

A Systematic Literature Review on the Role of Teach-for-Rural-China Programs in Enhancing Teacher Professional Development for Educators of Left-Behind Children

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Abstract – Teacher professional development (TPD) is a critical component in improving educational quality, particularly in under-resourced rural areas. In China, the Teach-for-Rural-China (TFRC) program has emerged as an initiative to address disparities in rural education by recruiting university graduates to teach in remote schools. This systematic literature review examines the role of TFRC programs in fostering teacher professional development and their impact on educating left-behind children—students whose parents migrate to urban areas for work. Using a qualitative research design, this study synthesizes findings from 42 peer-reviewed studies published between 2010 and 2024, retrieved from academic databases such as Google Scholar, CNKI, Web of Science, and Scopus. Thematic analysis reveals that TFRC programs contribute significantly to teachers' pedagogical skills, instructional strategies, and leadership development. Additionally, TFRC teachers play a crucial role in addressing the academic and emotional needs of left-behind children, fostering student engagement, and improving learning outcomes. However, the review also identifies several challenges, including high teacher turnover, limited resources, cultural adaptation difficulties, and inadequate long-term institutional support. Findings suggest that while TFRC programs positively impact teacher development and student learning, their sustainability requires policy improvements, enhanced mentorship programs, community engagement strategies, and long-term teacher retention initiatives. Future research should explore longitudinal studies on TFRC's long-term impact and comparative analyses with similar programs worldwide to inform best practices for teacher recruitment, training, and retention in rural education.

Keywords – Teach-for-Rural-China, Teacher Professional Development, Left-Behind Children, Rural Education, Systematic Literature Review

I. INTRODUCTION

Teacher professional development (TPD) plays a critical role in improving educational outcomes by enhancing the skills and knowledge of educators, particularly in under-resourced and rural areas. In many countries, including China, the quality of education is often

significantly influenced by the level of teacher expertise, access to resources, and ongoing professional support (Darling-Hammond, 2021). This is especially true in rural regions where schools frequently suffer from teacher shortages, inadequate infrastructure, and a lack of continuous professional development opportunities. As a result, the teaching profession in rural areas often lacks the capacity to fully address the academic and socio-emotional needs of students, particularly those facing additional challenges.

In China, the education gap between urban and rural areas has been a persistent issue, with rural schools often unable to provide the same quality of education as their urban counterparts (Tang, 2023). This disparity is particularly pronounced in remote areas where left-behind children, a group of students whose parents migrate to urban centres for work, face significant educational and emotional challenges. Left-behind children are often raised by grandparents or other relatives, with limited parental involvement in their academic and emotional development (S.-M. Chen, Gao, Lin, & Zhang, 2024). These children frequently struggle with feelings of neglect and isolation, which can have a profound impact on their academic performance, mental health, and overall well-being.

The Teach-for-Rural-China (TFRC) program was launched to address these challenges by recruiting and placing qualified teachers in rural schools, with the goal of improving the quality of education in these underserved areas. Similar to other "Teach for" initiatives around the world, TFRC aims to bridge the educational gap by providing short-term but impactful teaching interventions, while simultaneously offering professional development opportunities for teachers. TFRC recruits university graduates, often without a background in education, and trains them to teach in rural schools for a fixed period, typically two years. The program also emphasizes the importance of teacher mentorship, community engagement, and cultural adaptation in rural settings.

This initiative is especially important for rural schools serving left-behind children, as these students often require a unique approach to teaching that addresses both their academic needs and emotional well-being. Teachers in the TFRC program are tasked not only with delivering the standard curriculum but also with providing guidance and emotional support to students who are dealing with the absence of their primary caregivers. Consequently, the professional development of TFRC teachers is crucial in equipping them with the skills necessary to teach effectively in this context, foster meaningful relationships with students, and contribute positively to the broader community.

This systematic literature review aims to explore the role of the TFRC program in fostering teacher professional

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development and its impact on the quality of teaching for left-behind children. Specifically, it seeks to identify key themes and patterns in the literature regarding the effectiveness of TFRC programs in enhancing teachers' skills, their ability to engage with students from diverse backgrounds, and the challenges they face in rural educational settings. Through an in-depth examination of empirical studies, this review provides insights into the strengths and weaknesses of the TFRC model, with particular attention to how it addresses the unique needs of teachers working with left-behind children. Ultimately, this review aims to contribute to the growing body of knowledge on rural teacher development and inform future policies and practices aimed at improving educational outcomes in rural China.

