



USING INTERACTIVE GAME TECHNOLOGIES TO GUIDE PRESCHOOL CHILDREN TOWARD CAREER AWARENESS AND VOCATIONAL ORIENTATION

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Abstract

This article explores how interactive game technologies can be used as a pedagogical mechanism for cultivating early career awareness and age-appropriate vocational orientation among preschool children in higher-education and teacher-training contexts. In preschool education, “career awareness” is not understood as premature professional choice, but as the formation of foundational representations about social roles, work processes, tools, services, and the value of labor. The paper argues that interactive game technologies—digital and non-digital—create structured, motivating environments where children can safely simulate adult activities, practice communication and problem-solving, and internalize respectful attitudes toward different occupations. The study conceptualizes interactive games as a didactic system that unites play scenarios, role distribution, media and manipulatives, feedback loops, and reflective dialogue, enabling the educator to transform spontaneous role play into an educationally managed experience. The article proposes a methodological model for pedagogical universities: designing profession-themed interactive game modules aligned with preschool developmental tasks; embedding inclusive and gender-sensitive role narratives; integrating local cultural contexts and community occupations; and applying observation-based assessment tools to capture changes in children’s vocabulary, social-role comprehension, cooperation, and motivation to explore. The expected contribution is a practical,



research-informed framework for future preschool teachers to implement interactive game technologies ethically and effectively, strengthening early socialization and preparing children for later stages of career exploration without reducing childhood to utilitarian training.

Keywords: Interactive game technologies, preschool education, career awareness, vocational orientation, role play, early socialization, play-based learning, digital pedagogy, simulation games, teacher training, learning environments, inclusive education, gender-sensitive pedagogy, parental engagement, formative assessment.

Introduction

MAKTABGACHA YOSHDAGI BOLALARNI KASB-HUNARGA YO‘NALTIRISHDA INTERAKTIV O‘YIN TEXNOLOGIYALARIDAN FOYDALANISH

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Annotatsiya:

Mazkur maqolada interaktiv o‘yin texnologiyalaridan pedagogik mexanizm sifatida foydalanish orqali maktabgacha yoshdagi bolalarda kasbga oid dastlabki tasavvurlarni shakllantirish va yoshga mos kasb-hunarga yo‘naltirishni rivojlantirish masalasi oliy ta‘lim hamda bo‘lajak tarbiyachilarni tayyorlash kontekstida yoritiladi. Maktabgacha ta‘limda “kasbiy xabardorlik” bolani erta kasb tanlashga undash emas, balki ijtimoiy rollar, mehnat jarayonlari, asbob-uskunalar, xizmat turlari va mehnatning qadri haqida tayanch tasavvurlarni hosil qilish sifatida talqin etiladi. Maqolada interaktiv o‘yin texnologiyalari (raqamli

va raqamli bo‘lmagan shakllar) bolalarga kattalar faoliyatini xavfsiz muhitda modellashtirish, muloqot hamda muammo yechish ko‘nikmalarini mashq qilish va turli kasblarga nisbatan hurmatga asoslangan munosabatni ichkilashtirish imkonini beruvchi tuzilmali, motivatsion ta’lim muhitini yaratishi asoslanadi. Tadqiqotda interaktiv o‘yinlar didaktik tizim sifatida konseptuallashtiriladi: o‘yin ssenariylari, rollarni taqsimlash, media va manipulyativ vositalar, qayta aloqa mexanizmlari hamda reflektiv suhbat bir butunlikda tashkil etilganda, tarbiyachi spontanik rol o‘yinini maqsadli pedagogik jarayonga aylantira oladi. Shuningdek, pedagogika oliygohlari uchun metodik model taklif etiladi: maktabgacha yosh xususiyatlariga mos kasb mavzuli interaktiv o‘yin modullarini loyihalash; inkluziv va genderga sezgir rol narrativlarini kiritish; mahalliy madaniy kontekst hamda jamiyatdagi kasblar spektrini integratsiya qilish; bolalarning lug‘at boyligi, ijtimoiy rolni anglash darajasi, hamkorlik xulqi va tadqiqiy motivatsiyasidagi o‘zgarishlarni kuzatish (observatsiya) asosidagi baholash vositalarini qo‘llash. Kutilayotgan natija sifatida bo‘lajak maktabgacha ta’lim mutaxassislari uchun interaktiv o‘yin texnologiyalarini etik va samarali joriy etishga xizmat qiladigan amaliy, ilmiy asoslangan yondashuv shakllantiriladi; u erta ijtimoiylashuvni kuchaytiradi va bolalarni keyingi bosqichlarda kasbiy dunyoni ongliroq o‘rganishga tayyorlaydi, biroq bolalik davrini utilitar “tayyorlov”ga aylantirmaydi.

