



REVIEW ARTICLE

A REFLECTIVE NOTE ON THE EROSION OF BASIC RESEARCH SUPPORT: A CALL FOR ACADEMIC RENEWAL

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ABSTRACT

This reflective article explores the lived realities of conducting basic scientific research within a laboratory environment that has been gradually eroded by neglect, underfunding, and administrative rigidity. Drawing from personal experiences as a training researcher since 1998, this narrative highlights critical infrastructural challenges, such as malfunctioning electrical systems, broken cabinet doors, lack of distilled water, and malfunctioning piping in the lab. All these symbolize the larger institutional disrepair affecting basic research. These observations are not isolated, but echo broader global trends where economic pressures and policy shifts have deprioritized basic, curiosity-driven inquiry in favour of short-term output metrics and applied research funding. Beyond material decay, the reflection questions the disproportionate enforcement of protocols over pedagogical purpose, especially when dedicated students are reprimanded for staying beyond permitted lab hours. Through culturally rooted proverbs and a grounded metaphor of “Unchanged Melody,” this article conveys a sense of nostalgia, frustration, and persistent hope. It emphasizes the importance of hands-on learning, mentorship, and the human spirit in sustaining research environments. Supported by global academic literature, this piece becomes both a call to action and a plea for understanding, reminding academic leadership to look beyond policies and truly support those who still strive to light the flame of science, and to continue flickering though it may be.

KEYWORDS

Basic research support, Laboratory infrastructure, Academic reflection, Research mentorship, Policy and pedagogy

1. INTRODUCTION

Today, I found myself once again searching for something as fundamental as double distilled water (or deionized distilled water) in the preparation laboratory, with my PhD student. I knocked, waited, and was met with silence—on a regular working day. The lab, like so much else lately, felt abandoned. This may seem trivial to outsiders. But to those of us working at the frontlines (better to say beginning-lines) of discovery, this is the first crack in the dam. If something as essential as distilled water is unavailable, what message are we sending to our students? To our future researchers? That science can wait, or worse—that it isn't a priority in our research.

This is not just about a missing resource. It is a reflection of something larger: the slow erosion of basic research support, something mirrored around the world (Sarpong et al., 2023; RAND Reading Study Group, 2002; Li and Bai, 2025).

2. THE HANDS MUST LEARN: WHY DOING STILL MATTERS

I have never claimed myself as a scientist even though my name has appeared for at least three times as World's Top 2% Scientists based on Stanford and Elsevier Data, and the latest in 2024 [<https://topresearcherslist.com/Home/Profile/928484>]. As a professor, mentor, educator and researcher, I believe deeply in the value of doing. Research is not learned by watching a video, Youtube, Tik-Tok, or reading a paper. It is learned by touching, trying, making mistakes, and asking why. That is why I insist on giving my students a chance to work directly with their hands, to stay in the lab (24 hours if possible- well supported by Prof Dr. W.S. Tan), to linger with their curiosity.

But what happens when they walk into a lab with no tools, no light, no

water, and worst of all—no welcome?

Basic research is hands-on education (Janssens et al., 2010; Tay, 2022). As the proverb goes, “Tell me and I forget, teach me and I may remember, involve me and I learn.” The erosion of support means fewer opportunities for involvement, fewer experiments, fewer questions, and fewer sparks of discovery. The call for research and development models that include human engagement and practical growth is echoed in the work, who argued for communities of development that emphasize relational, collaborative R&D environments (Postholm and Moen, 2011).

But I will still stand by my students. They come to me eager to learn, and I will not let broken infrastructure or absent resources kill their spark and their passions.

3. THE LIGHTS FLICKER BUT NOBODY LISTENS

Since early this year, my ecology laboratory has been plagued by an unresolved electrical fault that continues to pose serious safety and operational risks. The recurring blackouts have created an atmosphere of uncertainty and anxiety—not only compromising the basic functions of the lab, but more distressingly, threatening the preservation of valuable biological samples. These are not just items stored in freezers—they are irreplaceable specimens of fish and molluscs, painstakingly collected by my students under physically demanding conditions, often at great financial cost. Each blackout revives the same fear: that these frozen samples, critical for ongoing research and academic integrity, might be lost to decay. Despite multiple reports and persistent hope that action would be taken, the issue remains unresolved. This prolonged negligence has not only jeopardized scientific progress but has also eroded our trust in the system that is supposed to support our academic and research

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endeavours.

This silence is not new. Across the world, as funding tightens and priorities shift, labs like mine are left in limbo—functional only in name (Sarpong et al., 2023; Muto, 2025; Dezhina, 2023). The proverb, “*Jangan berharap pada pagar, pagar makan padi*,” reminds us that we cannot trust the fence when the fence itself has turned against the rice. That is what it feels like—being failed by the very system meant to support us.

