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From Lagging to Leading: The Role of Higher and Advanced Teacher Education in Transforming Underperforming Regions

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ABSTRACT

Education sometimes is misunderstood as a competition and ranking is always an issue. This paper examines the persistent educational challenges in SOCCSKSARGEN, particularly in Sultan Kudarat, one of the poorest provinces in the Philippines and among the lowest performers in international assessments, such as PISA, in mathematics, science, and literacy. Despite these setbacks, Sultan Kudarat State University (SKSU) stands as a beacon of hope, offering robust teacher education and advanced graduate programs. The study examines how targeted interventions, such as teacher upskilling, curriculum reform, community engagement, and evidence-based educational leadership, are being leveraged to promote educational equity and excellence. Drawing on recent data, policy analysis, and case studies, the paper highlights both the barriers and emerging successes, providing a roadmap for similar regions striving for educational transformation.

1. Introduction

Educational inequities remain one of the most urgent and complex challenges on the global stage, with developing countries disproportionately affected by disparities in access, quality, and outcomes. International benchmarks such as the Programme for International Student Assessment (PISA) consistently reveal that many nations in the Global South struggle to provide equitable, high-quality education, resulting in persistent gaps in mathematics, science, and literacy achievement [5,15]. In Southeast Asia, these disparities are further magnified by socioeconomic inequalities, limited technological infrastructure, and uneven teacher training, making educational transformation not just a policy imperative but a moral one. The Philippines, in particular, continues to grapple with these systemic issues, as reflected in its below-average performance in both national and international assessments [4].

Nowhere are these challenges more pronounced than in the SOCCSKSARGEN region (Region XII) and its province of Sultan Kudarat. Recent assessments have highlighted that Region XII consistently scores below the national average in both the PISA and the National Achievement Test (NAT), with

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Sultan Kudarat facing additional hurdles, including inadequate infrastructure, insufficient learning resources, and only moderate curriculum implementation [13,20]. Despite these formidable barriers, there are signs of progress: Sultan Kudarat State University has demonstrated strong research engagement, teacher licensure performance in elementary education exceeds national averages, and innovative, context-responsive interventions are being piloted [7]. This study critically analyzes the underlying barriers and emerging successes in Sultan Kudarat, offering a roadmap for sustainable educational transformation. The findings aim to inform educational managers and policymakers, providing evidence-based strategies for designing effective catch-up mechanisms and elevating the performance of higher education and teacher development in similarly challenged regions.

2. Methodology

This study employed a convergent mixed-methods design to provide a comprehensive analysis of educational performance, barriers, and emerging successes in Sultan Kudarat and Region XII. The approach integrated both quantitative and qualitative data sources to ensure robust triangulation and depth of insight [2].

Quantitative Component

Quantitative data were sourced from the most recent national and international educational assessments, including the Programme for International Student Assessment (PISA) 2018 and 2022, the National Achievement Test (NAT) 2024, and the Licensure Examination for Teachers (LET) 2024. These datasets provided objective measures of student performance in mathematics, science, and literacy, as well as teacher qualification outcomes. For instance, Region XII's performance in PISA placed it among the lowest proficiency levels nationally, while NAT results confirmed persistently low proficiency in key subject areas [6,8]. LET results from Sultan Kudarat State University (SKSU) were analyzed to assess teacher education outcomes relative to national benchmarks [19].

Qualitative Component

Qualitative insights were gathered from recent interviews with DepEd school heads, subject specialists, peer-reviewed studies, institutional reports, and case studies focusing on Sultan Kudarat and Region XII. These included analyses of curriculum implementation, teacher well-being, school environment, and local educational innovations [7,13,20]. Thematic analysis was employed to identify recurring barriers, such as infrastructure gaps, limited access to technology, and resource constraints, as well as to document emerging successes, including research productivity, professional development initiatives, and the adoption of culturally responsive teaching strategies [4,5].