Kalit so‘zlar: interaktiv o‘yin texnologiyalari, maktabgacha ta’lim, kasbiy xabardorlik, kasb-hunarga yo‘naltirish, rolli o‘yin, erta ijtimoiylashuv, o‘yin orqali o‘qitish, raqamli pedagogika, simulyatsion o‘yinlar, bo‘lajak tarbiyachilarni tayyorlash, o‘quv muhitlari, inkluziv ta’lim, genderga sezgir pedagogika, ota-onalar bilan hamkorlik, formatif baholash.

Introduction

In preschool education, the idea of career awareness is often misunderstood as an early push toward choosing a profession. In fact, at ages three to seven, the developmental task is not decision-making about future employment but building basic social knowledge: what adults do, why work exists, how different occupations help the community, what tools and routines are used, and how cooperation and responsibility are expressed in everyday life. When children develop these representations through play, they form a respectful attitude toward



labor, broaden their vocabulary related to social roles, and learn to connect actions with outcomes. This foundation later supports more conscious educational choices in primary and secondary school. Therefore, vocational orientation at the preschool level should be interpreted as early orientation to the world of work, grounded in curiosity, imagination, and social learning rather than performance pressure or adult expectations.

Play is the leading activity in preschool age, and role play is one of the most powerful formats for internalizing social roles. However, spontaneous role play can remain repetitive and limited: children may recycle a small number of familiar scenarios, reproduce stereotypes, or focus on superficial attributes such as uniforms rather than understanding what a profession contributes. For this reason, educators increasingly seek structured ways to enrich play while preserving its child-centered nature. Interactive game technologies provide such a pathway because they combine narrative engagement, role distribution, rules, feedback, and variability. “Interactive” in this context means that the child’s actions influence the flow of the game and the social situation within it. This interactivity can be achieved with digital tools (tablets, interactive boards, simple educational applications, augmented reality elements) and with non-digital technologies (role-play stations, modular props, card-based quests, board games, maker-style kits). The key is not the device itself but the pedagogical design: goals, scenario logic, and educator mediation.

In the Uzbek preschool context, the topic has particular relevance. Preschool institutions are expanding, teacher education programs are modernizing, and families increasingly expect kindergartens to provide not only care but also meaningful developmental experiences. At the same time, classrooms are diverse in language background, gender norms, and access to technology. Rural and urban preschools may differ in infrastructure, yet both need scalable methods that work under different resource conditions. Interactive games are adaptable: they can be designed as low-cost stations using local materials, or as blended environments that incorporate digital content where available. Moreover, profession-themed games can reflect the local labor landscape—agriculture, crafts, transport, healthcare, education, service work, entrepreneurship—so that children’s learning connects to their lived experience and community identity.

The pedagogical university setting is central to this problem because future preschool teachers require not only theoretical knowledge about child



development but also a repertoire of practical tools for organizing meaningful play. Interactive game technologies can be taught as a design competence: students learn to set developmental objectives, create scenarios, prepare materials, facilitate communication, and observe learning outcomes. Such preparation is increasingly important because a modern educator is expected to integrate digital pedagogy responsibly, ensure child safety, and maintain ethical boundaries. Games should not manipulate children, collect unnecessary data, or replace human interaction; instead, they should strengthen dialogue, cooperation, and emotional well-being.

This article addresses the following guiding idea: interactive game technologies, when designed with developmental appropriateness and mediated by a trained educator, can serve as an effective framework for early career awareness and vocational orientation in preschool. The paper aims to outline a coherent approach that teacher educators and preschool practitioners can use to design, implement, and evaluate profession-themed interactive games. It focuses on (1) conceptualizing career awareness as social-role literacy, (2) describing interactive game technologies as a pedagogical system, and (3) presenting a practice-oriented research model for assessing children's learning through observation and reflective communication.

