

THE REALITY OF DEVELOPING SOCIAL INTERACTION SKILLS FOR CHILDREN AGED 5–6 WITH MILD INTELLECTUAL DISABILITIES THROUGH STEAM ACTIVITIES

Ho Sy Hung¹, Nguyen Phuong Thao², Nguyen Thi Cam Van², Vu Thi Ha², Ngo Thi Thao², Nguyen Thi Thanh Tam²

Received: 12 March 2026/ Accepted: 20 July 2026/ Published: 30 July 2026

<https://doi.org/10.70117/hdujs.E11.7.2026.1192>

Abstract: *This study examines the current state of social interaction skill education for children aged 5–6 with mild intellectual disabilities through STEAM activities in preschools. Employing a mixed-methods research approach involving 125 preschool teachers, the findings reveal a significant discrepancy between perception and practice. While educators demonstrate high awareness of the role of STEAM activities, their pedagogical efficacy in organizing activities and providing practical support remains limited, particularly regarding the differentiation of tasks for children with disabilities. On the students' side, social interaction skills range from low to near-average levels. While these children perform relatively well in foundational skills such as sharing materials and coordinated actions, they face substantial challenges in proactive communication and conflict resolution. The research highlights a "theory-practice gap" and emphasizes the urgent need for structured interaction scripts and visual supports in inclusive education settings.*

Keywords: *Mild intellectual disability, social interaction skills, STEAM education, inclusive education, preschool children*

1. Introduction

Developing social interaction skills for preschool children plays a pivotal role in their overall development. Within the framework of the pilot Early Childhood Education (ECE) curriculum for the 2026-2027 period, educational activities are mandated to be organized through an integrated and inclusive orientation, tailored to the developmental characteristics, needs, and individual capacities of each child. Furthermore, the care and education process requires synergistic collaboration between families, schools, and the community to establish a safe, supportive, and friendly environment conducive to holistic growth. Consequently, the primary responsibility for educators is to cultivate a positive learning environment that fosters social interaction skills, thereby equipping children with the necessary foundations for transitioning to subsequent educational levels. However, children with mild intellectual disabilities (MID) in inclusive settings often encounter significant obstacles in social interaction—a critical factor for school readiness and social integration, particularly during the transition to primary school at ages 5-6 [7]. Deficits in

¹Faculty of Early Childhood and Primary Education, Hong Duc University; Email: hosyhung@hdu.edu.vn

²K26 students in the Bachelor's Program in Early Childhood Education, Faculty of Early Childhood and Primary Education, Hong Duc University

cognition, language, and behavioral self-regulation hinder their ability to communicate, share, cooperate, and engage in group activities. These social interaction impairments not only impede classroom integration but also exert long-term impacts on the children's socio-emotional development and academic outcomes [4]. Consequently, fostering social interaction skills for children with MID during the preschool years is considered a foundational educational mandate [5]. Although the current ECE curriculum is designed with an open framework, allowing teachers flexibility to tailor activities to individual needs, practical evidence suggests that educators still struggle to select and implement effective strategies for developing these skills within inclusive environments [4]. This underscores the urgent need for integrated, experiential educational approaches that maximize interaction opportunities for these children.

STEAM education is recognized as an integrated approach that fosters scientific thinking, problem-solving, creativity, and collaborative skills through experiential activities and teamwork for preschool children [9, 17]. In inclusive settings, STEAM is particularly suitable for children with special educational needs (SEN) due to its multisensory learning characteristics, concrete tasks, and open interactive environments. When implemented through the Universal Design for Learning (UDL) framework, STEAM activities can enhance engagement levels and provide robust learning support for children with disabilities [16]. For children with MID, appropriately designed STEAM activities facilitate cognitive development, simple problem-solving, communication, and social cooperation; however, the effectiveness largely depends on the teacher's role in scaffolding and instructional adjustment. Furthermore, numerous studies indicate a positive correlation between participation in STEAM activities and the development of social interaction skills in preschoolers. The inherent nature of collaboration, idea sharing, and task coordination within groups provides a fertile ground for children to practice communication and regulate social behaviors. The 'Arts' component in STEAM further supports emotional expression, active listening, and respect for diverse perspectives, contributing to socio-emotional competence [13]. For children with MID, STEAM activities-characterized by high visibility, clear structure, and specific objectives-create purposeful interactive contexts that help maintain engagement and increase communication opportunities. Research also emphasizes the critical role of teachers through strategies such as small-grouping, role assignment, and the use of visual supports to catalyze peer interaction.

