EXAMINING THE DEVELOPMENT OF 21ST CENTURY SKILLS AMONG STREET-CONNECTED CHILDREN IN NON-FORMAL SCHOOLS

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ABSTRACT

The improvement of teacher's instruction is garnering more attention for the development of 21st-century skills. However, a key challenge in achieving the desired improvements is incorporating relevant strategies for promoting teacher professional development and a context-specific understanding of teaching practices. This paper focuses on the examination of the development of 21st-century skills among street-connected children in Pehli Kiran Schools. These are non-formal schools in slum areas of Islamabad. A quantitative approach followed by structured observation was used. The teachers and students of Pehli Kiran Schools were the research population. The study involved a sample of participants from two branches of Pehli Kiran Schools (PKS-5 and PKS-8). The sample included 10 teachers and 26 students. The two branches (PKS-5 and PKS-8) were chosen using a random sampling technique. All teachers and students in the 5th grade across both branches of schools were observed, employing a census sampling technique. The researchers used two checklists that were designed for observing and recording information in order to gather evidence for their study. The data was analyzed using descriptive statistics. The instruction was found to be quite relevant to the development of character, citizenship, collaboration, creativity, critical thinking, and communication skills. However, these skills were well developed among street-connected children, except communication skills, which were developed at a moderate level. The study recommended that there should be language labs in these schools where students can practice for the development of communication skills. The use of multimedia, technology, videos, and audio recordings should be encouraged.

Keywords: *Classroom instruction, level of development, non-formal education, 21st-century skills, street-connected children.*

INTRODUCTION

The efficiency of classroom instruction (and how that relates to learning outcomes) is a significant lever for educational improvement. Seidman, Kim, Raza, Ishihara & Halpin (2018) argue that essential components of the 21st-century classroom environment are student engagement, effective use of instructional methodologies or emotional components that support child development. Instructional quality has been demonstrated to have a stronger relationship with student learning than structural aspects of schools in both developed and developing countries (Garrett & Steinberg, 2015; Pisani, Borisova & Dowd, 2018). However, a wide range of key competences and skills—also referred to as 21st-century skills—beyond literacy and numeracy are essential for excellent learning of students and successful teaching. The 21st-century skill set is typically thought to include a number of competencies, such as collaboration, citizenship, communication, critical thinking, creativity, and character development (for a review of frameworks see Dede, 2010). The development of these skills is especially important in case of developing countries, where there has been a marked lack of improvement in learning

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outcomes, suggesting that urgent work has to be done to raise instructional quality. When teaching methods are not context-specific and there are ineffective ways to support teachers in their professional development, it might be challenging to achieve the desired improvements in education (UNESCO, 2016).

Pakistan is a developing country with insufficient educational resources. According to National Commission on the Rights of Children (NCRC) statistics for the year 2019-20, Pakistan is ranked 149th out of 185 nations in the Kids Rights Index. Economic Survey of Pakistan (2019-20) indicates that there are 3.3 million street-connected children in the country. A Street-connected child is a child aged 1 to 18 who spends most of the time living or working in the streets. Ali and Ali (2015) reported that street-connected children are the most marginalized and vulnerable group. They are subjected to poverty, conflict, sexual abuse, violence, discrimination, parental death or parental neglect which limits their access to education. They lack the necessary skills to succeed in the 21st-century. Quality education can help them to be better citizens and deal with their problems more effectively (Ali & Ali, 2015). Various organizations and initiatives have emerged to provide education and support to underprivileged children in Pakistan. Pehli Kiran Schools are non-formal schools established by Jamshed Akhtar Qureshi (JAQ) Education Trust and registered under Trust Act II of 1882. They have been providing the right of education to these marginalized children since 1995. They build portable sheds in katchi abadis of Islamabad to provide education, skills, and opportunities to the underprivileged children. They claim to get these children off the streets into schools where these children can study, grow, and play. They realize that each child's educational journey should be unique. Pehli Kiran Schools' aim is to promote literacy and 21st-century skills among children from lower socio-economic backgrounds to provide them a chance of a better tomorrow.

Baharun (2017) expresses that character development in schools aims to foster responsible, kind, and caring individuals by addressing cognitive, affective, and behavioral aspects of morality. Novianti & Ferianto (2023) explain that teachers play a crucial role in shaping students' personalities through activities like discussion, debate, fieldwork, and role-playing. Ichilov (2013) emphasizes citizenship education, which involves understanding and fulfilling rights and responsibilities and exploring concepts like power, freedom, equality, democracy, and racism across subjects. Lai, DiCerbo, & Foltz (2017) claim collaboration, a 21st-century skill, enhances problem-solving through shared knowledge, requiring clear directions and objectives. Kropp, Meier, and Biddle (2016) express communication skills as a key aspect that empowers students to participate in various educational settings. Khambayat (2017) asserts that communication skills are the cornerstone of human learning from which good listening, speaking, reading, and writing emerge. Yuldashev & Yuldasheva (2019) profoundly believe that communication expands opportunities for students and the ability to participate in a variety of educational settings. Newton & Newton (2014) claim it is a necessary skill that should be developed by the educational system in early childhood. Batlolona, Diantoro, & Latifah (2019) argue that creativity can be enhanced using art, music, crafts, role-playing, problem-solving, poetry, creative writing, and story-telling. Critical thinking enables people to comprehend and understand content in their daily lives. It is a key skill for the twenty-first century. This skill is

developed through time and is broadened beginning in childhood (Alsaleh, 2020). Harahap, Ristanto, and Komala (2020) explain that the use of games, story mapping, problem-solving exercises, quizzes, and other techniques has a significant positive impact on the rise of higher-level thinking. Chusni, Saputro, Suranto, and Rahardjo (2020) mention that teaching strategies for developing critical thinking in students can be more successful if the teacher creates a favorable atmosphere in class for thinking where students are free to ask questions, express their viewpoints, collaborate, and speak with one another. In the context of Pakistan, particularly the Islamabad Capital Territory, the educational challenges are exacerbated by the presence of extensive slum areas with limited access to resources. The 21st-century skills development within the specific challenges faced by street-connected children underscores the importance of holistic education and targeted interventions in ensuring a better future for this group.