But what hurts more is not the flickering light, but the feeling of not being heard. My students see this. They ask me, “Why hasn’t it been fixed?” And I have no honest answer—only a deepening sense of helplessness. I still try to mentor them, but I worry: what are they really learning about how science is supported?

4. PROTOCOL OVER PASSION: WHEN RULES OUTWEIGH REASON

Last weekend, my students stayed in the lab past noon—motivated, driven, finishing their work not for marks but for passion of research and sense of responsibility. It was their own initiative. They didn’t come to waste time or cause trouble. They came to learn. But instead of encouragement, they faced scrutiny.

This clash between protocol and purpose is disheartening. Of course, safety and approvals matter. But must we treat every situation with the same rigidity, without considering the spirit behind the act?

International research systems increasingly struggle with balancing oversight and engagement, as highlighted in education-focused RandD frameworks (Postholm and Moen, 2011; RAND Reading Study Group, 2002; Ma, 2019). When we spend more time chasing paperwork than nurturing curiosity, we lose the very thing that makes science worth pursuing.

“*Don’t miss the forest for the trees.*” A student staying back to run a gel or calibrate a pH meter should not be viewed as a threat to protocol. It should be viewed as a testament to our success as mentors.

5. WHAT ARE WE TEACHING IN SILENCE?

Each neglected repair, each missing item, and each over-enforced rule teaches something—but not what we want our students to learn. The unspoken curriculum is becoming louder than our lectures. It says: “Stay quiet. Don’t ask. Just comply.”

I struggle with this. I mentor my students with honesty, I teach them the beauty of questions, and I encourage them to take ownership of their learning. But I fear that what they are truly learning is that enthusiasm is inconvenient, and that working hard may be frowned upon.

“*Melentur buluh biarlah dari rebungnya.*” If we do not guide and support them while they are still young and growing, how will they stand tall as scholars in the future? And what kind of research culture will they carry forward?

6. A WIDER LENS: EROSION AS A GLOBAL TREND

What I experience in my lab is not unique. Around the world, basic research is being undervalued. In Japan, researchers struggle under fixed-term contracts and performance quotas that leave little room for exploration (Muto, 2025). In China, even with policy support, enterprise investment in basic science remains low (Jia et al., 2021; Liu et al., 2023).

Worse still, research content becomes narrower when grant renewals demand repeat success in the same themes. These policies reward predictability over innovation and control over curiosity (Li and Bai, 2025; Sarpong et al., 2023).

I say this not to compare or complain—but to place our struggles in a broader academic context. What we are facing here is not just a local frustration—it is part of a global trend of erosion.

7. THE HEART OF THE MATTER: HOPE AND MENTORSHIP

Despite everything, I still believe in the power of the lab. I still believe that a student’s first failed experiment can lead to a lifelong fascination with science. I still believe in the joy of seeing a student master a technique, troubleshoot an error, or discover something they never thought they could. This is because the basic science is utmost important and is still relevant especially in today’s AI era (Janssens et al., 2010; Tay, 2022). Are you a human to read this article? Because many do not read articles word by word.

This is why I continue—not for metrics, but for meaning. My lab is not just a workplace. It is a classroom. A sanctuary. A space where passion is nurtured through action. I mentor not because it’s my duty, but because it

is my calling. But I can no longer pretend that passion alone is enough. Support must follow.

8. CLOSING THOUGHTS: A CALL FOR UNDERSTANDING

“*Seek first to understand, then to be understood.*” May those entrusted with academic stewardship pause to listen; not merely to complaints, but to the quiet determination, the perseverance, and the unwavering love for science that still echo within our aging laboratories.

These are not echoes of bitterness. They are echoes of belief. Of educators who refuse to give up. Of students who stay behind. Of experiments that continue by candlelight, of water that is sought even when absent. These are not the makings of a broken system, but the remnants of one still struggling to breathe, still worth reviving.

Sometimes, in moments of exhaustion, I think about the lab I worked in back in 1998. It was far from perfect—but it held promise. And now, after decades, it has changed, but not for the better. Instead of singing “*Unchained Melody*,” I now hum “*Unchanged Melody*,” because while time has passed, the cracks remain, only now the wiring flickers, malfunctioning piping in the lab, and even the cabinet doors hang broken.

These broken cabinet doors are not just wood and hinges. They are symbols. Symbols of promises unkept, of tools once cherished now left unused, of a system too slow to care for the spaces where thinking lives and learning grows.

Let us not waste these symbolic melodies. Let us not allow the flicker of hope to extinguish under the weight of red tape. The soul of research does not lie in policy memos or funding quotas. It lies in the human hands that persist, the minds that dare to wonder, and the hearts that continue to care.

So may we listen, not just to voices raised in complaint, but to the unspoken melodies of resilience playing softly beneath cabinet doors hang broken. For in that song lies our greatest chance at renewal. *Ayuh Bangkit Kita Semua!*

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