

WHEN TECHNOLOGY SOLUTIONS DON'T SOLVE THE COLLEGE'S PROBLEM

Why improving information does not resolve fragmentation

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Every community college carries two lists of problems. The first list is spoken aloud in strategy meetings and planning retreats: data systems that do not talk to each other, offices that lack a complete picture of the student, processes that vary from one campus to the next, staff who track their work in spreadsheets because nothing better exists. The second list is quieter. It concerns who owns the student relationship, how many times a student is handed from one office to another, whether anyone is accountable for a student's momentum across the first year, and whether the intake process itself makes sense. The first list generates projects. The second list generates discomfort.

The distinction matters because colleges are drawn, persistently and understandably, toward solutions that can be purchased, installed, standardized, or reported on: a new technology platform, a shared system of record, standardized process documentation, a reorganized reporting structure so that internal offices finally have the complete picture. Each of these sounds sensible, and in a narrow sense each is sensible. Yet as a class, these solutions have a poor record of producing durable change in student outcomes. Colleges emerge from them with modernized systems wrapped around an unchanged design, and the student experience, which is produced by the design rather than the systems, remains largely what it was.

This essay is about why that happens, why the pattern is so hard to name from inside an institution, and what distinguishes modernization from the redesign it so often stands in for. The examples that follow are composites of recurring practices across community colleges rather than portraits of a single institution. No one college matches every detail, but the design problem is widespread.

A real problem, wrongly treated

The hardest part of making this critique stick is that the diagnosis behind these projects is usually correct. Community colleges do have weak student data tracking. Caseload assignments still live in spreadsheets. Integrations are delayed, narrowed, or abandoned. Staff cannot reliably see one another's notes. When someone proposes a shared system of record, they are not inventing a problem; they are describing one accurately. The skeptic in the room is placed in the unenviable position of appearing to defend spreadsheets.

This is what gives the pattern its durability. The proposal is a correct diagnosis of the information layer that remains silent about the design layer beneath it. A student's experience of a college is shaped by how many offices they must pass through, how long any one person stays with them, and whether the underlying process was built for their progress or for the institution's internal divisions. Technology inherits that design. It does not amend it.

When a college modernizes a fragmented process, it does not get a coherent process. It gets fragmentation with better records.

A common pattern: supporting early momentum

Consider a composite drawn from large community colleges and systems that have made early momentum a priority: completion of gateway courses, credit accumulation, and continuous enrollment. The typical support model is layered. An enrollment guide helps a student enter the college. A generalist coach or success advisor takes over during the first term. Academic planning, program questions, transfer, financial aid, and specialized supports remain distributed among other offices. Each role is sensible in isolation. Together they form a relay.

The informational infrastructure rarely matches even this complicated design. Assignments may be divided among local spreadsheets, case-management tools, and unit-specific notes. Students may not know which person is responsible for them at a given moment, while staff can see only fragments of prior outreach. Different campuses or academic units adapt the model to local staffing, so a similar student need can trigger a different sequence of contacts depending on where the student enters. The institution therefore has both an information problem and a design problem, though the first is easier to see.

The usual response is predictable: establish a common case-management environment, make support assignments visible to students, standardize workflows, and build dashboards so that everyone can see the same history. All of this would improve the current state. Private spreadsheets are brittle. Students should know whom to contact. Staff should not have to reconstruct a student's story from memory, email, and disconnected notes.

Yet the project would leave the relay itself intact. It would not reduce the number of transitions, decide which relationship should anchor the first year, or give any one role sufficient authority to address the mix of academic, financial, and scheduling decisions that shape momentum. Intake would still belong to one unit, early outreach to another, academic planning to another, and specialized milestones to still others. The seams would become more visible, but they would remain seams. The college would digitize the relay without shortening it.

More structural alternatives are easy to imagine: one primary relationship lasting through a defined first-year milestone; a small cross-functional team with shared authority rather than a sequence of referrals; or a redesign that moves routine academic and enrollment decisions closer to the person already working with the student. These options are rarely rejected because they lack educational logic. They collide with capacity, reporting lines, workload rules, budget ownership, and established jurisdiction. The technology project survives because it can improve coordination without redistributing authority. It changes what people can see without changing what they control.

The proposal most likely to survive is the one that redistributes information while leaving authority untouched.

