Teaching the Whole Student

A Case Study of Holistic Education in a High School Math Class

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Abstract

Guided by Miller's holistic framework, this paper establishes four criteria for holistic education—multidimensionality, relational community, psychological safety, and differentiated instruction. It then presents a case study from the author's internship teaching a high school math class. Using the Holistic Support Wheel, the author identified students' low self-efficacy, emotional resistance, lack of belonging, and internalized stereotypes. Interventions included differentiated instruction, informal relationship-building, transformative classroom language, and stereotype-challenging discussions. Each measure is analyzed against the four criteria to demonstrate why this case exemplifies holistic education. The case shows that attending to the whole student can reconnect learners with mathematics and themselves, even in challenging classroom settings.

Keywords: *holistic education, whole child, measures*

"Wholeness recognizes the interconnected nature of experience and the multi-dimensionality of human beings. Holistic education fosters this awareness in ourselves and in students. We see the relationship between the physical, intellectual, emotional, and spiritual dimensions of life." (Miller, 2019, p. 8) However, under the dual pressures of intensifying global competition and the rapid development of artificial intelligence, education has increasingly taken on a utilitarian character. In many schools, teaching has been reduced to the mere filling of knowledge and preparation for standardized exams, while students' emotional needs, self-awareness, and relational capacities are systematically overlooked.

According to the latest PISA results, Chinese students rank among the highest in the world in reading, mathematics, and science (OECD, 2019). Yet, precisely because of the heavy emphasis placed on academic performance by both families and the education system, Chinese adolescents show significantly lower levels of stress

resilience, are more prone to mental health issues, and report lower life satisfaction (Zhou et al., 2023). This imbalance between cognitive competence and personal development stands in stark opposition to the very goals of holistic education.

I am fully aware that holistic education is an effective way to solve the problem of educational utilitarianism and return to the essence of education. Therefore, it is urgent for educators to master and apply the concepts of holistic education. In this paper, based on the theoretical framework proposed by Miller and others, I will design a set of effective criteria for holistic education. Subsequently, I will present a real case of my internship teaching experience. Following the case description, I will use the criteria to analyze why this case aligns with the core requirements of holistic education.

Criteria

Holistic education focuses on the spiritual development and soul health of both educators and students. It is not merely about learning and knowledge; rather, it involves jointly constructing and exploring the inner meaning, helping students and educators understand life, achieve self-development, and thereby improve the character of the culture at large by creating deeply educated persons. (Moore, 2019)

To evaluate whether a teaching practice qualifies as holistic education, I design four interconnected criteria.

- C1 (Multidimensionality): Drawing on the whole teaching framework- integrate the modes of transmission, transaction, and transformation. Cultivate students' basic skills and factual knowledge, cognition, facilitate thinking and problem solving, as well as self-awareness, empathy, and social responsibility. (Miller, 2010)
- C2 (Relational and communal): Emphasize the cultivation of positive interdependence in student-community relationships to motivate students' initiative and engagement.
- C3 (Psychological safety and self-concept focused): Target students' confidence, expectations, and emotional security, recognizing that the learners' self-efficacy is an important factor influencing their participation in the learning process.
- C4 (Differentiated instruction): Show patience and care, realise and respect students' individualization. (Miller, 2019) Teaching should be adapted to each learner's learning habits and needs, moving beyond a one-size-fits-all approach.

These four criteria provide a coherent framework: synergistic application in the classroom can better achieve holistic education. The interdependence of C1 through C4 reflects the wholeness that the curriculum seeks to cultivate.

Experience

In 2024, I taught Math at a Catholic high school as a teacher candidate. I was responsible for four different math classes: two grade 9 classes, one regular grade 10 class, and one grade 10 “year-long” class. The "year-long class" is a classroom designed for students with weaker mathematical abilities. It extends the original semester-long teaching content over the entire year to enable them to complete the learning in a way that better suits their own pace.

The most memorable and impactful experience happened in the “year-long” class. Before my first encounter with these students, my collaborating teacher described the students' classroom

performance as worrisome - they were frequently absent, demonstrated minimal interest in math, and occasionally expressed anger.

To better understand the underlying needs behind their behaviors, I conducted systematic observations of each student before officially taking over this class, using the "Holistic Support Wheel" (CBE, 2022). This framework advocates for comprehensive recording and analysis of students' needs from four dimensions: physical, intellectual, emotional, and spiritual. These four aspects are interrelated and mutually supportive, collectively forming the students' whole existence. The observation and recording allowed me to formulate targeted supports and teaching plans based on each dimension.

