

A better way to cultivate personalized success for each of our students





THE MARIO FRAMEWORK & THE MARIO MOVEMENT

We know how frustrating it is to want more success for your students with special needsknowing that, somehow, whether providing additional you're support outside of classes or in the midst of your own bustling classroom, there's got to be a to cultivate better way personalized success for each student.

MARIO Founder Philip Bowman saw the need for a new learning paradigm in his own classroom. He was inspired to create a novel approach based on one-to-one sessions, which led to remarkable advances in his students.



When you join the MARIO Movement, you will discover the key to unlocking your students' potential.

THE MARIO STORY

In 2015, Philip Bowman reached the point where simply supporting his students with learning differences did not feel like he was doing enough. Knowing there must be a better way to unlock individual potential for each student, he did what any dedicated educator would do: Philip began researching and experimenting in his special education classroom at the International School Bangkok. The answer, he found, was a universal framework that empowers each learner with the personalized tools and skills necessary to become self-directed and independent learners that reach results that they once thought were impossible.

Philip's journey toward a new framework for special education started with an exploration of the analyses from the most influential researchers in education. He compared high-impact learning strategies in John Hattie's top "Influences and Effect Sizes Related to Education," found inspiration in Robert Marzano's "Nine Instructional Strategies for Learning," and leaned heavily into the implications of Jean Piaget's work on schema and constructivism theory in education. Philip also recognized the strong research supporting the use of response to intervention (RTI)¹ and multi-tiered systems of supports (MTSS)². He recognized that the founding father of evidence-based teaching John Hattie was right when he argued that the most important factor for teacher effectiveness was measuring the impact of their own pedagogical interventions³. For learners to flourish, educators need to become researchers, evaluators, and scientists in their own classrooms⁴.

Philip gained even deeper insight from studying fields outside of education. He realized that cross-pollination between disciplines leads to the best idea generation⁵. He read foundational works from psychology, psychiatry, physiology, neurobiology, decision theory, statistics, and systems theory. He realized that his instincts in his own teaching arose from key concepts in the study of the importance of beliefs⁶, language⁷, measurement⁸, timing⁹, and design thinking¹⁰. But one theme kept recurring across these interdisciplinary fields, towering in significance above all pedagogical guideposts: change is more profound when it comes from within.

If this is true, that "change is more profound when it comes from within," the logical application in education would be to regularly listen to our students and find ways to scaffold learning goals that they choose to pursue¹¹.

Indeed, Philip's research led him to the realization that **self-directed learning** is the key to developing happy and healthy life-long learners. Students whose change comes from within, who are masters of themselves and their learning goals, attain astonishing growth inside and outside of the classroom¹².

Evidence from researchers in self-directed learning led Philip to focus on cultivating key traits in his students: self-awareness¹³, self-advocacy¹⁴, self-management¹⁵, and goal setting ¹⁶, monitoring¹⁷, and adjusting¹⁸. He framed these traits within the whole-child approach, including social and emotional goals in addition to academics^{19,20}. Further, Philip felt strongly that the best educators emphasize strengths rather than deficits, emphasizing each child's potential instead of their weaknesses²¹. Leveraging the strengths of his students cultivated a growth mindset, developing their metacognition skills and allowing their personal ambitions to flourish.

ONE-TO-ONE IS THE KEY

Philip hypothesized that the ideal way to maximize student learning is through **one-to-one conversations** with students about their learning. These are conversations where students drive the learning and focus on what matters most to them. Instead of talking, teachers primarily listen and provide targeted expertise as needed so that students can build their own tools, improve skills, and illuminate possibilities. A class founded on one-to-one sessions would be a class that is truly centered on the student and cultivates authentic student agency.

But how, in the midst of a bustling classroom with a packed schedule, was Philip to facilitate this new approach of one-to-one conversations facilitating personalized learning? He realized there are challenges that have prevented the one-to-one approach from being widely used by teachers^{22–25}. The biggest hurdle for many is the logistics of structuring a classroom to facilitate one-to-one conversations²⁶. All too frequently, the limitations of classroom structure prevent one-to-one instruction from becoming a core practice²⁷.



