

ENHANCED LEARNING, EMPOWERING LIVES: A COMMUNITY-BASED LEARNING APPROACH FOR STUDENTS WITH SPECIAL NEEDS

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ABSTRACT

Community-Based Learning (CBL) integrates academic learning with community engagement, enabling students to apply theoretical knowledge to real-world projects while fostering civic responsibility, critical thinking, and personal growth. This concept paper explores CBL in the Service-Learning Project (SLP) initiative at MINDS Woodlands Gardens School (WGS), combining community service with curriculum learning to enhance inclusivity and support students with intellectual disabilities, including autism spectrum disorder (ASD) and high support needs. The initiative aligns with the Ministry of Education's Values-in-Action (VIA) framework to promote empathy, civic responsibility, and 21st-century skills. The paper examines the application and impact of CBL in a Singapore special education (SPED) school context through the SLP at WGS. It highlights the initiative's role in enhancing inclusivity, practical learning, and fostering key skills while addressing challenges in implementation. The SLP applies CBL theory and Kolb's experiential learning model, incorporating community projects and reflection using Driscoll's Model of Reflection. Data from observations, student journals, and teacher feedback were analyzed thematically to assess self-determination, social-emotional development, and community integration. The project engaged 79.5% of junior and senior students and 77.9% of high-support-needs students in tiered roles, in collaboration with four community partners. It strengthened community partnerships, integrated curriculum effectively, and provided authentic learning experiences. Feedback highlighted improvements in social-emotional skills, self-determination, and civic responsibility, though task suitability for students with high-support-needs requires further refinement. Building on 2024's achievements, the SLP will continue in 2025 with a focus on sustainability and addressing identified challenges to enhance its impact further.

Keywords: Service-learning, Community-Based Learning (CBL), Autism Spectrum Disorder (ASD), Self-determination, Social-emotional development, Inclusive Educational Practices.

INTRODUCTION

Imagine a learning environment where community service and curriculum learning converge, fostering inclusivity and providing robust support for students with intellectual disabilities, including autism spectrum disorder (ASD) and high support needs. This concept paper explores the innovative Community Based Learning (CBL) approach within the Service-Learning Project (SLP) initiative at MINDS Woodlands Gardens School. By integrating community engagement with educational objectives, we aim to create a more inclusive and supportive educational experience that empowers students to apply their learning beyond the school setting.

Background Information:

- **School Profile:** Woodlands Gardens School (WGS) is part of the Movement for the Intellectually Disabled of Singapore (MINDS), catering to students with moderate to severe intellectual disabilities (MSID) and ASD. The school aims to provide a vibrant learning environment that inspires students towards independence and integration into society
- **Student profile:** The student profile at WGS includes children aged 7 to 18 years old with MSID and ASD. The school adopts a holistic learning approach that involves, parents, partner agencies and the community. It offers various programmes, including the Junior Programme for ages 7-12, the Senior Programme for ages 13-18, and the Special Programme for students with high support needs aged 7-18. WGS has a diverse range of students in terms of backgrounds and abilities – each one is unique. All students have intellectual disability, ie IQ below 70, and about two-thirds of them have co-occurring ASD.

The Singapore Special Education (SPED) Curriculum Framework, introduced in 2012, aims to provide a holistic and inclusive education for students with moderate to severe special educational needs. It focuses on three broad outcomes of Living, Learning, and Working, through curriculum instruction in seven core learning domains, namely (i) Communication and Language, (ii) Numeracy, (iii) Daily Living Skills, (iv) Social-Emotional Learning, (v) Physical Education, (vi) Arts, and (vii) Vocational Education. Additionally, Character and Citizenship Education (CCE) and Information and Communication Technology (ICT) are emphasized to support values-based education and enhance teaching and learning.

Despite the robust syllabuses guiding the curriculum, a universal challenge remains: how SPED students in Singapore transfer and generalize what they have learned in school to their daily lives. Currently, there is no specific framework to guide the process of knowledge and skills transference from the school setting to an authentic community setting.

