

Designing a Role-Play Activity About Social-Emotional Learning for the Indian Context Based on the Integrated Design Framework for Playful Learning

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Abstract: The game design for social-emotional learning (SEL) activities is underexplored worldwide. In particular, there is little research on how to establish best practices for designing SEL games in India. SEL games are vital for children's development, focusing on understanding and managing emotions, building healthy relationships, and making responsible decisions. However, the current state of SEL in India faces several challenges. While a few educational institutions have begun integrating SEL into their curricula, the majority of others remain unaware or lack the resources to implement effective programs. To address this gap, we explored how we can implement game-based learning, in particular, the integrated design framework for playful learning (IDFPL), for SEL in the Indian context. Two pilot tests were conducted with Indian children to assess the appropriateness of such gameplay processes within the cultural context. Six master's students from an Indian university and eighty rural Indian children participated in the game pilot. We conducted four role-play activity sessions by 45 minutes each. The activity included icebreakers, emotional charades, and role-play exercises to encourage the expression and recognition of emotions. A validated Kids Empathy Development Scale (KEDS)-inspired design of this role-play activity in order to engage children to SEL practice and explore the ways to assess their empathy-related skills, including emotion recognition (affective empathy) and ability to understand and explain others' emotions (cognitive empathy). This paper discusses the non-digital design process for Indian rural schoolchildren to teach SEL, lessons learned from designing this game activity, and insights on incorporating affective and sociocultural components of IDFPL into the design process. Pilot tests indicated positive outcomes in enhancing relatedness, observational learning, goal orientation, motivation, interest, and self-esteem among participants. However, hierarchical dynamics between children and adults presented challenges in promoting agency, participatory learning culture, and open social interaction. Additionally, the study emphasizes the need for further empirical research using mixed methods to understand children's engagement with SEL games more deeply. It also suggests developing digital versions of the role-play game, creating a culturally tailored IDFPL for India, and providing guidelines for designing SEL games across diverse cultural contexts.

Keywords: Non-Digital games, Social-Emotional learning, India, Game design framework, Empathy

1. Introduction

Social-emotional learning (SEL) is a crucial aspect of child development. It helps individuals understand and manage emotions, build healthy relationships, and make responsible decisions (Lawlor 2016). There are still challenges with implementing SEL education in school curricula (Jones et al. 2017). Educational game researchers state that games can be used to help teach these skills in effective and engaging ways, using elements like role-play, social interaction, and feedback (Farber 2021). A growing body of research on SEL suggests that games could incorporate the expression of emotions (Nikolayev et al. 2016) to foster self-awareness, social interaction, and resilience. (Shrinivasa et al. 2018; Selman 2003; Hughes 2009; Hormek 2004; Norris 2003; Diamond 2012) Many SEL games include acting, guessing, and expressing emotions (Frey et al., 2019) to build emotional vocabulary and recognition skills (Hoing 1982). Such games may provide a safe space to explore emotions, foster empathy for others, and learn strategies to manage emotions and build relationships (Van Mechelen 2016; Joronen et al. 2011; Walker et al. 2019; Xavier et al. 2022; Craig 2016), which can lead to improving classroom behavior, reducing anxiety, and strengthening friendships (Webster et al., 2004). Indian education is only starting to move toward integrating SEL through playful activities (Chatterjee et al., 2020; Farber, 2021). While India's booming gaming industry holds potential for SEL development (Mukund et al. 2022), the scientific approach to tailoring the educational game design to the Indian context is under-explored. Kam (2009) conducted a study with Indian middle school children and found that the games designed in Western countries failed to match local children's understanding and needed alteration adapted to local social-cultural contexts (Kam 2009). De Jong suggests that there is a cultural impact on the dynamics of game scenarios, communication styles, problem-solving approaches, and emotional expressions. Traditional Indian games like Kabaddi and Ludo have the potential to promote valuable SEL skills through teamwork, communication, and

strategic thinking (Rohit 2013; Khan et al. 2016). This suggests that using culturally relevant game design and incorporating Indian context or art forms can improve engagement and learning (Kumar et al 2010).

