International Journal of Integrative Studies

Educational Reform: Addressing the issue of zero Value Education at Secondary Level

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Abstract

The aims of the study are to explore the education system in Poonch district of jammu and Kashmir. In this study the researcher analyses the education reform, address the issue of zero value education at secondary level in Poonch district of jammu and Kashmir. The educational landscape in Tehsil Mankote of Poonch District, Jammu and Kashmir, faces numerous challenges, including infrastructural deficiencies, teacher shortages, mass copying, socio-economic barriers, and the impacts of frequent ceasefire violations. Inadequate facilities, overcrowded classrooms, outdated curricula, and limited community support undermine educational quality and integrity. Teacher evaluations tied to student performance exacerbate stress and job dissatisfaction among educators. Addressing these issues requires comprehensive educational reforms, focusing on infrastructure development, curriculum and pedagogical updates, continuous teacher training, technology integration, and enhanced community and parental engagement. Additionally, tackling socio-economic barriers through scholarships and flexible schooling options is essential. Some teachers are also engaged in other responsibilities, such as BLOs. The government should take proper initiatives to fill BLOs vacancies to reduce the burden on teachers. Implementing a robust monitoring and evaluation framework, along with measures to curb mass copying, can promote academic integrity and ensure effective education. A holistic approach involving these strategies can transform the educational landscape in Mankote, fostering a more inclusive, equitable, and effective educational system that prepares students for future challenges and opportunities.

Keywords: *Educational Reforms, Infrastructural Deficiencies, Teacher Shortages, Socio-Economic Barriers, Academic Integrity*

Introduction

Education is a fundamental right and a critical driver of economic and social development. In regions like the Poonch district of Jammu and Kashmir, however, the education system faces numerous challenges that result in what is often termed "zero value education". This term describes a scenario where the education provided fails to impart the necessary skills, knowledge, and competencies to students, rendering their schooling largely ineffective and unproductive. Addressing this issue requires comprehensive educational reforms tailored to the unique circumstances and needs of the Poonch district. Poonch district, a border area of Jammu and Kashmir, faces significant challenges impacting its education system. Frequent ceasefire violations disrupt daily life and schooling. High **poverty rates, low parental aspirations, and limited** parental education further hinder students academic progress. Many schools in Poonch suffer from inadequate infrastructure, insufficient resources, and a lack of trained teachers, resulting in zero value education. Addressing these issues requires comprehensive reforms, including improved facilities,teacher

training, relevant curricula, and community involvement to ensure students receive a meaningful education despite the region's socio-political and economic challenges.

The Poonch district, with its diverse population and complex socio-political landscape, faces several obstacles that contribute to the prevalence of zero value education. These challenges include inadequate infrastructure, insufficient teaching resources, lack of trained and motivated educators, and socio-economic barriers that hinder students' ability to fully participate in and benefit from the educational system. Schools in this region often suffer from overcrowded classrooms, lack of basic facilities such as libraries and laboratories, and outdated curricula that do not align with current educational standards or the needs of the job market.In addition to infrastructural and resource-related issues, there are significant socio-economic factors that exacerbate the problem. High poverty rates, low parental literacy levels, and limited access to supplementary educational resources mean that many students enter and leave the education system without acquiring the basic skills required for further education or employment. The socio-political unrest and frequent disruptions in the region further impact the continuity and quality of education, leaving students at a significant disadvantage compared to their peers in more stable and affluent regions. Addressing the issue of zero value education in the Poonch district requires a multifaceted approach. Educational reform efforts must prioritize improving infrastructure, ensuring the availability of adequate learning materials, and investing in teacher training and motivation. It is essential to develop and implement a curriculum that is relevant and aligned with contemporary educational standards, and to integrate technology to enhance learning outcomes. Community involvement and support are also crucial, as parents and local stakeholders play a key role in reinforcing the value of education and supporting students learning journeys. Moreover, tailored interventions that address the specific needs of underprivileged students, such as scholarship programs, after-school tutoring, and vocational training, can help bridge the gap and provide these students with the skills and opportunities they need to succeed. By fostering a more inclusive and supportive educational environment, these reforms can help transform the current system, ensuring that education in the Poonch district is not only accessible but also meaningful and empowering for all students.

