*(3), 686-696. https://doi.org/10.3390/ejihpe11030049

Rogow, F. (2019). Teaching Media Literacy in Less Than an Hour. *Journal of Media Literacy Education*, 72-74. http://files.eric.ed.gov/fulltext/EJ1095255.pdf

Seifi, P., & Abbasi, M. (2016). The Relationship Between Culture and Curriculum with Emphasis on Opportunities and Threats of Cyberspace. World Conference on Psychology and Educational Sciences, Law and Social Sciences at the Beginning of the Third Millennium, Shiraz.

Sinai, S. A., & Mousavi Mashhadi, S. (2021). A Sociological Analysis of the Effect of Cyberspace on Students' Academic Achievement. *Innovation and Value Creation*, *10*(20), 95-106.

Subrahmanyam, K., & Greenfield, P. (2008). Online Communication and Adolescent Relationships. *The Future of Children*, *18*(1), 119-146. https://doi.org/10.1353/foc.0.0006

Twenge, J. M., Martin, G. N., & Spitzberg, B. H. (2018). Trends in US Adolescents' Media Use, 1976-2016: The Rise of Digital

Media, the Decline of TV, and the (Near) Demise of Print. *Psychology of Popular Media Culture*, *8*(4), 329. https://doi.org/10.1037/ppm0000203

Zych, I., Beltran-Catalan, M., Ortega-Ruiz, R., & Llorent, V. J. (2018). Social and Emotional Competencies in Adolescents Involved in Different Bullying and Cyberbullying Roles. *Revista de Psicodidáctica (English ed.)*, *23*(2), 86-93. https://doi.org/10.1016/j.psicoe.2017.12.001

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