In my observation records, several significant issues gradually became clear. Firstly, the students lacked clear goals for their math learning. They didn't learn out of intrinsic interest or curiosity, but rather passively accepted knowledge and simply followed what the teacher said and completed the assigned homework. This task-oriented learning state prevented them from truly engaging their minds in the learning process, and over time, their motivation for learning faded away. Secondly, their relationship with the classroom and the teacher is relatively distant. They lack a sense of belonging to the class and fail to establish a good relationship with the teacher. For them, the classroom is merely a place they must be in, rather than a safe and accepting learning community. As a result, absenting classes has become a matter of little consequence.

Additionally, there was an issue that deserves extra attention: A stereotypical bias present in the classroom. The students unconsciously thought that Asian students are better at learning math or that boys are more suitable for studying math than girls. The long-term accumulation of such external stereotypes gradually internalizes as students' self-denial and leads to their extreme lack of confidence in their mathematical abilities. Its external manifestations are learned helplessness and defensive resistance - either giving up efforts directly or using anger to mask inner anxiety. This is not merely a cognitive issue, nor is it simply a matter of not understanding the course content. It is actually a deep "connection break" between the student's entire self-concept - how they view themselves as a learner - and the subject of mathematics. As emphasized in holistic education, learning difficulties are often not just a problem of the mind, but also a problem of the heart and identity.

Measures

After I had conducted sufficient observation and records, I officially took over this class. Initially, I deliberately maintained the same teaching style as that of the previous math teacher, which was the "transmission" teaching method - explaining core concepts, demonstrating problem-solving steps, and leading students to complete example problems together. This continuity helped alleviate the possible disaccustom caused by the change of teachers, while ensuring the basic coverage of the cognitive dimension and maintaining the continuity of the academic foundation. This approach aligns with the requirements of basic skills and factual knowledge aspect of C1(Multidimensionality), reflecting a professional attitude toward students' academic and cognitive development.

Meanwhile, based on the records of the Holistic Support Wheel (see Appendix), I gradually became aware of the individual differences among students. In response, I designed differentiated learning goals and homework assignments tailored to their varying needs. For instance, students with a weaker mathematical foundation were only required to complete basic problems, with hints provided alongside more challenging

ones; for those who had a certain level of competence but lacked confidence, I encouraged them to attempt one or two variant problems after completing the basic tasks. What left a deep impression on me was a student with a weak foundation who appeared visibly more relaxed after completing her homework independently. She proudly showed me her "outcomes" and I immediately offered positive feedback and affirmed her learning process. This moment signified an important step towards a dual breakthrough for her - both cognitively and emotionally. This approach aligns with both C3 (Psychological safety and self-concept focused) and C4 (Differentiated instruction): It attends to students' cognitive levels while also fostering their self-concept and reflective capacity. Moreover, through differentiated instructional design, it helps each student find the content and goals most suited to their unique learning situation.

Learning happens within the realm of relationships, and teaching is fundamentally relational work. As Bhansali (2024) argues in *I Don't Teach Maths, I Teach Children*, teachers should treat children as whole human beings and heavily emphasize building relationships as a major part of the teacher's work. I deeply realized that establishing positive relationships with students not only narrows interpersonal gaps and dissolves barriers but also enhances students' sense of security, transforming my classroom into a space where they can freely express themselves. Fortuitously, this class was scheduled right after lunch, so many students would come to the classroom earlier to eat there. I took this opportunity to initiate informal communication with the students - sharing aspects of my culture, daily diet, personal growth experiences, especially my past struggles and failures in learning math. Through such candid and authentic interactions, students gradually came to see me as a "real person" and showed genuine interest. As they became more familiar with me, they willingly shared both interesting and troubling matters with me. This approach aligns with the C2 (Relational and communal) and C3 (Psychological safety and self-concept focused): it actively challenges students' perception of the teacher as a distant, authoritarian figure, fosters trust and a sense of intimacy, which also resonates with the concepts of relationships and connectedness discussed by Eaude (2019) in *The Needs of the Whole Child*. Furthermore, by openly sharing my failure learning experiences, I reduced students' preconceived notion that "making mistakes is shameful" and provided them with a safe psychological reference.