The participants of the qualitative data are seasoned and award-winning educators, educational managers, and school heads. They were chosen based on their actual participation in the performance of Region XII. Wa-MBeleka (2019) stipulated that in qualitative research, the best sources of information are those who have first-hand exposure.

Data Integration and Analysis

Quantitative and qualitative findings were integrated through a process of triangulation, allowing for the validation of results and the identification of convergent and divergent themes [2]. Descriptive statistics and proficiency level analyses were used to interpret assessment data, while thematic

coding and content analysis were applied to qualitative sources. This comprehensive approach enabled the development of a data-driven roadmap for educational transformation tailored to the unique context of underperforming regions like Sultan Kudarat.

3. Results and Discussion

There are several situations presented to clearly illustrate the lagging scenario in the locale as barriers to Educational Progress to mention the severe resource gap. limited access to technology and learning materials, academic pressure and foundational gaps, high dropout and low participation rates and teacher and curriculum challenges. There are emerging such as government and institutional investments, alternative and remedial learning programs, innovative Teaching strategies, professional development and teachers' capability building.

3.1. Barriers to Educational Progress

In the province of Sultan Kudarat, there are schools that are considered big, medium, and small schools. Those with less than 9 teachers are the small schools, 9 to 20 teachers are the medium, 21 - 40 are large and 41 up are mega schools per DepEd Order no. 43, s. 2017 as bases in these categories apply to public elementary, junior high, and senior high schools and are used for various administrative and programmatic purposes, such as the Brigada Eskwela Best Implementing Schools awards.

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3.1.1 Severe resource gaps

Many schools in Sultan Kudarat and Region XII lack basic infrastructure, including electricity, potable water, adequate classrooms, textbooks, and laboratory facilities, directly hindering student learning and teacher effectiveness [5,15]. Last-mile schools in Sultan Kudarat are characterized by severe infrastructure deficiencies. According to recent assessments, these schools often lack basic amenities, including reliable electricity and potable water, Adequate classroom structures, Sufficient learning materials and textbooks, and laboratory facilities for STEM education. During the interview, subject specialists are reproducing reading materials at their own expense, thus they are trying to reduce the paper size and in black and white images. Their personal laptops are used to store energy and play presentations downloaded online in places without electric current. They charge again in the town before returning back to their stations.

The Technoarete study [20] specifically documented that physical plant and facilities in Sultan Kudarat schools received a mean score of only 2.21 on a 4-point scale, categorized as "Poorly Implemented." Similarly, utilization of library resources (2.33), equipment (2.42), and learning resources (2.46) all fell into the "Poorly Implemented" category, severely hampering educational delivery despite relatively stronger administrative support.

Technology Access and Digital Divide

The digital divide is particularly pronounced in the last-mile schools of Sultan Kudarat. The Philippine Institute for Development Studies [16] highlighted how limited access to computers, internet connectivity, and digital resources in rural regions, such as Sultan Kudarat, exacerbates learning gaps and contributes to poor performance in assessments. This technological gap became especially problematic during pandemic-related school closures, when remote learning was nearly impossible for many students in these areas.

Teacher Deployment and Support

While Sultan Kudarat State University has demonstrated strong performance in producing qualified teachers (with a 96.97% first-timer passing rate for elementary LET examinations in 2024), deploying and retaining these teachers in Last Mile Schools remains challenging. The International Journal of Research Publication and Reviews [9] noted that teachers in Sultan Kudarat's remote areas "face moderate challenges in environmental quality and managing debt," with "environmental barriers" persisting in many schools despite relatively good classroom space and accessibility in more central areas.

The Graduate School of SKSU has produced graduates with Master of Arts degrees in Teaching English, Filipino, Mathematics, Science, Social Studies, Physical Education, and Livelihood and Technology Education, as well as educational managers and leaders. Many of these graduates are working throughout the region, particularly in South Cotabato. In the Division of Sultan Kudarat, more than 25% of the 746 newly promoted teachers via reclassification are current graduating students, as indicated in Division Memo OSDS No. 99, s. 2025. Others are also SKSU alumni who completed their graduate studies two years ago.

