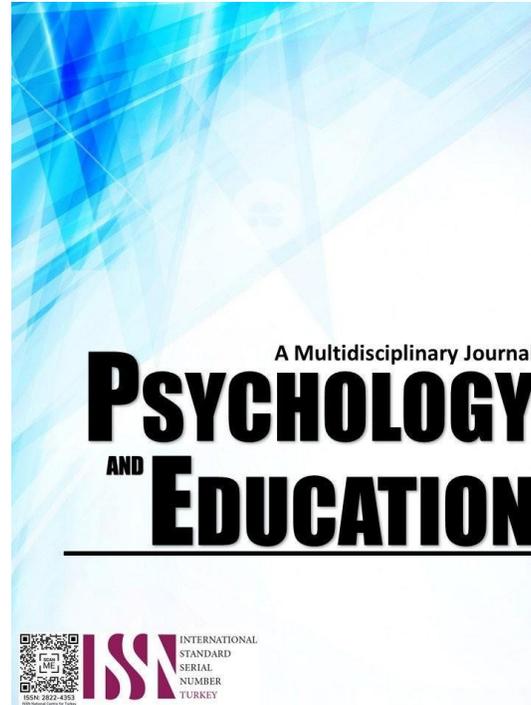


21ST CENTURY SKILLS, PARENTAL INVOLVEMENT: PREDICTORS OF KINDERGARTENERS' ACADEMIC PERFORMANCE



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 48

Issue 5

Pages: 763-771

Document ID: 2025PEMJ4681

DOI: 10.70838/pemj.480505

Manuscript Accepted: 09-25-2025

21st Century Skills, Parental Involvement: Predictors of Kindergarteners' Academic Performance

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Abstract

The 21st century has ushered in essential skills and competencies for academic and career success. Simultaneously, parental involvement and effective communication in a child's education have gained significant attention. This study examined the relationship between 21st-century skills, parental involvement, and the academic performance of kindergarteners in public schools in Cagayan de Oro City. Following extensive validation and reliability verification, the study employed questionnaires as the primary instrument within a causal-predictive framework. The sample consisted of 120 kindergarteners who completed a 52-item survey using a 5-point Likert scale. Results showed that the children demonstrated a high level of 21st-century skills (overall $M = 4.13$, $SD = 0.87$), with collaboration ($M = 4.26$, $SD = 0.73$) and communication ($M = 4.14$, $SD = 0.74$) rated highest. Parental involvement was perceived as very high ($M = 4.88$, $SD = 0.42$). Academic performance across learning areas was also high (overall $M = 2.63$, $SD = 0.44$). Correlation analysis indicated that communication was the only skill significantly related to academic performance ($r = .166$, $p < .085$), while other skills and parental involvement were not significant predictors. Regression analysis further identified communication as the best predictor of academic performance ($\beta = .514$, $p = .083$), whereas creativity, critical thinking, collaboration, and parental involvement did not show significant predictive value. These findings suggest that communication skills play a pivotal role in supporting the academic success of kindergarteners, underscoring the importance of fostering oral and social communication in early education.

Keywords: *21st Century Skills, academic performance, parental involvement, kindergarteners*

Introduction

Early childhood education has become increasingly important in preparing children to meet the demands of the 21st century. The kindergarten curriculum, as implemented by the Department of Education, emphasizes not only foundational literacy and numeracy skills but also the development of competencies such as creativity, critical thinking, collaboration, and communication (Care et al., 2018; Cetin & Cetin, 2021). These skills are critical in equipping learners to thrive in a rapidly evolving, technology-driven society (Altınpulluk & Yıldırım, 2021; Scott, 2015). Alongside these competencies, parental involvement has consistently been recognized as a significant factor influencing children's educational experiences and academic performance (Gadeyne et al., 2014; Hornby & Blackwell, 2018). Parents contribute not only to the social and emotional readiness of children but also to their motivation, learning attitudes, and school achievement (Barger et al., 2019).

Despite this recognition, limited empirical evidence exists on how parental involvement and 21st-century skills collectively predict academic outcomes in kindergarteners, particularly within the Philippine context. This gap highlights the need to examine the predictive value of these factors during early childhood, a critical stage of learning and development. The present study, therefore, aims to investigate the relationship between kindergarteners' 21st-century skills, parental involvement, and their academic performance in public schools in Cagayan de Oro City. Specifically, it seeks to assess the levels of these variables, determine their correlations, and identify which factors best predict kindergarteners' academic outcomes.