Playing games has the potential to develop essential skills like problem-solving, especially for young children entering primary school (Akcaoglu 2014; Artut 2015; Nizaruddin et al.2017) For example, studies have shown success in using non-digital games with frameworks like ProSkiND to improve math skills in preschoolers (Anis et al. 2022). However, the majority of game design frameworks for learning are focused on cognitive aspects of education by considering learning goals, mechanics, and engagement (Martin 2018). In contrast, Plass et al. created a theoretical framework (IDFPL) that incorporates social interaction to enhance the learning experience (Plass et al. 2014). This framework considers cognitive (intellectual challenges), affective (emotions and motivation), and socio-cultural (social interaction and cultural context) aspects of learning. However, it was developed in the US and not in the Indian cultural context. Our paper focuses on addressing the research gap in establishing the practices for designing SEL games for the Indian sociocultural context. This paper shares 1) a description of the design process of a non-digital game for Indian rural school children to teach SEL; 2) lessons learned on designing this game; and 3) insights on how affective and social-cultural components of the IDFPL can be incorporated into such a design process. We specifically addressed the following research questions: 1) How should we design affective and social-cultural elements of role-play game activities to support SEL learning for youth in the Indian context? 2) How can we apply the IDFPL to design SEL games for children in rural India?

2. Methods

Design Process. We used the Integrated Design Framework for Playful Learning (IDFPL) (Plass et al. 2014) because it includes the game design process not only cognitively but also affectively and socio-culturally, which is the focus of our design research. As IDFPL is a flexible framework, we were able to apply it for a nondigital role-play game. Our design process was inspired by the SEL game design process conducted within the USA context by Muravevskaia et al. (2023). We intended to adapt this process to the Indian social-cultural context by engaging children in the co-creation of game scenarios. We chose charades as the primary play pattern, which is commonly known in India. We conducted 2 pilot tests with Indian children, which were facilitated by master's students and professionals from an Indian university. The goal of the tests was to ascertain the appropriateness of the game-play process for the cultural context. We observed participants and then asked them to share their feedback, insights, and potential challenges on how they envision this game being applied in an Indian school context. *In this paper, we focused on the design process and only discussed preliminary observations from the pilot tests; in-depth findings from our study will be discussed in subsequent publications.*

PARTICIPANTS. Six master's students from an Indian university and 10 professionals who worked in our lab participated in our game pilot. Also, there were about 80 rural Indian children who took part.

GAME DESCRIPTION. The game activity includes the following parts. *Part 1: Icebreakers:* This part aimed to establish rapport with the children and to prepare them to express and guess emotions. It included questions on their favorite game and why they like it, how they feel, how they understand how others feel, and the importance of knowing how others feel (Muravevskaia, 2023). *Part 2: Emotional Charades.* This part engaged the children in expressing and guessing emotions. *Part 3: Role-Play.* This part expanded emotional charades from a single to a team role-play activity and invited them to think of a scenario and the roles that would represent different specific emotions. After acting out their scenario in front of the audience, the children in the audience are asked to guess the emotions represented by each child, provide the reasons why they think so, and guess the scenario. The questions were inspired by the KEDS (Kids Empathy Development Scale) (Reid, 2013).

3. Design Framework Application and Discussion

To design the activity, we used the aforementioned Integrated Design Framework of Playful Learning (IDFPL) due to its inclusion of sociocultural and affective components, which are relevant to empathy (alongside cognitive components). We used all three parts of IDFPL (i.e., cognitive, affective, and social-cultural). To answer our RQs, we will discuss the affective and social-cultural aspects of the IDFPL, the ways we incorporated them into our game, our lessons learned, and insights on their application in the Indian context. Figure 1 summarized our discussion.