Murray (2020) discussed the increasing expectations for teachers, emphasizing the importance of their deep understanding, passion, and adaptability to build a 21st-century school system. He also discussed the role of digital technology in education, recognizing its potential and challenges in its implementation. A transformative shift in the teaching approach from a traditional, teacher-centered model to one that embraces 21st-century skills is discussed and emphasizes the importance of personalizing the learning experience, understanding students' interests, and using authentic, diverse content to engage learners. Providing feedback and continuous reflection on teaching methods are highlighted as crucial elements in preparing students for the future *(How to implement 21st-Century Skills in Class,* n.d*.)*. Stehle and Peters-Burton (2019) present a student-centered learning model focused on knowledge construction and real-world problem-solving. They emphasize a circular relationship between these elements, facilitated by collaboration and communication. Self-regulation is highlighted as an internal process guiding individual connections. Information and communication technology (ICT) are seen as tools to enhance 21st t-century skills. Buynay (2023) claims that 21st century skills can be developed through classroom instruction, project-based learning, technology integration, experiential learning, collaborative learning, self-reflection, and real-world connections. These approaches collectively create a holistic learning environment, fostering skills such as critical thinking, problem-solving, teamwork, and digital literacy. Martínez (2022) asserts that educators use project-based learning (PBL) to blend academic knowledge with 21st-century skills. PBL links modern skills to real-world challenges, emphasizing critical thinking, creativity, collaboration, and communication. Implementing PBL best practices involves student-teacher cooperation, clear expectations, and addressing challenges.

Objectives of the research were to:

1. examine the quality of instruction for developing 21st-century skills among street-connected children.

2. determine the level of development of students of Pehli Kiran Schools in the core areas of 21st-century skills (character, critical thinking, collaboration, communication, creativity, and citizenship).

The research addressed following research questions:

1. What are the strategies used for developing 21st-century skills among street-connected children?
2. What is the teaching-learning process employed for developing 21st-century skills among street-connected children?
3. What kind of classroom management is used to help street-connected students gain 21st-century skills?
4. What do students reflect about their level of development for 21st-century skills?

RESEARCH METHODOLOGY

The nature of the study was epistemologically related to the positivism paradigm. It depends on measurement and reason, on the idea that knowledge is revealed from an objective, quantifiable, and neutral observation of an event, action, or response. According to positivism, there can be no certainty about something if it is not measurable in this way (Park, Konge & Artino, 2020). The approach was quantitative approach followed by structured observation. Quantitative research relies on the collection and analysis of numerical data to describe, explain, predict or control variables and phenomenon of interest (Gay, Mills & Airasian, 2009). Quantitative approaches to assess classrooms have the ability to be more systematic than qualitative.

Research Design. It was a structured observational study. The emphasis in structured observation was on gathering quantitative rather than qualitative data. The researchers were interested in a set of behaviors. This allows them to quantify the behaviors they were observing (Price, Jhangiani, Chiang, Leighton & Cuttler, 2017). Quantitative observational studies typically focus on particular aspects of behavior that can be quantified through some measure (Leedy & Omrode, 2013).

Context of the study. Islamabad Capital Territory has huge slums spread around the city. Sixty-three slums' areas located in 20 of the 26 UCs of the city. The authorities rarely treat and address these underdeveloped areas as integral or equal components of cities (UN-Habitat, 2010). According to the National census 2017, Islamabad has a population of one million people, and its 38 percent or 379, 620 live in slums. In the last three decades, the number of people living in slums has grown. According to a report of UNICEF (2020), many of the dwellers are temporary migrants from other parts of the country and Afghanistan. The residents are mostly illiterate with large size of their families. Mostly children are out of school, and they wander here and there in the streets. Getting education is their least priority and at the same time the government is also giving little attention to their education. The education facilities are lacking in these areas. Some NGOs are running different schools with the coordination of government. The Pehli Kiran Schools are one of them. These are schools with mobile infrastructure established by a philanthropist. There were nine schools in total at start but currently eight schools are working. They impart knowledge to out-of-school children so that they can play a

positive role in the society. The Pehli Kiran Schools have an average of eight teachers per school. The student-teacher ratio is 28:1. The average number of students in a school is around 350.

Population and sampling. The teachers and students of Pehli Kiran Schools were the research population. The sample of the study was 10 teachers and 26 students from two schools in Pehli Kiran (PKS-5 and PKS-8). Two schools were selected using a random sampling technique. All teachers and students in grade 5 were observed in both branches of schools using the census sampling technique. Two teachers were male, and eight were female. One of the teachers was an M.A., M.Ed. Two teachers had a master's degree with a B.Ed., and six teachers had a B.A., B.Ed. Two teachers had more than two years of teaching experience. Five teachers had more than three years of teaching experience, and two teachers had more than four years of teaching experience. The total number of male students was 10, and female students were 16.

Research instruments. The nature of the study was quantitative. Quantitative methods for observing classrooms can be categorized into two primary groups: checklists and rating scales. The researchers used two checklists designed for observing and recording information in order to gather evidence for their study. The observer in the classroom was required to mark on a checklist whether an item was present or absent. Rating or categorization scales are often higher-inference methods, capable of focusing on the quality of specific behaviors as well as their frequency of occurrence in the classroom (Fredricks, 2022). The purpose of using observation checklists in this context was to ensure a systematic and organized approach to collecting evidence during the study. Each checklist focused on different aspects of the subjects or phenomena under observation, contributing to a more comprehensive understanding of the research topic.