The significance of this study lies in its potential contributions to practice, policy, and scholarship. By offering empirical insights into how foundational skills and parental engagement shape academic performance, the study can guide educators in designing teaching approaches that prioritize communication and collaboration in early learning environments. Policymakers may also use the findings to strengthen family-school partnerships through targeted initiatives, while parents may gain a deeper understanding of how their involvement directly supports their children's success.

Finally, this research contributes to the growing body of literature on early childhood education by integrating the analysis of both 21st-century skills and parental involvement, two factors often studied in isolation. By clarifying their individual and collective influence, it provides a more comprehensive picture of the predictors of early academic success within the Philippine setting. In particular, the findings underscore the central role of communication skills as a key determinant of achievement, thereby enriching theoretical models of early learning and offering practical insights for curriculum development and parental engagement strategies.

Methodology

Research Design

The researcher utilized a causal-predictive design to determine the variable that best predicted kindergarteners' academic performance. This design aimed to establish causal relationships between independent variables and the dependent variable, which was measured using standardized procedures. It also involved creating models that predicted the impact of actions or treatments on outcomes of interest. This study therefore employed a causal research design to examine the cause-and-effect connections among variables

(Erickson, 2017).

Respondents

The participants in the study were the kindergarteners enrolled in a public school in Cagayan de Oro during the academic year 2023–2024. The population consisted of 131 kindergarteners, distributed across three sections: Maroon, Gray, and Violet. Using the RAOSOFT sample size calculator at a 95% confidence level and a 5% margin of error, the required sample size was 120 students.

A proportionate stratified random sampling method was employed to ensure that each section was adequately represented in the study. This approach allowed the researcher to divide the population into homogeneous subgroups (strata) and select samples from each stratum in proportion to its size, thereby enhancing representativeness and minimizing sampling bias (Creswell & Creswell, 2018; Statistics How To, 2024).

Instrument

The study employed a structured survey questionnaire designed to assess two key constructs: parental involvement and 21st-century skills among kindergarteners. The instrument was partly adapted and partly researcher constructed. The first section was adapted from Epstein's framework of six types of parental involvement (Epstein, 1995). This section consisted of 20 items that evaluated parental engagement across various dimensions, including parenting, communication, volunteering, learning at home, decision-making, and community collaboration. Responses were recorded using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating stronger perceptions of parental involvement.

The second section was researcher-developed to align with established 21st-century learning standards. It included items designed to measure kindergarteners' proficiency in four domains of 21st-century skills: creativity, critical thinking, collaboration, and communication. This section utilized the same 5-point Likert scale format. The mean scores for each domain were computed to reflect the children's relative strengths and weaknesses in these skill areas.

Overall, the instrument was structured to yield quantitative measures of parental involvement and children's 21st-century skills, which were subsequently analyzed in relation to academic performance. The survey's dual structure allowed for a comprehensive assessment of both family-related and learner-centered factors contributing to kindergarten achievement.

Procedure

The study strictly adhered to the principles of research ethics. Approval was first obtained from the Office of the Dean of the School of Teacher Education, followed by review and clearance from the Research Ethics Board. After securing university approval, the researcher sought permission from the School Division Superintendent to administer the survey to kindergarten students. A formal letter was submitted outlining the study's objectives and schedule. Upon approval, informed consent was requested from parents or guardians.

The researcher conducted one-on-one sessions to help participants understand and complete the questionnaires. Surveys were personally distributed and collected, and the responses were tallied in Microsoft Excel before being forwarded to a statistician for SPSS computation and analysis. Participants were assured of confidentiality and their right to withdraw at any time without penalty or consequence. The collected data were securely stored and accessible only to the researcher, and participants' identities remained anonymous. To acknowledge their participation, children received a small token of appreciation.

Data Analysis

The study employed descriptive statistics, such as mean and standard deviation, to determine the levels of 21st-century skills, parental involvement, and academic performance. The computation of descriptive statistics served as an essential initial phase before conducting inferential analysis (Kaur et al., 2018). Pearson's product-moment correlation (Pearson r) was used to determine relationships among the variables, while multiple regression analysis was employed to identify the variable that best predicted kindergarteners' academic performance.

Results and Discussion

In this section, the findings are presented, analyzed, and interpreted.

