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Abstract (250 words)

21st Century Skills for Student Transition: Bold Supplants Old

Introduction

Transition is a shift from the traditional method of teaching and learning to practical skill building which will lead to a stable and satisfactory employment. The landscape of present-day education should undergo a transformation. The transition from school education to higher education and employment has become challenging due to changing workplace expectations and the growing demand for 21st-century competencies.

Approach/Method

Despite increasing emphasis on employability skills, limited attention has been given to understanding how schools prepare students for the transition from education to the workplace. This paper examines the role of schools in facilitating student transition through the development of skills. Klorofeel School, Brahmapur has been facilitating these skills to students to make them future-ready. Pottery, Drama, Community Connect, Music, Art, Agricultural Study and Vocational Education have been a part of the regular curriculum for secondary students. Students have realised that such education will help them excel and meet the needs of the fast-growing world. The study employed a descriptive survey involving 350 middle school and secondary students and teachers.

Findings

The findings suggest that integrating experiential learning, career guidance and competency-based education within school curricula can enhance students' readiness for higher education and employment. These skills have been integrated in the regular curriculum so that students develop the competencies needed to thrive in an interdependent world.

Conclusion/Implications

The study highlights that holistic, skill-based education empowers students with confidence, adaptability and practical competencies, ensuring smoother transitions to higher education, meaningful careers and lifelong success.

Keywords: 21st-century skills; student transition; experiential learning; competency-based education; skill-based education; employability skills; career readiness; holistic education; higher education; Klorofeel School.

Research Paper (2493 words)

21st Century Skills for Student Transition: Bold Supplants Old

1. Introduction

The 21st century has brought significant changes in education, technology, employment and society. These changes have created a growing need for students to develop competencies that enable them to respond confidently to unfamiliar situations, solve problems, communicate effectively, collaborate with others and adapt to changing environments. The transition from school education to higher education and employment is no longer determined by academic knowledge alone. Students are increasingly expected to demonstrate practical competencies, creativity, digital awareness, adaptability and the ability to apply knowledge in real-life situations.

Transition should therefore be understood not simply as movement from one educational stage to another, but as a process through which learners develop the knowledge, skills, attitudes and confidence required to enter new professional environments. Traditional education has generally emphasised subject knowledge, memorisation, examination performance and teacher-directed instruction. While these elements remain valuable, an education system that relies predominantly on rote learning may not adequately prepare students for the demands of a rapidly changing world.

The phrase **'Bold Supplants Old'** in this study refers to the movement from outdated or predominantly rote-oriented educational practices towards experiential and competency-based approaches. It does not imply that traditional knowledge should be discarded. Rather, academic learning needs to be complemented by opportunities that enable students to apply knowledge, experiment, create, communicate, collaborate and solve authentic problems.

21st century skills commonly include critical thinking, creativity, communication, collaboration, problem-solving, digital literacy, adaptability, self-management, leadership and lifelong learning. These competencies are particularly relevant during transition because students encounter new academic expectations, unfamiliar environments, increased independence and changing social and professional relationships. Students may possess adequate academic knowledge but lack confidence in communication, decision-making, teamwork, problem-solving or adapting to new situations.

Research has highlighted the importance of transferable competencies in educational and occupational transition. The growing importance of technology further strengthens the need for digital competence, including the ability to evaluate information critically, communicate responsibly and use technology to solve problems and create knowledge.

Against this background, the present study examines how school education can facilitate student transition through the systematic development of 21st-century skills. The study focuses on **Klorofeel School, Brahmapur,** where experiential and skill-based learning has been incorporated into the regular curriculum for secondary students. Activities such as pottery, drama, Community Connect, music, art, agricultural study and vocational education provide opportunities for students to learn through doing and connect classroom learning with practical experiences.

2. Objectives of the Study

The study was undertaken with the following objectives:

1. To examine the role of 21st-century skills in preparing students for educational and career transition.
2. To understand students' perceptions of skill-based and experiential learning.
3. To examine how experiential activities contribute to students' confidence, adaptability, communication, collaboration and practical competence.
4. To identify the perceived relevance of these skills for higher education and future employment.
5. To examine the role of the school in developing future-ready learners.
6. To suggest educational practices that can strengthen student transition through competency-based learning.