In Vietnam, preliminary studies indicate that STEAM not only fosters cognitive development and problem-solving abilities but also holds significant potential for enhancing communication and social interaction for children with ID in inclusive environments [8,11]. Nevertheless, specialized research on organizing STEAM activities specifically designed to develop social interaction skills for children with MID, particularly those aged 5-6, remains scarce. Most existing literature focuses on evaluating intervention efficacy, whereas descriptive investigations of the actual inclusive classroom context have not received adequate attention. To address this research gap, the present study was conducted to answer the following questions:

- (1) What is the current level of social interaction skills among children with MID aged 5-6 during STEAM activities in preschools?
- (2) What is the current status of social interaction skill education for children with MID aged 5-6 through STEAM activities?

On this basis, the study aims to provide an empirical foundation for future research directions in proposing appropriate educational measures, thereby contributing to the effectiveness of inclusive education for children with MID within the context of contemporary educational reform

2. Methodology

2.1. Participants

2.1.1. Survey Sample

The study involved 125 preschool teachers (100% female) currently working in inclusive classrooms with children with MID in Thanh Hoa Province. Thanh Hoa was selected because its diverse geographical contexts, including mountainous, rural/delta, and urban areas, provide varied educational conditions for examining inclusive STEAM practices. The participants were selected based on their direct experience working with children with MID, enabling the study to capture relevant practical experiences and challenges in social interaction education through STEAM activities.

2.1.2. Observation and Assessment Sample

To evaluate social interaction skills in practice, the study purposively selected 30 children with MID aged 5-6 attending inclusive preschools. These children were the primary subjects for:

Direct Observation: Monitoring behaviors during STEAM activities.

Skill Assessment: Evaluating performance based on the 15 established criteria.

2.1.3. Interview Sample

A sub-sample of 12 teachers (from the 125 surveyed) was selected for semi-structured interviews to provide deeper insights into the challenges of teaching social skills.

2.2. Research Instruments

The assessment tool was developed by the authors based on 15 criteria for children's social interaction skills within STEAM activities. This set of criteria was developed by adapting and inheriting from established social skill rating scales for preschool children, including;

Gresham & Elliott's "Social Skills Improvement System (SSIS) - Rating Scales" [10], Merrell, Kenneth W's "Preschool and Kindergarten Behavior Scales - 2 (PKBS-2)" [14].

(1)Teacher Questionnaire: The primary instrument was a structured questionnaire consisting of two parts: general demographic information and a system of 5-point Likert scales (ranging from 1 = Strongly Disagree to 5 = Strongly Agree). The scale comprised 09 observed variables across three dimensions: Perception of STEAM's role (03 variables); Competence in designing STEAM activities (03 variables); and Skills in guiding and supporting children (03 variables). Reliability testing yielded Cronbach's Alpha coefficients ranging from 0.918 to 0.958, with item-total correlation coefficients exceeding 0.3, ensuring high internal consistency.

(2) Observation Tool: Social interaction skills were assessed through structured observations of children during STEAM activities. The tool evaluated 05 groups of skills across five proficiency levels, from "no manifestation" to "well-manifested".

(3) In-depth Interviews: Semi-structured interviews were conducted with selected teachers to gain deeper insights into their perceptions, practical experiences in organizing STEAM activities for children with MID, and the children's social interaction behaviors exhibited during these activities.

