From Theory to Impact: The Transformative Role of IBEC Graduates in PYP and MYP Classrooms

Valerynne Yann Lyn Chang
valerynne@fairview.edu.my

Abstract

This study investigates the transformative impact of International Baccalaureate Educator Certificate (IBEC) graduates on teaching and learning within International Baccalaureate (IB) World Schools, focusing on the Primary Years Programme (PYP) and Middle Years Programme (MYP). Through a case study of University College Fairview (UCF) graduates, the research explores how IBEC-trained educators integrate student-cantered, concept-based inquiry, enhance professional collaboration, and nurture student agency. Drawing on classroom observations, teacher interviews, and student surveys, the study identifies both challenges and solutions in the transition from theory to practice. Findings reveal that IBEC graduates foster heightened student engagement, promote critical thinking, and assume leadership roles within their schools. However, they also confront tensions between IB philosophy and local educational contexts, as well as difficulties in classroom management and differentiation. To address these challenges, the study introduces the **IBEC Impact Cycle**—*a conceptual framework emphasizing induction, observation and feedback, collaborative professional learning, leadership development, and student agency outcomes. The framework highlights how systemic supports transform novice educators into impactful practitioners, with implications for international schools worldwide. The study underscores the necessity of robust mentorship, leadership support, and professional learning communities to sustain the long-term impact of IBEC graduates.*

Keywords*: IBEC, PYP, MYP, teacher education, student engagement, inquiry-based learning, professional collaboration*

1. Introduction

Teacher preparation has long been identified as a decisive factor in shaping student learning outcomes (Darling-Hammond, 2021). Within International Baccalaureate (IB) World Schools, the challenge is intensified by the complexity of delivering inquiry-driven, concept-based curricula across diverse cultural and educational contexts. The International Baccalaureate Educator Certificate (IBEC) programme was designed to address this challenge by equipping teachers with pedagogical expertise aligned with IB philosophy.

This article presents a case study of University College Fairview (UCF) graduates who completed IBEC training and subsequently assumed teaching roles in Primary Years Programme (PYP) and Middle Years Programme (MYP) classrooms. The study explores how these graduates translate theory into practice, the challenges they encounter, and the systemic supports required to maximize their impact.

Three interrelated research questions guide this investigation:

1. How do IBEC graduates influence teaching effectiveness and student engagement in PYP and MYP contexts?
2. What challenges do newly trained IB teachers face in translating theory into practice?
3. How can schools develop systemic supports that sustain IBEC graduates' impact over time?

In answering these questions, the study contributes both empirical evidence and theoretical insight by proposing the **IBEC Impact Cycle,** a conceptual model that connects teacher preparation, professional collaboration, and student agency. This model provides a framework for schools to design induction programmes, mentorship structures, and professional learning opportunities that empower IBEC graduates to thrive.

2. Literature Review

2.1 Teacher Preparation and Induction in International Contexts

Teacher education plays a pivotal role in equipping educators with the skills necessary to respond to diverse student needs. Induction programmes are especially critical for novice teachers, reducing attrition and fostering professional confidence (Ingersoll & Strong, 2021). Within international schools, the challenges multiply due to cultural diversity, high parental expectations, and accountability to multiple curricula. Research emphasizes that induction must balance theoretical ideals with the pragmatic realities of classroom practice (Tan & Wong, 2021). Effective induction has been shown to accelerate teachers' ability to design inquiry-based tasks, manage diverse classrooms, and align assessment with broader learning goals (Hammerness & Matsko, 2022).

2.2 Inquiry-Based and Concept-Based Pedagogy

The International Baccalaureate (IB) framework is grounded in inquiry-driven and concept-based learning, intended to foster transferable understanding and critical thinking (Erickson, Lanning, & French, 2022). Inquiry-based approaches are associated with increased student engagement, problem-solving capacity, and long-term retention of knowledge (Furtak & Penuel, 2019). However, implementing inquiry successfully requires teachers to balance openness with structure, and to design scaffolds that support diverse learners (Chu, Reynolds, & Notari, 2021). Novice teachers often struggle with this balance, particularly in contexts where assessment systems emphasize rote learning or narrow standards of achievement (Hallinger & Lee, 2023).