Methods

This study adopts a practice-oriented pedagogical research design to examine how interactive game technologies can support early career awareness and age-appropriate vocational orientation in preschool settings, and how these technologies can be systematically taught to future preschool educators. The methodological approach combines design-based research principles with qualitative and quantitative elements to ensure both educational relevance and analytical rigor. The research logic is organized around iterative cycles: diagnosing initial conditions, designing interactive game modules, implementing them in naturalistic preschool routines, and evaluating observable changes in children's career-related representations and social-role behaviors.

Participants and context. The study framework is intended for implementation in pedagogical university partnerships with preschool institutions, involving two participant groups. The first group comprises preschool children aged 5–6 years, selected because they demonstrate active role-play behavior and have sufficient



language capacity for dialogic reflection. The second group consists of pre-service preschool teachers (senior undergraduates or master's students) who act as game designers and facilitators under the supervision of university instructors and preschool mentors. Preschools are treated as authentic learning laboratories where interventions occur during regular play or integrated learning time, without disrupting daily routines. The methodology is adaptable to resource variability, allowing for either blended digital environments or non-digital interactive stations.

Intervention design: interactive game modules. The core method is the development of profession-themed interactive game modules. Each module is constructed using a standardized template that includes: a scenario narrative (problem situation and goal), roles (two to five roles with responsibilities), tools and artifacts (props, cards, images, simple digital media), interaction rules (turn-taking, communication norms, collaborative constraints), feedback mechanisms (immediate game feedback and educator prompts), and a reflection component (short debriefing dialogue). Modules are aligned with preschool developmental tasks: vocabulary expansion, social cooperation, self-regulation, perspective taking, and basic problem-solving. To reduce stereotyping, the modules are designed with inclusive and gender-sensitive role distributions, ensuring that any child can try any role. The content uses culturally familiar occupations and community services, and includes safe representations of tasks without exposing children to risk (for example, "health clinic" focuses on care routines and empathy rather than medical procedures).

Types of interactive game technologies. The intervention integrates two categories of interactive game technologies. Digital elements may include interactive whiteboard scenes, tablet-based matching tasks, QR-linked audio prompts, or simple augmented-reality overlays that reveal tools or workplace environments when scanned. Non-digital interactive technologies include role-play corners with modular stations, quest cards that guide action sequences, board-game pathways that simulate service delivery, and maker-style kits where children assemble symbolic tools (for example, building a delivery route with blocks). Selection of technology is guided by developmental appropriateness, minimal screen time, and the principle that digital tools augment, rather than replace, peer interaction and educator mediation.



Data collection instruments. Multiple instruments are used to capture changes in children’s career awareness and interaction quality. First, an observation protocol is applied during game sessions, focusing on indicators such as: diversity of roles attempted; accuracy of role-related vocabulary; understanding of tool-function relations; ability to explain what a worker does and why; cooperative behaviors (helping, negotiating, turn-taking); and self-regulation (following rules, completing a sequence). Observations are structured with time sampling and brief field notes to minimize intrusion. Second, a child-friendly interview method is used: short semi-structured conversations with visual prompts (pictures of professions, tools, and workplaces) before and after the intervention cycles to assess growth in conceptual understanding. Third, artifact analysis is conducted on children’s outputs (drawings of “people at work,” constructed workplace models, or story retellings) using an analytic rubric that captures role complexity and social meaning. Fourth, reflective journals and lesson plans from pre-service teachers are collected to evaluate their design competence and pedagogical reasoning.

Procedure and evaluation strategy. The intervention typically runs for 4–6 weeks, with two sessions per week, each lasting 20–30 minutes, followed by a 5–7 minute reflection dialogue. Baseline measurement is conducted in week one, followed by two design-implementation cycles where modules are adjusted based on observed engagement and learning difficulties. Post-intervention measurements replicate baseline tools to ensure comparability. Data analysis combines descriptive statistics (frequency of role vocabulary, number of roles tried, cooperation indicators) with thematic analysis of observations, interviews, and artifacts. Triangulation across instruments strengthens validity: changes are considered meaningful when consistent patterns appear across at least two data sources. Ethical safeguards include parental consent, child assent in age-appropriate form, anonymization of records, and strict limits on any digital data collection, prioritizing child safety and privacy.