2.3. Procedure

This study employed a mixed-methods research design. Quantitative data were collected via online surveys (Google Forms) and direct administration at early childhood education centers. Concurrently, classroom observations and in-depth interviews were conducted to complement and validate the survey findings (triangulation). Post-collection, data underwent screening, cleaning, and coding prior to analysis.

2.4. Data Analysis

Quantitative data were processed using SPSS. Descriptive statistics, including mean (M) and standard deviation (SD), were used to describe teachers' perceptions and instructional competencies as well as children's social interaction skills. Cronbach's Alpha was used to assess the internal consistency of the teacher questionnaire. Qualitative interview data were analyzed thematically to clarify and contextualize the quantitative findings.

2.5. Research Ethics

The study strictly adhered to the principles of voluntary participation, anonymity, and data confidentiality. All data were used solely for scientific purposes, ensuring no adverse effects on the participating teachers, children with MID, or the pedagogical environment.

3. Results and discussion

3.1. Preschool Teachers' Perceptions of Social Interaction Skill Education for Children with Mild Intellectual Disabilities through STEAM Activities

Table 1. Descriptive Statistics of Teachers' Perceptions, Design Competence, and Instructional Skills in STEAM-based Social Interaction Skill Education for Children with MID Aged 5-6

Items		Mean	SD	Min-Max
1) Perception of STEAM's role in social interaction development		4.35	0.52	3.3-5.0
	STEAM as an optimal environment for practical social skills training	4.42	0.49	3-5
	Social skill development as equally important as academic goals	4.28	0.61	3-5
	STEAM enhancing confidence in peer integration for children with MID	4.35	0.55	3-5
2) Competence in designing integrated STEAM activities		3.62	0.68	2.0-5.0
	Designing projects requiring mandatory collaboration (min. 2 kids/group)	3.55	0.72	3-5

	Selecting familiar STEAM themes to create natural communication contexts	3.85	0.65	3-5
	Incorporating interaction scripts (apologizing, borrowing, praising) into lesson plans	3.46	0.75	3-5
3) Instructional and practical support skills		3.05	0.82	3.0 – 5.0
	Integrating hypothetical situations to guide social communication during projects	3.12	0.85	2-5
	Differentiating STEAM tasks to match the ability of children with MID	2.95	0.91	2-5
	Utilizing visual supports (images, symbols) for group rule compliance	3.08	0.78	2-5

Descriptive statistical results in Table 01 reveal a pronounced distinction in preschool teachers' perceptions regarding the integration of STEAM education to foster social interaction skills for children with MID aged 5-6. Regarding the perception of STEAM's role, there was a remarkably high level of consensus, with an overall mean score of $M = 4.35$ ($SD = 0.52$). Notably, educators expressed strong confidence in STEAM activities as an optimal environment for children with MID to practice real-world social interaction skills ($M = 4.42$). This finding aligns with the assertions of Park and Kim (2022), who argued that when teachers maintain a robust belief in the inclusivity of STEAM, they tend to facilitate more opportunities for children with special needs to engage in group-based activities [12]. Furthermore, the teachers' affirmation that social skills are of equal value to academic knowledge ($M = 4.28$) reflects an alignment with Bandura's (1997) self-efficacy theory, wherein positive perception serves as a core psychological driver for implementing complex educational interventions [3].

Nevertheless, pedagogical competence in designing integrated STEAM activities recorded a significantly lower mean score ($M = 3.62$, $SD = 0.68$). Although teachers tend to prioritize familiar themes such as 'Family' or 'Animals' to create communication contexts ($M = 3.85$), the operationalization of specific interaction scripts (e.g., apologizing, borrowing materials) within their lesson plans remains limited ($M = 3.46$). This finding indicates that educators still struggle to weave behavioral objectives into the Engineering Design Process (EDP). Qualitative insights from in-depth interviews further illuminate this issue; one teacher shared: *'We often prioritize designing engaging scientific experiments, while social interaction situations are usually handled reactively as they arise rather than being anticipated and intentionally established.'* This current state underscores the urgent necessity for more concrete STEAM instructional frameworks, such as the conceptual toolkit for STEAM teaching practices proposed by Quigley et al. (2020) [15].