2.3 Tensions Between Philosophy and Practice in IB Schools

IB schools articulate ambitious goals of international-mindedness, holistic learning, and student agency. Yet, the realities of local assessment pressures, national curriculum requirements, and parental expectations often create systemic tensions (Tan & Wong, 2021). Teachers are caught between enacting IB philosophy and meeting external demands, leading to professional stress and, at times, superficial implementation of inquiry practices. Hallinger and Lee (2023) argue that the sustainability of IB pedagogy depends heavily on leadership buy-in, resource allocation, and organizational culture. Without systemic alignment, inquiry-based teaching risks being marginalized or diluted.

2.4 Professional Collaboration and Mentorship

Professional learning communities (PLCs) are widely recognized as vehicles for sustained teacher growth. When designed as collaborative problem-solving hubs, PLCs enable teachers to co-construct strategies for scaffolding inquiry, differentiating tasks, and integrating transdisciplinary learning (Darling-Hammond, Hyler, & Gardner, 2021). However, research warns against reducing PLCs to "talking shops" devoid of tangible outcomes (Stoll, 2020). Mentorship further supports novice teachers by bridging theory and practice, modelling effective classroom strategies, and providing a safe space for reflection (Johnson, 2020). In IB contexts, mentorship has been identified as particularly crucial for helping teachers reconcile tensions between philosophy and local realities.

2.5 Emerging Frontiers: Digital and AI-Supported Professional Development

The rise of digital platforms and artificial intelligence (AI) presents new opportunities for professional learning. Zhao (2022) highlights how AI can support teacher reflection by connecting lesson observations to student outcomes in real time. Similarly, Hennessy et al. (2023) argue that digital platforms can sustain professional networks beyond physical school boundaries, strengthening collaboration and innovation. However, scholars caution that digital tools must augment—not replace—human mentorship and community (Selwyn, 2022). Within IBEC contexts, digital scaling may offer ways to extend professional learning while maintaining the deep relational connections necessary for impactful teacher growth.

3. Methodology

3.1 Research Design

This study employed a **qualitative case study design** to investigate the impact of IBEC graduates within Primary Years Programme (PYP) and Middle Years Programme (MYP) classrooms. A case study approach was selected because it allows for in-depth exploration of complex, context-bound phenomena, particularly where the boundaries between phenomenon and context are blurred (Creswell & Poth, 2018; Yin, 2018). The case of University College Fairview (UCF) graduates provides a focused yet transferable lens to understand how IBEC-trained teachers enact inquiry-driven pedagogy and navigate systemic challenges in international schools.

3.2 Research Context

The study was conducted within the **Fairview School ecosystem**, a network of K–12 international schools implementing IB programmes across multiple levels. The context was chosen due to its long-standing engagement with IB philosophy and its unique partnership with University College Fairview, which offers IBEC programmes for aspiring educators. This ecosystem allows for continuous observation of the trajectory from teacher preparation (preservice) to classroom implementation (in-service).

3.3 Participants

Five IBEC graduates who had transitioned into teaching roles within PYP and MYP classrooms participated in the study. Selection criteria included:

- Completion of the IBEC programme at UCF within the past three years.
- Full-time teaching roles in PYP (Years 1–5) or MYP (Years 6–10) classrooms.
- Willingness to participate in classroom observations, interviews, and reflective discussions.

The participants represented a range of subject specializations, including language and literature, mathematics, science, and integrated humanities. Three of the five were early-career teachers (0–2 years of experience at entry), while two had prior teaching experience outside the IB system.