One of the observation checklists was devised for the observation of classroom instruction. It was comprised of six outcomes (skills), which were related by looking at how five different disciplines were taught in the classroom to fifth-graders. Islamiat was linked to character development, social studies to citizenship, math to teamwork, English to creativity and communication, and G. Science to critical thinking. The researcher devised a list of different elements that addressed three areas using literature review: teaching-learning process, strategies and classroom management. The observation checklist comprised of first column for outcomes, second for areas addressed, third for elements observed, fourth for PKS-5, and fifth to PKS-8, consisting of rating scale Effectively, Somewhat effectively, Ineffectively and Not Observed. The following sources were used to devise the observation checklist: Price, Pierson, & Light (2011); Borrowski (2019). Six experts validated the instrument. Its S-CVI value was 0.94.

Second observation checklist was devised for the observation of students' level of development of 21st-centuryskills. It was also comprised of six outcomes (skills) and these outcomes were connected with the observation of above mentioned five subjects and break time. It was also devised using literature review. This observation checklist comprised of first column for outcomes, second for elements observed, third for PKS-5, and fourth to PKS-8, consisting of behavioral observation scale Always, Sometimes, Rarely and Never. Sources of development of

observation checklist were Zúñiga, Cárdenas, Martínez, & Valledor (2020), Nakano & Wechsler (2018). The instrument was validated by six experts. Its S-CVI value was 0.96.

Data collection and analysis. The researcher paid a visit to the school and after getting due permission from the higher authorities, talked to school principals and concerned teachers for examining classroom instruction and students' behaviors. The researcher made observations of five subjects daily for three weeks for classroom instruction and five subjects and break time daily for three weeks for students' development. The researcher made observations as non-participant observer to prevent influence on participants' behavior. Data was analyzed using descriptive analysis.

FINDINGS OF THE RESEARCH

Table 1: Observations of Teachers' Instruction regarding Character Development

Areas Addressed	Elements Observed	N	PKS-5			PKS-8		
			F	%	SD	F	%	SD
Teaching-learning process	Teacher quotes different stories/ examples for character building	15	13	87	1.4	12	80	2.1
	Teacher makes use of guidance for students' character building	15	13	87	1.4	11	73	2.8
Strategies	Teacher makes use of historical dramatization/role play during lessons	15	12	80	2.1	14	93	0.7
	Teacher models ideal behavior	15	14	93	0.7	13	87	1.4
	Teacher puts focus on each and every student	15	13	87	1.4	12	80	2.1
Classroom Management	Classrooms rules are established	15	14	93	0.7	12	80	2.1
	Teacher makes use of rewards/appreciation for good behavior	15	11	73	2.8	13	87	1.4

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

The above table shows that for character development, the teacher gives several examples and stories: This element was observed 13 times out of 15 in PKS-5, accounting for 87% and having a standard deviation of 1.4. This element was seen 12 times in PKS-8, which is 80% and has a standard deviation of 2.1.Teacher makes use of guidance for students' character building: In PKS-5, this element was observed 13 times (87%) with a standard deviation of 1.4. In PKS-8, this element was observed 11 times (73%) with a standard deviation of 2.8. Teacher makes use of historical dramatization/role play during lessons: In PKS-5, this element was observed 12 times, representing 80% of the observations with a standard deviation of 2.1. In PKS-8, this element was observed 14 times, representing 93% of the observations with a lower standard deviation of 0.7. Teacher models ideal behavior: In PKS-5, this element was observed 14 times (93%) with a low standard deviation of 0.7. In PKS-8, this element was observed 13 times (87%) with a standard deviation of 1.4. Teacher puts focus on each and every student: In PKS-5, this element was observed 13 times, representing 87% with a standard deviation of 1.4. In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of 2.1. Classroom rules are established: In PKS-5, this element was observed 14 times, representing 93% with a low standard deviation of 0.7.In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of 2.1. Teacher makes use of rewards/appreciation for good behavior: In PKS-5, this element was observed 11 times, representing 73% with a high standard deviation of 2.8.In PKS-8, this element was observed 13 times, representing 87 with a standard deviation of 1.4. Overall, PKS-5 and PKS-8 show some differences in the observed elements within the teaching-learning process, strategies, and classroom management. However, both institutions made every effort to foster students' moral development.

Table 2: Observation of Students for Character Development

Elements Observed	N	PKS-5			PKS-8		
		F	%	SD	F	%	SD
Students behave mannerly	15	14	93	0.7	14	93	0.7
Students pay greetings to others	15	14	93	0.7	13	87	1.4
Students show patience and tolerance	15	13	87	1.4	14	93	0.7
Students show obedience to elders	15	14	93	0.7	15	100	0.0
Students are helpful to others	15	12	80	2.1	13	87	1.4

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

This table shows the data related to the behavior and conduct of students in both schools PKS-5 and PKS-8. Students behave mannerly: In both PKS-5 and PKS-8, this element was observed 14 times, representing 93% with a standard deviation of 0.7.Both PKS-5 and PKS-8

seem to have a very high percentage of students displaying good manners, and the standard deviation suggests that this behavior is consistent. Students pay greetings to others: In PKS-5, this element was observed 14 times, representing 93% with a standard deviation of 0.7.In PKS-8, this element was observed 13 times, representing 87% with a slightly higher standard deviation of 1.4. Students show patience and tolerance: In PKS-5, this element was observed 13 times, in PKS-8, this was observed 14 times. Students show obedience to elders: In PKS-5, this element was observed 14 times, representing 93% of the observations with a very low standard deviation of 0.7.In PKS-8, this element was observed 15 times, representing 100% of the observations with standard deviation (0.0).Both schools show a very high percentage of students displaying obedience to elders, with PKS-8 having a perfect score, indicating no variability in this behavior. Students are helpful to others: In PKS-5, this element was observed 12 times, representing 80% of the observations with a higher standard deviation of 2.1.In PKS-8, this element was observed 13 times, representing 87% of the observations with a standard deviation of 1.4.PKS-8 has a higher percentage of students being helpful to others, with less variability compared to PKS-5. Thus, findings from both PKS-5 and PKS-8 show generally positive behavior and conduct among students.