The review will also investigate the broader implications of the TFRC program for educational reform in rural China. It is important to consider how these teacher professional development programs can be scaled, adapted, and integrated into larger policy frameworks aimed at reducing the urban-rural education gap. In doing so, this paper will not only highlight the achievements of the TFRC program but also provide recommendations for enhancing its impact and ensuring sustainable improvements in the education of left-behind children.

II. LITERATURE REVIEW

Teach-for-Rural-China Programs

Teach-for-Rural-China (TFRC) programs are part of a broader educational reform movement designed to address the disparities between urban and rural education in China. These programs aim to alleviate the challenges faced by rural schools, particularly in less-developed regions, by recruiting university graduates who are passionate about teaching and community service. The core objective of TFRC is to place highly motivated and qualified teachers in rural schools for a designated period—typically two years—where they are expected to deliver high-quality instruction and support to students. This model draws inspiration from similar initiatives such as Teach for America and Teach First, with a unique focus on rural areas in China.

The TFRC program not only places teachers in rural classrooms but also provides them with professional development opportunities throughout their service. This support includes orientation and training sessions before placement, continuous professional development workshops, mentorship from experienced educators, and a community network of other TFRC teachers. The goal of the program is twofold: to improve the educational outcomes in rural schools and to build a cadre of teachers who can act as agents of social change. By focusing on rural education, TFRC seeks to empower educators to become leaders who can influence both their schools and their broader communities, helping to mitigate the educational divide between rural and urban regions.

However, despite the promising goals of the program, challenges remain. Rural schools are often under-resourced, and the students—many of whom are left-behind children—come from socioeconomically disadvantaged backgrounds (Kukulska-Hulme, Giri, Dawadi, Devkota, & Gaved, 2023). These students frequently lack academic support at home, leading to significant learning gaps. In this context, the TFRC program faces the dual challenge of improving teacher quality while addressing the specific needs of students who may have limited social and emotional support. Research on the impact of TFRC programs has shown that while the initiative provides much-needed relief to rural schools, it also requires careful consideration of how best to prepare and support teachers, particularly in such a challenging and often isolating environment.

Teacher Professional Development (TPD)

Teacher professional development (TPD) refers to the processes and activities through which teachers enhance their skills, knowledge, and competencies throughout their careers (Salifu, Agyekum, & Nketia, 2024). TPD is considered essential for improving the quality of education, especially in rural areas where teachers often face significant challenges. In the context of TFRC programs, TPD is crucial for equipping teachers with the necessary tools to adapt to the unique demands of teaching left-behind children.

In rural China, TPD has historically been underfunded and undervalued, resulting in a significant gap in the quality of education delivered in these regions compared to urban schools (Q. Chen, Khattak, & Ahmad, 2024). Teachers in rural areas often face challenges such as limited access to training, outdated teaching materials, and inadequate support for professional growth. In response to these issues, TFRC programs have been designed to provide comprehensive professional development opportunities, including pre-service training, in-service workshops, and mentoring. These initiatives are intended to foster a continuous learning environment for teachers, enabling them to stay updated on best practices in pedagogy and classroom management (Zhao, Zhao, & Shi, 2024).

Key components of TPD within the TFRC program include mentorship, peer collaboration, and leadership development. Mentorship from experienced teachers is a cornerstone of the TFRC model, as it helps new teachers adjust to the rural teaching context and navigate the challenges they may face in the classroom. Peer collaboration is also emphasized, with TFRC teachers encouraged to engage in collaborative learning with their fellow teachers. This not only enhances teachers' pedagogical skills but also promotes a sense of community and shared purpose. Furthermore, leadership development is an integral part of the professional growth of TFRC teachers, as they are expected to take on leadership roles within their schools and communities, influencing educational outcomes beyond the classroom.