3.4 Data Collection

Multiple sources of data were triangulated to enhance validity and reliability:

1. **Classroom Observations**

   - Conducted over two terms, focusing on implementation of inquiry-based strategies, classroom management, and evidence of student agency.
   - Observations were guided by a structured rubric adapted from the Rigor/Relevance Framework (Daggett, 2020), allowing for developmental scaling from "beginning" to "well-developed."
2. **Teacher Interviews**

   - Semi-structured interviews lasting 45–60 minutes.
   - Topics included experiences of induction, challenges in applying IB frameworks, strategies for differentiation, and perceptions of mentorship.
   - Interviews were transcribed and coded thematically.
3. **Student Surveys**

   - Administered to 85 students across the five classrooms.
   - Likert-scale and open-ended items assessed student perceptions of engagement, agency, and critical thinking in lessons led by IBEC-trained teachers.
   - Response rate: 92%.
4. **Document Analysis**

   - Lesson plans, reflective journals, and PLC meeting notes provided supplementary data on instructional planning and collaborative practices.

3.5 Data Analysis

Data were analysed thematically through iterative coding, combining inductive and deductive approaches (Braun & Clarke, 2021). Initial codes were derived from the three "tensions" identified in the literature and presentation framework—pedagogical, systemic, and structural.

Emerging themes were then mapped against these tensions, highlighting both challenges and strategies employed by IBEC graduates. Quantitative data from student surveys were analysed descriptively, focusing on frequency distributions and percentages.

3.6 Ethical Considerations

Ethical approval was obtained through University College Fairview's academic review board. All participants provided informed consent, with assurances of anonymity and confidentiality. Student surveys were conducted with parental consent, and all data were stored securely in compliance with data protection protocols.

4. Findings

The analysis of classroom observations, teacher interviews, student surveys, and document reviews revealed significant insights into the role of IBEC graduates in PYP and MYP contexts. Four major themes emerged: **student engagement, teacher leadership and development, challenges in practice, and systemic supports.**

4.1 Impact on Student Engagement

Across the five classrooms studied, IBEC graduates consistently fostered higher levels of student engagement. Student surveys indicated that **85% of learners reported heightened interest and active participation** in lessons led by IBEC-trained teachers. Open-ended responses highlighted appreciation for opportunities to ask questions, lead discussions, and explore topics beyond the textbook.

Classroom observations confirmed that IBEC graduates regularly integrated **student-led inquiry tasks, concept-mapping activities, and Socratic-style discussions.** These practices aligned with IB's learner profile attributes, particularly *inquirers*, *thinkers*, and *communicators*. One observed PYP lesson in mathematics, for instance, engaged students in designing real-world problems connected to personal interests, which sustained motivation and collaborative problem-solving.

However, observations also revealed variability in execution. While some teachers facilitated inquiry with minimal scaffolding, others struggled to maintain focus, leading to off-task behaviour. This suggests that while IBEC training provides a strong foundation, classroom management and differentiation remain areas requiring ongoing support.

4.2 Teacher Development and Leadership

A notable outcome was the rapid progression of IBEC graduates into leadership roles. Within two years of teaching, **three of the five participants had assumed mentorship responsibilities** for peers, particularly in guiding inquiry-based lesson design. This reflects the strong emphasis on reflective practice within the IBEC programme and the collaborative culture of the Fairview ecosystem.

Interviews revealed that teachers saw themselves not merely as classroom practitioners but as **agents of curricular innovation and professional collaboration.** One MYP teacher described mentoring a colleague in designing interdisciplinary assessments, noting that IBEC training had instilled confidence to take on leadership despite limited years of experience.

This finding underscores the **leadership pipeline potential** of IBEC graduates: while they enter the classroom as novices, the training equips them with the conceptual tools and confidence to become change agents relatively early in their careers.

4.3 Challenges Encountered by IBEC Graduates

Despite positive outcomes, participants faced multiple challenges that mirrored the **pedagogical, systemic, and structural tensions i**dentified in the literature

1. **Classroom Management and Differentiation (Pedagogical Tension).**

   Novice IBEC teachers often struggled with balancing open-ended inquiry and maintaining classroom order. Teachers also found it challenging to scaffold tasks for students with diverse language proficiencies and prior knowledge levels.

2. **Adapting IB Philosophy to Local Contexts (Systemic Tension).**

   Teachers reported tension between IB's philosophy of inquiry and local demands for exam preparation or parent-driven expectations for visible progress. One teacher described pressure to provide frequent test scores, which conflicted with the IB emphasis on formative assessment and conceptual understanding.