Table 1 presents a summary of the mean scores for the kindergarteners' level of 21st-century skills. As shown in the table, kindergarteners obtained the highest mean score, $M = 4.26$, $SD = .73$, for collaboration, followed by a mean score of $M = 4.13$, $SD = 1.14$ for communication, and a mean score of $M = 4.13$, $SD = 1.14$ for creativity. Lastly, critical thinking has a mean score of $M = 3.99$ and $SD = .85$. This indicates the possibility that Kindergarten prioritizes social and collaborative skills, which are taught more explicitly than critical thinking. Teaching methods that stress group work also boost collaboration scores. Assessment tools may emphasize observable collaboration over complex critical thinking skills.

The interpretation of critical thinking might not entirely reflect its depth, impacting overall scores. Developmental differences, cultural factors, and subjective assessment methods also influence scores. The overall mean score is $M=4.13$, $SD=.87$, described as agree and

interpreted as high. The results revealed that the kindergarteners have a high level of 21st-century skills. This suggests a favorable agreement or proficiency in the skills being measured.

Table 1. *Summary of Mean Scores for the Level of the Kindergarteners 21st Century Skills*

| <i>Sub-variables</i> | <i>Mean</i> | <i>SD</i> | <i>Description</i> | <i>Interpretation</i> |
|----------------------|-------------|-----------|--------------------|-----------------------|
| Creativity | 4.13 | 1.14 | Agree | High |
| critical thinking | 3.99 | 0.85 | Agree | High |
| Communication | 4.14 | 0.74 | Agree | High |
| Collaboration | 4.26 | 0.73 | Agree | High |
| Over-all Mean | 4.13 | 0.87 | Agree | High |

The specific skills assessed, along with their corresponding indicators, likely align with what is considered necessary for 21st-century learning, including collaboration, communication, critical thinking, and creativity. Therefore, the high mean score and the interpretation of "agree" as indicating a high level suggest that the kindergarteners performed well and demonstrated a good grasp of these essential skills. This finding supports the claim that curriculum in the 21st-century classroom is connected to student interests, experiences, and the natural world (Olivia & Gordon, 2013). Faulkner and Latham (2016) posited that the teacher qualities necessary to equip students with 21st-century skills require educators to embody a spirit of adventure in their own lives, which cultivates resiliency and fosters creative problem-solving. They further emphasized that learning is no longer confined solely to the school calendar or the classroom. At a time of instant access to information with interconnectivity, people learn everywhere and anywhere (Rshaid, 2014), leaving behind five days when education was built on the paradigm that learning involved a process where information was transferred from one higher authority to the student. As evidenced by Rshaid (2014), the trend for education in the 21st century shifted to a more immediate one with learning that takes place anytime and anywhere. Identifying these trends and understanding the skills students need in the future was therefore necessary.

Table 2. *Level of Parents' Parental Involvement as Perceived by the Kindergarteners*

| <i>Indicators</i> | <i>Mean</i> | <i>SD</i> | <i>Description</i> | <i>Interpretation</i> |
|--|-------------|-----------|--------------------|-----------------------|
| 1. My parent discusses with teachers about my academic progress. | 4.82 | .669 | Strongly Agree | Very High |
| 2. My parent assists me to realize the set targets. | 4.87 | .379 | Strongly Agree | Very High |
| 3. My parent communicates with teachers about my learning problems at school. | 4.57 | 1.07 | Strongly Agree | Very High |
| 4. My parent supervises my homework. | 4.93 | .250 | Strongly Agree | Very High |
| 5. My parent provides extra reading materials for me. | 4.88 | .433 | Strongly Agree | Very High |
| 6. My parent explains the consequences of my behavior. | 4.80 | .773 | Strongly Agree | Very High |
| 7. My parent gives me reasons why rules should be obeyed. | 4.98 | .128 | Strongly Agree | Very High |
| 8. My parent receives information on what I can do to help me improve or advance my learning. | 4.90 | .301 | Strongly Agree | Very High |
| 9. My parent gives comfort and understands me when I'm upset. | 4.90 | .418 | Strongly Agree | Very High |
| 10. My parent has warm and intimate times together with me. | 4.89 | .405 | Strongly Agree | Very High |
| 11. My parent emphasizes the reasons for rules. | 4.83 | .748 | Strongly Agree | Very High |
| 12. My parent shows respect for my opinions by encouraging me to express them. | 4.95 | .238 | Strongly Agree | Very High |
| 13. My parent ensures that I have enough materials for school projects or activities. | 4.95 | .254 | Strongly Agree | Very High |
| 14. My parent inspires me to exert more efforts in studies. | 4.95 | .271 | Strongly Agree | Very High |
| 15. My parent ensures that he/she will continue to participate and perform the task given by the school. | 4.95 | .218 | Strongly Agree | Very High |
| 16. My parent gives full support to me whenever I join a contest. | 4.91 | .277 | Strongly Agree | Very High |
| 17. My parent guides and monitors my accomplishment of the assignment or homework. | 4.92 | .321 | Strongly Agree | Very High |
| Over-all Mean | 4.88 | 0.42 | Strongly Agree | Very High |