Table 3: Observations of Teachers' Instruction regarding Citizenship

Areas Addressed	Elements Observed	N	PKS-5			PKS-8		
			F	%	SD	F	%	SD
Teaching-learning process	Teacher relates classroom discussion to social norms	15	14	93	0.7	13	86	1.4
	Teacher teaches rights and responsibilities of students as citizens	15	14	93	0.7	12	80	2.1
Strategies	Teacher encourages respect for cultural and social differences	15	13	87	1.4	13	86	1.4
	Teacher promotes loyalty and patriotism through lectures	15	12	80	2.1	11	73	2.8
Classroom Management	Putting the wrappers in the bins/picking up the litter is encouraged.	15	13	87	1.4	12	80	2.1
	Waiting for ones' turn is encouraged	15	12	80	2.1	13	86	1.4

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 3 shows data related to observations of teachers' instruction regarding citizenship Teacher relate classroom discussion to social norms: In PKS-5, this element was observed 14 times, representing 93% with standard deviation of 0.7. In PKS-8, this element was observed 13 times, representing 86% with standard deviation of 1.4. Teacher teaches rights and responsibilities of students as citizens: In PKS-5, this element was observed 14 times, representing 93% with standard deviation of 0.7. In PKS-8, this element was observed 12 times, representing 80% with standard deviation of 2.1. Teacher encourages respect for cultural and social differences: In both PKS-5 and PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.4 in both schools. Teacher promotes loyalty and patriotism through lectures: In PKS-5, this element was observed 12 times, representing 80% with a standard deviation of 2.1. In PKS-8, this element was observed 11 times, representing 73% with a standard deviation of 2.8. Putting the wrappers in the bins/picking up the litter is encouraged: In both PKS-5 and PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.4 in both schools. Waiting for one's turn is encouraged: In PKS-5, this element was observed 12 times, representing 80% with a standard deviation of 2.1. In PKS-8, this element was observed 13 times, representing 86% with a standard deviation of 1.4. PKS-5 and PKS-8 both exhibit positive teaching-learning processes and classroom management practices. PKS-5 generally has a slightly higher percentage and lower variability in some elements related to teaching and classroom management. However, PKS-8 shows less variability in certain strategy-related elements.

Table 4: Observation of Students for the Development of Citizenship

Elements Observed	N	PKS-5			PKS-8		
		F	%	SD	F	%	SD
Students follow the classroom rules	15	13	87	1.4	12	80	2.1
Students respect to each other	15	14	93	0.7	14	93	0.7
Students are responsible in their tasks	15	15	100	0.0	12	80	2.1
Students know their rights	15	12	80	2.1	13	87	1.4
Students pick trash and throw in the bins	15	14	93	0.7	14	93	0.7

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 4 presents data related to various elements observed in students' behavior regarding citizenship in two schools PKS-5 and PKS-8. Students obey the classroom rules: In PKS-5, this element was observed 13 times, representing 87% with a standard deviation of 1.4.In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of

2.1.PKS-5 has a higher percentage and less variability in students obeying classroom rules compared to PKS-8.Students respect each other: In both PKS-5 and PKS-8, this element was observed 14 times, representing 93% with a standard deviation of 0.7 in both schools. Students are responsible: In PKS-5, this element was observed 15 times, representing 100% with no standard deviation (0.0).In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of 2.1.Students know their rights: In PKS-5, this element was observed 12 times, representing 80% with a standard deviation of 2.1.In PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.4.Students pick trash and throw it in the bins: In both PKS-5 and PKS-8, this element was observed 14 times, representing 93% with a standard deviation of 0.7 in both schools. Both PKS-5 and PKS-8 have the same high percentage and low variability in students picking up trash and disposing of it properly. PKS-5 and PKS-8 both have positive student behavior and conduct in various aspects.

Table 5: Observations of Teachers' Instruction regarding Collaboration

Areas Addressed	Elements Observed		PKS-5			PKS-8		
		N	F	%	SD	F	%	SD
Teaching-learning process	Teacher teaches how to listen and interact effectively	15	14	93	0.71	12	80	2.1
	Teacher teaches how to work in a team	15	14	93	0.71	12	80	2.1
Strategies	Teacher gives lecture to convey set of expectations and guidelines for working together	15	15	100	0.00	13	87	1.4
	Teacher makes use of group work/ cooperative learning	15	13	87	1.41	14	93	0.7
	Teacher assigns different tasks to engage students in group work	15	14	93	0.71	13	87	1.4
Classroom management	Teacher assigns different responsibilities to students	15	13	87	1.41	15	100	0.0
	Teacher encourages leadership, decision-making and trust building among students	15	13	87	1.41	12	80	2.1
	Teacher uses group sitting arrangements	15	12	80	2.12	14	93	0.7