3. **Isolation in Professional Practice (Structural Tension).**

   Despite the collaborative ethos of IB, some graduates initially felt isolated in their roles, particularly when placed in departments dominated by colleagues trained in non-IB systems. The absence of structured mentorship in the early months amplified this challenge.

4.4 Supports and Solutions Implemented

To mitigate these challenges, three systemic supports within the Fairview ecosystem proved pivotal:

1. **The IBEC Launchpad Programme.**

   A structured induction programme-oriented graduates to the realities of classroom life, bridging the gap between IB philosophy and local assessment cultures. Teachers valued its pragmatic focus on realistic expectations rather than abstract ideals.

2. **Lesson Observation Framework.**

   A developmental rubric adapted from Daggett's Rigor/Relevance Framework allowed for continuous observation, feedback, and reflection. Teachers noted that the framework provided clarity on progression, moving them from "beginning" to "well-developed" in specific competencies.

3. **Post-IBEC Professional Learning Communities (PLCs).**

   Graduates found PLCs most valuable when they shifted from theoretical discussions to collaborative problem-solving. Successful PLCs focused on designing inquiry tasks, co-creating concept-based assessments, and troubleshooting classroom management strategies.

4.5 Student Agency Outcomes

Ultimately, the most significant outcome was the **growth of student agency**. Survey data revealed that students of IBEC graduates reported feeling empowered to ask questions, lead group projects, and reflect on their own learning. One PYP student wrote: *"We get to decide what to explore, and it makes me want to learn more."*

This finding demonstrates how IBEC-trained teachers, despite challenges, succeed in enacting IB's vision of fostering independent, critical, and globally minded learners. The emphasis on student agency links directly to the final stage of the proposed **IBEC Impact Cycle,** situating learners at the centre of the model.

5. Conceptual Framework: The IBEC Impact Cycle

The findings of this study informed the development of the **IBEC Impact Cycle**, a conceptual framework designed to explain how novice IBEC graduates transition from pre-service preparation into impactful classroom practice. The model integrates insights from the literature review with the case study data, capturing both the challenges and supports encountered by new IB teachers.
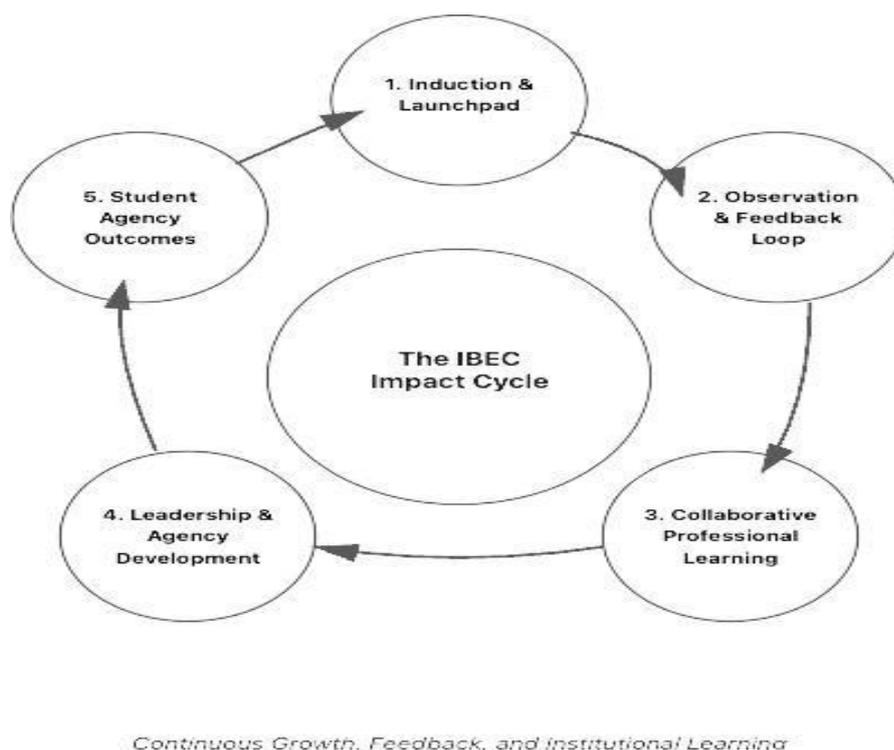

Figure 1. The IBEC Impact Cycle: Continuous Growth, Feedback, and Institutional Learning.