Problem Statement: Despite the comprehensive Singapore SPED Curriculum Framework, which aims to provide a holistic and inclusive education for students with moderate to severe special educational needs, there remains a significant challenge in ensuring that students can effectively transfer and generalise the skills and knowledge acquired in school to their daily lives. This gap highlights the need for a structured approach to facilitate the application of learned competencies in real-world community settings

Hypothesis of the paper: The integration of CBL within the SLP initiative at MINDS WGS will enhance the transference and generalisation of skills and knowledge from the school

environment to authentic community settings for students with intellectual disabilities, including autism spectrum disorder (ASD) and high support needs.

OBJECTIVES:

Main Objectives of the concept paper:

- 1) **Evaluate the Effectiveness of CBL:** Assess how the integration of CBL within the SLP initiative at WGS impacts the ability of students with intellectual disabilities, including ASD and high support needs, to transfer and generalise skills and knowledge to real-world community settings.
- 2) **Identify Best Practices:** Determine the best practices and strategies for implementing CBL in a way that maximizes the educational and developmental benefits for SPED students.
- 3) **Enhance Inclusivity:** Explore methods to enhance inclusivity and support within the educational framework, ensuring that all students, regardless of their abilities, can participate fully and benefit from the CBL approach.
- 4) **Develop a Framework:** Propose a structured framework for the transference and generalization of skills from the school setting to the community, based on the findings and feedback gathered.

Methodology:

1. **Student Participation Rate:** We analysed data to assess how the adoption of CBL has impacted student participation rates in the SLP. This involved tracking participation trends over a three-year period.
2. **Surveys and Reflections:** Surveys were administered to teachers, and reflections were collected from students to gather qualitative data on how students have applied their learning to contribute meaningfully to the community. These instruments provided insights into the perceived effectiveness of the CBL approach.
3. **Observation:** Firsthand observations were conducted during SLP activities to gain insights into student engagement and interaction within community settings. Observations also aimed to identify potential challenges students faced when applying their learning in real-world contexts.
4. **Data Analysis:** We focused on analyzing trends in student participation rates over three years, along with observation records and qualitative feedback from students, teachers, and community partners. This comprehensive analysis helped us understand the overall impact of the CBL initiative.

LITERATURE REVIEW

Major Literature Concepts/References

Introduction: The SLP references the Ministry of Education (MOE), Singapore SPED Curriculum Framework, which encompasses seven Teaching and Learning Syllabuses (TLs).

The SPED Curriculum Framework



Source:;Ministry of Education. (2012). *SPED Framework*. Ministry of Education.

The Singapore SPED Curriculum Framework aspires to ensure students are "Active in the community, Valued in society." It focuses on three key outcomes: living, learning, and working. These outcomes are achieved through seven core learning domains:

1. Communication and Language
2. Numeracy
3. Daily Living Skills
4. Social-Emotional Learning (SEL)
5. Physical Education
6. Arts
7. Vocational Education (Voc ED)

In addition, the framework emphasizes Character and Citizenship Education (CCE) and the integration of Information and Communication Technology to enhance teaching and learning. This structure enables SPED schools to tailor their curriculum to meet the diverse needs of their students, promoting their growth and integration into the community.

To support these core learning domains, seven Teaching and Learning Syllabuses (TLs) have been developed. The SLP is notably aligned with the Voc Ed TLs, which focus on helping students comprehend the meaning and value of work before exploring their interests, preferences, and strengths in the community. The SLP platform also aids students in acquiring essential skills such as problem-solving, adaptability, and collaboration. According to the Voc Ed TLs, these skills are vital for students as they transition to post-school pathways.

Beyond the SPED Curriculum Framework, the concept paper incorporates evidence-based frameworks and approaches, such as Kolb's Experiential Learning Theory, John Dewey's educational philosophy, and the Driscoll model for reflection. CBL merges academic instruction with community involvement. This concept paper explores how CBL utilizes Kolb's experiential learning theory and John Dewey's educational philosophy to improve student outcomes. It also

highlights the role of reflection, particularly through the Driscoll model, in assessing student learning during service-learning projects.