Student Achievement and Participation

Although province-specific PISA or NAT results are not published for Sultan Kudarat, the province contributes to Region XII's consistently below-average performance in these assessments. The region scored at Proficiency Level 1b in Scientific Literacy in PISA, placing it among the lowest-performing regions nationally. Last Mile Schools in Sultan Kudarat are likely to perform even below these regional averages, given their additional resource constraints.

The 2019 Functional Literacy, Education, and Mass Media Survey (FLEMMS) by the Philippine Statistics Authority (PSA) reported that Region XII had a functional literacy rate of 91.6% (for persons aged 10 to 64). However, Sultan Kudarat, is Top 9 most Functional Illiterate province, [5] which is part of Region XII while still in the region, South Cotabato is Top 2 Most Functionally Literate in the country. bottom two in the country, while likely close to this figure but may be lower in rural and disadvantaged areas. Last Mile Schools in Sultan Kudarat likely perform even below these regional averages given their additional resource constraints.

Government Response and Initiatives

The Department of Education has recognized these challenges and implemented targeted interventions for Last Mile Schools, including:

The Last Mile Schools Program prioritizes infrastructure development in geographically isolated areas itself. Expanded summer remediation programs to address learning gaps (DepEd, 2025) and Alternative Learning System (ALS) initiatives to reach out-of-school youth in remote communities.

Here are the situations in the assessment of the Region XII Performance;

1. PISA (2018 & 2022) Proficiency Level 1b in Scientific Literacy; among the lowest in the country
2. NAT 2024 (Grade 12) Below national average; Low Proficiency level
3. Education Research 200% of research target achieved (70/35)

Analyzing the results, the underperformance of the region, and the province in particular, is a manifestation of challenges that need to be addressed. Personally funded research added to the region's doubled performance. Sultan Kudarat, located in Region XII (SOCCSKSARGEN), is classified among the poorest provinces in the Philippines. According to the latest data from the Philippine Statistics Authority (PSA), the poverty incidence among families in Sultan Kudarat was 31.0% in 2021, significantly higher than the national average of 18.1% [17]. This high poverty rate reflects persistent socioeconomic challenges, including limited access to basic services, underemployment, and a heavy reliance on agriculture as the primary economic activity.

> *Kasali gid political will ma'am eh...it takes a village to educate a child di ba...if magbulig SI LGU sa literacy program ni DepEd , nga intentional gid ang paghatag resources, Daku gid nga impact para ma improve ang literacy..sa system sang DepEd on basic education ma'am dapat mabago din. Dapat full institutionalization na gid ang pagkuha sang ancillary services not related to teaching sa teachers po. Dapat si teacher magtudlo lng gid ang trabaho (Principal 1)*

3.1.2 Limited access to technology and learning materials

Poor internet connectivity, insufficient library resources, and outdated teaching materials particularly affect the quality of STEM education [4]. In terms of Infrastructure and Resources, Geographically Isolated and Disadvantaged Areas (GIDA) in Sultan Kudarat are characterized by their remoteness, limited accessibility, and persistent deprivation of basic services. These areas face compounded challenges in education, health, and infrastructure, which are more acute than in non-GIDA communities. Schools in GIDA barangays of Sultan Kudarat often lack reliable electricity, potable water, adequate classrooms, and essential learning materials.

During the interview, a mathematics teacher who was assigned to administer the PISA in Mathematics to the identified 15-year-old learners experienced confusion between coaching them on how to answer mathematics problems in the SULO form and training them on how to use the mouse.

3.1.3 Academic pressure and foundational gaps

Students face complex subject matter and academic stress, with notable conceptual gaps in science and mathematics. Weak foundational knowledge impedes progress [13]. It is undeniable that the COVID-19 series of lockdowns and class suspensions occurs every time the weather is unfavorable.

