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Rating of Community Colleges for Their Role in Obtaining Undergraduate Degrees

Jing A. Luán, Ph.D.

ABSTRACT

University rankings exert significant influence over student choice, institutional behavior, and global perceptions of educational quality. However, prevailing ranking systems rely on narrow, prestige-driven indicators that misrepresent institutional effectiveness, reinforce inequality, and marginalize mission-sensitive sectors of higher education. Among the most affected are U.S. community colleges, which play a critical role in undergraduate degree attainment, workforce development, and social mobility but remain largely absent from national and global evaluative frameworks. This paper argues that traditional ranked-order systems are conceptually and methodologically inappropriate for assessing community colleges. Instead, it proposes a multidimensional rating framework that clusters institutions by mission-sensitive variables. Drawing on AI data mining and unsupervised machine learning techniques, the article introduces a cluster-based approach to evaluate community colleges across key dimensions, including transfer outcomes, institutional support capacity, and geographic context. Using University Transfer Admission (UTA) as a demonstrative case, the study illustrates how clustering enables context-sensitive, student-centered decision-making without imposing artificial hierarchies. The proposed framework offers a more equitable, transparent, and analytically sound alternative to conventional rankings, supporting informed choice, policy development, and institutional accountability while recognizing the diverse missions of community colleges. It will have broad utility for other institutions.

Keywords: community college ratings, university rankings, higher education evaluation, university transfer admission (UTA), transfer education, data mining in education, AI, clustering analysis, K-means, machine learning, educational equity, informed and student-centered decision-making, institutional effectiveness, postsecondary access, outcomes-based evaluation, higher education policy, prestige bias, multidimensional assessment, entry points, college choice frameworks

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Introduction

Since their inception, university rankings have become a dominant force shaping college applications for countless students worldwide. Influential publications such as the QS World University Rankings, Times Higher Education, and U.S. News & World Report often guide individual college choices, influence university funding decisions, and drive institutional strategies. Despite their widespread impact, these rankings rely on flawed methodologies that frequently misrepresent educational quality and reinforce existing inequalities.

Amid the global focus on university rankings, a vital component of higher education has been largely overlooked: U.S. community colleges. These institutions serve millions of students by providing accessible pathways to undergraduate degrees, workforce training, and lifelong learning. However, their absence of rankings—or even a standardized evaluation system—marginalizes this essential sector. A more honest, inclusive, and mission-sensitive approach to evaluating community colleges is urgently needed to reflect the true richness and diversity of global education. Meaningful evaluation, therefore, requires a framework capable of capturing diverse pathways and outcomes—one that rankings are structurally unable to provide.

Traditional rankings impose a rigid hierarchical order that oversimplifies complex institutions. A rating system, in contrast, evaluates colleges across multiple key variables and groups them into meaningful clusters. This approach empowers students, policymakers, and educators to make informed choices without relying on a one-size-fits-all, top-to-bottom list.

This article proposes a mission-sensitive rating framework for community colleges, arguing that clustering—rather than ranking—offers a more valid, equitable, and analytically defensible model of institutional evaluation.

What rankings miss

University rankings not only mismeasure educational quality but also amplify global inequality and institutional instability. Over the past several decades, university rankings have exerted enormous influence on higher education systems worldwide. Publications such as QS World University Rankings, Times Higher Education, and U.S. News & World Report have become de facto benchmarks shaping academic reputation, institutional funding, and student choice.

Despite their widespread adoption, a growing body of scholarship identifies serious methodological flaws, embedded biases, and unintended consequences associated with these ranking systems. A major critique of rankings is their heavy

reliance on inputs—such as research volume, reputational surveys, and faculty credentials—rather than outcomes meaningful to students and communities. As noted in University Rankings: A Review of Methodological Flaws (Fauzi, 2020; Kochetkov, 2024), most rankings prioritize inputs—such as faculty-to-student ratios, research citations, and subjective reputational surveys—rather than outputs such as student learning outcomes, development of critical thinking, community impact, or the number of students successfully transferring to four-year institutions. These rankings systematically privilege well-established, well-funded research-intensive universities over institutions that emphasize undergraduate instruction, access, or community engagement (Moustafa, 2024). In effect, rankings reward prestige and accumulated wealth rather than educational value added.