Table 2 presents the level of Parents' Parental Involvement as Perceived by the Kindergarteners. As shown in the table, the level of parents' parental involvement is highest for items 15 "My parent ensures that he/she will continue to participate and perform the task given by the school" (M=4.95, SD=.218), 14 "My parent inspires me to exert more efforts in studies" (M=4.95, SD=.217), 13 "My parent ensures that I have enough materials for school projects or activities" (M=4.95, SD=.294), and 12 "My parent shows respect for my opinions by encouraging me to express them" (M=4.95, SD=.238). Meanwhile, the lowest mean score of M=3.92, SD=.871 for item 16, "I can understand that numbers relate to quantity," followed by a mean score of M=4.57, SD=1.07 for item 3, "My parent communicates with teachers about my learning problems at school" followed by a mean score of M=4.82, SD=.669 for item 1 "My parent discusses with teachers about my academic progress," and a mean score of M=4.83, SD=.748 for item 11 "My parent emphasizes the reasons for rules." The overall mean score is M=4.88, SD=.42, which is described as enormously agreeable and very high. The results revealed that kindergarteners perceive their parent's parental involvement very highly.

This indicates that active parental involvement is pivotal in shaping a child's academic and social-emotional development, particularly

during the crucial kindergarten stage. Kindergarteners perceive their parents as engaged when attending school functions, volunteering in classrooms, and participating in school-related events. This involvement fosters a sense of support and appreciation in children, boosting their self-esteem and eagerness to learn. Effective communication between home and school is also crucial to parental involvement in kindergarten. Regular check-ins with teachers, parent-teacher meetings, and school collaboration demonstrate commitment to a child's education.

Moreover, parents' provision of educational support and resources at home, such as reading together, aiding with homework, and promoting learning activities, reinforces the value of education and cultivates a positive learning attitude in children. In essence, the text highlights the crucial role of parental engagement, both within the school environment and at home, in fostering a child's academic and social-emotional development during the formative kindergarten years. This finding supports that a critical factor in the success of such programs is strong parent involvement (Howard et al., 2018; Soltero, 2016). Research on parent involvement has demonstrated its positive impact on student achievement and overall school success (Posey-Maddox & Haley-Lock, 2020). Even with the recognition that parent involvement can aid in the success of student achievement and many other positive outcomes, efforts to involve parents have remained lacking (Curry & Holter, 2019).

In a comprehensive meta-analysis of studies on parent involvement, Barger et al. (2019) state that study on parent involvement consistently associates parent involvement with children's adjustment—academically, socially, and emotionally. Parent involvement has also been shown to enhance parent-teacher relationships, improve school attendance and school climate, and increase parents' satisfaction, confidence, and interest in their education (Hornby & Blackwell, 2018). Parent involvement has also been shown to enhance parent-teacher relationships, improve school attendance and school climate, and increase parents' satisfaction, confidence, and interest in their education (Hornby & Blackwell, 2018).

Despite research illustrating the positive outcomes of parent involvement, efforts to involve parents in schools are consistently lacking (Curry & Holter, 2019). Some study points to a continued disconnection between how schools and parents view parent involvement, with parents typically having a broader idea of what parent involvement looks like and where it occurs (Curry et al., 2019). This disconnect has researchers calling on schools to broaden their definition of parent involvement that considers cultural qualities, societal backgrounds, and parent perspectives, as well as their expectations of how parents are involved (Berkowitz et al., 2021).