The most significant challenge was found in instructional and practical support skills, which recorded the lowest overall mean ($M = 3.05$, $SD = 0.82$). In particular, teachers reported relatively limited competence in differentiating STEAM tasks according to the abilities of children with MID ($M = 2.95$, $SD = 0.91$) and using visual supports such as pictures and symbols to facilitate compliance with group rules ($M = 3.08$, $SD = 0.78$). These findings suggest that the main difficulty lies not in teachers' recognition of the importance of inclusion, but in translating this awareness into concrete instructional adaptations.

Interview data indicate two interrelated explanations. First, teachers have limited opportunities for professional development that specifically address differentiated instruction, Universal Design for Learning (UDL), and the adaptation of STEAM tasks for children with intellectual disabilities. As a result, teachers may understand the principle of inclusion but lack practical procedures for reducing task complexity, providing alternative response modes, or adjusting group roles while maintaining the core learning objectives. Second, teachers face pressure to maintain the common pace and expected outcomes of whole-class STEAM activities. When a child with MID cannot complete a task at the same pace as peers, teachers may intervene directly or complete part of the task for the child rather than modify the task itself. As one teacher explained, *“When children with MID cannot keep up with the group’s pace, we tend to complete the tasks for them to stay on schedule with the lesson plan.”* This practice may preserve lesson progression but can unintentionally reduce children’s opportunities for independent participation and peer interaction.

The relatively limited use of visual supports may be explained by the same practice-oriented constraints. Visual cards, symbols, step-by-step pictures, and role cues require advance preparation and systematic integration into the activity design. In a STEAM activity where teachers must simultaneously manage materials, group work, safety, and learning objectives, such supports may be overlooked or introduced only after interaction difficulties emerge. Therefore, the findings point to a need to move from reactive support toward planned pedagogical scaffolding, in which task differentiation and visual supports are embedded in the STEAM lesson from the outset.

3.2. Current Manifestations of Social Interaction Skills in Children with MID through STEAM Activities

Table 2. Interpretation of Mean Scores for Children’s Social Interaction Skills

Mean score	Interpretation
0.00-0.80	No manifestation/Very low
0.81-1.60	Low
1.61-2.40	Moderate
2.41-3.20	High
3.21-4.00	Very high

Note: The mean scores were interpreted on a 0-4 scale: 0.00–0.80 = no manifestation/very low; 0.81-1.60 = low; 1.61-2.40 = moderate; 2.41-3.20 = high; and 3.21-4.00 = very high.

Table 3. Descriptive Statistics of Social Interaction Skill Dimensions among Children with MID (N = 30)

No.	Skill Dimensions	Mean	SD
1	Social Communication	2.04	0.87
2	Group Cooperation	2.38	0.72
3	Listening and Responding	2.32	0.59
4	Social Conflict Resolution	2.19	0.86
5	Behavioral Self-regulation	2.36	0.89

The mean scores for the five social interaction skill dimensions ranged from 2.04 to 2.38 on a 0-4 scale, placing all dimensions within the moderate level according to the interpretation framework presented in Table 02. However, the scores were concentrated toward the lower end of this range, suggesting that the children had not yet demonstrated stable and proactive social interaction across different STEAM situations. Group Cooperation recorded the highest mean score ($M = 2.38$), followed by Behavioral Self-regulation ($M = 2.36$) and Listening and Responding ($M = 2.32$), whereas Social Communication had the lowest score ($M = 2.04$). This pattern suggests that children were relatively more capable of participating in structured tasks involving coordinated actions and clear procedures than initiating spontaneous communication or managing complex social situations. Such characteristics are consistent with the social-adaptive profile of children with MID described in the AAIDD framework [5], which highlights difficulties in social communication, behavioral regulation, and navigating complex social situations. Similarly, research on social competence among young children with disabilities indicates that systematic support is often required to facilitate effective participation in inclusive educational environments.