3. Review of Literature

The importance of 21st-century skills has received increasing attention in educational and employability research. Although different frameworks classify these skills differently, there is broad recognition of cognitive, interpersonal, digital and socio-emotional competencies. Communication and collaboration enable learners to express ideas, listen to others, negotiate differences and work effectively individually and in teams. Creativity supports innovation, while adaptability helps learners respond to changing academic, technological and workplace conditions.

Research on transition to employment has particularly emphasised transferable skills. Grosemans et al. (2017) found that generic competencies are important in the transition from higher education to the labour market, reinforcing the view that subject knowledge alone does not fully explain successful transition. Hamdan et al. (2023), in a review of employability research, identified problem-solving, communication, teamwork, adaptability and willingness to learn among the skills most consistently associated with employability.

The importance of authentic learning has also received attention. Real-world activities and authentic assessment provide opportunities for students to apply knowledge rather than merely reproduce information. Such learning can promote critical thinking, collaboration, problem-solving, creativity and independence.

The present study extends this perspective to school education. Instead of waiting until students enter higher education or employment to develop these competencies, **Klorofeel School** prepares learners through activities incorporated into the regular curriculum. These activities provide meaningful contexts through which students can develop practical competencies. Their educational value is strengthened when 21st-century skills are integrated with regular learning.. Such integration allows learners to experience education as a combination of knowledge, practice, reflection, creativity and application.

4. Methodology

4.1 Research Design

The study employed a survey design to examine the role of 21st-century skills in facilitating student transition. The design was appropriate because the study sought to understand students' perceptions of skill-based education and its relevance to future academic and professional pathways.

4.2 Participants

The study involved **350 middle-school and secondary students of Klorofeel School, Brahmapur**. The participants represented learners developing competencies needed for subsequent educational stages and eventually enter into the world of work.

4.3 Educational Context and its competency matrix

Klorofeel School facilitates 21st-century skills through practical and experiential activities and students are exposed to these activities:

Table 1: Activities and Competencies

Activity	Competency
Drama	Expression, acting, communication, teamwork
Art	Creativity, drawing, colouring, design
Pottery	Clay handling, shaping, creativity, finishing
Vocational Competency	Practical skills, tool use, safety, work habits
Information Technology	Basic computer skills, digital literacy, online safety
Community Connect	Communication, teamwork, social responsibility, participation
Agriculture	Farming skills, soil/crop knowledge, sustainable practices
Music	Singing, rhythm, melody, instrument handling, musical expression

These activities provide opportunities to engage with learning beyond conventional classroom instruction. Teachers encourage students to work with materials, people, communities, creative processes and practical situations.

4.4 Data Collection and Analysis

Data was collected through a 13-item questionnaire. Items 1–6 measured 21st-century skills; Items 7–10 measured the contribution of the experiential and skill-based curriculum; and Items 11–13 measured transition readiness.

Responses were analysed using item-wise mean scores and percentages. Composite means were calculated for the three broad areas. The study also considered whether stronger 21st-century skill scores were associated with stronger transition-readiness scores.

5. Findings

The findings indicate that students recognise the importance of moving beyond purely knowledge-centred approaches towards learning experiences that develop practical and transferable competencies. Activities such as pottery, agriculture, art, music and vocational education provide opportunities to learn through direct participation and understand that knowledge can be applied to real situations.

Students also recognise the relevance of these experiences to their future. Practical and skill-based education is perceived as useful in meeting the demands of a fast-changing world. Students learn to respect different professions and appreciate the labour and effort behind successful outcomes.

5.1 Question-wise Mean and Percentage

Table 2. Question wise Mean and Percentage

Area	Q No.	Mean Score / 5	Percentage
21st-century skills	Q1	3.81	76.23%
	Q2	3.34	66.86%
	Q3	3.77	75.43%
	Q4	4.17	83.31%
	Q5	4.06	81.20%
	Q6	3.77	75.43%
Experiential learning	Q7	4.45	88.91%
	Q8	4.00	79.94%
	Q9	4.01	80.23%
	Q10	4.11	82.17%
Transition readiness	Q11	3.91	78.29%
	Q12	3.85	76.97%
	Q13	4.37	87.49%

The highest individual percentage was recorded for Q7 (88.91%), followed by Q13 (87.49%), Q4 (83.31%), Q10 (82.17%) and Q5 (81.20%). The lowest score was observed for Q2 (66.86%). The high score for Q7 indicates particularly strong recognition of the contribution of the school's experiential and skill-based curriculum, while the high score for Q13 indicates strong perceived transition readiness.