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

The above table shows data related to various elements observed PKS-5 and PKS-8. Such as teacher teaches how to listen and interact effectively: In PKS-5, this element was observed 14 times, representing 93% with a standard deviation of 0.71. In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of 2.1. PKS-5 has a higher percentage and less variability in teaching effective listening and interaction compared to PKS-8. Teacher teaches how to work in a team: In PKS-5, this element was observed 14 times, representing 93% with a standard deviation of 0.71. In PKS-8, this element was observed 12 times, representing 80% with a standard deviation of 2.1. PKS-5 has a higher percentage and less variability in teaching teamwork compared to PKS-8.Teacher gives a lecture to convey a set of expectations and guidelines for working together: In PKS-5, this element was observed 15 times, representing 100% with no standard deviation (0.00). In PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.4. Teacher makes use of group work/cooperative learning: In PKS-5, this element was observed 13 times, representing 87% with a standard deviation of 1.41. In PKS-8, this element was observed 14 times, representing 93% with a standard deviation of 0.7. Teacher assigns different tasks to engage students in group work: In PKS-5, this element was observed 14 times, representing 93% with a standard deviation of 0.71. In PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.4. Teacher assigns different responsibilities to students: In PKS-5, this element was observed 13 times, representing 87% with a standard deviation of 1.41. In PKS-8, this element was observed 15 times, representing 100% with no standard deviation (0.0). Teacher encourages leadership, decision-making, and trust-building among students: In both PKS-5 and PKS-8, this element was observed 13 times, representing 87% with a standard deviation of 1.41 in both schools. Teacher uses group sitting arrangements: In PKS-5, this element was observed 12 times, representing 80% with a standard deviation of 2.12. In PKS-8, this element was observed 14 times, representing 93% with a standard deviation of 0.7. PKS-5 and PKS-8 both exhibit positive teaching-learning processes, strategies, and classroom management practices. PKS-5 has a higher percentage and less variability in several elements related to teaching and classroom management. However, PKS-8 shows slightly better performance in certain strategy-related elements and group work.

Table 6: Observation of Students for the Development of Collaboration

Elements Observed	N	PKS-5			PKS-8		
		F	%	SD	F	%	SD
Students work together to complete assignments and solve difficulties	15	12	80	2.1	15	100	0.0
Students work together to set group goals	15	14	93	0.7	13	87	1.4
Students work together to achieve group	15	14	93	0.7	15	100	0.0

objectives							
Students discuss and incorporate multiple points of view	15	12	80	2.1	15	100	0.0
Students take suggestions and critiques from others and implement them into work	15	15	100	0.0	14	93	0.7

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 6 shows the data regarding observations of students for the development of collaboration. In PKS-5, Students working together to complete assignments and solve difficulties found12 times 80% with a standard deviation of 2.1. Students working together to set group goals found 93% with a standard deviation of 0.7. Students working together to achieve group objectives found 93% with a standard deviation of 0.7. Students discussing and incorporating multiple points of view found 80% with a standard deviation of 2.1. Students taking suggestions and critiques from others and implementing them into work found 100% with a standard deviation of 0.0.In PKS-8, students working together to complete assignments and solve difficulties found 100% with a standard deviation of 0.0. Students working together to set group goals found 87% with a standard deviation of 1.4. Students working together to achieve group objectives found 100% with a standard deviation of 0.0. Students discussing and incorporating multiple points of view found 100% with a standard deviation of 0.0. Students taking suggestions and critiques from others and implementing them into work found 93% with a standard deviation of 0.7. Both PKS-5 and PKS-8 show high levels of collaboration and teamwork, with some variations in the "Students working together to set group goals" element for PKS-8 and the "Students working together to complete assignments and solve difficulties" and "Students discussing and incorporating multiple points of view" elements for PKS-5.

Table 7: Observations of Teachers' Instruction regarding Communication Skills

Areas Addressed	Elements Observed		PKS-5			PKS-8		
		N	F	%	SD	F	%	SD
Teaching-learning process	Teacher makes use of listening exercises to teach how to listen.	15	13	87	1.4	12	80	2.1
	Teacher teaches students the art of asking questions	15	13	87	1.4	13	87	1.4
	Teacher makes use of different AV Aids to teach communication skills	15	14	93	0.7	14	93	0.7
Strategies	Teacher makes use of discussion/	15	12	80	2.1	14	93	0.7

	dialogue/active exchange of ideas related to the subject with the learners							
	Students are given several oral communication activities/ presentations by the teacher	15	13	87	1.4	14	93	0.7
Classroom management	Teacher uses sitting arrangements in which students can communicate easily	15	15	100	0.0	15	100	0.0
	Teacher makes the environment peaceful and conducive for effective communication.	15	15	100	0.0	12	80	2.1

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 7 Depicts the areas addressed and elements observed in PKS-5 and PKS-8 related to teaching-learning processes, strategies, and classroom management. In both PKS-5 and PKS-8, the teacher consistently (13 in both) makes use of listening exercises to teach how to listen. In PKS-5, this practice is observed with a percentage of 87% and a standard deviation of 1.4, indicating a consistent emphasis on teaching listening skills. In PKS-8, this behavior is observed with a slightly lower percentage (80%) and a standard deviation 2.1, suggesting some variability and room for improvement. In both PKS-5 and PKS-8, the teacher consistently (13 in both) teaches students the art of asking questions. In both schools, this practice is observed with a percentage of 87% and a standard deviation of 1.4. In both PKS-5 and PKS-8, the teacher consistently (14 times in both schools) makes use of different audio-visual aids to teach communication skills. In both schools, this practice is observed with a percentage of 93% and a standard deviation of 0.7. Teacher makes use of discussion/dialogue/active exchange of ideas related to the subject with the learners: In PKS-5, the teacher does this practice 12 times with a percentage of 80% and a standard deviation2.1. In PKS-8, the teacher consistently 14 engages in active exchange of ideas with a percentage of 93 and a standard deviation 0.7, suggesting a strong emphasis and consistency in this aspect. In both PKS-5 and PKS-8, the teacher 13 times in PKS-5and 14 times in PKS-8) provides students with oral communication activities and presentations. In both schools, this practice is observed with a percentage of 87 and a low standard deviation of 0.7. In both PKS-5 and PKS-8, the teacher consistently (15 in both) uses sitting arrangements that facilitate easy communication among students. In both schools, this practice is observed with a perfect percentage of 100% and no standard deviation (0.0), indicating a strong emphasis and consistency in creating conducive seating arrangements. In PKS-5, the teacher creates a peaceful and conducive environment with a perfect frequency of 15, a percentage of 100%, and no standard deviation (0.0).In PKS-8, this practice is observed less frequently (12) with a lower percentage (80%) and a standard deviation 2.1, suggesting some

variability and room for improvement in maintaining a conducive communication environment. Overall, both schools value effective communication and teaching strategies.