3.1.1 Affective engagement

MOTIVATIONS AND INTEREST. Motivation drives people's desire to play, interact, communicate, and connect with an experience. Sparking curiosity and interest for the player can also help lead to better learning outcomes to help engage players; we chose a well-known, popular play pattern: charades. We also chose to engage players by incorporating collaborative aspects. Players needed to work together by acting out to express emotions as well as understanding what others tried to express. For example, we asked children to form a team of two, assigned emotions each of them would be presenting, and asked them to think of the scenario to act out in front of the others.

EMOTIONAL DESIGN (REPRESENTATION AND INTERACTION). Emotional design in IDFPL refers to the learning environment and how sounds, colors, characters, and game challenges help to convey belongingness, support, and camaraderie (Plass et al. 2014). Although a non-digital playful activity may not have established sounds or color palettes, we created emotional design through the tasks we provided. For instance, in the charade activity we devised, we encouraged players to take on characters such as We also established a sense of connection by having players take turns, act and perform for others, and perform as a group, representing a scenario they collaboratively chose.

GOAL INTERACTION. All games have goals and provide the means to reach those goals. Goals are integral to learning because they help us understand what outcome we need to reach and what success looks like. This helps learners continue to strive through challenges. In our game activities, the facilitators worked with the children to set goals (e.g., to show emotion so that others understand, to guess the emotion presented by others, and to be able to explain how they guessed it). We gradually increased the level of difficulty over time from basic to more complicated emotions and from single-player to teamwork-oriented exercises. Facilitators were saying things like, "Would you like to have a harder task to act out?" This helped to engage children by sparking their curiosity and desire to solve the challenges and by providing a space for agency and independent choices. Using the zone of proximal development approach, we gradually increased the difficulty. During pilots and study sessions, we observed that students and children enjoyed following the activity. However, local children were only comfortable with the direct instructions on what exactly they should do.

SELF-EFFICACY AND SELF-ESTEEM. Self-efficacy is the sense that a person has that they are capable of learning a topic or skill, and self-esteem refers to an overall sense of worth and competence. Self-efficacy connects not only to one's belief in their ability to succeed, but also research has suggested that it affects whether a person can actually succeed. Higher self-efficacy and self-esteem increase motivation, the assurance that one can handle increasingly complex tasks, and the willingness to take on a novel learning experience. We used a familiar play pattern (charades) to provide an immediate sense of comfort to the students. We used simple to increasingly complex challenges so players would feel a sense of mastery as they progressed through the game. We observed that children enjoyed the challenges and progressed well through the tasks (e.g., nodded to the harder tasks, enthusiastically showed the new emotions assigned, and actively guessed).

3.1.2 Sociocultural engagement

SOCIAL INTERACTION DESIGN. This element focuses on designing a learning environment with positive, caring, and empathetic social interactions. It is important to sustain an empathetic culture so that the players are not only engaged in the play but also meet the learning objectives (i.e., gaining empathy skills). We designed the activity to integrate social interactions, peer support, facilitator support, and collaborative play. The facilitators also encouraged constructive peer-to-peer feedback by first modeling examples and caring words and then kindly prompting students to share their ideas, feedback, and support. Children positively perceived kind words and examples; however, we observed that children did not show support and feedback toward each other. It might be caused by cultural and school norms to focus only on the teacher and not peers. We should further explore how to promote social support among children within an Indian cultural context.

3.1.3 Social context

This element acknowledges that the social context of learning matters and how one learns information, skills, and attitudes affect how one practices them (Plass et al. 2014). It suggests that playful learning contexts help enable players to develop social connections and a sense of belongingness, which helps cultivate a community of practice (Plass et al. 2014). The social context for our playful activity included: 1) encouragement for everybody to sit in the circle (the facilitator and children) without dividing roles so all see each other as equals; 2) encouragement for children to collaborate in pairs on the scenario that they are going to perform for others.