Philip realized that a fundamental rethinking of his classroom structure was required.

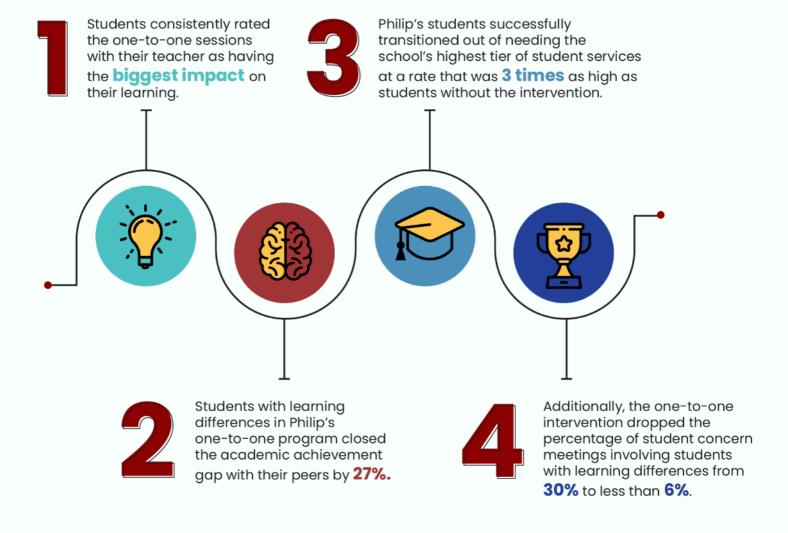
His goals for his new classroom structure involved both space and timing, with emphasis on privileging the student voice and facilitating one-to-one sessions. With the green light from the International School Bangkok, Philip transformed his classroom space from a traditional layout to a free-flow space that facilitated personalized and self-directed student work. He carved out an area for one-to-one conversations that was private but allowed him to monitor other students. He shifted the focus from academic support and study skills to a focus on self-awareness and self-monitoring, leading to higher self-esteem²⁸. Philip hypothesized that this shift would help students achieve their self-identified academic, social, and emotional goals²⁹.

Most importantly, in his new class structure, Philip made time for frequent one-to-one sessions of five to seven minutes and monthly one-to-one conferences of 20 to 30 minutes. Coaching the students toward more independent learning was key to making one-to-one learning a reality in his new classroom structure.

The International School Bangkok was sold on Philip's new classroom model. They approved Philip's plan to trial his promising approach and encouraged him to measure its efficacy along the way. Over the next four years, Philip systematically trialed and reiterated his approach in his classroom and used student data to fuel these improvements.

At the end of four years, the learning outcomes were remarkable.

THE ONE-TO-ONE IMPACT



The success of his program made Philip realize he needed to make this framework available to all educators. But it was not until the 2020 Special Education Network and Inclusion Association (SENIA) conference that he realized how great the need was for a scaffolded, one-to-one approach. At SENIA, Philip heard many conference participants express excitement about the promise of personalization. But they were uncertain as to how to make it happen in their own classrooms. To address this need, Philip dedicated himself to transforming his framework—already shown to have immense success with students with learning differences—into a universal tool that could be used by any special education teacher.

THE MARIO FRAMEWORK WAS BORN



easured. All MARIO Educators learn to measure the efficacy of their instruction and continuously improve student learning.



mbitious. All students have the capability to do things that will amaze us. We help learners set and achieve high expectations.



esearch-based. Interdisciplinary research is kept at the core of pedagogical decision making in the classroom.



nnovative. The MARIO Framework and MARIO Educators are always striving to become better versions of themselves via healthy experimentation based on cutting-edge research.



ne-to-one learning. One-to-one learning is at the heart of the MARIO Framework. The most meaningful learning becomes possible when students talk and teachers listen.

Based on cutting-edge research, the MARIO Framework draws from discoveries in neuroscience, medicine, design thinking, systems theory, and psychology. As it grows, the MARIO Framework is constantly evolving to take into account best practices in education as well as new insights from science.