5.2 Comparison of the Three Broad Areas

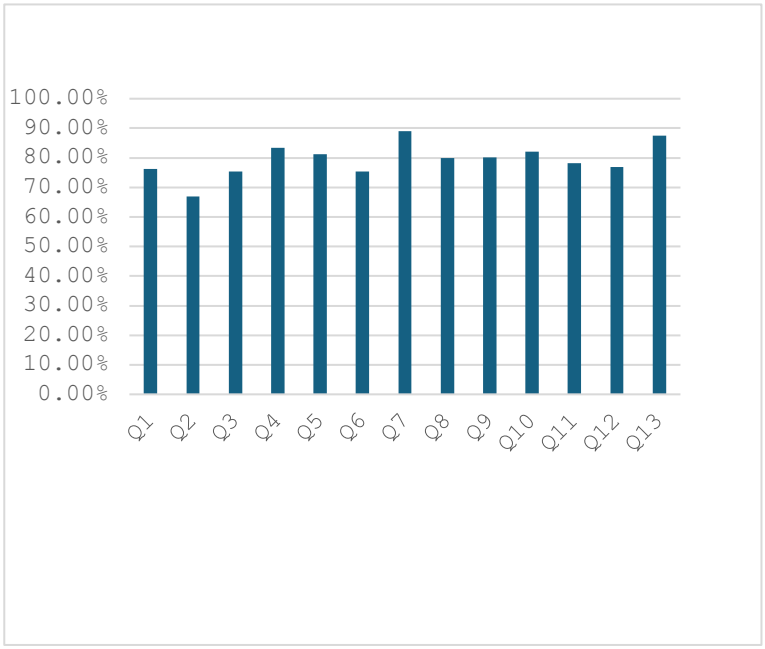
Table 3. Comparison of the Three Broad Questionnaire Areas

Broad Area	Items	Mean Score / 5	Average Percentage
21st-century skills	Q1–Q6	3.82	76.41%
Experiential and skill-based curriculum	Q7–Q10	4.14	82.81%
Transition readiness	Q11–Q13	4.05	80.91%

Experiential and skill-based learning received the highest overall rating (82.81%), followed by transition readiness (80.91%) and 21st-century skills (76.41%). This pattern indicates particularly strong recognition of the school's experiential curriculum. Transition readiness was also rated positively and exceeded the direct 21st-century-skills score.

The overall average across the thirteen items was approximately **79.42%**, equivalent to a mean of approximately **3.97 out of 5**. The overall response pattern can therefore be described as favourable.

Figure 1. Bar Diagram



The bar diagram provides the more appropriate visual comparison because the three values are mean percentage scores rather than parts of a whole.

Figure 2. Pie Chart

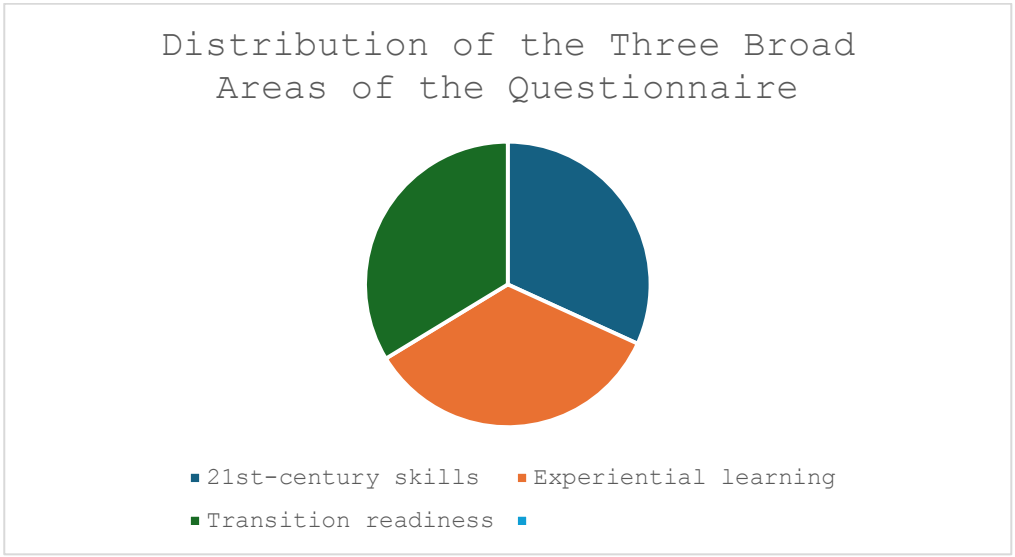


Table 4: Three mean percentage

Area	Score Used	Normalised Share
21st-century skills	76.41	31.78%
Experiential learning	82.81	34.45%