The relatively higher scores for cooperation, self-regulation, and listening may also be related to the concrete and structured characteristics of STEAM activities. Experiential learning involving material manipulation, shared tasks, and teamwork can provide repeated opportunities for children to participate in basic social interactions. In inclusive contexts, intentionally designed STEAM activities have likewise been reported to increase opportunities for collaboration and social engagement among children with intellectual disabilities. However, the lower score for Social Communication indicates that participation in a collaborative activity does not necessarily lead to spontaneous communication. Children may successfully perform a shared task while still requiring explicit prompts to initiate communication, express ideas, or respond appropriately to peers.

Conversely, Social Communication and Social Conflict Resolution recorded lower mean scores, reflecting the children's difficulties in initiating interactions, verbalizing ideas, and navigating disputes that arise during activities. This finding is consistent with research on social skill development in children with MID, which identifies expressive language, social reasoning, and flexible behavioral adjustment as the most significant areas of limitation. Studies on socio-emotional interventions in early childhood also emphasize that skills such as proactive communication and conflict resolution must be taught explicitly through behavioral modeling, step-by-step guidance, and scaffolded practice, rather than relying solely on a general learning environment.

Furthermore, the relatively large standard deviations across skill groups indicate significant inter-individual differences within the same age group, reflecting the heterogeneity in social skill development among children with MID. This observation aligns with recent research suggesting that the development of social competence in children with intellectual disabilities is influenced by a complex interplay of individual and environmental factors, resulting in a broad diversity of skill manifestations. This reinforces the argument that educational interventions in inclusive settings must be designed with an individualized approach (differentiation) rather than a 'one-size-fits-all' application.

In summary, the integrated findings demonstrate that STEAM activities provide a favorable context for structured forms of social interaction, such as group cooperation and procedural compliance. However, these environments alone are insufficient to catalyze complex social skills, particularly proactive communication and conflict resolution. This suggests that while the hands-on and collaborative nature of STEAM naturally facilitates physical participation and shared task execution, it does not inherently guarantee the development of sophisticated social-emotional competencies without targeted pedagogical interventions

Table 4. *Descriptive Statistics of Social Interaction Skills among Children with MID through STEAM Activities in Preschools (N=30)*

No.	Component Skills	Mean	SD
1	Initiating communication	2.17	0.99
2	Expressing ideas	2.10	0.92
3	Explaining actions	1.87	0.78
4	Sharing materials	2.50	0.94
5	Coordinated action	2.47	0.90
6	Task participation/distribution	2.17	1.02
7	Paying attention to speakers	2.60	0.72
8	Appropriate responding	2.23	0.63
9	Turn-taking in conversation	2.13	0.57
10	Recognizing conflicts	2.33	0.84
11	Finding solutions	1.97	0.89
12	Accepting agreements	2.27	0.94
13	Emotional control	2.33	0.92
14	Adhering to group rules	2.57	0.97
15	Supporting peers	2.17	0.87

The survey results on the social interaction skills of children with MID aged 5–6 reveal that among the various skill sets, the children demonstrate relatively proficient performance in foundational social skills, such as paying attention to speakers, adhering to group rules, sharing materials, and coordinated actions. In contrast, more complex skills—including explaining actions, finding solutions, and expressing ideas—remain significantly limited. This finding aligns with the prevailing perspectives on early childhood social development documented in numerous international studies.