Despite these efforts, there are several challenges to implementing effective TPD in rural settings. A lack of access to high-quality educational resources, limited professional networks, and the isolation of rural schools often hinder the effectiveness of TPD initiatives. Additionally, the transient nature of TFRC teachers—many of whom serve for only a limited time—can disrupt continuity in professional development efforts. This underscores the importance of creating sustainable models of teacher support that can continue to benefit rural schools even after TFRC teachers complete their service.

Left-Behind Children

The term “left-behind children” refers to those living in rural China while their parents migrate to urban areas for work, leaving the children in the care of grandparents or other relatives (Murphy, 2022). This phenomenon has become widespread due to China’s rapid urbanization and rural-to-urban migration trends. According to estimates, tens of millions of children in rural China are left behind, and they face a range of challenges both academically and emotionally.

Research on left-behind children highlights the complex impact of parental absence on their well-being. Academically, left-behind children often lag their urban peers due to limited access to educational resources and support (Zheng & Zhou, 2024). In rural areas, schools are often understaffed, under-resourced, and less equipped to address the special needs of these children. Moreover, these children tend to face emotional and psychological issues related to the absence of their parents, such as feelings of neglect, anxiety, and loneliness (D. Wu, Liu, Li, & Yin, 2024). The lack of parental involvement in their academic and emotional development further exacerbates these issues, leading to poorer academic performance and lower self-esteem.

Teachers in rural areas, especially those participating in TFRC programs, must be aware of the unique needs of left-behind children and adapt their teaching methods accordingly. Research has shown that effective teaching strategies for left-behind children include providing emotional support, fostering strong teacher-student relationships, and offering guidance that extends beyond the academic realm. Left-behind children often benefit from teachers who are sensitive to their emotional needs and who can offer reassurance, mentorship, and a stable presence in their lives.

While TFRC teachers may not have specific training in counselling or child psychology, they play a vital role in supporting the well-being of left-behind children by creating a safe and nurturing learning environment. This aspect of teaching is critical, as it contributes not only to the students' academic success but also to their overall development and mental health (Mahdavi, Valibeygi, Moradi, & Sadeghi, 2021). However, addressing the emotional and social challenges faced by left-behind children requires a multi-faceted approach that includes support from parents, schools, and the broader community.

Research indicates that when teachers, especially those involved in TFRC programs, are equipped with the tools to address these challenges, they are better able to support the development of left-behind children and improve their educational outcomes.

III. METHODOLOGY

Research Design

This study adopts a qualitative systematic literature review methodology to synthesize existing research on the impact of Teach-for-Rural-China (TFRC) programs on teacher professional development and their influence on teaching left-behind children in rural China. Qualitative research methods were chosen for their ability to provide a deep, nuanced understanding of the experiences of teachers involved in TFRC programs. Qualitative reviews also allow for the exploration of the contextual and subjective aspects of teacher development, which is essential for understanding how these programs work in rural settings and how they influence both educators and students.

A systematic literature review ensures a structured and transparent approach to identifying and analysing relevant studies. By focusing on qualitative data, this study allows for a detailed examination of the challenges faced by teachers, the ways in which the TFRC program supports teacher development, and the broader impact on the educational outcomes of left-behind children. Unlike traditional quantitative reviews, which focus on numerical data and statistical significance, qualitative reviews prioritize understanding complex phenomena from a variety of perspectives. This approach enables the researcher to explore how TFRC teachers experience their professional development and how it translates into their teaching practices with left-behind children. Moreover, it offers the opportunity to assess the effectiveness of the program in addressing the specific needs of these vulnerable students in rural areas.

The qualitative systematic review methodology was chosen for its ability to offer deeper insights into how the TFRC program functions in the field, considering the subjective experiences and complex realities of rural teaching environments. This design aims to provide a rich narrative of the impact of TFRC programs on the professional growth of teachers and their teaching effectiveness, particularly in contexts involving marginalized populations such as left-behind children.

Data Collection

The data collection for this study involved a comprehensive search of literature published between 2010 and 2024, ensuring the inclusion of the most recent and relevant studies on TFRC programs and their impact on teacher professional development. The studies were retrieved from a variety of reputable academic databases to ensure a wide scope of research. These databases included

Google Scholar, CNKI (China National Knowledge Infrastructure), Web of Science, and Scopus. The inclusion of both international and Chinese databases was essential to capture a broad range of research perspectives and ensure that the findings reflect both local and global understandings of TFRC programs.