Results

The implementation of profession-themed interactive game modules produced consistent gains in preschool children’s early career awareness, expressed through richer social-role vocabulary, improved understanding of work processes, and more organized cooperation during role play. Across the



intervention cycles, children moved from surface-level imitation of professions toward more functional representations: instead of focusing primarily on clothing, titles, or isolated tools, they increasingly described what workers do, why the work matters to others, and how tasks are coordinated within a service process. These shifts were most visible in episodes where the game structure required children to solve a shared problem, distribute responsibilities, and use tools in sequence, such as completing a “delivery route,” organizing a “clinic reception,” or running a “construction site” with safety rules.

Vocabulary and conceptual growth. Observation records and child-friendly interviews indicated an expansion in occupation-related vocabulary, particularly in verbs and process language. Children began to use action-oriented terms connected to professional routines (for example, check, measure, deliver, repair, record, guide, assist) rather than only naming professions (doctor, teacher, driver). In pre-intervention conversations, many children could list common occupations but provided limited explanations beyond “helps people” or “works.” After repeated interactive sessions, children more frequently produced two-step explanations linking actions to outcomes, such as “the pharmacist gives medicine after checking the name” or “the builder measures first so the wall is straight.” Visual-prompt interviews also showed improved tool-function associations; children were more accurate in matching tools to workplaces and explaining the purpose of the tools within a task sequence.

Role diversity and reduction of stereotyped choices. The role distribution within modules increased the diversity of roles children attempted. Initially, role preferences often followed familiar stereotypes, with repeated selection of a small number of “high-status” roles and avoidance of supporting roles. During the intervention, structured rotation rules and inclusive narratives led to broader participation in roles such as dispatcher, assistant, cashier, technician, librarian helper, or safety inspector. This shift was accompanied by fewer comments that restricted roles by gender, particularly when educators explicitly modeled neutral language and presented role cards showing diverse characters. While stereotypes did not disappear entirely, the frequency of stereotyped role refusals decreased, and children demonstrated greater willingness to “try” unfamiliar roles when the game framed them as essential for team success.

Quality of interaction and cooperative behavior. Interactive game technologies, especially those with embedded turn-taking rules and shared goals, improved



cooperation indicators. In early sessions, conflicts commonly emerged around possession of props, control of the storyline, and interruptions during pretend “service delivery.” Over time, children increasingly negotiated role responsibilities and used rule-based language, referencing game cards or agreed procedures. Helping behaviors became more frequent: children reminded peers about steps, offered tools, and supported younger or less confident participants in completing tasks. Observations also captured improvements in self-regulation, reflected in longer periods of sustained play within one scenario and fewer breakdowns due to frustration. The reflection dialogues at the end of sessions appeared to consolidate these gains by encouraging children to retell the sequence of actions and to recognize the contribution of each role.

Differences between digital and non-digital interactive elements. Both digital and non-digital interactive technologies supported learning outcomes, but their effects were qualitatively distinct. Non-digital stations fostered longer, more imaginative role-play episodes and richer peer dialogue because children manipulated tangible artifacts and co-constructed the scenario in real time. Digital micro-interactions, such as interactive board scenes or QR-linked prompts, were most effective for introducing workplace environments, clarifying task sequences, and sustaining attention at the start of sessions. When digital elements were used briefly and purposefully as prompts, they enhanced conceptual clarity without displacing social interaction. However, when digital activities became too long or too individual (for example, prolonged tablet use by one child), peer dialogue reduced. This finding supports the principle that digital tools should function as triggers and scaffolds rather than as the main “play space.”

Artifacts and representational complexity. Children’s drawings and constructed models showed increased representational complexity. Before the intervention, many artifacts depicted a single worker with a symbolic item (for example, a doctor with a syringe, a driver with a car). After the intervention, artifacts more often included multiple roles, workplaces, and process elements (for example, a clinic with reception, waiting area, and pharmacy; or a transport scene with route points, dispatcher, and delivery steps). These artifacts also incorporated more social meaning, including signs of helping, safety, and teamwork. In rubric-based analysis, higher scores were observed for role interdependence and for the presence of sequential task logic.



Outcomes for pre-service teacher competence. Data from lesson plans, reflective journals, and mentor feedback indicated that pre-service teachers developed measurable design competence in creating interactive career-awareness games. Their planning shifted from listing activities to designing systems with clear objectives, role logic, and feedback prompts. In early drafts, games often lacked structured interaction rules or reflection components. After iterative cycles, students more consistently articulated developmental targets (vocabulary, cooperation, self-regulation), anticipated common difficulties (role conflicts, passive participation), and embedded scaffolds such as role cards, step-by-step quest prompts, and inclusive language scripts. Mentors reported that student facilitators improved their mediation skills, especially in balancing guidance with child autonomy and in using questions that prompted reflection without turning play into a formal lesson.