Table 8: Observation of Students for the Development of Communication Skills

Elements Observed		PKS-5			PKS-8		
	N	F	%	SD	F	%	SD
Students use different ways of communication	15	13	87	1.4	14	93	0.7
Students share the information in useful and meaningful manner	15	14	93	0.7	12	80	2.1
Students convey their message clearly to the audience they are addressing	15	14	93	0.7	11	73	2.8
Students listens effectively	15	15	100	0.0	14	93	0.7
Students communicate confidently	15	13	87	1.4	15	100	0.0

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

This table presents the elements observed related to students' communication skills in PKS-5 and PKS-8. In PKS-5, students are observed frequently using different ways of communication with a percentage of 87 and a standard deviation 1.4. In PKS-8, students use this 14 times with a percentage 93 and a standard deviation (0.7). In both PKS-5 and PKS-8, students consistently (14 times in PKS-5 and 12 times in PKS-8) share information in a useful and meaningful manner. In PKS-5, this behavior is observed with 93% and a standard deviation 0.7. In PKS-8, the percentage is 80%, and the standard deviation is (2.1), suggesting some variability and room for improvement in conveying information effectively. In both PKS-5 and PKS-8, students consistently (14 times in PKS-5, 11 times in PKS-8) convey their message clearly to the audience they are addressing. In PKS-5, this behavior is observed with a percentage 93% and a standard deviation 0.7. In PKS-8, the percentage is 73%, and the standard deviation is 2.8, suggesting more variability and room for improvement in clarity of communication. In PKS-5, students listen effectively with a perfect frequency 15 (100%) and 0.0 standard deviation. In PKS-8, students also demonstrate effective listening with a frequency of 14, a percentage of 93%, and a low standard deviation 0.7. In PKS-5, students communicate confidently with a frequency of 13 (87%), and a standard deviation 1.4. In PKS-8, students are consistently found communicating confidently with a percentage of 100% and 0.0 standard deviation. In summary, PKS-5 and PKS-8 both emphasize various aspects of effective communication skills among students.

Table 9: Observations of Teachers' Instruction regarding Creativity

Areas Addressed	Elements Observed		PKS-5			PKS-8		
		N	F	%	SD	F	%	SD
Teaching-learning process	Teacher presents innovative ideas in the class	15	13	87	1.4	13	87	1.4
	Teacher adds art challenges in the curriculum	15	14	93	0.7	13	87	1.4
Strategies	Teacher gives the students space and a framework in which they can be creative	15	14	93	0.7	13	87	1.4
	Teacher gives students direct feedback on their creativity	15	13	87	1.4	14	93	0.7
Classroom management	Teacher uses motivation and rewards for innovative/ creative work	15	13	87	1.4	13	87	1.4
	Teacher arranges display for kids' creativity	15	14	93	0.7	12	80	2.1

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

The above table presents data regarding the areas addressed and elements observed for creativity in PKS-5 and PKS-8. In both PKS-5 and PKS-8, the teachers are found 13 times presenting innovative ideas in the class. In both schools, this practice is observed with a percentage of 87% and a standard deviation of 1.4.In PKS-5, the teacher frequently (14 times) adds art challenges to the curriculum with a high percentage (93%) and a standard deviation 0.7. In PKS-8, the teacher does 13 times with a percentage of 87% and a standard deviation of 1.4, suggesting some variability. In both PKS-5 and PKS-8, the teacher consistently (14 in both) provides students with space and a framework for creativity. In both schools, this behavior is observed with a percentage of 93% and a standard deviation of 0.7, indicating a strong and consistent emphasis on fostering creativity. In PKS-5, the teacher frequently 13 times gives students direct feedback on their creativity with a percentage of 87% and a standard deviation of 1.4, indicating some variability. In PKS-8, the teacher consistently 14 times provides feedback on creativity with a percentage of 93% and a standard deviation of 0.7.In both PKS-5 and PKS-8, the teacher 13times in both found using motivation and rewards for innovative or creative work. In both schools, this practice is observed with a percentage of 87% and a standard deviation of 1.4.In PKS-5, the teacher frequently arranges a display for kids' creativity and a low standard deviation 0.7.In PKS-8, the teacher does this practice less frequently with a standard deviation 2.1, suggesting some variability and room for improvement in this aspect. In summary, PKS-5

and PKS-8 share several similarities in their teaching and classroom management approaches. Both schools emphasize the presentation of innovative ideas, providing space and frameworks for creativity, giving direct feedback on creativity, and using motivation and rewards for innovative work.

Table 10: Observation of Students for the Development of Creativity

Elements Observed	N	PKS-5			PKS-8		
		F	%	SD	F	%	SD
Students have ability to generate ideas	15	12	80	2.1	13	87	1.4
Students are able to see the questions/topics from different perspectives	15	14	93	0.7	12	80	2.1
Students use knowledge and understanding to create something different/new	15	13	87	1.4	14	93	0.7
Students try to bring originality in their work	15	14	93	0.7	15	100	0.0
Students put together known elements in unique ways	15	13	87	1.4	13	87	1.4