Service-Learning Projects gained traction in Singapore's education system during the 2010s, fostering inclusivity and a sense of purpose among students through planning, execution, and reflection. Although there is no dedicated service-learning framework for Special Education (SPED) in Singapore, the Ministry of Education's SPED curriculum aligns with Character and CCE and SEL. These projects further the SPED curriculum vision of making students "Active in the community, Valued in society," by providing real-world applications of their learning.

At MINDS WGS, the community-based learning approach was referenced for the school-wide learning project. This approach emphasizes real-world problem-solving, community engagement, and structured reflection. It fosters critical thinking and holistic student development while aligning with the SPED curriculum vision.

Experiential Learning Theories and Philosophy

The SLP also incorporates evidence-based theories and philosophies to shape and design meaningful community-based learning experiences for students.

1. **Kolb's Experiential Learning Theory:** Emphasizes learning through concrete experience, reflective observation, abstract conceptualization, and active experimentation. In CBL, students engage in real-world projects, reflect on experiences, conceptualize learning, and apply insights.
2. **John Dewey's Educational Philosophy:** Advocates for learning through experience and interaction with the environment. CBL aligns with Dewey's principles by engaging students in meaningful community work, enhancing understanding through practical application.
3. **Driscoll Model of Reflection:** Uses the questions "What?", "So what?", and "Now what?" to help students describe experiences, analyse learning significance, and plan future actions.

Community-Based Learning (CBL): Enhancing Holistic Student Development

CBL plays a crucial role in connecting academic learning with community engagement, fostering meaningful experiences for students. Through structured activities designed to address community needs, CBL promotes outcomes such as character development and social awareness. Anchored in Kolb's Experiential Learning Model, CBL emphasizes the four stages of learning:

1. **Concrete Experiences** – Engaging directly with real-world tasks.
2. **Reflective Observation** – Analyzing experiences to identify key lessons.
3. **Abstract Conceptualization** – Forming generalizations and applying theoretical insights.
4. **Active Experimentation** – Testing ideas and applying learning in new situations.

For students with moderate to severe disabilities, Community-Based Instruction (CBI) within CBL frameworks enhances socialization and community living skills. Teachers have observed improved social behaviours and more positive interactions during community engagement compared to classroom settings. This underscores the importance of providing social opportunities in SLP to support students' development.

CBL also serves as a foundation for embedding academic objectives within service-learning. This balanced approach ensures that learning and service complement each other, enriching the educational experience. By linking community service with planned academic outcomes, CBL fosters a holistic learning approach.

The principles of CBL align closely with the MOE Voc Ed TLs from the SPED curriculum framework. Both emphasize preparing students to understand the meaning and value of work before identifying their interests, strengths, and preferences in community settings. These frameworks prioritize the development of practical skills such as problem-solving, adaptability, and collaboration, which are essential for students' transition to post-school pathways. By integrating real-world learning with community engagement, CBL reinforces these competencies, ensuring alignment with the MOE Voc Ed TLs.

Implementing CBL effectively requires:

- Leadership and staff commitment.
- Strong community awareness and partnerships.
- Continuous assessment of student reflection, especially for students with disabilities, to drive progressive learning outcomes.

By aligning with experiential education principles, addressing community needs, and integrating the objectives of the MOE Voc Ed TLs, CBL empowers students, enhances learning, and builds essential life skills.

In **conclusion**, the reviewed literature highlights the transformative potential of Community-Based Learning (CBL), rooted in Kolb's and Dewey's experiential learning frameworks, to enhance students' academic, personal, and civic growth. A key component is the Driscoll reflection model, which guides students through structured questioning— What? (describing the experience), So what? (analysing its significance), and Now what? (applying insights to future actions)—to deepen learning and personal development. These principles are integral to shaping school-wide service-learning initiatives at MINDS Woodlands Gardens School,

fostering meaningful community engagement while achieving targeted learning outcomes. By aligning these efforts with the SPED curriculum framework, the programme ensures consistency with Singapore's national curriculum, enhancing its relevance and impact.