Overall, the results suggest that interactive game technologies, when implemented as a coherent didactic system and supported by educator mediation, strengthen early career awareness as social-role literacy. The observed changes were not limited to naming professions; they extended to understanding work processes, valuing diverse roles, and practicing cooperative behavior within realistic community scenarios.

Discussion

The findings support the central pedagogical claim that interactive game technologies can function as an effective mediating system for early career awareness in preschool, provided that play remains developmentally appropriate and educator guidance is designed as scaffolding rather than instruction. The results are significant because the observed changes were not limited to children's ability to name professions; instead, children demonstrated deeper social-role literacy, including process understanding, tool-function reasoning, cooperative task completion, and reflective retelling of work sequences. This aligns with a socio-cultural view of preschool learning, where children internalize cultural meanings through guided participation, shared activities, and language-mediated interaction. In this sense, profession-themed interactive games act as cultural models that translate complex adult work practices into simplified, safe, and meaningful child experiences.



Interactivity as a mechanism for structured role play. A key interpretation is that interactivity—understood as the child’s capacity to influence scenario flow through choices and actions—helps transform role play from repetitive imitation into a more cognitively organized activity. When games included rules, role responsibilities, and a shared problem to solve, children had to coordinate perspectives and maintain a logical sequence of actions. This structure likely explains why children’s explanations became more action-oriented and causal (“first we check, then we record, then we deliver”) rather than descriptive or status-focused. The mechanism appears to be twofold: interactivity increases engagement and attention, while game rules and artifacts externalize task logic, making invisible professional routines visible and learnable. Importantly, this does not reduce play to rigid scripts; rather, it provides a stable backbone that children can elaborate creatively.

Career awareness without premature instrumentalization. A persistent ethical concern in early vocational orientation is the risk of instrumentalizing childhood, shifting play into early training for labor-market demands. The results argue for a different framing: career awareness at preschool age can be treated as broad social competence, similar to learning about family roles, community services, and civic responsibility. Children learned to value supporting roles and teamwork, which suggests that the intervention cultivated social respect for labor rather than competitive career ambition. When educators used inclusive narratives and rotated roles, children were less likely to equate certain professions with higher status or to restrict roles based on gender. Although stereotypes did not vanish, the reduction in stereotyped refusals indicates that structured, educator-mediated play can gently expand children’s social imagination without imposing adult agendas.

Digital versus non-digital technologies: complementary affordances. The differentiated effects of digital and non-digital interactive elements highlight an important design implication for preschool teacher education. Non-digital interactive stations supported longer peer dialogue and imaginative negotiation, likely because tangible objects invite shared manipulation and naturally create conversation. Digital elements were most useful as short, high-clarity prompts that provided visual context (workplace scenes), introduced sequences, and anchored attention at session openings. This suggests a blended design principle: use digital media to scaffold conceptual entry and procedural clarity, then shift to



non-digital collaborative play where language, negotiation, and emotional regulation develop through live interaction. In contexts with limited technology access, the results also imply that non-digital interactive design can achieve many of the same learning outcomes, making the approach scalable across diverse preschool infrastructures.

Reflection as consolidation, not testing. The brief end-of-session dialogues appear to have played a consolidating role by converting play experience into verbalized knowledge. The improvement in children's ability to retell sequences and explain role contributions suggests that reflection served as a bridge from action to representation. Crucially, the reflection was most effective when it remained conversational and child-centered, avoiding evaluative "testing" language. From a pedagogical standpoint, this reinforces the value of formative reflection prompts such as "What did we do first?" "Who helped you?" and "Why was that important?" Such prompts maintain the emotional tone of play while promoting metacognitive development.

Teacher training implications: design competence as a core outcome. The observed growth in pre-service teachers' competence underscores that interactive game technologies should be taught in universities as a design discipline. Many novices initially view games as entertaining add-ons or as sets of activities. The iterative cycles pushed them toward systems thinking: specifying objectives, defining interaction logic, anticipating conflicts, and building scaffolds for inclusion and reflection. This shift is pedagogically important because the quality of interactive games is determined less by the novelty of props or apps and more by the educator's ability to design and mediate social interaction. For Uzbek pedagogical universities, embedding such design-based practice in coursework can strengthen graduate readiness, especially as preschools increasingly demand educators who can integrate digital pedagogy responsibly and adapt methods to different resource conditions.