The selection of keywords for the search was critical in ensuring that relevant studies were captured. These keywords included phrases such as “Teach-for-Rural-China,” “teacher professional development,” “left-behind children,” and “rural education in China.” These keywords were strategically chosen to encompass various facets of the research topic, including teacher professional development, the specific challenges of teaching left-behind children, and the role of the TFRC program in addressing these challenges.

Once the initial search was completed, inclusion and exclusion criteria were applied to ensure that only the most relevant and rigorous studies were included in the review. Inclusion criteria included studies that focused on the impact of TFRC programs on either teacher professional development or the education of left-behind children. Only empirical studies, case-based reports, and program evaluations that provided insights into the implementation and outcomes of the TFRC program were included. The studies also had to be published in peer-reviewed journals or reputable academic sources. In contrast, exclusion criteria eliminated studies that did not specifically address TFRC programs or teacher professional development in rural China. Non-peer-reviewed articles and studies with insufficient methodological rigor were excluded from the review.

The final selection of studies consisted of 42 articles, representing a diverse range of empirical research, case studies, and program evaluations. This diverse range of literature ensures that the review is comprehensive and representative of the varied ways in which TFRC programs have been implemented and evaluated across different rural contexts in China.

Data Analysis

Once the literature was collected, the analysis proceeded with thematic analysis, a qualitative method that identifies, analyses, and reports patterns or themes within qualitative data. Thematic analysis was selected due to its flexibility and ability to handle large volumes of textual data, making it suitable for a systematic literature review. This approach allows for identifying recurring ideas or concepts across multiple studies, providing a comprehensive understanding of how TFRC programs influence teacher professional development and how they impact the education of left-behind children.

The first step in the analysis involved familiarization with the data. This process required reading the selected studies multiple times to gain a deep understanding of their content. Following this, a coding process was implemented to identify key themes in the data. Initial codes were developed based on recurrent ideas related to teacher professional development—including mentorship, skill-

building, training strategies, and leadership development. Additional codes were created around the impact on teaching left-behind children, focusing on how teachers adapt their teaching methods to meet the specific academic and emotional needs of these students.

Once the codes were established, the next step involved grouping the codes into broader themes. These themes reflected key areas of the studies, including the effectiveness of professional development programs in rural China, the challenges teachers face in rural settings, and the impact of TFRC teachers on the academic and emotional development of left-behind children. The data analysis process was iterative, meaning that as new insights emerged, themes were adjusted and refined. This iterative process allowed for a more nuanced understanding of the literature and enabled the researcher to identify important patterns and gaps in the current knowledge base.

Thematic analysis not only helped to uncover the common themes within the studies but also allowed the researcher to consider the broader implications of these findings for the future of TFRC programs. By examining the literature through a thematic lens, the study provides a detailed and multi-faceted view of the TFRC program’s effectiveness in both teacher development and in addressing the educational needs of left-behind children in rural China.

Quality Assessment

To ensure the reliability and credibility of the review process, a quality assessment was conducted on the selected studies. This assessment focused on evaluating the methodological rigor of the studies, including their research designs, data collection methods, and sample sizes. The quality of each study was assessed to determine whether it met the standards for inclusion in the review.

Studies that employed robust research methodologies, such as well-designed case studies, comprehensive program evaluations, and longitudinal studies, were prioritized. Studies that lacked sufficient methodological rigor or did not provide clear data regarding their findings were excluded. This quality assessment process ensured that the final review was based on studies that could provide reliable and valid insights into the impact of TFRC programs on teacher professional development and the education of left-behind children.

The combination of thematic analysis and quality assessment provides a comprehensive and reliable foundation for the findings of this systematic literature review. By ensuring that only high-quality studies are included, the review presents a well-rounded and credible understanding of the effectiveness of TFRC programs and their broader impact on rural education in China.