This critique deepens when rankings are examined as self-reinforcing mechanisms of global inequality. In a 2020 Nature editorial, Gadd argued that rankings persist despite widespread recognition of their flaws because they offer a simplified narrative that appeals to students, governments, and donors. However, this narrative often distorts institutional behavior. Rather than meaningfully improving educational quality, universities may respond by manipulating admissions practices, selectively reporting data, or investing in superficial changes designed to boost ranking performance. The Columbia University case—where a mathematics professor revealed data misreporting that artificially inflated the institution's ranking—illustrates the system's opacity and fragility (McGreal, 2022).

Rankings also disadvantage institutions that prioritize innovation or serve nontraditional student populations. As highlighted by the LSE Impact Blog (Grayson, 2023), ranking methodologies favor traditional elite models of higher education, thereby discouraging institutional diversity. Newer universities in Africa, Latin America, and parts of Asia, for example, may excel in access-oriented missions, workforce preparation, or community-based learning but perform poorly in global rankings that reward costly research infrastructure or publication volume in Western journals.

From a methodological standpoint, rankings are further undermined by their sensitivity to weighting schemes. Research by Abramo and D'Angelo (2008) demonstrates that minor changes in the weights assigned to indicators such as citations or employer reputation can produce dramatic shifts in institutional position. Such volatility calls into question any claim that rankings offer objective, stable, or reliable measures of educational excellence.

In sum, while university rankings remain highly influential, they are increasingly contested for misrepresenting educational quality, reinforcing global inequities, and incentivizing counterproductive institutional behavior. By relying on narrow metrics and promoting zero-sum competition, rankings entrench existing hierarchies rather than democratizing access to higher education. Meanwhile, the absence of meaningful evaluative frameworks for community colleges leaves a critical gap in understanding educational effectiveness and social progress—one that ranking-based systems are ill-equipped to address.

The neglect of community colleges

The absence of community colleges from national and global ranking systems reflects a structural bias embedded in contemporary prestige regimes. While universities are extensively ranked, benchmarked, and scrutinized, U.S. community

colleges—institutions that serve nearly half of all American undergraduates at some point in their academic careers—are almost entirely invisible in ranking discourse. This omission is not incidental; it reveals deeper assumptions about what constitutes educational value and how academic prestige is constructed and perpetuated.

Community colleges differ fundamentally from research universities in their missions, structures, and student populations. They typically maintain open-admissions policies, emphasize workforce preparation and associate degrees, and serve disproportionately high numbers of first-generation, minority, and low-income students. Conventional ranking indicators—such as research expenditures, faculty publication counts, selectivity, and alumni giving—are poorly suited to capturing the educational purpose and social impact of these institutions.

At the core of this misalignment is the traditional ranking system's overemphasis on inputs rather than outcomes. Community colleges produce multifaceted outcomes shaped by diverse student goals and service populations. As Belyeu and Rowan (2017) argue in The Russell Sage Foundation Journal of the Social Sciences, assessing community college quality poses distinct challenges. Standard measures such as graduation rates can be misleading, as many students attend part-time, transfer to four-year institutions without completing a credential, or enroll primarily to acquire specific skills rather than degrees. Meaningful evaluation, therefore, requires a more nuanced understanding of varied student pathways and success metrics—an understanding that conventional ranking systems fail to accommodate.

Further complicating evaluation, Issues in Science and Technology highlights that community colleges operate under severe fiscal constraints and confront social and economic challenges that elite universities largely avoid. Charged with delivering high-quality education at a fraction of the per-student funding received by flagship institutions, community colleges nonetheless receive limited attention from policymakers, funders, and the media.

Reports from the Strada Education Network (2019) and the Lumina Foundation underscore the lack of consistent, comparable data on community college outcomes, including employment rates, wage growth, and skills acquisition. There is no comprehensive national statistic tracking the number of nurses, auto mechanics, or other skilled professionals trained through community colleges. In the absence of such data, attempts to impose traditional rankings risk being arbitrary or misleading. These studies instead call for alternative accountability frameworks aligned with community college missions, such as successful *transfer* to four-year institutions, contributions to regional workforce development, and student satisfaction with nontraditional learning experiences. Transfer—one of the core missions of community colleges—will be used in this article to illustrate how such outcomes can be incorporated into a meaningful rating system.

The near-total absence of rankings or evaluative frameworks for community colleges has tangible consequences. It reinforces societal narratives that elevate selective universities while undervaluing institutions critical to social mobility, regional economic vitality, and lifelong learning. Without greater visibility and recognition, community colleges face ongoing challenges in securing the resources and public support necessary to fully realize their educational and societal potential.