Moreover, tackling zero value education in the Poonch district of Jammu and Kashmir is a pressing challenge that necessitates comprehensive and context-specific educational reforms.Through concerted efforts to improve infrastructure, enhance teacher quality, update curricula, and engage the community, it is possible to create a more effective and equitable educational system that can provide students with the skills and knowledge they need to thrive in today world.

Review of related literature

(Cizek, G. J. 1999). A study on "cheating on tests: how to do it, detect it, and prevent it this study provides strategies to detect and prevent cheating in examinations, emphasizing the need for strict exam protocols and fostering a culture of academic integrity to combat mass copying.

(Cuban, L. 2001). Conducted a study on "oversold and underused: computers in theclassroom". This book critically examines the integration of technology in classrooms, suggesting that while technology has the potential to enhance learning, its effectiveness depends on proper implementation and teacher training.

(Kyriacou, C. 2001). A study on the "teacher stress: directions for future research". This research focuses on the sources of teacher stress and its impact on job satisfaction. It calls for supportive measures to alleviate stress and improve teacher well-being.

(Darling L. 2000). A study on "teacher quality and student achievement: a review of state policy evidence. The research underscores the importance of qualified and well-trained teachers in improving student achievement. States with rigorous teacher preparation and ongoing professional development programs see higher student performance.

(Hnderson & Mapp 2002). A study on "new wave of evidence: the impact of school, family, and community connections on student achievement". This report highlights the positive impact of parental and community involvement on student achievement. Active engagement from families and communities enhances educational outcomes.

(Sirin, 2005). Socio-economic status and academic achievement: a meta-analytic review of Research. This meta-analysis examines how socio-economic factors influence academic achievement. It concludes that students from lower socio-economic backgrounds face significant barriers to education, impacting their academic performance.

(Fullan, M. 2007). "The new meaning of educational change". In this study researcher examine the importance of effective educational policies and administrative practices in driving meaningful change. Inefficiencies in policy implementation can hinder educational progress.

(Barrett, et al, 2018). Conducted a study on "infrastructural investments and student learning: a review of the evidence". This study highlights the critical role of infrastructural development in enhancing student learning outcomes. Improved facilities, such as modern classrooms, libraries, and laboratories, directly contribute to better educational experiences and performance.

(Goodall, J. 2018). Learning-centred parental engagement: Freire reimagined. The researcher reimagines Freire's sprinciples to emphasize the crucial role of parental engagement in enhancing student achievement and motivation.

(Hattie, & Clarke, 2018). "Visible learning: feedback". The book underscores the critical role of feedback and regular assessments in monitoring student progress and enhancing educational outcomes

(Milner 2020). Conducted a study on "start where you are, but don't stay there understanding diversity, opportunity gaps, and teaching in today's classrooms". This study discusses the strategies for addressing diversity and opportunity gaps in education to create more equitable learning environments.

(Mushtaq, 2023) A study on engagement in blended learning and academic performance among secondary level students. In this study the researcher found that education is crucial for personal growth, societal progress, and economic development. Innovative methods like blended learning enhance student engagement and skills. This study examined the impact of blended learning on academic performance among 400 secondary students in Jammu and Kashmir, revealing a significant positive effect on engagement and motivation.

Significance

This study addresses the critical issue of zero value education at the secondary level in Poonch district of Jammu and Kashmir, a region plagued by ceasefire violations, poverty, and low parental education. The significance lies in its comprehensive approach to understanding and resolving these challenges. Mass copying, a widespread issue, undermines the integrity of the education system and diminishes student learning outcomes. Additionally, the shortage of teachers, even with Cluster Resource Coordinators (CRCs)

present, exacerbates the problem, leading to overcrowded classrooms and insufficient individualized attention.

The study also highlights the low academic performance of students, often resulting in teachers being unfairly blamed and pressured by higher authorities, creating a stressful working environment that further impairs educational quality. The lack of student attention and the ineffectiveness of punitive measures call for a shift towards more supportive and engaging educational strategies.

By examining these issues, this study aims to propose targeted reforms such as improved teacher recruitment and training, the introduction of effective student assessment methods, and increased community involvement. These reforms are essential for transforming the educational landscape in Poonch, ensuring that students receive a meaningful and valuable education that equips them for future success.

Objective

1. To study the cause of ineffective education in Underprivileged Areas
2. To explore the strategies for educational reforms in Poonch district of jammu and Kashmir.