According to the study by You et al. (2015), families can increase the rate of children completing their homework by providing assistance with homework and establishing a consistent homework routine. In addition, families can increase their academic achievement by going to centers where learning is intensive, such as libraries and museums, reading, watching scientific broadcasting and talking about them, and watching films in foreign languages (Dotterer & Wehrspann, 2016; Gubbinsa & Otero, 2016; Partin, 2017; Perkins et al., 2016; Zhang, 2018; You et al., 2015).

Table 3 presents kindergarteners' academic performance levels in the New Normal. As shown in the table, of the eight learning areas or subjects enrolled by the kindergarteners, the highest academic performance is on Kahimsug, Pagkatawo og Paglihok ($M=2.87$, $SD=.332$) followed by Pinulungan, Literasiya, ug Komunikasyon Pagpaminaw ug Paglantaw ($M=2.70$, $SD=.461$), Pagsulat ($M=4.70$, $SD=.44$), Pag story ($M=2.69$, $SD=.49$), Mathematics ($M=2.66$, $SD=.46$), Makasabot sa Pisikal ug Natural nga Kinaiyahan ($M=2.57$, $SD=.47$), Kalamboan sa Katilingbanong Pagabti ($M=2.53$, $SD=.339$), and last is Pagbasa ($M=2.34$, $SD=.53$). The overall mean is $M=2.63$, $SD=.44$ described as consistent and interpreted as high. These results revealed that the kindergartners had high academic performance during this new normal when DepEd implemented face-to-face classes.

Table 3. *Level of Kindergarteners' Academic Performance in the New Normal*

| <i>Learning Area/Subject</i> | <i>Mean</i> | <i>SD</i> | <i>Description</i> | <i>Interpretation</i> |
|---|-------------|-----------|--------------------|-----------------------|
| Kahimsug, Pagkatawo og Paglihok | 2.87 | 0.332 | Consistent | High |
| Kalamboan sa Katilingbanong Pagabti | 2.53 | 0.339 | Consistent | High |
| Pinulungan, Literasiya, ug Komunikasyon Pagpaminaw ug Paglantaw | 2.70 | 0.461 | Consistent | High |
| Pag estorya | 2.69 | 0.496 | Consistent | High |
| Pagbasa | 2.34 | 0.535 | Consistent | High |
| Pagsulat | 2.70 | 0.444 | Consistent | High |
| Mathematics | 2.66 | 0.468 | Consistent | High |
| Makasabot sa Pisikal ug Natural nga Kinaiyahan | 2.57 | 0.472 | Consistent | High |
| Over-all Mean | 2.63 | 0.443 | Consistent | High |

These results demonstrate that kindergarteners have adapted well to the new normal and significantly improved their academic performance. This finding underscores the profound impact of the COVID-19 pandemic on early childhood education, including school closures and a decline in preschool enrollment (National Institute for Early Education Research [NIEER], 2021). It is impossible to blame current kindergarten/school readiness issues on school closures and lack of attendance alone. Instead, we must examine the pandemic as a complex set of interconnected factors that impact young students, their families, teachers, and access to services (Ananat & Gassman-Pines, 2020; Bacher-Hicks & Goodman, 2021; Rothstein, 2020).

The kindergarten curriculum has shifted substantially in the last two decades (Stipek, 2019). Based on the Missouri Desired Results

Developmental Profile, or DRDP (2015), which assesses preschool children ages three through kindergarten entry on school readiness skills, the common indicators that a child is prepared for kindergarten are broken into eight domains: Approaches to learning- self-regulation, social and emotional development, language and literacy development, English language development, cognition including math and science, physical development health, history and social science, and visual and performing arts. These eight domains have measures or indicators that encapsulate what a child needs, at the emergent or proficient levels, to succeed in each kindergarten domain. According to Head Start, school readiness is viewed as children possessing the necessary skills, knowledge, and attitudes for success in school, as well as for future learning and life in general (Head Start, 2022). For this study, school readiness will include social-emotional, cognitive, language and literacy, and physical development. The way three students acquire these skills before kindergarten varies based on their experiences, opportunities, education, and more.

At the core of this study was a child or student-centered paradigm. This paradigm takes the learner's perspective when planning school and learning experiences. There is a growing body of research that supports the idea that kindergarten readiness is not essential; rather, the focus should be on “ready schools,” schools prepared to meet students at their current level and equitably support their learning and well-being (Pretti-Frontczak, 2014, p. 52). “Readiness for schools means involvement of families, inclusive classrooms, well-prepared and supported teachers, and manageable class sizes.” (Pretti-Frontczak, 2014).