Ranking versus rating in educational evaluation

Ranking and rating serve fundamentally different purposes. Technically, ranking distinguishes overall performance by ordering entities along a single scale. Quacquarelli Symonds (QS), a leading global ranking organization, explains that rankings identify who performs best overall, whereas ratings indicate who performs well in specific areas (QS, 2024).

The "Single-Number" problem

Traditional rankings aggregate diverse indicators—such as transfer rates, job placement outcomes, cost, student-to-faculty ratios, and program breadth—into a single composite score. This approach obscures the fact that different students prioritize different outcomes. For example:

> Student A (Transfer-Oriented): seeks an institution with strong articulation agreements and demonstrated transfer success to specific four-year public universities.
>
> Student B (Workforce-Oriented): prioritizes high program completion rates and strong job placement outcomes in a particular local industry, such as nursing or advanced manufacturing.

A single numerical ranking cannot meaningfully serve both students, as it fails to weight outcomes according to individual goals. In doing so, rankings risk misleading prospective students rather than informing their choices.

The "Local Identity" problem

Ranking a community college is, in effect, ranking the community it serves. Community colleges are deeply embedded in local economic, demographic, and labor-market contexts. A highly effective college in a large metropolitan area—such as Chicago or San Diego—operates under conditions vastly different from those of a college serving a rural region focused on agriculture or manufacturing. Differences in population density, employer base, funding structures, and student needs make direct national comparisons inherently problematic.

Accordingly, the effectiveness of a community college is best assessed by how well it fulfills its local mission rather than by how it performs on a national hierarchy. A rating or clustering system that accounts for institutional context allows for more meaningful comparisons among peer institutions and provides students, policymakers, and communities with information that is both accurate and actionable.

Rate community colleges rather than rank them

Unlike traditional four-year universities, community colleges serve highly diverse student populations with varied academic, professional, and life goals. In California, approximately 60 percent of community college students are classified as economically disadvantaged, and approximately 35 percent are first-generation college students. Their student bodies include working adults, veterans, foster youth, and retirees (California Community College Chancellor's Office, CCCCO, 2024).

Community college funding typically derives from a combination of state appropriations, local property taxes, tuition, and fees, with state and local sources providing most operating revenue (PPIC, 2024). Given this context, a strict ranked-order system—one that stacks institutions into a single hierarchical list—fails to capture the nuanced missions and strengths of individual colleges. A rating system that evaluates institutions across multiple dimensions provides a more accurate and equitable representation of what different community colleges offer.

A strictly ranked-order system presumes a single definition of excellence, obscuring institutional strengths that matter differently to different students. Rating systems, by contrast, allow institutions to be evaluated across multiple dimensions without forcing comparability where none exist. One college may excel in transfer outcomes, another in workforce development, and another in adult education. Ranking collapses these distinctions; rating preserves them.

From a mathematical and evaluative perspective, institutional comparison generally follows two distinct approaches: classification (or rating) and ordinal ranking. The first approach is classification, in which institutions are grouped into affinity categories based on shared characteristics or performance across selected dimensions. This approach is typically represented as horizontal groupings on a Cartesian plane. The Carnegie Classification of Institutions is a prominent example. Classification does not imply a hierarchy or value judgment about which group is "better" but instead highlights institutional similarity and mission alignment (mission sensitivity). Community colleges function more accurately as affinity groups embedded in local ecosystems rather than as competitors on a national scale.

Table 1: *Key Differences between Ranking and Rating Systems*

Feature	Ranking	Rating
Definition	Ordering items from best to worst (or vice versa).	Assigning a score to each item based on a fixed scale.
Comparison	Relative. Compares items against one another within a defined set.	Absolute. Compares each item against a standard scale (e.g., 1–5 stars).
Result values	Unique values (1st, 2nd, 3rd, etc.). Only one item can be ranked first.	Nonunique values. Any number of items may receive the same score (e.g., 5/5).
Use of composite score	A final composite score (e.g., 0–100) is used to determine ordinal position (rank).	A final composite score (e.g., 0–100) functions as the evaluative outcome itself (rating).

Note: data table generated from Google: (Google, 2025, Gemini response to question: organize author's notes on ranking and rating into a data table).

The second approach is ordinal ranking, which arranges institutions along a single interval scale using composite scores derived from multiple indicators. This

method uses numerical distance to imply relative superiority or inferiority—better versus worse, higher versus lower—and yields a strict hierarchical ordering. Global university rankings commonly use this approach, often employing scales that extend from 1 to infinity, with 1 representing the highest rank.