JOIN THE MARIO MOVEMENT

MARIO Educators are confident they are receiving an advanced professional development training program. Our innovative approach to personalized learning is combined with professional development research by Dr. Linda Darling-Hammond³⁰, Harvard³¹, and the US Department of Education³². All courses are aligned with the USA's Every Student Succeeds Act³³ and the UK's Standard for Teachers' Professional Development³⁴.

Becoming a MARIO educator gives you access to a robust system of flexible modules that prepare you to to adopt the framework with fidelity. One-size-fits-all programs don't work³⁵. Instead, MARIO is designed for you to build your own living and evolving program specifically designed for your context. We are here to encourage and guide you on your own journey to skillfully employing the MARIO Framework in your classroom with one-on-one coaching, personalized learning projects, and ongoing evaluation and feedback.

The MARIO Movement is rapidly being utilized around the world, currently reaching thirty international schools in over fifteen countries. You can partner with special education teachers worldwide who are deploying this model. Join the online community discussions with colleagues and instructors to exchange ideas and build relationships.

We invite you to become part of the MARIO Movement and empower your students to achieve new levels of success. You can be a key player in driving innovation and transforming the concept of what special education is capable of.

Let's reimagine special education together.

REFERENCES

- 1. Handbook of Response to Intervention. (Springer US, 2016).
- 2. Stoiber, K. C. & Gettinger, M. Multi-tiered systems of support and evidence-based practices. in Handbook of Response to Intervention: The Science and Practice of Multi-Tiered Systems of Support: Second Edition 121–141 (Springer US, 2015). doi:10.1007/978-1-4899-7568-3 9.
- Hattie, J. Teachers Make a Difference, What is the research evidence? https:// research.acer.edu.au/research_conference_2003 (2003).
- 4. Hattie, J. VISIBLE LEARNING FOR TEACHERS MAXIMIZING IMPACT ON LEARNING. https://sci-hub.im/https://books.google.com/books? hl=en&lr=&id=vSoUT6PXdoIC&oi=fnd&pg=PP1&dq=john+hattie+teacher+measurement &ots=XJZ8YsCdLQ&sig=5VnuYQ7TuAIYna1YdfaBDxR8LVU (2012).
- 5. Rhoten, D., O'connor, E. & Hackett, E. J. The act of collaborative creation and the art of integrative creativity: Originality, disciplinarity and interdisciplinarity. *Thesis Elev.* **96**, 83–108 (2009).
- Kay, A., Sullivan, D. & Landau, M. Psychological importance of beliefs in control and order: Historical and contemporary perspectives in social and personality psychology. (2015).
- 7. Case, R. E. & Taylor, S. S. Language Difference or Learning Disability? Answers from a Linguistic Perspective. *Clear. House A J. Educ. Strateg. Issues Ideas* **78**, 127–131 (2005).
- 8. Wesson, C. L., King, R. P. & Deno, S. L. Direct and frequent measurement of student performance: If it's good for us, why don't we do it? *Learn. Disabil. Q.* **7**, 45–48 (1984).
- 9. Holt, E. W., McGrath, D. J. & Herring, W. L. Timing and Duration of Student Participation in Special Education in the Primary Grades. ERIC http://factfinder.census.gov/ (2007).
- 10. Dorst, K. The core of 'design thinking' and its application. *Des. Stud.* **32**, 521–532 (2011).
- 11. McLoughlin, C. & Lee, M. J. W. Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. *Australas. J. Educ. Technol.* **26**, 28–43 (2010).
- 12. Munn, J., Schrock, D., Member, C. & Reynolds, J. Choosing learning in later life: Constructions of age and identity among lifelong learners. https://sci-hub.im/https://diginole.lib.fsu.edu/islandora/object/fsu%3A183823/ (2013).
- 13. Urdang, E. Awareness of self-A critical tool. Soc. Work Educ. 29, 523-538 (2010).
- 14. Test, D. W., Fowler, C. H., Wood, W. M., Brewer, D. M. & Eddy, S. A conceptual framework of self-advocacy for students with disabilities. *Remedial and Special Education* vol. 26 43–54 (2005).
- 15. McDougall, D. Research on self-management techniques used by students with disabilities in general education settings. *Remedial and Special Education* vol. 19 310–320 (1998).
- 16. Palmer, S. B. & Wehmeyer, M. L. Promoting self-determination in early elementary school: Teaching self-regulated problem-solving and goal-setting skills. *Remedial Spec. Educ.* **24**, 115–126 (2003).
- 17. Scheuermann, B. Research on Self-Monitoring as a Behavior Management Technique in Special Education Classrooms: A Descriptive Review. *journals.sagepub.com* **14**, 38–56 (1993).