Research questions

1. What is the cause of ineffective education in Underprivileged Areas?
2. What are the strategies for educational reforms in Poonch district of jammu and Kashmir?

Methodology

The primary focus of the study is on the rural areas of Poonch district, with particular attention to the aspirational tehsil Mankote. This region faces unique educational challenges due to its socio-economic and geopolitical conditions. The frequent ceasefire violations, pervasive poverty, low levels of parental aspiration and education, and inadequate infrastructure collectively contribute to the inefficacy of the education system. To explore the causes of ineffective education in underprivileged areas and develop strategies for educational reforms in Poonch district of Jammu and Kashmir, the researcher employed secondary sources of data. These sources include governmental reports, research articles, research papers, theses, orders from the Directorate of School Education Jammu, and directives from the district administration. Additionally, the study incorporates the researcher's personal experiences while working in the school education department.

1. Causes of Ineffective Education in Underprivileged Areas
Causes of Ineffective Education in Tehsil Mankote of Poonch District in Jammu and Kashmir

1. Infrastructural Deficiencies: Many schools in Tehsil Mankote suffer from inadequate facilities, including insufficient classrooms, lack of basic amenities, and outdated teaching resources. This hampers effective teaching and learning.

2. Teacher Shortage and Quality: The region faces a significant shortage of qualified teachers. Even with Cluster Resource Coordinators (CRCs) present, the number of teachers is often inadequate to meet the needs of the growing student population. This shortage leads to overcrowded classrooms and less individualized attention.

3. Mass Copying and Academic Integrity Issues: Mass copying during examinations is prevalent, undermining the educational system's integrity. This practice erodes the value of assessments and impacts overall student learning outcomes.4. Socio-Economic Challenges: High levels of poverty in Mankote limit

students' access to educational resources and support. Low parental education levels and aspirations further contribute to a lack of emphasis on the importance of education.

4. Impact of Ceasefire Violations: Frequent ceasefire violations disrupt daily life and schooling in the region, leading to inconsistent attendance and interruptions in the educational process.

5. Lack of Community Support: Limited community involvement and support for schools can affect student motivation and engagement, leading to poor educational outcomes.

6. Inadequate Curriculum and Pedagogical Methods: The curriculum may not be aligned with current educational standards or the needs of the local job market, and teaching methods may be outdated, affecting student learning and skill development.

7. Administrative and Policy Issues: Inefficient administrative practices and inadequate implementation of educational policies can hinder the effective functioning of schools.

9. Low level of parental education: In Tehsil Mankote, low levels of parental education significantly impact students' academic performance. Parents with limited educational backgrounds often lack the knowledge and resources to support their children's learning effectively. This deficit contributes to lower educational aspirations, insufficient academic encouragement, and reduced involvement in school activities. Consequently, students may experience diminished motivation and lower achievement levels, further perpetuating the cycle of educational disadvantage in the region. Addressing this issue requires targeted community and educational support initiatives to uplift parental engagement and education.

10. Teacher Results and Increments: Teacher results and increments are often influenced by student performance and overall educational outcomes. In regions like Tehsil Mankote, inadequate student results can lead to reduced teacher increments and job dissatisfaction. This creates a challenging environment where teachers face pressure from higher authorities for low student achievements, despite systemic issues such as insufficient resources and support. Addressing these concerns involves aligning teacher evaluations with realistic performance metrics and improving the support structures that affect both teaching quality and student outcomes**.**

11. Explanation from teachers and head of the institution towards low achievement: Teachers and heads of institutions often face challenges in explaining low student achievement. They may attribute poor outcomes to factors such as inadequate resources, overcrowded classrooms, and socio-economic issues affecting students. Additionally, systemic problems like insufficient training and support can hinder teaching effectiveness. In some cases, teachers may also experience pressure from higher authorities, which can lead to a defensive stance rather than addressing underlying issues. A comprehensive review and supportive approach are essential for addressing and improving student performance.

12. Teachers stress by the administration: Teachers often experience stress due to pressure from administration regarding student performance. Administrators may impose stringent targets and hold teachers accountable for low achievement, exacerbating the stress levels of educators. This pressure can lead to job dissatisfaction, reduced morale, and increased burnout among teachers. The focus on punitive measures rather than supportive strategies can hinder teaching effectiveness and negatively impact students' learning experiences. Addressing teacher stress requires a more supportive approach that includes professional development and realistic performance expectations.