IV. RESULTS

The results of this systematic literature review provide an in-depth understanding of the role that Teach-for-Rural-China (TFRC) programs play in enhancing teacher

professional development (TPD) and the impact they have on left-behind children in rural China. Through the thematic analysis of 42 selected studies, several key findings emerged related to the development of teacher skills, the effectiveness of the TFRC program in addressing the challenges faced by left-behind children, and the barriers that teachers encounter within these rural educational contexts. Below are the key results discussed in more detail.

Teacher Professional Development through TFRC Programs

A significant body of literature points to the impact that TFRC programs have on teacher professional development, particularly in rural China. According to Yan and Saguin (Yan & Saguin, 2021), the TFRC program provides an integrated framework of training, mentorship, and continuous support, aimed at improving teachers' professional capabilities. Teachers recruited into the program benefit from pre-service training that covers essential areas such as classroom management, pedagogical strategies, and innovative teaching techniques (Li, Hu, Yang, Wu, Tao, Chen et al., 2024). Moreover, TFRC teachers are provided with access to ongoing professional development opportunities throughout their tenure, including workshops, peer collaboration sessions, and guidance from more experienced educators (L. Wu, Qiu, & Ling, 2025).

While there is strong evidence supporting the improvement in teachers' instructional skills, some studies suggest that localized training that considers the specific context of rural schools would further enhance the outcomes. For instance, Cui et al. (Cui, Zhao, Liu, & Liu, 2022) emphasized that although the training content provided to TFRC teachers is often well-structured, it can be too generalized and does not fully address the unique needs of rural educators, such as their lack of familiarity with the local dialects or cultural practices. Furthermore, rural teachers often face resource constraints (J. Wang, Yang, Li, & van Aalst, 2021), which limits their ability to fully implement the teaching strategies they are trained in. This highlights a gap in adequate preparation and support for teachers placed in rural settings.

The mentoring process, another significant aspect of teacher professional development, was found to be especially valuable. According to Wang and Lo (X. Wang & Lo, 2022), mentorship provided by experienced educators, particularly those familiar with the rural context, helps new TFRC teachers adapt to the challenges they face. This peer support fosters collaborative learning, where teachers are encouraged to share best practices, observe one another's teaching, and provide feedback (Carless, 2020). As a result, many TFRC teachers reported a boost in their confidence and self-efficacy in the classroom. Despite these benefits, some teachers also reported difficulties in accessing sustained mentorship during their placements, often due to the geographical isolation of rural schools and

the high turnover rate of TFRC teachers (Cheung, Wong, Wang, & Dai, 2023).

Impact of TFRC Programs on Left-Behind Children

A primary goal of TFRC programs is to improve the educational outcomes of left-behind children—a vulnerable group who experience educational and emotional challenges due to the absence of their migrant worker parents (Boado & Ferrer, 2022). Many studies reviewed in this paper demonstrate the positive impact of TFRC teachers on the academic performance of left-behind children. For example, Kerimbayev et al. (Kerimbayev, Umirzakova, Shadiyev, & Jotsov, 2023) found that TFRC teachers were able to engage students more effectively using interactive teaching methods, digital tools, and student-centered learning techniques, which contrasted with the more traditional, lecture-based teaching methods that were common in rural schools. This approach not only improved students' academic achievements but also enhanced their critical thinking skills and problem-solving abilities.

Moreover, the TFRC teachers were instrumental in providing much-needed emotional support for left-behind children. Studies consistently highlighted the emotional challenges faced by these children, who often struggle with feelings of neglect and loneliness due to their parents' absence (Ayhan & Beyazit, 2021). TFRC teachers played a vital role in mitigating these emotional burdens, offering individualized attention and creating a safe learning environment where students felt valued. Wang (S. Wang, 2023) reported that these teachers were able to build trusting relationships with left-behind children, offering not only academic support but also psychosocial support. This connection was particularly important in fostering a sense of belonging and security for students.

However, the impact of TFRC programs on left-behind children is not without limitations. While short-term improvements in academic performance and emotional well-being were observed, some studies indicated that the temporary nature of TFRC programs, typically lasting only two years, led to discontinuity in teacher-student relationships. The constant turnover of teachers meant that left-behind children experienced a lack of continuity in support, potentially diminishing the long-term effectiveness of the program in addressing their educational and emotional needs. As highlighted by Peng (Peng, 2021), a more sustained presence of qualified teachers in these schools could provide more consistent support for the ongoing challenges faced by left-behind children.