METHODOLOGY

Prior to 2024, MINDS WGS had no prominent records on how service learning was conducted. Students participated in projects on an ad-hoc basis, with no clear alignment to the school curriculum. Not all students were involved, and there were no clear records of the number of participants.

This section provides precise details of the methods and procedures used in the study in 2024:

- (a) **Participants and Selection:** The participants included all students at MINDS WGS involved in the SLP, which is part of the main school curriculum.
- (b) **Data Collection Methods:**
 - **Surveys and Reflections:** Surveys were administered to teachers, and reflections were collected from students to gather qualitative data on how students applied their learning to contribute meaningfully to the community. These instruments provided insights into the perceived effectiveness of the CBL approach.
 - **Observation:** Firsthand observations were conducted during SLP activities to gain insights into student engagement and interaction within community settings. Observations also aimed to identify potential challenges students faced when applying their learning in real-world contexts.
- (c) **Process of Ethical Consent:** Ethical consent was not required as no sensitive data, such as personal details of stakeholders, were involved.
- (d) **Data Analysis Methods:**
 - **Student Participation Rate:** Data was analyzed to assess how the adoption of CBL impacted student participation rates in SLP. This involved tracking participation trends over a three-year period.
 - **Qualitative Feedback:** Analysis focused on trends in student participation rates, observation records, and qualitative feedback from students, teachers, and community partners. This comprehensive analysis helped understand the overall impact of the CBL initiative.

RESULTS AND FINDING

1. Student Participation and Engagement:

- **Tool:** Participation records.
- **Time Points:** Before and after 2024.

Outcomes: Before 2024, there were no significant records of student participation in service learning. It is estimated that less than 30% of students were involved annually. Service learning was conducted on an ad-hoc basis, typically involving students with lower support

needs.

In 2024, there was a notable increase in participation from students with diverse learning profiles. The results are as follows:

Junior: 79.5% participation.

Senior: 79.5% participation.

Special: 77.9% participation.

Qualitative: Increased engagement across all groups.

2. Teacher Surveys:

a. **Tool:** Post-service-learning survey with 79 teachers.

b. **Time Points:** After project implementation.

Outcomes:

89% of teachers indicated students could identify ways to contribute.

20% reported over 75% of students could identify one way to contribute. 51% reported 51%-74% of students could identify one way to contribute. 18% reported over 75% of students could list one reason for contributing. 42% reported 51%-74% of students could list one reason for contributing.

Qualitative: Improved student understanding and articulation of community contributions.

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS

1. Whether Any Initial Hypothesis Was Supported:

The initial hypothesis likely suggested that the integration of CBL would enhance the transference and generalization of skills from the school environment to real-world community settings for students with intellectual disabilities, including those with ASD and high support needs. Based on the collected data, the hypothesis appears to be supported.

2. Student Participation Rates: Before the adoption of CBL, less than 30% of students were involved in service-learning activities. Post-integration of CBL in 2024, there was a significant increase in participation rates across various student groups:

- **Junior Students:** 79.5%
- **Senior Students:** 79.5%
- **Special Needs Students:** 77.9%

This increased participation across all groups strongly supports the hypothesis that CBL enhances engagement, thus providing more opportunities for students to transfer and generalize skills in community settings.

Teacher Feedback: 89% of teachers reported that students could identify ways to contribute, indicating that CBL not only promoted participation but also helped students recognize and apply their learning in real-world contexts. This supports the effectiveness of CBL in facilitating skill transfer.

3. Whether the Findings Met the Aims of the Study:

Yes, the findings largely met the aims of the study. The main objectives of the study were to evaluate the effectiveness of CBL in promoting skill transfer to community settings, enhance inclusivity, gather feedback for improvement.