This process was intended to improve social connectedness and collaboration. We observed children being able to collaborate well in pairs; however, we noticed that there still was a sense of hierarchy between children and adults. We plan to continue iterating on the design that better matches our intent while acknowledging existing social constraints.

PARTICIPATORY LEARNING CULTURE. In a participatory culture (cite Jenkins), through direct engagement with a community in different situations, one learns the norms, values, and views of that community. Our intention for the activity was to help players directly engage with each other as well as revise and adapt the game to their own lives, interests, and ideas. The players were invited to be co-designers (e.g., collaboratively decide on new scenarios and ways to present them, communicate while expressing and guessing emotions). However, we observed that there were challenges with establishing collaboration with each other in that children were mainly comfortable communicating through the facilitator only. We plan to explore ways to find culturally sensitive ways to address this, for example, through digital facilitation or increasing the comfort of children around the facilitator.

SOCIAL ASPECTS OF AGENCY. Agency is the ability of a learner to have control and ownership over their learning experience and to decide on how to work together and how to journey through an experience. This helps to give a learner a sense of responsibility and creative control over their learning. Through the activity, we gave learners choices within constraints (e.g., to choose their style and performance in portraying emotions and to tell their own stories). We hoped that children would feel a sense of control over how they wanted to express emotions. However, children only followed the facilitator's commands and did not express readiness to perform independently.

OBSERVATIONAL LEARNING. The keyway to learn is by watching others and observing how they act and engage in different roles and skills, for instance, in how others perform an emotion or express a feeling through dramatic play. Watching others gives one insight into how one might also contribute when it is their turn. We had hoped that the facilitators would act as role models and mentor the kids through the game so that children could follow and eventually generate their own ideas. We also had planned that children would observe peers expressing different emotions and learn from each other. Overall, this was effective in that the facilitators provided examples like performing the first expressions of emotion or by sitting on the floor, showing where and how the children needed to sit. The children were also able to see other children acting out different emotions, which provided them with the varied ways we can express emotions. For instance, each child expressed sadness in different ways, which encouraged variations of expression. Also, one child started using body language and gestures, which encouraged other children to do so. Watching others gives one insight into how one might also contribute when it is their turn. We had hoped that the facilitators would act as role models and mentor the kids through the game so that children could follow and eventually generate their own ideas. We also had planned that children would observe peers expressing different emotions and learn from each other. Overall, this was effective in that the facilitators provided examples like performing the first expressions of emotion or by sitting on the floor, showing where and how the children needed to sit. The children were also able to see other children acting out different emotions, which provided them with the varied ways we can express emotions. For instance, each child expressed sadness in different ways, which encouraged variations of expression. Also, one child started using body language and gestures, which encouraged other children to do so.

RELATEDNESS/SELF-PERCEPTION. This concept relates to inclusion and the belongingness we feel in social groups. When a person feels valued by a community and has a sense of belongingness, they are more likely to perform better, feel safer, experiment more, take more risks, and have a greater sense of self-perception and self-efficacy. We aimed to implement this in our role-play game activity by using positive reinforcement (i.e., cheering on players for participating) and team achievements (i.e., inviting reflection and positive self-assessment). We found that this worked well in that the majority of the students were willing to actively participate (i.e., raised hands to ask to act out the next turn; verbally asked to do so; smiled, laughed, and clapped as a way to cheer each other up as a team).