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 10 presents data related to observation of students for the development of creativity In PKS-5, students 12 demonstrate the ability to generate ideas, percentage 80% and a standard deviation 2.1, indicating some variability and room for improvement. In PKS-8, students 13 times demonstrate this ability with percentage 87%and a lower standard deviation 1.4.In PKS-5, students 14 times demonstrate the ability to see questions/topics from different perspectives, with a high percentage 93% and a low standard deviation 0.7, indicating a strong emphasis and consistency. In PKS-8, students are observed 12 times with percentage 80% and standard deviation 2.1.Students consistently (13 times in PKS-5 and 14 times in PKS-8) use knowledge and understanding to create something different/new. In both schools, this behavior is observed with a percentage of 87% and 93% and a standard deviation of 1.4 and 0.7.In PKS-5, students are found 14times trying to bring originality into their work, with a percentage 93% and a low standard deviation 0.7.In PKS-8, students 15 times achieve this with a perfect percentage (100%) and standard deviation 0.0.In both PKS-5 and PKS-8, students (13 times in both) put together known elements in unique ways. In both schools, this behavior is observed with a percentage of 87% and a standard deviation of 1.4.Both schools encourage students to be creative, innovative, and capable of approaching topics from various angles, but PKS-8 seems to have a more pronounced focus on these aspects.

Table 11: Observations of Teachers' Instruction regarding Critical Thinking

Areas Addressed	Elements Observed	N	PKS-5			PKS-8		
			F	%	SD	F	%	SD
Teaching-learning process	Teacher suggests new things to look at and try to encourage experimentation and thinking	15	12	80	2.1	11	73	2.8
	Teacher provides situations for making assumptions	15	13	87	1.4	15	100	0.0
	The teacher allows students to make connections between various concepts/ ideas	15	14	93	0.7	14	93	0.7
Strategies	Teacher uses Socratic method	15	14	93	0.7	13	87	1.4
	Teacher makes use of brain storming	15	13	87	1.4	14	93	0.7
Classroom management	Teacher carefully listens to students' ideas in order to help them to develop their skills	15	12	80	2.1	13	87	1.4
	Teacher maintains a compassionate, accepting environment in the classroom	15	13	87	1.4	12	80	2.1

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

Table 11 provides a data for observations of teachers' instruction regarding critical thinking. Teacher suggests new things to look at and encourages experimentation and thinking: The teacher in PKS-5 is found 12 times with a percentage 80% and a standard deviation 2.1.In PKS-8, the teacher is found 11 times with a percentage 73% and a standard deviation 2.8.In PKS-5, the teacher 15 provides situations for making assumptions with a percentage 87% and a standard deviation 1.4, indicating a strong emphasis on this aspect. In PKS-8, the teacher 15 times provides situations for making assumptions with a percentage 100% and standard deviation 0.0, indicating strong consistency and emphasis on this aspect. The teacher allows students to make connections between various concepts/ideas: The teacher in PKS-5 allows students 15 times to make connections with a percentage 93% and a standard deviation 0.7.In PKS-8, the teacher consistently allows students 14 times to make connections with a percentage 93% and a standard deviation 0.7.Teacher uses the Socratic Method: In PKS-5, the teacher is found 15 times using the Socratic Method with a percentage 93% and a standard deviation 0.7.In PKS-8, the

teacher uses the Socratic Method 13 times with a percentage 87% and a standard deviation 1.4.Teacher makes use of brainstorming: In PKS-5, the teacher 15 times makes use of brainstorming with a high percentage 87% and a low standard deviation 1.4.In PKS-8, the teacher 14 times makes use of brainstorming with a high percentage 93% and a low standard deviation 0.7.Teacher carefully listens to students' ideas to help them develop their skills: The teacher in PKS-5 is found in practice of this 15 times with a percentage 80% and a standard deviation 2.1.In PKS-8, the teacher is found in practice of this13 times with a percentage 87% and a standard deviation 1.4.Teacher maintains a compassionate, accepting environment in the classroom: In PKS-5, the teacher maintains a compassionate, accepting environment 15 times with a percentage 87% and a standard deviation 1.4.In PKS-8, the teacher maintains such an environment 12 times with a percentage 80% and a standard deviation 2.1.PKS-5 and PKS-8 both seem to prioritize elements related to teaching-learning processes, strategies, and classroom management, but there are some differences in the frequency and consistency of certain aspects.

Table 12: Observation of Students for the Development of Creativity

Elements Observed	N	PKS-5			PKS-8		
		F	%	SD	F	%	SD
Students reason and evaluate facts and evidence	15	14	93	0.7	15	100	0
Students are capable of solving problems	15	13	87	1.4	14	93	0.7
Students are able to draw inferences and conclusions	15	13	87	1.4	13	87	1.4
Students have curiosity to know the things	15	12	80	2.1	14	93	0.7
Students ask meaningful questions	15	13	87	1.4	14	93	0.7

Note: N= Number of total observations, F= Frequency of the behavior observed, SD= Standard deviation

This table demonstrates the elements observed in the context of students' development of creativity in PKS-5 and PKS-8. In both PKS-5 and PKS-8, students 15 times exhibit the ability to reason and evaluate facts and evidence. In PKS-5, this behavior is observed with a percentage 93% and a low standard deviation 0.7, indicating strong consistency. In PKS-8, this behavior is observed with a percentage 100% and standard deviation 0.0. In both PKS-5 13 times and PKS-8 14 times students exhibit the ability to solve problems. In PKS-5, this behavior is observed with a percentage 87% and a standard deviation 1.4. In PKS-8, this behavior is observed with a high percentage 93% and a standard deviation 0.7. In both PKS-5 and PKS-8, students (13 times in both) exhibit the ability to draw inferences and conclusions. In both schools, this behavior is observed with a percentage of 87% and a standard deviation of 1.4. In PKS-5, students 15 times show curiosity to know things, with a percentage 80% and a standard deviation 2.1. In PKS-8,

students consistently 14 times show curiosity with a percentage 93% and a standard deviation 0.7.Students are found asking meaningful questions 13 times in PKS-5 and 14 times in PKS-8.In both schools, this behavior is observed with a percentage of 87% and a standard deviation of 1.4. Both PKS-5 and PKS-8 students are found prepared for reasoning, problem-solving, drawing inferences, and asking meaningful questions. Both schools seem to promote active and engaged learning for creativity among students.