Research on social competence development in early childhood has established that social-cognitive abilities and social behaviors during this stage encompass cognitive, personal-regulatory, emotional, and behavioral components, all of which are essential for effective peer integration and environmental interaction. Scholars emphasize that repetitive practice and the transfer of skills across diverse contexts are pivotal factors in the formation of social competence among preschool children.

A comprehensive review of social skill interventions for preschool children, including those at risk for social-emotional difficulties, demonstrates that curriculum designs characterized by high structure, repetition, and a direct focus on social interaction

skills yield a relatively large moderate effect size (effect size ≈ 0.54) in improving positive social behaviors. This statistical evidence underscores the potential of structured STEAM programs as a viable pedagogical framework for enhancing the social integration of children with MID. This suggests that specific activities like STEAM, if structured, can support social skills development in children with mild intellectual disabilities in a similar way to preschool children in general.

Furthermore, existing literature emphasizes the pivotal role of educators in fostering peer-to-peer social interactions, particularly through guided play and classroom management strategies that enable children to practice cooperation, sharing, and positive communication skills. The findings of the current study align with this perspective, as evidenced by the higher proficiency in skills such as coordinated action and material sharing within the STEAM context—an environment that inherently provides extensive opportunities for collaborative engagement and group-based interaction.

Additionally, the correlation between social skills and other developmental factors, such as academic self-esteem and teacher-child relationships, has been reported in recent large-scale studies of preschoolers. The evidence suggests that proficient social skills can bolster academic self-esteem and enhance the quality of teacher-child interactions, thereby mitigating challenging behaviors and facilitating more effective inclusion within the learning environment [6]. This indicates that the development of social interaction skills is not only beneficial at the level of peer-to-peer engagement but also exerts a broader influence on integrated aspects such as socio-emotional well-being and academic performance.

Another international research trend emphasizes the home-school partnership in the development of children's social skills, particularly for those with special educational needs. This line of research highlights that close coordination between families and early childhood education institutions is a pivotal factor in providing optimal support for social development. Such findings suggest a more holistic intervention framework that extends beyond classroom-based STEAM activities to include comprehensive family involvement [2].

In summary, the research results indicate that children with MID aged 5-6 years participating in STEAM activities in preschools demonstrate proficiency in foundational social skills, such as listening, sharing, and coordination. However, they remain limited in complex skills, including explaining actions, finding solutions, and expressing ideas. These findings are not only consistent with international research on social skill development in preschoolers but also highlight the role of structured learning environments—such as STEAM—in supporting social development. Furthermore, the results underscore the necessity for highly guided activities (scaffolded instruction) to provide children with more opportunities to practice advanced social-cognitive skills.

4. Conclusion

This study examined the current state of social interaction skill education for children with MID aged 5-6 through STEAM activities in inclusive preschools. Three main findings emerged.

First, teachers demonstrated a high level of awareness of the role of STEAM in promoting social interaction ($M = 4.35$), but their competence in designing integrated activities ($M = 3.62$) and providing practical instructional support ($M = 3.05$) was

considerably lower. The most evident limitations concerned task differentiation for children with MID and the use of visual supports. Interview findings suggest that these difficulties are associated with both limited specialized professional development and pressure to maintain the pace of whole-class activities.

Second, children with MID demonstrated moderate levels of social interaction skills across all five dimensions ($M = 2.04\text{--}2.38$ on a 0–4 scale). They performed relatively better in structured and concrete behaviors, such as attending to speakers, following group rules, sharing materials, and coordinating actions, but showed greater difficulty in explaining actions, expressing ideas, initiating communication, finding solutions, and resolving social conflicts.

Third, the findings indicate that the collaborative and experiential nature of STEAM creates valuable opportunities for social participation but is insufficient by itself to develop more complex interaction skills. For children with MID, structured interaction scripts and visual prompt cards should therefore be incorporated as planned pedagogical scaffolds, helping children move from passive or task-oriented participation toward active communication, negotiation, and collaborative problem solving.