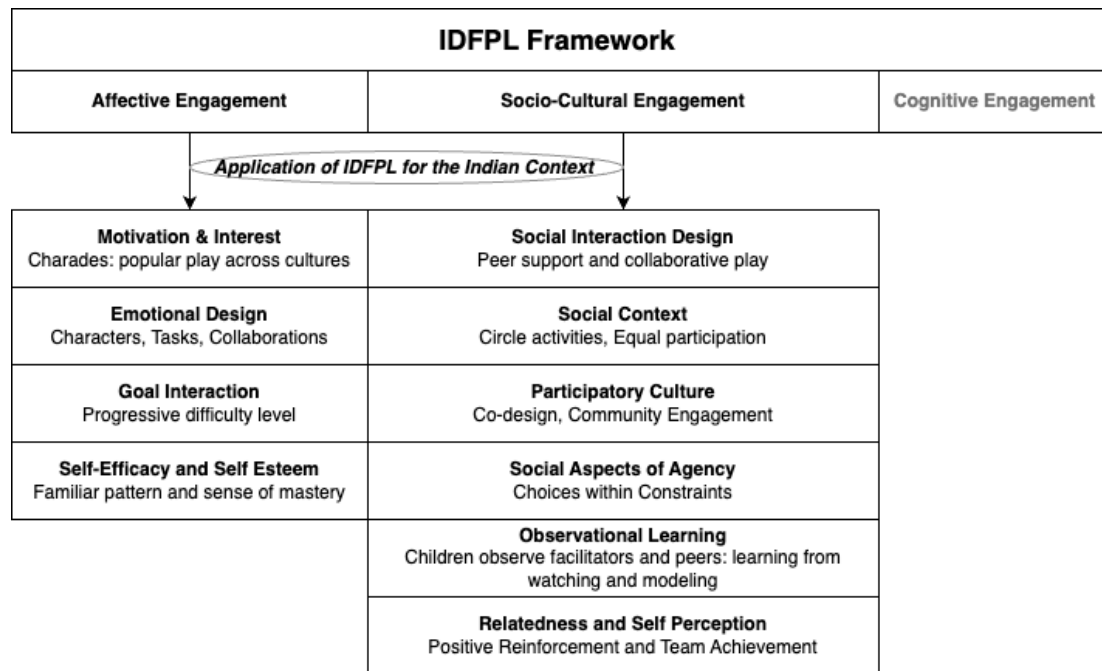


Figure 1: IDFL Framework— Indian Charades Game Application

3.1.4 Design implications

The key design implication from our study for game-based learning researchers and game designers is the importance of culturally responsive and affectively engaging game mechanics when developing SEL experiences. The study demonstrates that integrating familiar play patterns like charades, scaffolding emotional complexity, and fostering peer collaboration can enhance motivation, self-efficacy, and emotional expression. However, it also highlights cultural challenges such as hierarchical classroom dynamics and limited peer-to-peer interaction, which can hinder agency and participatory learning. Therefore, designers should prioritize culturally sensitive facilitation strategies, such as modelling empathetic behaviour and gradually shifting control to learners, to foster a more inclusive and empowering learning environment. Additionally, embedding observational learning and social reinforcement mechanisms can support emotional development and community building, especially in contexts where direct peer engagement is less common. These insights underscore the need for iterative, context-aware design processes that balance structure with learner autonomy.

4. Conclusion

This paper opens the discussion on the current research gaps in design methods of SEL game experiences within Indian cultural contexts. To initiate this exploration, we designed a role-play activity for Indian youth based on the IDFPL framework. In this paper, we described how we applied the affective and sociocultural elements. During pilot tests, we observed some effective aspects of the application (i.e., relatedness, observational learning, goal orientation, motivation and interest, and self-esteem) while also observing challenges with other aspects (i.e., agency, participatory learning culture, and social context). We suggest the following next steps: 1) conducting in-depth empirical mixed-methods studies on children's understanding and engagement with our non-digital SEL role-play game to evaluate further each of the elements (cognitive, affective, social-cultural) and explore the reasons why some aspects are effective; 2) using this to then design digital games based on the emotional charades game in single as well as multiplayer modes; 3) exploring ways to create an integrated design framework for SEL specifically for the Indian context; 4) devising recommendations on considerations for designing and implementing SEL games in different cultural contexts.

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AI Declaration: This paper was written without using AI tools and grammar check was obtained using Grammarly.

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