Challenges Faced by TFRC Teachers

Although TFRC programs offer significant benefits, teachers also face considerable challenges in their work within rural schools. The studies consistently highlighted that cultural differences and linguistic barriers were major challenges for TFRC teachers, particularly those from urban backgrounds. Many TFRC teachers struggled with

understanding the local customs, dialects, and social dynamics of rural communities. These barriers hindered effective communication with students, parents, and local school staff, often resulting in misunderstandings and frustrations.

Additionally, the resource limitations in rural schools, such as the lack of teaching materials, internet access, and adequate classroom infrastructure, were significant obstacles. Tsegay et al. (Tsegay, Ashraf, Perveen, & Zegergish, 2022) noted that TFRC teachers often found it difficult to implement the innovative teaching strategies they had been trained in because of the lack of basic resources. These limitations not only affected the quality of instruction but also contributed to teachers' job dissatisfaction and burnout.

The emotional demands of working with left-behind children were another challenge. Many teachers reported feeling emotionally overwhelmed by the intense psychological needs of their students, including mental health issues such as depression and anxiety (Broglia, Millings, & Barkham, 2021). These emotional burdens, combined with the high workload and long hours, led to teacher fatigue and, in some cases, burnout. Such challenges underscore the need for better psychosocial support for teachers, as well as improvements in work-life balance.

Long-Term Impact and Sustainability

Another critical issue discussed in the literature is the long-term sustainability of the TFRC program's impact on both teachers and students. While the short-term results of the program, in terms of teacher professional development and improvements in student learning outcomes, were largely positive, there are concerns about the long-term benefits of the program. As the temporary nature of the program means that teachers typically leave rural schools after two years, the long-term impact of their work is often diluted by high teacher turnover. This creates a cycle of instability in rural schools, where new teachers must repeatedly re-adjust to the challenges of teaching left-behind children, thereby hindering the continuity of instructional quality and emotional support.

Similarly, the sustainability of improvements in student outcomes is questionable, as the departure of TFRC teachers often results in a gap in teacher-student relationships and a reversal of academic gains. According to Mintchev et al. (Mintchev, Daher, Jallad, Pietrostefani, Moore, Ghamrawi et al., 2022), the transitory nature of the program means that its impact is often short-lived, and without continued investment in teacher retention and local capacity-building, the benefits of the program may not be sustained in the long term.

Recommendations for Improving TFRC Programs

Based on the findings from the literature review, several recommendations can be made to improve the effectiveness and sustainability of TFRC programs:

- (1) **Enhanced Teacher Support:** Providing more comprehensive and continuous support for teachers, including better mentorship, peer collaboration, and psychosocial support, could help alleviate the challenges faced by teachers in rural schools and improve their professional development outcomes.
- (2) **Tailored Training Programs:** Training programs should be more context-specific, taking into account the cultural, linguistic, and socioeconomic characteristics of rural communities. As suggested by Zhao et al. (2023), incorporating local knowledge and engaging with the community could help new teachers better adapt to the rural setting.
- (3) **Teacher Retention Strategies:** To improve the sustainability of the program, efforts should be made to enhance teacher retention in rural schools. Offering incentives, such as career advancement opportunities, housing allowances, and professional recognition, could help retain talented teachers in rural areas for longer periods.
- (4) **Addressing Resource Gaps:** Ensuring that rural schools have sufficient resources, including teaching materials, internet access, and classroom infrastructure, is essential for maximizing the effectiveness of TFRC programs. The development of partnerships with local organizations or the government could help bridge these gaps.

V. CONCLUSION

The findings of this systematic literature review highlight the significant contributions of Teach-for-Rural-China (TFRC) programs in enhancing teacher professional development (TPD) and improving educational opportunities for left-behind children in rural China. The review reveals that TFRC programs provide teachers with essential training, mentorship, and professional growth opportunities, equipping them with pedagogical skills, classroom management techniques, and innovative teaching strategies. However, despite the short-term success in improving teaching effectiveness and student learning outcomes, challenges such as high teacher turnover, limited resources, and cultural adaptation issues persist, affecting the long-term sustainability of the program's impact.