13. Punishment Ban: The ban on disciplinary measures in schools can significantly contribute to ineffective education. While the intent is to create a positive learning environment, the absence of consequences for disruptive behaviour can lead to a lack of discipline and diminished focus in the classroom. Without appropriate mechanisms to manage behaviour, students may not take their education seriously, resulting in poor academic performance and low engagement. This situation can also place additional strain on teachers, who may struggle to maintain order and effectively deliver the curriculum. Balancing discipline with supportive strategies is crucial to fostering a productive educational environment.

14. Additional responsibility of BLOs: Teachers, already burdened with their primary educational duties, often face additional responsibilities as Booth Level Officers (BLOs). This role, primarily linked to electoral processes, includes tasks like voter list verification, updating records, and ensuring voter awareness. While these duties are crucial for democratic functioning, they can strain teachers, impacting their primary focus on education. Balancing these roles demands significant time and effort, potentially leading to burnout and reducing their effectiveness in both teaching and administrative responsibilities.

Strategies for Educational Reforms in Poonch District of Jammu and Kashmir

Educational reforms in Poonch district, Jammu and Kashmir, require a comprehensive approach. Key strategies include improving infrastructure, updating curricula, enhancing teacher training, integrating technology, and engaging the community. This involves constructing safe schools, promoting hands-on learning, providing continuous professional development for teachers, equipping classrooms with digital tools, and involving parents and local resources. Addressing socio-economic barriers with scholarships and flexible learning options is also crucial to ensure meaningful education despite regional challenges.

1. **Infrastructure Development**

To create an effective learning environment, it is essential to enhance the physical infrastructure of schools. Many schools in Poonch lack basic facilities such as proper classrooms, libraries, laboratories, and sanitation. The government, in collaboration with non-governmental organizations (NGOs) and private sector partners, should prioritize:

   a) Building and Renovating Schools: Constructing new school buildings and renovating existing ones to ensure they are safe and conducive to learning.
   b) Providing Basic Amenities: Ensuring access to clean drinking water, functional toilets, electricity, and internet connectivity.
   c) Setting Up Laboratories and Libraries: Establishing well-equipped science laboratories and libraries to foster a culture of inquiry and reading among students.

2. Curriculum and Pedagogical Reforms

Making education more relevant and engaging requires curriculum and teaching method reforms. This involves updating the curriculum, promoting hands-on and experiential learning, and ensuring inclusivity to meet diverse student needs. These changes foster a more interactive and practical learning environment.

   a) Updating Curriculum: Revising the curriculum to include contemporary subjects such as environmental science, digital literacy, and life skills.
   b) Promoting Experiential Learning: Encouraging hands-on learning experiences through field trips, projects, and practical sessions to help students apply theoretical knowledge.

c) Inclusive Education: Ensuring that the curriculum caters to the diverse needs of all students, including those with disabilities.

3. Teacher Training and Professional Development

Teachers play a pivotal role in the educational process. Therefore, investing in their professional development is essential:

a) Continuous Professional Development: Implementing regular training programs to update teachers on the latest pedagogical techniques, educational technologies, and subject matter advancements.
b) Mentorship Programs: Establishing mentorship and peer-learning programs where experienced teachers can guide and support less experienced ones.
c) Incentives and Recognition: Providing incentives such as awards, career progression opportunities, and financial bonuses to motivate teachers and recognize their efforts.

4. Technology Integration

Incorporating technology into the educational framework can significantly enhance learning outcomes:

a) Digital Classrooms: Setting up digital classrooms with multimedia tools to make lessons more interactive and engaging.
b) E-Learning Platforms: Developing e-learning platforms that offer online courses, educational resources, and virtual classrooms to supplement traditional teaching.
c) Teacher Training in Technology: Providing training to teachers on how to effectively integrate technology into their teaching practices.

5. Community and Parental Engagement

Engaging the community and parents in education enhances outcomes. This includes raising awareness, forming school management committees, and utilizing local resources. Parental and community involvement supports students' learning and strengthens the educational system.

a) Awareness Programs: Conducting awareness campaigns to highlight the importance of education and encourage parental involvement in their children's learning.
b) School Management Committees: Establishing school management committees comprising parents, teachers, and community leaders to oversee school operations and ensure accountability.
c) Community Resources: Leveraging community resources, such as local experts and volunteers, to provide additional learning opportunities and support for students.