Table 4. Results of Pearson R Correlation Analysis for the Significant Relationship between Kindergarteners' Academic Performance, 21st Century Skills, and Parental Involvement

| Variables | N | R | Effect Size | P-value | Interpretation |
|----------------------|-----|------|-------------|---------|-----------------|
| Creativity | 120 | .093 | Small | .315 | Not Significant |
| Critical Thinking | 120 | .089 | Large | .336 | Not Significant |
| Communication | 120 | .166 | Small | .071 | Significant |
| Collaboration | 120 | .128 | Large | .164 | Not Significant |
| 21st Century Skills | 120 | .118 | Small | .199 | Not Significant |
| Parental Involvement | 120 | .019 | Small | .837 | Not Significant |

*Correlation is significant at the 0.085 level (2-tailed).

Table 4 presents the Results of Pearson R Correlation Analysis for the Significant Relationship between Kindergarteners' Academic Performance, 21st Century Skills, and Parental Involvement. As shown in the table, the variables creativity ($p > .085$), critical thinking ($p > .085$), collaboration ($p > .085$), 21st century skills ($p > .085$), and parental involvement ($p > .085$) have probability value greater than the alpha level of .05, therefore, the null hypothesis which states that “there is no significant relationship between kindergarteners' academic performance, 21st century skills and, parental involvement is accepted. This means that there is not enough substantial evidence to claim that the variables creativity, critical thinking, collaboration, 21st-century skills, and perceived parental involvement affect the kindergarteners' academic performance. This finding supports the notion that parental involvement is both an individual right and responsibility for families, as well as a social need. It is generally accepted that without the positive cooperation of family and school, it is not possible to reach the high standards set for educational outcomes by a demanding society.

On the other hand, the variable communication has a slight, positive, and significant relationship with kindergarteners' academic performance ($p < .085$, $r = .166$). This implies that if communication skills increase, it is likely that the kindergarteners' academic performance will also improve. This finding is supported by the claim of Ramsook et al. (2019) who found that preschoolers' social communication skills significantly predicted better academic achievement in kindergarten, including reading and math skills. The study emphasized that growth in these communication skills during preschool contributed to improved academic performance. As children begin formal schooling, their social communication skills can play a vital role in their success. Studies have shown that practical communication skills are essential for children's academic success, particularly in early education. Students who possess strong oral communication skills can clearly and confidently express their thoughts and ideas, participate in meaningful discussions, and articulate their perspectives effectively.

Thus, enhancing oral communication skills is essential for students' readiness for academic and professional success. A study by Luz (2015) highlights that teacher-student interactions have a significant impact on the development of students' oral communication abilities. Positive relationships between teachers and students, along with effective feedback, modeling, and scaffolding, are crucial in promoting students' growth in these skills. By creating supportive environments, offering constructive feedback, demonstrating effective communication practices, and utilizing scaffolding techniques, teachers can significantly enhance their students' oral communication skills. Shabani (2021) revealed that effective communication processes, both formal and informal, among educational stakeholders contribute to improved academic performance.

In conclusion, while parental involvement appears to have no significant direct impact on kindergarteners' academic performance, the development of communication skills emerges as a crucial factor influencing their success. Enhancing these skills in early education not only prepares children for academic challenges but also contributes to their long-term social and academic development. Therefore, educators should prioritize fostering communication abilities alongside encouraging parental engagement to support holistic student growth.

Table 5 presents the Results of Multiple Regression Analysis for Variables Used to Predict Kindergarteners' Academic Performance. As depicted in the table, the variables creativity ($p > .085$), critical thinking ($p > .085$), ($p > .05$), collaboration ($p > .085$), 21st century skills

($p > .085$), and parental involvement ($p > .05$) have probability value greater than the alpha level of .085, therefore, the null hypothesis which states that “there is no variable that significantly predict kindergarteners’ academic performance is accepted. On the other hand, the best predictor of kindergarteners’ academic performance is communication ($p > .085$, $\beta = .514$).