5.1 Stage One: Induction and Launchpad

The cycle begins with structured induction, such as the Fairview Launchpad Programme. This stage acknowledges the **systemic tension** between IB philosophy and local realities, ensuring that new teachers are not overwhelmed by conflicting expectations. Induction programmes grounded in realism rather than idealism help teachers align IB's inquiry-driven framework with external accountability measures (Tan & Wong, 2021).

5.2 Stage Two: Observation and Feedback Loop

The second stage emphasizes developmental feedback. Using lesson observation frameworks, novice teachers receive clear, structured guidance on classroom management, differentiation, and scaffolding inquiry. This phase addresses the **pedagogical tension** of translating strategies into execution. Research indicates that frequent, targeted feedback accelerates novice teachers' professional growth and confidence (Hammerness & Matsko, 2022).

5.3 Stage Three: Collaborative Professional Learning

In the third stage, teachers participate in **professional learning communities (PLCs)** that prioritize problem-solving and co-construction of practice. Unlike discussion-based groups, effective PLCs generate practical strategies, co-design assessments, and share inquiry scaffolds. This stage bridges the **structural tension** between isolation and collaboration, affirming the importance of collegiality in sustaining inquiry pedagogy (Darling-Hammond et al., 2021).

5.4 Stage Four: Leadership and Agency Development

As teachers develop, they begin to assume mentorship and leadership roles. The study revealed that three out of five IBEC graduates became peer mentors within two years. This stage positions graduates as **agents of change**, reinforcing distributed leadership models within IB schools (Johnson, 2020). By mentoring others, teachers reinforce their own practice while embedding IB values across the institution.

5.5 Stage Five: Student Agency Outcomes

The final stage highlights the **ultimate goal of IB pedagogy: student agency.** Surveys confirmed that students of IBEC graduates felt empowered to take ownership of their learning, demonstrating higher levels of engagement and critical thinking. This stage represents both the culmination and renewal of the cycle, as improved student outcomes provide evidence of teacher impact and feed back into reflective practice.

6. Discussion

6.1 From Theory to Practice: Addressing the Pedagogical Tension

The findings confirm that IBEC training provides teachers with strong conceptual foundations in inquiry-based learning, but that translating these strategies into daily practice remains challenging. Classroom observations revealed inconsistency in managing open inquiry and scaffolding for diverse learners, echoing earlier research on the difficulties novice teachers face in balancing freedom and structure (Chu et al., 2021). The **Observation and Feedback Loop** in the IBEC Impact Cycle directly addresses this challenge, ensuring that teacher growth is not left to trial-and-error but scaffolded through structured developmental feedback.

This aligns with Hammerness and Matsko's (2022) call for teacher education programmes to embed "practice-based rehearsals" that bridge theory with enactment. In this study, the developmental rubric adapted from Daggett's Rigor/Relevance Framework provided clarity and progression markers, showing how systematic feedback can accelerate novice teacher competence.

6.2 Navigating the Systemic Tension: Philosophy vs. Reality

Teachers in this study consistently reported the difficulty of reconciling IB philosophy with external pressures such as standardized assessment and parental expectations. This tension is not unique to Fairview but is a well-documented phenomenon in IB schools worldwide (Tan & Wong, 2021).

The **Induction and Launchpad** stage of the IBEC Impact Cycle offers one pathway through this tension by preparing teachers to navigate contextual constraints while maintaining fidelity to IB principles. Leaders who design induction programmes with pragmatic sensitivity help new teachers avoid disillusionment, a key factor in retention and long-term success. This resonates with Hallinger and Lee's (2023) argument that leadership buy-in is essential for sustaining inquiry-based approaches.