6. Addressing Socio-Economic Barriers

Many students in Poonch face socio-economic challenges that hinder their educational pursuits:

a) Scholarships and Financial Aid: Providing scholarships, free textbooks, uniforms, and meals to economically disadvantaged students to reduce the financial burden on families.
b) Flexible Schooling Options: Offering flexible schooling options, such as evening classes and part-time courses, to accommodate students who need to work or fulfill family responsibilities.

7. Monitoring and Evaluation

To ensure the effectiveness of the reforms, a robust monitoring and evaluation framework is essential:

a) Data-Driven Decision Making: Collecting and analyzing data on various educational parameters to inform policy decisions and identify areas needing improvement.
b) Regular Assessments: Conducting regular assessments of students' academic performance and school infrastructure to gauge the impact of reforms.
c) Feedback Mechanisms: Establishing feedback mechanisms for students, parents, and teachers to continuously improve the educational process.

Educational reforms in the Poonch district of Jammu and Kashmir require a comprehensive and collaborative approach, focusing on infrastructure, curriculum, teacher development, technology, community involvement, and socio-economic support. By implementing these strategies, the district can create a more inclusive, equitable, and effective educational system that prepares students for future challenges and opportunities.

8. Strategies to cope up the mass copying system

Addressing mass copying in educational institutions requires a multifaceted approach, including strict exam procedures, teacher and student awareness programs, parental involvement, technological solutions, policy enforcement, and diverse assessment methods to promote academic integrity and deter cheating.:

1. Strict Examination Procedures: Implement stringent exam protocols by increasing the number of invigilators, using multiple versions of question papers, and installing CCTV cameras. Randomized seating arrangements can also help deter cheating.

2. Teacher Training and Awareness: Train teachers to identify and prevent cheating through workshops and seminars on maintaining academic integrity. Equip them with strategies to monitor exams effectively and foster a culture of honesty.

3. Student Awareness Programs: Educate students about the consequences of cheating and the value of honest work. Conduct workshops, seminars, and campaigns to emphasize the importance of academic integrity and the long-term benefits of genuine effort.

4. Parental Involvement: Engage parents in the educational process to monitor and discourage dishonest practices. Regularly communicate with parents about the importance of academic honesty and their role in supporting it.

5. Technological Solutions: Implement technology such as online exam platforms with anti-cheating measures and plagiarism detection software. These tools can minimize opportunities for copying and ensure the authenticity of student work.

6. Policy Enforcement: Enforce strict anti-cheating policies with clear penalties for violations. Ensure these policies are well-communicated to students and consistently applied to deter dishonest behaviour.

7. Alternative Assessment Methods: Adopt diverse assessment methods like open-book exams, project-based assessments, and oral exams, which focus on understanding and application rather than rote memorization.

Combining these strategies can create an environment that discourages mass copying and promotes academic integrity, ensuring a fair and effective education system.

9. Remove the norms of low outcome and increment: Addressing these causes requires targeted interventions and reforms to improve infrastructure, enhance teacher quality, and engage the community in supporting education, ensuring that students in Tehsil Mankote receive a meaningful and effective education.

This comprehensive approach is crucial for developing sustainable solutions to the educational challenges in Poonch, paving the way for enhanced learning outcomes and overall socio-economic development in the region.

Conclusion

The educational landscape in Tehsil Mankote of Poonch District, Jammu and Kashmir, is significantly impacted by a multitude of challenges. Infrastructural deficiencies, including inadequate classrooms, outdated teaching resources, and lack of basic amenities, severely hamper the teaching and learning processes. Additionally, a significant shortage of qualified teachers, compounded by overcrowded classrooms, undermines the quality of education and prevents individualized attention to students. Mass copying during examinations further erodes academic integrity, while high levels of poverty and low parental education levels limit students' access to educational resources and support, perpetuating a cycle of educational disadvantage.

The frequent ceasefire violations in the region disrupt schooling, leading to inconsistent attendance and interrupted learning. Limited community involvement and support for schools exacerbate these issues, affecting student motivation and engagement. Moreover, the curriculum often fails to align with contemporary educational standards or local job market needs, and outdated pedagogical methods further impede student learning and skill development. Administrative inefficiencies and inadequate policy implementation hinder the effective functioning of schools, while low parental education levels contribute to diminished academic support and lower student aspirations.