In addition to addressing some external visible issues, it is equally important to focus on the obstacles that hinder the development of students' core qualities and inner beliefs. The stereotypes I observed in the classroom, such as "Asian students are naturally good at math" or "boys are better at learning math", correspond to the beliefs, identity, mission and core levels proposed by Korthagen and Nuijten (2019) in The Onion Model. When students are constantly exposed to these incorrect assumptions and beliefs about situations, they gradually form incorrect self-concepts, such as "I'm not good at math" or "It's difficult for girls to learn math". Over time, they will lose their intrinsic motivation to learn math, causing their original curiosity, perseverance, creativity and other core qualities to be suppressed and even self-denied.

In order to actively expose and challenge these beliefs, my intervention measures are not only aimed at changing behaviors, but also at triggering a transformation of their self-concept. Firstly, I changed the way of questioning. I replaced the questions like "Can you do it?" and "Do you understand?" with open-ended and non-evaluative questions. For example, during the demonstration of the questions, I would ask students about their opinions on the questions or

what information could be derived from the questions. By exploring together with the students, I aimed to increase their enthusiasm and participation. Secondly, when students solved the problems independently, I would promptly affirm all their attempts, emphasize the process of effort and think rather than just focusing on the answers. As a result, students gradually came to realize that making mistakes is acceptable, and their anxiety in solving problems significantly decreased. Most importantly, I left half of the class period to have a serious discussion with the students about the stereotypes that existed in the classroom. By introducing the stories of mathematicians of different genders and from different eras, I aimed to break the students' single-minded perception of success. At the same time, whenever students unconsciously uttered those erroneous prejudices again, I always used gentle yet firm words to refute those assumptions and clearly told the students that personal efforts are far more important than any identity labels.

Furthermore, when designing group collaborations, I deliberately had students of different genders and backgrounds work together to solve problems, using real collaborative experiences to break down stereotypes. Through the combination of language transformation, guided encouragement, and stereotype intervention, students gradually enhanced their self-efficacy, integrated their math learning with self-concept, and rediscovered their core qualities suppressed by negative self-perception, such as curiosity and perseverance. These measures precisely meet the standards of C1, C2, and C3, reflecting the multi-dimensional nature of teaching - acting on emotional, cognitive, and social-cultural levels simultaneously; and by openly discussing biases, helping students realize the inclusiveness of the classroom. Thus, it enhances students' psychological security and self-concept, reshaping their self-expectations and identity.

Conclusion

Looking back on the whole teaching experience, this case clearly demonstrates the feasibility and value of holistic education in a real classroom. When teachers regard students as “whole individuals" rather than mere recipients of knowledge, and are willing to delve into the students' minds, souls, and core qualities to work on them, even "at-risk" classes can undergo positive changes in terms of classroom atmosphere, learning motivation, and self-awareness.

However, in future teaching, there are still aspects that are worthy of further exploration and improvement. Firstly, although students have shown significant changes in their classroom participation and study attitudes, establishing a more effective connection between holistic education and the current standardized evaluation system remains a question worth considering. In the future, I will attempt to design more diversified assessments, such as incorporating self-evaluation forms, peer feedback, and learning portfolios into the assessment system, aiming to more comprehensively track students' growth processes. Secondly, I deeply recognize that holistic education has certain requirements for teachers' inner growth - especially the awareness skills and emotional investment. In the future, I hope to strengthen teacher professional training, especially in the ability to identify and address students' hidden beliefs (such as stereotypes, learned helplessness, etc.). Thirdly, I will focus on home-school cooperation. If the psychological security and self-confidence that students establish in the classroom cannot be continued and supported in the family, the effects may be weakened. Therefore, I will communicate with parents regularly and follow up to help parents understand the concept of holistic education and jointly create a supportive growth environment. Finally, I deeply realize that holistic education is a

long-term and continuous process. In the future, I will carry forward qualities such as presence, love, caring, and patience, and continuously strive towards the goal of holistic education - balance, inclusion, and connection. (Miller, 2019)

In conclusion, this real case not only validates the potential of holistic education in addressing the problem of educational instrumentalization and returning to the essence of education but also points out the direction for my future educational practice: to continue to support the "whole student" and constantly improve teaching through theoretical and practical reflection.

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Author Bio

Chengyue Li is a master's student at the Ontario Institute for Studies in Education (OISE), University of Toronto. Her research focuses on curriculum and pedagogy, with a special interest in holistic education, mindfulness and meditation practices, and the integration of AI in teaching and learning. She is exploring how contemplative approaches and digital tools can complement each other to create more supportive and transformative educational environments. Her work aims to bridge theory and practice in K-12 and higher education settings.