3.1.4 High dropout and low participation rates

Higher education participation rates in the region remain below national and ASEAN averages, with marginalized areas experiencing high dropout rates [15].

> *Lack of monitoring and evaluation of teachers' performance. School heads have many tasks and responsibilities, wherein teachers' performances, preparation of tests, materials, and others are often neglected.*
> *DI Man LAHAT (not all) pa my nonteaching personnel at Hindi pa kumpleto.. that's why school head pa rin ang maraming gawain kaya id ma monitor lahat ng galaw nila (Administrator 1)*

This means that there is a need to closely and strictly monitor the teacher's performance. Not all schools have non-teaching staff to liquidate and prepare reports. In short, the school heads are still the ones preparing paperwork, which could hinder their supervisory functions.

3.1.5. Teacher and curriculum challenges

While teacher qualifications are improving, gaps remain in professional development, curriculum support, and alignment with local realities [7].

> *Sa IPED, training japun po ma'am… crafting of strategic plan on strengthening IPED Education implementation and establishment of cultural heritage learning center (Principal 1)*

3.2 Emerging Successes
3.2.1 Government and institutional investments

The Philippine government and SKSU have invested in infrastructure upgrades, classroom construction, and the provision of basic utilities. Programs like K-12 and textbook distribution aim to raise standards [4].

3.2.2 Alternative and remedial learning programs

Initiatives such as the Alternative Learning System (ALS) and expanded remediation programs target out-of-school youth and struggling learners, bridging foundational gaps [5].Reading Interventions are conducted like "TARA BASA" in partnership with the Department of Social Work and Development (DSWD), Rapid Mathematics Assessment (RMA), and Capacity Building for Teachers (TEACEP) in partnership with the World Bank. These are currently implemented. (Principal 3)

> *Intensive training on reading, with a focus on literacy drive now. The Phil IRI Administration and intensive instructional supervision for school heads po Kasama mga reading teachers (Principal 1)*

Implement Data-Driven and Participatory Reforms:

Use research, assessment data, and stakeholder feedback to guide policy and curriculum updates.

> *" For now, po, DepEd has just finished its Literacy Remediation Program (LRP) as part of the Learning Recovery Plan wherein the low emerging learners from Grade 3 were given intervention and intensive literacy instruction from May 13 to June 6, po. DepEd is also collaborating with the DSWD Tara, through the Basa Tutoring Program, in which tutors from SUCs taught our struggling incoming Grade 2 learners for 20 days, along with their parents. Kasama pa rin po ang National Reading Program and NATIONAL math Program sa daily schedule ng mga klase"(Principal 2)*

3.2.3 Innovative teaching strategies

Culturally responsive, context-based instructional materials (e.g., Project DEMAR) have improved engagement and performance, especially when reflecting students' backgrounds [7]. Project DEMAR is a graduate program of Sultan Kudarat State University Graduate School under the Master of Arts in Teaching major in Social Studies (MAT –Social Studies). Several initiatives have been undertaken to improve the province's challenged performance.

> *This year, on the go na rin po ang matatag curriculum for Grade 2, 3, 5, and 8, wherein there is a focus on core subjects, reduced learning areas (MTBMLE is now a medium of instruction and not a subject, GMRC/VR has replaced ESP), there is a shift towards higher-order thinking skills and 21st-century skills to align with international standards, and emphasis on values and peace educ through GMRC and values ed (Principal 2)*

3.2.4 Professional development and teacher capacity building

The Graduate School at Sultan Kudarat State University plays a significant role in promoting teachers' capabilities through advanced education and specialized training, which is recognized by the Professional Regulation Commission (PRC) and can serve as a supplemental factor in the renewal of teachers' licenses. (RA 7836 s 26.)