REFERENCES

- 18. Hoover, J. J. Making informed instructional adjustments in rti models: Essentials for practitioners. *Intervention in School and Clinic* vol. 47 82–90 (2011).
- 19. Bryan, T., Burstein, K. & Ergul, C. The social-emotional side of learning disabilities: A science-based presentation of the state of the art. *Learn. Disabil. Q.* **27**, 45–51 (2004).
- 20. Denham, S. A. & Brown, C. Early Education and Development 'Plays Nice With Others': Social-Emotional Learning and Academic Success. *Taylor Fr.* **21**, 652–680 (2018).
- 21. Trent, S. C., Artiles, A. J. & Englert, C. S. Chapter 8: From Deficit Thinking to Social Constructivism: A Review of Theory, Research, and Practice in Special Education. *Rev. Res. Educ.* **23**, 277–307 (1998).
- 22. Bocconi, S., Kampylis, P. & Punie, Y. Framing ICT-enabled Innovation for Learning: the case of one-to-one learning initiatives in Europe. *Eur. J. Educ.* **48**, 113–130 (2013).
- 23. Balanskat, A. *et al.* Overview and Analysis of 1:1 Learning Initiatives in Europe. doi:10.2791/20333.
- 24. Lindsay, L. Transformation of teacher practice using mobile technology with one-to-one classes: M-learning pedagogical approaches. (2015) doi:10.1111/bjet.12265.
- 25. Learning, M. L.-H. of R. on A. & 2016, undefined. Possibilities and challenges in a one-to-one initiative from a school leader perspective. <u>igi-global.com</u>.
- 26. Liebfreund, M. D. & Amendum, S. J. Reading Horizons: A Journal of Literacy and Language Arts Teachers' Experiences Providing One-on-One Instruction to Struggling Readers Part of the Elementary Education and Teaching Commons, and the Language and Literacy Education Commons. vol. 56 https://scholarworks.wmich.edu/ (2017).
- 27. Dorn, L. & Allen, A. Helping Low-Achieving First-Grade Readers: A Program Combining Reading Recovery Tutoring and Small-Group Instruction. *ERIC* (1995).
- 28. Conley, T. D., Ghavami, N., VonOhlen, J. & Foulkes, P. General and domain-specific self-esteem among regular education and special education students. *J. Appl. Soc. Psychol.* **37**, 775–789 (2007).
- 29. Birkholz, G., Clements, P. T., Cox, R. & Gaume, A. Students' self-identified learning needs: A case study of baccalaureate students designing their own death and dying course curriculum. *J. Nurs. Educ.* **43**, 36–39 (2004).
- 30. Darling-Hammond, L., Chung Wei, R., Andree, A., Richardson, N. & Orphanos, S. *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad. outlier.uchicago.edu* https://sci-hub.im/http://outlier.uchicago.edu/computerscience/OS4CS/landscapestudy/resources/Darling-Hammond, Wei, Adnree, Richardson and Orphanos, 2009 (1).pdf (2009).
- 31. Johnson, K. & Golombek, P. Mindful L2 teacher education: A sociocultural perspective on cultivating teachers' professional development. (2016).
- 32. USDE. Teacher Professional and Career Development. *U.S. Department of Education* https://www.ed.gov/oii-news/teacher-professional-and-career-development (2018).
- 33. U.S. Department of Education. Every Student Succeeds Act (ESSA). https://www.ed.gov/essa?src=rn (2015).
- 34. UK Department for Education. Standard for teachers' professional development. *Gov.UK* https://www.gov.uk/government/publications/standard-for-teachers-professional-development (2016).
- 35. Skinner, M. E. Full inclusion and students with disabilities: One size fits all? *Read. Writ. Q.* **12**, 241–244 (1996).