Table 5. Results of Multiple Regression Analysis for Variables Used to Predict Kindergarteners’ Academic Performance

| | Unstandardized Standardized Coefficients | | | t | Interpretation | Interpretation |
|--|--|------------|-------|-------|----------------|-----------------|
| | Beta | Std. Error | Beta | | | |
| (Constant) | 2.685 | .622 | | 4.317 | .000 | Not Significant |
| Parental Involvement | -.063 | .123 | -.048 | -.515 | .608 | Not Significant |
| Creativity | .003 | .058 | .008 | .049 | .961 | Not Significant |
| Critical Thinking | -.086 | .089 | -.220 | -.966 | .336 | Not Significant |
| Communication | .230 | .132 | .514 | 1.74 | .083 | Significant |
| Collaboration | -.076 | .137 | -.167 | -.557 | .578 | Not Significant |
| R=.214 R ² =.046 F=1.097 Sig/p=.366 | | | | | | |

The equation implies that if kindergarteners’ communication skills increase by 1 point, their academic performance will increase by .230. This finding is supported by the claims of Revitz (2014) and Sohaya (2020), who argue that communication is one of the most vital elements of social success and plays a key role in fostering positive environments. In today's globalized world, where individuals from diverse cultures frequently interact, educators must assist their students in developing essential communication skills by providing opportunities and spaces for practicing interpersonal communication (Lawley et al., 2014). Effective communication between students and teachers influences students' learning performance, the sharing of achievements, and fosters a positive classroom atmosphere (Shan et al., 2014). Therefore, learning communication is linked to both student satisfaction and performance effectiveness.

The findings align with earlier study by Hadiyanto et al. (2021), Häkkinen et al. (2017), Rusdin and Ali (2019), and Sohaya (2020), which emphasized that communication skills are crucial in the twenty-first century. Students expressed satisfaction and demonstrated a strong interest in communication skills-based activities in the classroom. Additionally, it supports Häkkinen et al. (2017), which found that effective communication enhances task performance. The results also corroborate the study by Darawong and Sandmaung (2019), indicating that student satisfaction has a positive influence on performance effectiveness. This underscores the importance of communication as a foundational skill in early childhood education, suggesting that fostering communication abilities in young learners can significantly enhance their academic success. Therefore, educators should prioritize the development of communication abilities in early childhood education, as fostering these skills not only enhances academic outcomes but also prepares students for future social and educational challenges.

Conclusions

The findings of this study indicate that the kindergarteners’ exhibited a high level of 21st century skills across various domains. In terms of creativity, the students obtained a high result. This suggests that the kindergarteners’ possess strong creative abilities, including skills such as recognizing and naming basic colors, expressing ideas through drawing, and telling stories with pictures.

Similarly, the pupils demonstrated a high degree of critical thinking, indicating that kindergarteners can engage in analytical and problem-solving processes based on their ability to recognize issues, generate ideas, and evaluate solutions. Additionally, the study found that kindergarteners’ have a high degree of communication abilities, indicating they can participate in meaningful conversations and exchange ideas and opinions both orally and nonverbally. Additionally, the results show that the kindergarteners exhibit a high level of collaboration skills. This suggests that the kindergarteners’ can work well with their peers, share ideas, and contribute to group efforts to achieve common goals.

These findings collectively suggest that the kindergarteners in this study possess a strong foundation in 21st-century skills, which are essential for their academic success and future development. The high levels of creativity, critical thinking, communication, and collaboration observed among the students provide a solid basis for their continued learning and growth in the new standard educational setting. Furthermore, the kindergarteners perceive a very high level of parental involvement from their parents. This indicates that the kindergarteners feel strongly supported and engaged by their parents in their educational journey. The kindergarteners perceive that their parents are deeply involved in their learning process, providing guidance, encouragement, and resources to help them succeed.

One important strength found in this study is the high degree of perceived parental participation. Empirical studies have repeatedly demonstrated the significant benefits that active parental involvement in a child's education may have on motivation, academic achievement, social-emotional growth, and general well-being. Given the high level of parental involvement reported by the kindergarteners, it can be concluded that these kindergarteners’ benefit from a strong support system at home. This foundation of parental involvement is likely to contribute positively to the kindergarteners’ academic achievement, as well as their holistic development during this crucial stage of their education. These findings underscore the importance of fostering and maintaining high levels of parental involvement, especially in the early years of a child's schooling.

In summary, although parents reported high levels of parental participation and pupils demonstrated a high degree of 21st-century skills, these factors do not significantly indicate which variables affect kindergarteners' academic achievement. This implies that the kindergarteners' academic performance in the new standard educational setting may be influenced by other factors not explored in this study. Therefore, further study is needed to examine other elements that might impact kindergarteners' academic achievement.

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