6.3 Overcoming the Structural Tension: Isolation vs. Collaboration

Structural tensions emerged when IBEC graduates entered professional cultures that were not fully aligned with IB values. Some teachers described feeling isolated when colleagues defaulted to traditional, content-driven pedagogy. Without structured collaboration, the risk of professional stagnation increased.

The **Collaborative Professional Learning** stage of the IBEC Impact Cycle proved essential in transforming PLCs from perfunctory meetings into genuine problem-solving hubs. When PLCs focused on co-constructing assessments or troubleshooting classroom strategies, teachers reported increased confidence and collective efficacy. This finding reflects Darling-Hammond et al.'s (2021) view that professional collaboration must be embedded in authentic problem-solving to avoid becoming tokenistic.

6.4 Teacher Leadership as a Multiplier of Impact

One of the most striking findings was the emergence of IBEC graduates as mentors within a short time frame. Leadership development was not simply an aspirational outcome but a documented reality, with three of five participants stepping into peer mentoring roles within two years. This challenges the assumption that novice teachers are too inexperienced to contribute to leadership.

The **Leadership and Agency Development** stage in the IBEC Impact Cycle reflects the recursive nature of teacher growth: as IBEC graduates mentor others, they reinforce their own learning while multiplying impact across the school. This dynamic aligns with Johnson's (2020) argument that early-career teachers thrive when leadership pathways are clearly articulated and supported.

6.5 Student Agency as the Core Outcome

Ultimately, the success of IBEC graduates must be measured by student outcomes. Survey data revealed that students experienced greater agency, engagement, and ownership in their learning when taught by IBEC-trained teachers. These findings substantiate Erickson et al.'s (2022) argument that concept-based inquiry cultivates transferable understanding and critical thinking.

The **Student Agency Outcomes** stage of the IBEC Impact Cycle situates learners at the centre of the model, emphasizing that all other stages feed into the empowerment of students. By framing student agency as both the culmination and renewal of the cycle, the model underscores that teacher development is not an end in itself but a means to transformative learning.

6.6 Implications for Policy and Practice

The IBEC Impact Cycle offers practical guidance for IB schools seeking to maximize the impact of novice teachers:

1. **Design Realistic Induction Programmes.** Induction must explicitly prepare teachers for systemic tensions between IB philosophy and local realities.
2. **Embed Developmental Feedback Loops.** Observation frameworks with clear progression markers help teachers move from theory to execution.
3. **Strengthen Professional Learning Communities.** PLCs must function as collaborative problem-solving hubs, not abstract discussion groups.
4. **Cultivate Teacher Leadership Pathways.** Schools should provide structures for novice teachers to mentor peers, reinforcing professional growth and institutional learning.
5. **Measure Student Agency as an Impact Indicator.** Surveys and reflective portfolios can document how teacher practices directly influence student ownership and engagement.

7. Conclusion and Implications

7.1 Conclusion

This study explored the transformative role of IBEC graduates in PYP and MYP classrooms, focusing on how novice teachers translate theory into practice within the Fairview School ecosystem. Evidence from classroom observations, student surveys, and teacher interviews demonstrated that IBEC-trained educators significantly enhance student engagement, foster critical thinking, and assume leadership responsibilities early in their careers.

At the same time, IBEC graduates encounter substantial challenges: managing inquiry-driven classrooms, adapting IB philosophy to local realities, and overcoming structural isolation. These tensions are not merely individual struggles but systemic issues that require institutional responses.

The proposed **IBEC Impact Cycle** offers a conceptual framework that synthesizes findings into five interrelated stages: induction, observation and feedback, collaborative professional learning, leadership development, and student agency outcomes. By framing teacher development as a continuous cycle, the model underscores that supporting novice teachers is not a one-time intervention but an ongoing process embedded in institutional culture.

7.2 Implications for Practice

The findings suggest several practical steps for IB World Schools and teacher preparation institutions:

1. **Structured Induction.** Schools should design induction programmes that explicitly address the systemic tension between IB philosophy and local assessment cultures.
2. **Developmental Observation.** Regular feedback anchored in developmental rubrics accelerates novice teachers' movement from theory to effective practice.
3. **Collaborative PLCs.** Professional learning communities should function as problem-solving hubs focused on immediate classroom challenges.
4. **Leadership Pathways.** Schools should cultivate teacher leadership by creating opportunities for novices to mentor peers and contribute to curriculum design.
5. **Measuring Student Agency.** Schools should assess student engagement and ownership as key indicators of teacher effectiveness, moving beyond test scores.