Transition readiness	80.91	33.66%

The pie chart demonstrates that the three areas occupy broadly similar proportions, with experiential learning representing the largest share, followed by transition readiness and 21st-century skills. Because the original values are mean scores rather than mutually exclusive quantities, the pie chart should be interpreted only as a normalised visual representation. The bar diagram remains the statistically preferable presentation.

5.3 Relationship Between 21st-Century Skills and Transition Readiness

The six 21st-century-skill items produced an overall mean of 3.82/5 (76.41%), while the three transition-readiness items produced a mean of 4.05/5 (80.91%). At the descriptive level, this pattern is consistent with the theoretical expectation that stronger competencies may support preparedness for future transitions.

Communication, collaboration, creativity, problem-solving and adaptability can equip students to respond to unfamiliar academic and occupational environments. However, the difference between group means does not establish that students with higher individual skill scores necessarily have higher individual transition-readiness scores.

For a formal statistical test, each participant's composite skill score should be calculated as the mean of Q1–Q6 and the transition-readiness score as the mean of Q11–Q13. A Pearson correlation between these participant-level composite scores would determine the strength and statistical significance of the relationship. The present findings therefore support the conceptual relationship but should not be described as evidence of a statistically confirmed correlation.

Teachers also play an important role in this process. Their role extends beyond transmitting subject knowledge to creating opportunities for students to explore, practise, reflect, collaborate and apply what they learn. Overall, the findings support the value of integrating experiential learning into the regular curriculum for developing confident, adaptable and practically capable learners.

6. Discussion

The findings are consistent with literature identifying 21st-century skills as important for educational and workplace transitions. Communication, problem-solving, collaboration, adaptability, creativity and practical competence are increasingly necessary as students move into environments characterised by changing expectations and technological development.

The experience of Klorofeel School demonstrates how these competencies can be integrated into school education through regular curricular experiences. Rather than treating skill development as a separate programme, the school provides opportunities to develop competencies through diverse forms of learning.

The concept of **'Bold Supplants Old'** is particularly relevant. It does not suggest that traditional academic knowledge has become irrelevant. Subject knowledge remains the foundation upon which higher-order competencies are developed. However, when knowledge is taught primarily through memorisation and examination-oriented practices, students may have limited opportunities to demonstrate what they can do with that knowledge. A more effective approach is to combine academic knowledge with practical application.

Agricultural study can connect scientific concepts with direct observation and practice. Drama can develop language, communication, confidence and teamwork. Pottery can encourage creativity,

patience, coordination, problem-solving and appreciation of craftsmanship. Community Connect can strengthen social awareness and empathy, while vocational education can increase awareness of practical work and diverse career pathways.

This approach changes the role of the learner. Instead of being a passive recipient of information, the student becomes an active participant in the learning process. Higher education requires students to become more independent and responsible for their learning, while employment requires communication, teamwork, adaptability, problem-solving, initiative and continuous learning. Experiential education can begin developing these competencies before students encounter such demands directly.

The study therefore supports the argument that transition preparation should begin within school rather than being addressed only when students are about to enter college or employment.

7. Implications

The study has several implications for educational practice. For students, experiential education can promote confidence, independence, creativity, communication and adaptability while helping learners discover interests and abilities that may not be visible through conventional academic assessment.

For teachers, the findings reinforce the importance of learner-centred approaches. Projects, collaborative activities, practical tasks, discussions, presentations, community engagement and reflection can be incorporated into regular teaching.

For schools, the findings demonstrate the value of integrating skill development into the curriculum rather than limiting it to occasional workshops. A sustained approach allows students to practise competencies repeatedly across different contexts.

For curriculum planners and policymakers, the findings support greater emphasis on competency-based and experiential learning. Curriculum design should provide adequate space for practical activities alongside academic learning.