DISCUSSION

In the present study the researcher observed the classroom instruction and development of 21st-century skills among street-connected children in Pehli Kiran Schools (non-formal) which were established in underserved areas of Islamabad. It was found that teachers at both PKS employed various elements of the teaching-learning process for developing contemporary skills among street-connected children. They were also found using diverse strategies for the development of character-building, citizenship, collaboration, communication, creativity and critical thinking. Their classroom management techniques helped street-connected students gain contemporary skills. These techniques included putting focus on each student, establishing classrooms rules, making use of rewards, engaging students in group work, sitting arrangements etc. It was also found that most of the street-connected children at Pehli Kiran Schools had attained 21st-century skills at varying levels across different outcomes. Mostly students had good moral values and habits which depicted development of character. They also demonstrated good civic sense from their behaviors. They were well prepared for collaboration as they know how to work together in teams to achieve their objectives. The students were found moderately prepared for communication skills. They were found good in creativity; they had some originality in their work. They were found excellent in critical thinking. They were able to reason and evaluate. They were also found to be able to draw inferences at an excellent level.

Suciptaningsih, Pradana & Haryati (2023) explores the integration of technology-based learning and 21st-century skills, such as critical thinking, problem-solving, communication, and collaboration, in elementary schools. Observations and interviews reveal the effective application of these skills through various activities, both inside and outside the classroom. The use of technology, including the internet, YouTube videos, LCDs, and Chromebooks, enhances student-centered learning and stimulates critical thinking, communication, collaboration, and creativity. Rosfiani, Hermawan & Sutisnawati (2022) focuses on enhancing elementary school students' 21st-century skills through improved literacy skills in various subjects. Teachers successfully develop creativity, collaboration, critical thinking, and communication skills through project work and small group activities. However, challenges include low communication skills and limited involvement of certain students in investigation projects. The study emphasizes the importance of teacher trust, competence, and past experiences in fostering 21st-century skills. Parental involvement is highlighted, and the need for maintaining collaborative projects and creating an inclusive classroom climate is emphasized.

Kim, Raza & Seidman (2019) conducted research focusing the requirement for contextualized evaluation of the social quality of instructional processes. To do this, they

emphasize the efforts put forward in three distinct contexts—Uganda (secondary), India (primary), and Ghana (pre-school)—to design and assess teacher practices and classroom procedures using the Teacher Instructional Practices and Processes System (TIPPS). They concluded that the development of 21st-century skills in learners depends significantly on effective teacher training and classroom practices. Feedback and reflective practice play crucial roles in improving teaching quality. Individualized support, such as mentoring and coaching, is essential for successful educational interventions. Stehle & Peters-Burton (2019) conducted research in order to determine the extent to which teachers at inclusive STEM high schools are involving and fostering students' 21st-century skills. This study analyzed teacher lesson plans to assess the development of 21st-century skills. Explicit instructions for activities like group work, peer feedback, and audience-specific projects were lacking. Collaboration and communication were frequently tied to real-world problem solving and knowledge construction. Self-regulation was consistently connected to other 21st-century skills, reflecting its role in guiding students' connections and reflections. The study found no consistent correlation between the use of information and communication technology (ICT) and other skills. According to research, inclusive STEM high schools offer settings that foster the growth of 21st-century skills.

CONCLUSION AND RECOMMENDATIONS

The present study examined the development of 21st-century skills among street-connected children in non-formal schools. Street-connected children are the most marginalized and vulnerable group facing numerous barriers to access education and basic amenities. Twenty-first Century skills help them to be better citizens and deal with their problems more effectively. The study concluded that their classroom instruction was relevant for developing character, citizenship, collaboration, creativity and critical thinking but moderately relevant with communication skills and creativity. The teachers at Pehli Kiran Schools were effectively employing various elements of the teaching-learning process to foster the development of contemporary skills among street-connected children. This suggests that the educational methods used were geared towards enhancing these skills. The teachers used diverse strategies to promote character-building, citizenship, collaboration, communication, creativity, and critical thinking among their students. This approach implies a holistic and well-rounded educational approach. Effective classroom management techniques were identified as contributing to the development of contemporary skills among street-connected students. These strategies likely created a conducive learning environment. Most of the street-connected children at Pehli Kiran Schools had attained 21st-century skills to varying degrees across different outcomes. The school's educational approach was successful in nurturing these skills. The students demonstrated good moral values and habits, indicating progress in character development. The students exhibited a good civic sense through their behaviors, indicating an understanding of their roles as responsible citizens. Street-connected children were well-prepared for collaboration and teamwork, which is essential for success in the 21st-century. While the students were found to be

moderately prepared for communication skills, this area might need further attention to bring it up to the same level as other skills. Students were found to have some level of originality in their work, indicating a positive development in creativity. The students excelled in critical thinking, being able to reason, evaluate, and draw inferences at an excellent level. This skill is also crucial for problem-solving and decision-making in the 21st-century.

This study may be significant for making improvements in non-formal education programmes. It may help educationists in making practical plans for development of 21st-century skills through non-formal education. It may benefit teachers of NFE to make their lessons effective for underprivileged children. The study may help to revisit the existing practices of non-formal schooling. The possible extension of the study could be to investigate the provision of other necessary skills such as life and career skills and information, media, and technology skills.

In the view of results and discussions, following recommendations were made:

- The development of communication skills requires a lot of speaking and listening activities. There should be language labs in these schools where students can practice the development of communication skills.

- Multimedia, technology, videos and audio recordings should also be used for the development of 21st-century skills.

- Pehli Kiran schools should be upgraded to higher levels. Moreover, this type of schools should also be established in other slum and underdeveloped areas of Pakistan.

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