When support compensates for design

A second composite appears at the front door. Many colleges candidly acknowledge that application, placement, financial aid, orientation, and registration are difficult for students to traverse. Their response is often to add a concierge role—a navigator, coach, or enrollment guide—whose job is to help students move through the existing sequence. The role is compassionate and frequently valuable. What it does not do is simplify the sequence.

The logic is worth pausing over. The institution concludes that its front door is a maze and responds by hiring guides. The maze is treated as a fixed feature of the landscape, something to be navigated more skillfully rather than dismantled. No committee needs to declare that decision. It is embedded in the architecture of the remedy.

Compensating roles also tend to institutionalize the defects they compensate for. The new position acquires a budget, a job description, performance measures, and a constituency. It can be staffed well and celebrated honestly because it does help students. Yet each success also makes the underlying process easier to tolerate. The case for simplification weakens because the college can point to the people helping students survive the complexity. Every decision may be locally reasonable, and the cumulative design can still be wrong.

From the student's side, the arithmetic is simpler. Students who reach the guide experience the maze with company, which is better than experiencing it alone. Students who do not connect receive the full force of the original process. Even the well-served student gains another temporary relationship that ends when the institution's internal sequence says it must.

When a college's answer to a maze is to hire guides, it has postponed the decision to remove the walls.

The complete-picture fallacy

Beneath both examples sits a belief that deserves direct examination: the belief that if every office could see everything about a student, the student would be well served. Information completeness becomes a proxy for institutional coherence. The two are not the same thing, and the difference is visible from the student's side of the counter. The question a student is living is not whether the offices share information about them. It is how many offices stand between them and their goal, how often they must establish trust anew, and whether anyone stays with them long enough to matter. A student passed through a sequence of well-informed specialists still experiences discontinuity, no matter how gracefully the record follows them.

The research record supports this distinction. Multi-college studies of technology-mediated advising reform have found that when new platforms are layered onto unchanged advising structures, effects on student outcomes are modest to negligible. Where technology-enabled reforms have shown promise, the technology arrived as part of a redesign of roles, caseloads, and processes, not as a substitute for one. The consistent lesson is that technology amplifies the design it is given. It does not correct it.

Telling modernization from redesign

The two can be distinguished with a short set of questions, askable of any proposed initiative before a dollar is spent. When this project is finished, will a student experience fewer handoffs than before? Will any office have relinquished a step it currently controls? Will anyone at the college know a given student longer than they do now? Does any authority move closer to the point where a student's momentum is actually won or lost? If the project charter can be written without changing anyone's responsibilities, the college is planning modernization, not redesign. Modernization may still be worth doing. It should not be budgeted, celebrated, or reported to the board as though it were the other thing.

There is also a sequencing rule hiding in these questions: design first, procure second. A college should decide the shape of the student relationship it intends to offer, including who owns it, how long it lasts, and where it transfers and why, and then acquire systems that ratify that design. Colleges usually invert the order. They buy the system first and trust that the design questions will be resolved during implementation, which is where design questions go to be deferred indefinitely. A configuration decision made under a go-live deadline is not a design decision; it is an accommodation to whatever structure already exists. The new system then hardens the old design in software, making the next redesign conversation more expensive than the last.

Closing reflection

None of this is an argument against technology, shared records, or standardized processes. Colleges genuinely need them. Private spreadsheets and disconnected notes are real liabilities; students should be able to see who supports them, and staff should not have to reconstruct a student's history from memory and email. The argument concerns order and substitution. The projects colleges reach for first are the ones that leave the institution's structure intact, and the problems colleges defer are deferred precisely because they implicate that structure: ownership of the student relationship, the number and necessity of handoffs, the intake process itself. Those are also the problems that shape what students actually experience, which is why solving everything around them moves outcomes so little.

A college that repeatedly chooses the addressable over the structural will, over time, accumulate an impressive inventory of modern systems around an unchanged design, and will find itself puzzled that persistence and completion do not respond. Its students, meanwhile, will continue to experience the college the old way: as a sequence of well-meaning strangers, each holding a better and more complete picture of a journey that no one is responsible for simplifying. The candor required for change is often already present; many colleges will freely admit that their systems are confusing. What remains is the harder step of letting that candor reach the design itself, so that the next investment is not another way to manage the maze, but a decision to build fewer walls.

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