For higher-education institutions and employers, students entering with stronger communication, adaptability, collaboration and problem-solving abilities may be better prepared to respond to new expectations. Career guidance should therefore be connected with skill development so that students can understand their strengths, explore different pathways and recognise how school experiences relate to future academic and occupational choices.

8. Limitations

The study is situated within a single school context; therefore, its findings may not be directly generalisable to all schools or student populations. The descriptive survey primarily reflects participants' perceptions and does not establish causal relationships between specific educational activities and transition outcomes. The study also focuses on current perceptions rather than longitudinally tracking students into higher education or employment.

Future studies could address these limitations by following students over time and examining actual transition outcomes. Research involving larger samples across different schools, geographical areas, socio-economic contexts and educational systems would help determine whether similar findings emerge elsewhere. Individual-level statistical analysis could additionally examine the relationship between 21st-century skill development and transition readiness.

9. Conclusion

The transition from school to higher education and employment requires more than academic achievement. Students need the ability to communicate, collaborate, think critically, solve problems, adapt to change, demonstrate creativity and apply knowledge in practical situations.

The present study of **Klorofeel School, Brahmapur**, demonstrates the potential of integrating such competencies into the regular curriculum through experiential activities including pottery, drama, Community Connect, music, art, agricultural study and vocational education. These experiences provide opportunities for students to learn by doing, connect knowledge with real-life situations, develop confidence and understand the relevance of education to future pathways.

The central message of **'Bold Supplants Old'** is therefore not the rejection of traditional education but its transformation. Knowledge remains essential, but it becomes more meaningful when students are given opportunities to apply, question, create, collaborate and solve problems.

Education in the 21st century must consequently move towards a balanced model in which academic knowledge and practical competencies reinforce one another. Schools have a crucial role in preparing students not merely to pass examinations but to navigate higher education, employment, community life and lifelong learning.

The experience of **Klorofeel School, Brahmapur** suggests that when experiential and competency-based learning become part of everyday education, students can develop the confidence and practical abilities required to face an interdependent and rapidly changing world. Such an approach can make the transition from school to future educational and professional pathways smoother, more meaningful and more sustainable.

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Questionnaire

KLOROFEEL SCHOOL, BRAHMAPUR
Academic Session 2026-27

Questionnaire: 21st-Century Skills for Student Transition

Instructions: Please tick (✓) the option that best represents your opinion.

Scale:
1 – Strongly Disagree | 2 – Disagree | 3 – Neutral | 4 – Agree | 5 – Strongly Agree

Section A: Basic Information

1. **Respondent:**
   ☐ Student ☐ Teacher
2. **If Student, Class:**
   ☐ VI–VIII ☐ IX–X
3. **Gender:**
   ☐ Male ☐ Female ☐ Other/Prefer not to say

Section B: 21st-Century Skills

No.	Statement	1	2	3	4	5
1	I can think critically and make informed decisions.	☐	☐	☐	☐	☐
2	I can solve new or unfamiliar problems.	☐	☐	☐	☐	☐
3	I can communicate my ideas confidently.	☐	☐	☐	☐	☐
4	I can work effectively with others as a team.	☐	☐	☐	☐	☐
5	I can use digital technology effectively for learning and work.	☐	☐	☐	☐	☐
6	I can adapt easily to new situations and challenges.	☐	☐	☐	☐	☐

Section C: Experiential and Skill-Based Learning

No.	Statement	1	2	3	4	5
7	Activities such as **Pottery, Drama, Music, Art, Agriculture, Community Connect and Vocational Education** help me develop useful skills.	☐	☐	☐	☐	☐
8	Practical and project-based learning helps me apply what I learn in real-life situations.	☐	☐	☐	☐	☐

No.	Statement	1	2	3	4	5
9	My school provides sufficient opportunities to develop communication, teamwork and problem-solving skills.	☐	☐	☐	☐	☐
10	Career guidance and exposure to different occupations help me understand my future options.	☐	☐	☐	☐	☐

Section D: Transition Readiness

No.	Statement	1	2	3	4	5
11	I feel confident about moving to higher education or future employment.	☐	☐	☐	☐	☐
12	I feel prepared to face new academic, social and workplace challenges.	☐	☐	☐	☐	☐
13	The skills I develop at school will help me succeed in my future studies and career.	☐	☐	☐	☐	☐