7.3 Implications for Policy

For institutions and policy-makers, the study highlights the importance of integrating IBEC programmes into broader teacher education systems. Aligning certification with induction, mentorship, and leadership development ensures continuity between pre-service training and in-service growth. Policy frameworks should also support schools in balancing IB philosophy with local accountability measures, preventing novice teachers from being pulled in contradictory directions.

7.4 Limitations

As a single-site case study with five participants, the findings are contextually bound and cannot be generalized across all IB schools. The reliance on self-reported data from teachers and students introduces potential bias. Future studies should adopt comparative designs across multiple IB World Schools and integrate longitudinal data to track the long-term career trajectories of IBEC graduates.

7.5 Directions for Future Research

Further research should explore:

- The long-term leadership trajectories of IBEC graduates across diverse cultural contexts.
- The effectiveness of digital and AI-supported mentorship in sustaining reflective practice (Zhao, 2022; Hennessy et al., 2023).
- Comparative analyses of IBEC-trained teachers and those without IBEC preparation, focusing on student outcomes and teacher retention.

The IBEC Impact Cycle provides both a conceptual lens and a practical roadmap for sustaining the impact of novice IB teachers. By embedding induction, feedback, collaboration, leadership, and student agency into a continuous loop, schools can transform early-career teachers into lasting contributors to student success. This study demonstrates that targeted preparation, coupled with systemic support, empowers IBEC graduates not only to survive but to thrive—and, in turn, to lead.

References

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. Sage.
    Chu, S., Reynolds, R., & Notari, M. (2021). *21st century skills development through inquiry-based learning: From theory to practice*. Springer.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.

Daggett, W. R. (2020). *Rigor/Relevance Framework: A guide to focusing resources for increasing student performance*. International Centre for Leadership in Education.

Darling-Hammond, L. (2021). Teacher education and the future of learning: Transforming systems for quality teaching. *European Journal of Teacher Education, 44*(3), 315–333. https://doi.org/10.1080/02619768.2021.1902092

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2021). *Effective teacher professional development*. Learning Policy Institute.

Erickson, H. L., Lanning, L. A., & French, R. (2022). *Concept-based curriculum and instruction for the thinking classroom* (3rd ed.). Corwin.

Furtak, E. M., & Penuel, W. R. (2019). Coming to terms: Addressing the persistence of "hands-on" and other reform terminology in science education. *Science Education, 103*(1), 167–186. https://doi.org/10.1002/sce.21486

Hallinger, P., & Lee, M. (2023). Sustaining inquiry-based learning in international schools: Leadership practices and organizational culture. *Journal of Educational Administration, 61*(2), 159–176. https://doi.org/10.1108/JEA-05-2022-0074

Hammerness, K., & Matsko, K. (2022). Learning to teach for equity and justice: Practice-based teacher education in context. *Teachers College Record, 124*(4), 87–116.

Hennessy, S., Major, L., & Al-Zaidiyeen, N. J. (2023). Rethinking digital professional development for teachers: Sustaining networks and practices. *Professional Development in Education, 49*(1), 89–107. https://doi.org/10.1080/19415257.2020.1827019

Ingersoll, R., & Strong, M. (2021). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 91*(1), 181–209. https://doi.org/10.3102/0034654321998573

Johnson, S. M. (2020). Where teachers thrive: *Organizing schools for success. Harvard Education Press*.

Selwyn, N. (2022). *Should robots replace teachers? AI and the future of education*. Polity Press.

Tan, C., & Wong, B. (2021). Tensions and challenges in implementing international curricula: Lessons from IB schools in Asia. *Curriculum Journal, 32*(3), 417–433. https://doi.org/10.1002/curj.70

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.

Zhao, Y. (2022). *Learners without borders: New learning pathways for all students*. Corwin.