From an applied perspective, preschool teacher professional development should include specific modules on Universal Design for Learning (UDL) and an adapted Engineering Design Process (EDP) for inclusive STEAM education. Such training should focus on practical competencies, including task differentiation, role assignment, visual scaffolding, interaction scripting, and flexible adjustment of STEAM activities according to children's individual abilities. These measures may provide teachers and educational managers with a more concrete pathway for translating inclusive STEAM principles into everyday classroom practice.

References

- [1] American Association on Intellectual and Developmental Disabilities (2021), *Intellectual disability: Definition, diagnosis, classification, and systems of supports* (12th ed.). AAIDD.
- [2] Anh, N. T. K. (2023), *Overview of research results on the coordination between preschool educational institutions and parents in educating social skills for preschoolers with autism spectrum disorder*. Hong Bang International University Journal of Science, 10:27-42. [In Vietnamese].
- [3] Bandura, A. (1997), *Self-Efficacy: The Exercise of Control*. W.H. Freeman and Company.
- [4] Bian, L., Leslie, S. J., & Cimpian, A. (2017), *Gender stereotypes about intellectual ability emerge early and influence children's interests*, Science, 355(6323):389-391.
- [5] Brenneman, K., Stevenson-Boyd, J., & Frede, E. C. (2009), *Math and science in preschool: Policies and practice*, National Institute for Early Education Research.
- [6] Cansu Tutkun, & Meral, S. E. (2025), *Preschool children's social skills, problem behaviors, academic self-esteem and teacher-child relationship: A serial mediation model*, Frontiers in Psychology, 16, 1-11.
- [7] Department of Education and Training (2026), *Pilot preschool education program from the 2026-2027 academic year (Approved under Decision No. 388/QĐ-BGDĐT dated February 12, 2026, by the Minister of Education and Training)*. Ministry of Education and Training. [In Vietnamese].

- [8] Duong, V. T., & Nguyen Thi Cam Huong (2022), *Application of the Finger Math mental arithmetic method in activities familiarizing children with some elementary mathematical concepts through the STEAM education approach in inclusive preschool classes for children with intellectual disabilities*, Hanoi National University of Education Journal of Science, 67(5A):123-132. [In Vietnamese].
- [9] Garcia, M., & Peterson, R. (2023), *Inclusive STEAM education and social skill development in children with intellectual disabilities*, International Journal of Inclusive Education, 27(6):589-604.
- [10] Gresham, F. M., & Elliott, S. N. (2008), *Social Skills Improvement System: Rating Scales*, Pearson Assessments.
- [11] Hung, H. S. (2018), *STEAM education approach to support communication skills for mild intellectually disabled 5-6 year old children in preschools*, Hanoi National University of Education Journal of Science, 67(5A):173-182. [In Vietnamese].
- [12] Kim, J., & Park, S. (2022), *Effects of STEAM-based cooperative activities on social interaction skills of children with intellectual disabilities*, Journal of Special Education Research, 45(2):87-102.
- [13] Liao, C., Motter, J. L., & Patton, R. M. (2019), *Tech-savvy girls: Learning 21st-century skills through STEAM digital artmaking*, Art Education, 72(1):29-35.
- [14] Merrell, K. W. (2002), *Preschool and Kindergarten Behavior Scales* (2nd ed.). PRO-ED.
- [15] Quigley, C. F., Herro, D., & Baker, A. (2020), *Conceptualizing STEAM Teaching Practices: A Conceptual Toolkit for Practitioners*, Technology, Knowledge and Learning, 25(2):275-300.
- [16] Wade, C. B. (2023), *STEAM activities in the inclusive classroom: Intentional planning and practice*, Education Sciences, 13(11):1161.
- [17] Wahyuningsih, S. (2020), *STEAM learning in early childhood education: A literature review*, International Journal of Pedagogy and Teacher Education, 4(2):15-19.