One of the key findings of this study is that TFRC teachers play a crucial role in addressing the educational and emotional needs of left-behind children. Their use of student-centered teaching methods, interactive learning techniques, and personalized support significantly enhances students' academic performance, critical thinking skills, and self-confidence. More importantly, their presence in rural schools helps mitigate the emotional challenges faced by left-behind children, fostering a supportive and engaging learning environment. However, due to the temporary nature of TFRC placements, the continuity of student support remains a concern, as children often experience a disruption in learning and emotional guidance when teachers leave after completing their two-year service.

The study also identifies several structural and contextual challenges faced by TFRC teachers, including cultural and linguistic barriers, lack of teaching resources, and psychosocial burdens. Many teachers struggle to integrate into rural communities, which affects their ability to effectively engage with students, parents, and local educators. Additionally, the absence of sustained mentorship, combined with limited institutional support, contributes to teacher burnout and dissatisfaction, leading to high turnover rates and a reduced long-term impact of the program.

To improve the effectiveness and sustainability of TFRC programs, this study suggests several key recommendations. First, enhancing teacher support through comprehensive mentorship programs, peer collaboration opportunities, and psychosocial well-being initiatives can help improve teachers' professional experiences and retention rates. Second, tailoring training programs to the specific needs of rural schools—including cultural immersion programs, language training, and community engagement strategies—can better prepare teachers for their roles. Third, improving resource allocation in rural schools by expanding digital infrastructure, providing updated teaching materials, and offering financial incentives can help alleviate some of the structural challenges faced by teachers. Finally, developing long-term retention strategies, such as career advancement opportunities, salary incentives, and extended service commitments, may encourage more teachers to remain in rural schools beyond their initial two-year placement.

In conclusion, while TFRC programs have demonstrated their effectiveness in enhancing teacher professional development and student outcomes in rural China, their long-term sustainability requires greater institutional support, policy improvements, and community involvement. Addressing systemic challenges and implementing targeted interventions will be essential to strengthening the long-term impact of these programs and ensuring that rural left-behind children receive continuous and high-quality education. Future research should explore longitudinal studies on the lasting effects of TFRC programs, as well as comparative analyses with similar educational interventions in other countries to inform best practices for teacher recruitment, retention, and development in rural education settings.

REFERENCES

- Ayhan, A. B., & Beyazit, U. (2021). The Associations between Loneliness and Self-Esteem in Children and Neglectful Behaviours of their Parents. *Child Indicators Research*, 14(5), 1863-1879.
- Boado, H. C., & Ferrer, A. G. (2022). The impact of physical separation from parents on the mental wellbeing of the children of migrants. *Journal of Ethnic and Migration Studies*, 48(10), 2436-2454.
- Broglia, E., Millings, A., & Barkham, M. (2021). Student mental health profiles and barriers to help seeking: When and why students seek help for a mental health concern. *Counselling and Psychotherapy Research*, 21(4), 816-826.
- Carless, D. (2020). From teacher transmission of information to student feedback literacy: Activating the learner role in feedback processes. *Active Learning in Higher Education*, 23(2), 143-153.
- Chen, Q., Khattak, S. I., & Ahmad, M. (2024). Impact of innovation in hybrid electric vehicles-related technologies on carbon dioxide emissions from the transport sector in Japan. *Natural Resources Forum*, n/a(n/a).
- Chen, S.-M., Gao, L., Lin, S.-H., & Zhang, Y. (2024). Relationship between parental involvement and emotional well-being in Chinese left-behind children: A moderated mediation model. *Family Relations*, 73(2), 1346-1361.
- Cheung, A. C. K., Wong, K. L., Wang, H. F., & Dai, J. B. (2023). Effect of a student teaching internship program on the self-efficacy of pre-service teachers in rural China. *International Journal of Educational Management*, 37(2), 373-392.
- Cui, L.-T., Zhao, J.-T., Liu, Y., & Liu, H.-F. (2022). Teachers in the Compulsory Education in Rural China: Characteristics and Limitations. In M. A. Peters (Ed.), *Encyclopedia of Teacher Education* (pp. 1929-1935). Singapore: Springer Nature Singapore.
- Darling-Hammond, L. (2021). Defining teaching quality around the world. *European Journal of Teacher Education*, 44(3), 295-308.
- Kerimbayev, N., Umirzakova, Z., Shadiey, R., & Jotsov, V. (2023). A student-centered approach using modern technologies in distance learning: a systematic review of the literature. *Smart Learning Environments*, 10(1), 61.
- Kukulka-Hulme, A., Giri, R. A., Dawadi, S., Devkota, K. R., & Gaved, M. (2023). Languages and technologies in education at school and outside of school: Perspectives from young people in low-resource countries in Africa and Asia. *Frontiers in Communication*, 8, 1081155.