- **Impact on Skill Transference:** The data showed a clear increase in student participation and engagement, indicating that students were able to apply their skills in community settings.
- **Feedback and Insights:** Teachers reported that students could identify ways to contribute, and a significant proportion could articulate reasons for their contributions, which suggests a level of self-awareness and skill transference to the community.
- **Inclusivity:** The increased participation rate across different student groups suggests that the CBL approach helped engage students from all levels of ability, meeting the aim of enhancing inclusivity.
- **Framework Development:** The data, along with the feedback gathered, provides a strong foundation for developing a structured framework to further improve and guide the transference of skills from the school to the community.

4. Comparison of Findings with Other Research:

The findings from this study are consistent with other research on the effectiveness of **Community-Based Learning (CBL)** for students with intellectual disabilities.

- **Social Skills and Community Engagement:** Research supports the idea that CBL improves socialization and community living skills for students with moderate to severe disabilities (e.g., as seen in **Community-Based Instruction (CBI)**). The findings at WGS align with these studies, as teachers observed improved social skills and more positive behaviour in community settings compared to classroom-based learning.
- **Skill Transference:** The increase in student participation and the ability to identify contributions in community settings is in line with findings from other studies that show CBL fosters skill generalization, particularly in areas like communication, social interaction, and practical life skills.
- **Reflection and Engagement:** The use of reflective practices, such as the **Driscoll Model**, is known to enhance learning outcomes and personal growth in students with disabilities. The findings at WGS, where students reflected on their learning and engaged meaningfully in community activities, support the broader literature on the positive impacts of structured reflection on skill transference.

5. Limitations, Flaws, or Problems in Study Design or Methods:

Despite the positive findings, several limitations and potential flaws in the study design or methods need to be acknowledged:

- a. **Lack of Control Group:** The study lacks a control group, making it difficult to determine whether the observed improvements were solely due to the CBL intervention or if other factors (e.g., changes in school environment, teacher training, or other curriculum modifications) contributed to the results.
- b. **Limited Data on Long-Term Impact:** While the study tracked participation and immediate outcomes, it did not assess the long-term impact of CBL on students' ability to generalize skills beyond the service-learning context. Future studies should consider evaluating the sustainability of skill transfer over time.
- c. **Qualitative Data Limitations:** While surveys and reflections provided valuable insights, the study relies heavily on self-reported data from teachers and students. These subjective reports may be influenced by personal biases, and objective measures (e.g., direct assessments of skills) could offer a more robust evaluation.
- d. **Potential for Overestimating Engagement:** The significant increase in participation rates may not necessarily reflect true engagement or deep skill transfer. Higher participation rates could be a result of increased exposure to CBL rather than sustained learning or behavioural change. Further analysis of engagement quality would provide more clarity on this aspect.

Conclusions

The study effectively met its aims, showing that Community-Based Learning (CBL) enhances skill transference from school to community settings for students with intellectual disabilities, including those with ASD and high support needs. Key findings include a significant increase in student participation rates and positive teacher feedback on students' ability to contribute to their communities.

However, limitations such as the absence of a control group and limited long-term impact data suggest areas for improvement. Future research should incorporate a control group and evaluate the sustainability of skill transfer over time.

Recommendations For Refinement of the MINDS Woodlands Gardens School (WGS) School-Service Learning Programme

1. **Develop a Comprehensive WGS School-Wide Service-Learning Framework:** This framework should encapsulate the underpinning approach, student outcomes, considerations, processes, and partnership aspects. Define detailed processes, components, and guidelines to strengthen the approach and ensure clarity in implementation.
2. **Foster Collaboration Across Learning Domains** Collaborate with departments overseeing various learning domains, such as Communication and Language, Numeracy, Daily Living Skills, and Vocational Education, to align learning outcomes more effectively

with the holistic skill development of students.

3. **Establish a Control Group:** Create a control group to further evaluate the effectiveness of the school-wide Service-Learning Projects (SLP) approach.
4. **Enhance Skill Transfer and Inclusivity:** Utilise findings and refined practices to improve the programme's capacity to foster transferable skills while ensuring inclusivity across all aspects.

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