Ongoing teacher training, notably through the MATATAG Learning Camp and SKSU's graduate programs, is enhancing instructional quality [13]. Structured constructed-response tests, such as the SULO-type, are supported by educational research as effective tools for assessing deep understanding and critical thinking [4,5]. They are especially valuable in contexts where rote memorization is prevalent and there is a need to encourage higher-order skills. Despite these challenges, there are emerging successes. Teacher peer networks and university-led workshops are also helping to build capacity in test construction.

Professional development opportunities related to assessment design are increasing, with programs such as the MATATAG Learning Camp and DepEd's in-service trainings. However, coverage and depth vary, and many teachers in GIDA (Geographically Isolated and Disadvantaged Areas) and last-mile schools report insufficient training on crafting structured, outcomes-based assessments [4].

3.2.5 Research productivity

Region XII exceeded its 2024 target for completed education research projects, achieving 200% of the goal, indicating strong engagement despite academic challenges [4]. Research productivity in

Region XII has surpassed targets, and some schools are piloting innovative, context-based assessment strategies [7].

3.3 The role of State University in Providing 21st Century Teachers and Administrators

3.3.1 Teacher education and licensure

Recent data show that teacher education graduates from Sultan Kudarat State University achieved a 96.97% passing rate for first-time elementary LET takers in 2024, far exceeding the national average [19]. This suggests strong foundational training. However, LET and other national assessments focus more on content and pedagogy rather than specific assessment construction skills [20]. These are the teachers who have the mission to improve the performance of the Sultan Kudarat Division and the nearby schools in the region. EDCOM 2 - The Second Congressional Commission on Education as of September 2024 presented the status that about half of the Science Teachers are not majors in science during college and 98 percent teaching in Physics do not have even backgrounds in the said subject.

EDCOM2 Executive Director Dr. Karol Mark Yee: "Iyong question din nga po namin is magfo-focus tayo on Science to prepare them for the PISA test that is focused on Science”

3.3.2 Curriculum implementation

The Philippine curriculum’s breadth-over-depth approach, inconsistent contextualization, gaps in teacher assessment literacy, and chronic resource shortages contribute to disparities with top-performing countries. These factors are exacerbated in provinces like Sultan Kudarat, resulting in persistent underperformance in both national and international assessments. Addressing these disparities requires systemic reforms, sustained investment, and localized innovations grounded in evidence-based practice. Curricular reforms in the Philippines are hindered by persistent resource constraints—insufficient textbooks, laboratories, and digital tools—especially in GIDA (Geographically Isolated and Disadvantaged Areas) and last-mile schools. In contrast, top-performing countries ensure equitable access to learning resources, supporting effective curriculum implementation [15].

Depth, Rigor, and Progression. High-performing countries (e.g., Singapore, Japan, Finland) feature curricula with strong foundations in literacy, mathematics, and science, emphasizing depth over breadth and systematic progression of concepts [12]. In contrast, the Philippine curriculum—while comprehensive—often covers too many topics superficially, leading to shallow understanding and weak mastery, particularly in STEM subjects [5,15].

3.3.3 Teacher well-being

Teachers report high confidence in school safety and compensation, but face moderate challenges in environmental quality and financial stability [13]. The well-being of teachers is a critical determinant of student performance and overall educational quality. Scientific research consistently demonstrates that teachers who experience high levels of well-being characterized by job satisfaction, manageable workloads, supportive work environments, and positive mental health are more effective in the classroom, exhibit greater instructional quality, and foster better learning outcomes among their students [3,10].

A recent study in Sultan Kudarat, Philippines, found that teachers' well-being, including their perceptions of school safety, compensation, and access to resources, directly influences their

motivation, instructional practices, and ability to support student learning [13]. When teachers face challenges such as environmental stressors, inadequate resources, or limited professional growth, their well-being suffers, leading to decreased engagement and effectiveness. Conversely, strong peer networks, professional development opportunities, and supportive leadership contribute to higher teacher well-being, which in turn positively impacts student achievement and classroom climate [3,13].