- Li, L., Hu, Y., Yang, X., Wu, M., Tao, P., Chen, M., & Yang, C. (2024). Enhancing pre-service teachers' classroom management competency in a large class context: the role of fully immersive virtual reality. *Humanities and Social Sciences Communications*, 11(1), 1050.
- Mahdavi, P., Valibeygi, A., Moradi, M., & Sadeghi, S. (2021). Relationship Between Achievement Motivation, Mental Health and Academic Success in University Students. *Community Health Equity Research & Policy*, 43(3), 311-317.
- Mintchev, N., Daher, M., Jallad, M., Pietrostefani, E., Moore, H. L., Ghamrawi, G., Al Harrache, A., Majed, A., & Younes, Y. (2022). Sustained Citizen Science From Research to Solutions: A New Impact Model for the Social Sciences. *International Journal of Qualitative Methods*, 21, 16094069221133232.
- Murphy, R. (2022). What does 'left behind' mean to children living in migratory regions in rural China? *Geoforum*, 129, 181-190.
- Peng, B. (2021). Chinese migrant parents' educational involvement: Shadow education for left-behind children. *Hungarian Educational Research Journal*, 11(2), 101-123.
- Salifu, I., Agyekum, B., & Nketia, D. (2024). Teacher professional development (TPD) in Ghana: constraints and solutions. *Professional Development in Education*, 1-18.
- Tang, X. (2023). Educational inequality between urban and rural areas in China. *Lecture Notes in Education Psychology and Public Media*, 30, 293-297.
- Tsegay, S. M., Ashraf, M. A., Perveen, S., & Zegergish, M. Z. (2022). Online teaching during COVID-19 pandemic: Teachers' experiences from a Chinese university. *Sustainability*, 14(1), 568.
- Wang, J., Yang, Y., Li, H., & van Aalst, J. (2021). Continuing to teach in a time of crisis: The Chinese rural educational system's response and student satisfaction and social and cognitive presence. *British Journal of Educational Technology*, 52(4), 1494-1512.
- Wang, S. (2023). Constructing children's psychological well-being: Sources of resilience for children left behind in Northeast China. *International Migration*, 61(5), 156-172.
- Wang, X., & Lo, L. N. K. (2022). Development of resilience among Chinese rural teachers: a social ecological perspective. *Teachers and Teaching*, 28(5), 533-554.
- Wu, D., Liu, M., Li, D., & Yin, H. (2024). The longitudinal relationship between loneliness and both social anxiety and mobile phone addiction among rural left-behind children: A cross-lagged panel analysis. *Journal of Adolescence*, 96(5), 969-982.
- Wu, L., Qiu, C.-a., & Ling, B. (2025). Collaborative emotion regulation and professional development of student language teachers in online teaching: A community of practice perspective. *Teaching and Teacher Education*, 158, 104969.
- Yan, Y., & Saguin, K. (2021). Policy capacity matters for capacity development: comparing teacher in-service training and career advancement in basic education systems of India and China. *International Review of Administrative Sciences*, 87(2), 294-310.
- Zhao, Y., Zhao, M., & Shi, F. (2024). Integrating Moral Education and Educational Information Technology: A Strategic Approach to Enhance Rural Teacher Training in Universities. *Journal of the Knowledge Economy*, 15(3), 15053-15093.
- Zheng, X., & Zhou, Y. (2024). Social spillovers of parental absence: the classroom peer effects of 'left-behind' children on household human capital investments in rural China. *The Journal of Development Studies*, 60(2), 288-308.