Teacher evaluations and increments, tied to student performance, often result in reduced teacher motivation and job dissatisfaction. The stress exerted on teachers by administration due to low student achievements exacerbates this issue, leading to burnout and decreased teaching effectiveness. The absence of punitive measures for disruptive behavior, while well-intentioned, can result in a lack of discipline and focus in the classroom, further affecting academic performance.

Addressing these challenges necessitates comprehensive educational reforms. Infrastructure development is crucial, requiring the construction of safe school buildings, provision of basic amenities, and establishment of well-equipped laboratories and libraries. Curriculum and pedagogical reforms are essential to make education more relevant and engaging. This involves updating the curriculum to include contemporary subjects, promoting hands-on learning experiences, and ensuring inclusivity for all students.

Investing in teacher training and professional development is pivotal. Continuous professional development programs, mentorship initiatives, and incentives for teachers can enhance teaching quality and motivation. Integrating technology into the educational framework can significantly improve learning outcomes, with digital classrooms, e-learning platforms, and teacher training in technology being key components.

Community and parental engagement are vital for enhancing educational outcomes. Awareness programs, school management committees, and leveraging community resources can strengthen the support system for students. Addressing socio-economic barriers through scholarships, flexible schooling options, and financial

aid can alleviate the financial burden on families and ensure that economically disadvantaged students have equal opportunities to pursue education.

A robust monitoring and evaluation framework is essential to ensure the effectiveness of these reforms. Data-driven decision-making, regular assessments, and feedback mechanisms can help identify areas needing improvement and inform policy decisions. Moreover, addressing mass copying through strict examination procedures, teacher and student awareness programs, parental involvement, technological solutions, policy enforcement, and alternative assessment methods can promote academic integrity and deter cheating.

Moreover, educational reforms in Tehsil Mankote require a comprehensive and collaborative approach that focuses on infrastructure development, curriculum and pedagogical reforms, teacher training, technology integration, community and parental engagement, and socio-economic support. By implementing these strategies, the region can create a more inclusive, equitable, and effective educational system that prepares students for future challenges and opportunities. This holistic approach can transform the educational landscape in Mankote, ensuring that every student has access to quality education and the potential to succeed.

References

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). "Effective Teacher Professional Development." Learning Policy Institute.

Hattie, J., & Clarke, S. (2018). "Visible Learning: Feedback." Routledge.

Jeynes, W. H. (2018). "A Meta-Analysis of the Efficacy of Different Types of Parental Involvement Programs for Urban Students." Urban Education, 53(9), 1251-1274.

Macfarlane, B., Zhang, J., & Pun, A. (2014). "Academic Integrity: A Review of the Literature." Studies in Higher Education, 39(2), 339-358.

Milner, H. R., IV (2020). "Start Where You Are, But Don't Stay There: Understanding Diversity, Opportunity Gaps, and Teaching in Today's Classrooms." *Harvard Education Press*.

Mushtaq, & Meena. (2023). Engagement in Blended learning and academic performance of secondary level students. *14*(2), 129-137. doi: 10.30954/2230-7311.2.2023.8

OECD (2020). "Educating 21st Century Children: Emotional Well-being in the Digital Age." OECD Publishing.

Reardon, S. F. (2018). "The Widening Income Achievement Gap." Educational Leadership, 70(8), 10-16.

Sifuna, D. N., & Sawamura, N. (2019). "Challenges of Quality Education in Sub-Saharan Africa: Some Key Issues." International Journal of Educational Development, 65, 7-12.

Skaalvik, E. M., & Skaalvik, S. (2017). "Motivated for Teaching? Associations with School Goal Structure, Teacher Self-Efficacy, Job Satisfaction and Emotional Exhaustion." Teaching and Teacher Education, 67, 152-160.

Sleeter, C. E. (2018). "Multicultural Education Past, Present, and Future: Struggles for Dialog and Power-Sharing." International Journal of Multicultural Education, 20(1), 5-20.

Voogt, J., & Roblin, N. P. (2016). "A Comparative Analysis of International Frameworks for 21st Century Competences: Implications for National Curriculum Policies." Journal of Curriculum Studies, 44(3), 299-321.