In several cases, teachers have to report to their destinations on Monday and then ride a motorcycle or walk for six hours to arrive at their assigned school. These are common in GIDA schools. How can a tired teacher teach well on the first day of the week? They have to stay in for the entire week, leaving their families at home. It could be extended into months if the rivers they used to cross are overflowing. They were comparable to overseas Filipino workers, who received less compensation.

Hazard pay for teachers is a form of additional compensation provided to educators who work in environments that pose significant risks to their health, safety, or well-being. In the Philippines, the need for hazard pay has gained renewed attention due to the persistent assignment of teachers in Geographically Isolated and Disadvantaged Areas (GIDA), conflict-affected zones, and during public health emergencies such as the COVID-19 pandemic [11,13].

Scientific and policy literature emphasize that teachers in GIDA and conflict-prone regions are exposed to risks such as armed conflict, natural disasters, hazardous travel, and lack of access to medical facilities [15]. These conditions not only threaten teacher safety but also contribute to high rates of absenteeism, burnout, and difficulties in teacher retention [13]. Hazard pay serves as both a recognition of these risks and an incentive to attract and retain qualified teachers in challenging posts [1].

Despite existing guidelines, the implementation of hazard pay remains inconsistent. Some teachers in GIDA receive hazard pay under the guidelines of the Department of Budget and Management (DBM) and the Department of Education (DepEd), but many report delays or a lack of clarity regarding eligibility and disbursement [1,4]. Research in Sultan Kudarat and similar provinces reveals that while hazard pay is appreciated, its amount is often insufficient to cover the actual risks and costs incurred by teachers [13]. There is a growing call for a more systematic and transparent approach to hazard pay, including clearer criteria, timely disbursement, and regular review of the amount in line with inflation and evolving risks [15].

Providing adequate hazard pay is not only a matter of fairness but also has broader implications for educational equity. When teachers feel supported and compensated for their sacrifices, their well-being and motivation improve, which in turn positively affects student learning outcomes, especially in disadvantaged and high-risk areas [3,13]. There are instances where GIDA-identified schools are not granted these benefits due to specific reasons.

Region XII, more widely known as SOCCSKSARGEN, is a dynamic region in the southern Philippines that comprises the provinces of South Cotabato, Cotabato (North), Sultan Kudarat (SK), Sarangani, and the highly urbanized city of General Santos. The region's name is an acronym reflecting the initials of its constituent provinces and cities, "SOX". Despite facing persistent educational and socio-economic challenges, SOCCSKSARGEN continues to embody its aspirational slogan, "Rise SOCCSKSARGEN, SK Sikat ka!"—a rallying call for progress, unity, and excellence, especially for Sultan Kudarat.

4. Conclusion

While Sultan Kudarat and Region XII face persistent barriers, such as resource gaps, foundational skill deficits, and systemic inequities, targeted investments, innovative teaching, and community engagement are driving emerging successes. The role of the advanced and teacher education institution is crucial in providing updated and globally competitive education to their learners. The outlined roadmap provides actionable steps for similar regions seeking educational transformation, grounded in current research and best practices.

5. Recommendations

These recommendations are generated out of the results of the study, which can be called the Roadmap for Educational Transformation:

1. Invest in Infrastructure and Resources.
2. Prioritize the provision of basic amenities, modern laboratories, libraries, and digital resources.
3. Strengthen Foundational Skills: Expand remedial and alternative learning programs, especially for early-grade and struggling learners.
4. Promote Culturally Responsive and Innovative Teaching: Develop instructional materials reflecting local culture and context.
5. Enhance Teacher Training and Support: Invest in continuous professional development and technology integration. Strengthen localization.
6. Increase Access and Equity in Higher Education: Address financial and systemic barriers through scholarships and targeted outreach.
7. Foster Community and Parental Involvement: Engage families and communities in the educational process to enhance student outcomes.

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