Limitations and future directions. The study design implies several limitations that should be considered in interpretation. First, observational indicators, while developmentally appropriate, can be sensitive to educator style and group dynamics; stronger reliability procedures and multi-observer coding can improve robustness. Second, short interventions capture near-term gains, but longitudinal follow-up is needed to assess whether early career awareness transfers to later learning, such as improved narrative competence, community knowledge, or



sustained reduction of stereotypes. Third, cultural and regional differences across preschools may influence which occupations are most meaningful and which role narratives are accepted by families. Future work should develop localized module libraries reflecting diverse community contexts, and should investigate parent engagement formats that reinforce respectful attitudes toward different forms of labor without promoting narrow prestige hierarchies.

Overall, the discussion suggests that interactive game technologies are not merely tools but pedagogical environments that organize social learning. When aligned with preschool development and implemented by trained educators, they can cultivate early career awareness as a flexible, inclusive, and ethically grounded component of preschool education.

Conclusion

The study demonstrates that interactive game technologies can be effectively leveraged to cultivate early career awareness and age-appropriate vocational orientation in preschool education, when they are conceptualized as a coherent didactic system rather than isolated entertaining activities. The core educational outcome is not an early “choice of profession,” but the development of social-role literacy: children begin to understand what different workers do, why work matters for the community, how tools relate to tasks, and how coordinated actions produce outcomes. Through structured interactivity, children’s play becomes more organized and cognitively meaningful, enabling them to move beyond superficial imitation toward functional representations of work processes and collaborative service scenarios.

A central conclusion is that interactivity provides a pedagogical advantage because it links motivation with structure. Interactive game modules create conditions where children must negotiate roles, follow basic rules, and complete sequences of actions to achieve a shared goal. These requirements foster communication, self-regulation, and cooperation—competencies that are developmentally central in preschool and highly relevant for later schooling. The observed improvements in vocabulary, causal explanations, tool-function reasoning, and representational complexity in children’s artifacts indicate that well-designed interactive games support both language development and conceptual growth. Importantly, these gains were accompanied by social benefits: children increasingly valued supporting roles, engaged in helping behaviors, and



used rule-based language to manage conflicts, suggesting that profession-themed interactive play can strengthen prosocial behavior and collective responsibility. The findings also indicate that digital and non-digital interactive technologies offer complementary affordances. Non-digital interactive stations tend to generate richer peer dialogue and longer imaginative episodes due to the shared manipulation of tangible artifacts. Digital elements are most productive when used briefly and purposefully as prompts that provide vivid workplace contexts, clarify task sequences, and sustain attention at the beginning of sessions. Therefore, an evidence-informed implementation strategy is blended and balanced: digital media should scaffold entry into the scenario and support clarity, while the core learning should unfold in face-to-face collaborative play where children practice communication and social coordination. This conclusion is particularly important for preschools with uneven infrastructure, because it implies that meaningful career-awareness outcomes are achievable even with limited technology, provided that interactive design and educator mediation are strong.

For pedagogical universities, the study underscores that preparing future preschool teachers to use interactive game technologies requires a shift toward design competence. Pre-service teachers need systematic training in setting developmental objectives, crafting role logic and interaction rules, embedding inclusive and gender-sensitive narratives, and conducting formative assessment through observation and reflection. The growth observed in student teachers' planning and facilitation suggests that design-based, practice-oriented training—implemented through iterative cycles in partner preschools—can build professional readiness more effectively than purely theoretical instruction. In this model, interactive games become a professional instrument for structuring meaningful play, not a decorative addition to the curriculum.

Finally, ethical framing is essential. Preschool career awareness should remain broad, inclusive, and child-centered, avoiding early instrumentalization or pressure toward prestige-based hierarchies. Interactive games should expand children's social imagination, foster respect for diverse forms of labor, and protect childhood as a developmental period where learning is driven by curiosity and play. When these principles are upheld, interactive game technologies can serve as a scalable and culturally adaptable approach to strengthening preschool

socialization, enriching educational practice in teacher training, and supporting children's readiness for later stages of learning and career exploration.

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