While any ranking or rating can be constructed mathematically, a fundamental validity problem emerges when attempting to rank community colleges. Each community college is deeply embedded within its local social, economic, and educational ecosystem. Because these institutions primarily serve localized communities, imposing a single national hierarchical scale is conceptually flawed. Community colleges function more accurately as a naturally formed affinity group, shaped primarily by internal community characteristics rather than by externally comparable conditions.

Absent a universal metric that meaningfully applies across all community colleges, these institutions are better understood as occupying positions on a multidimensional Cartesian surface rather than a linear ranking scale. This reality complicates broad value judgments but does not preclude meaningful evaluation for specific purposes. For instance, it is reasonable to examine transfer outcomes for community colleges that explicitly prioritize transfer as a core mission. Even then, such data must be contextualized, as transfer rates are influenced by factors including geographic proximity to four-year institutions, local labor market conditions, and the age and enrollment patterns of the student population.

This argument meets a core validity: absent a universal metric applicable across contexts, ranking community colleges is conceptually flawed. Rating—particularly when combined with clustering—offers a more defensible alternative.

How to rate community colleges effectively

Because ranking and rating differ fundamentally in both the factors they emphasize and the purposes they serve, this article proposes rating as the appropriate approach for comparing community colleges. A similar technical approach is described by Mellor (2025) in Ranking or Rating Survey Questions, which advocates clustering different attributes of rated items—such as cleanliness, service, price, and location—as a sophisticated and highly informative alternative to producing a single composite score. This method is commonly referred to as multidimensional rating or profile-based rating.

The paper selected K-means clustering, an unsupervised machine learning algorithm of artificial intelligence that partitions N observations into K distinct, nonoverlapping clusters. Each observation is assigned to the cluster whose mean (centroid) is closest in the multidimensional feature space. Rather than forcing entities into a single ordered list, K-means identifies groups of institutions with similar performance profiles across multiple variables.

To illustrate the logic of this approach, let us consider a case outside education to demonstrate the universality of ratings. Consider an example involving restaurant ratings, where the goal is not to identify the "best" restaurant overall but to help users make choices based on specific preferences—such as prioritizing food quality over price or location. In this context, a profile represents a cluster of restaurants with shared characteristics and is accompanied by a descriptive label. The analytical process proceeds as follows:

Step 1: Data Collection: Gather ratings for each relevant attribute (e.g., cleanliness, service, price, location).

Step 2: Clustering Algorithm (K-means): Apply the algorithm to group restaurants that exhibit similar patterns across these attributes into distinct clusters.

Step 3: Cluster Interpretation: Instead of producing a single rank, the analysis yields interpretable profiles, such as:

> Cluster A (Descriptor: "The Business Lunch"): High scores in service and location but weaker performance on price.
> Cluster B (Descriptor: "The Budget Feast"): Strong performance on price and food quality but lower scores in service and cleanliness.

This approach explicitly recognizes that different users value different attributes. By enabling selection based on profiles rather than averages, clustering provides more relevant and actionable information than a single composite ranking. Applied to community colleges, this method allows stakeholders to identify institutions that align with specific student goals, institutional missions, and local needs—without imposing an artificial hierarchy.

The benefit of rating using clusters

Below is an example of rating a community college based on its three mission areas: workforce development, transfer education and access to education. A rating system using clustering allows users to create performance clusters based on specific, high-priority indicators. This empowers prospective students and employers to make choices aligned with their goals.

Table 3: *Demonstration of Clustering Select Community College Missions with Semantic Labels*

Cluster Category (Semantic Labels)	High-Rated on (Example Metrics)	Low-Rated on (Example Metrics)	Ideal User
Transfer Hub	High transfer rate to state flagships; strong faculty research background; low tuition cost.	Low job placement rate for specific trades; limited vocational programs.	Students planning to complete a four-year degree.
Workforce Engine	High job placement in local target industries; fast completion time for	Low transfer rate to four-year schools; high student-to-faculty	Students seeking immediate employment or career change.

	certifications; strong industry partnerships.	ratio in general education.	
Value/Access Champion	Very low tuition; high financial aid per student; high percentage of part-time/older students served.	Lower transfer rate; limited selection of high-cost specialized equipment.	Nontraditional, low-income, or adult students.

Additional data points among community colleges can be used for cluster analysis that may produce more meaningful "profiles" for students. They are very diverse and are independent of each other, which makes a rating system appropriate:

- *Affordability* – Instead of ranking tuition costs, evaluating them in relation to financial aid options and local living expenses.
- *Student Success Rates* – A range of success indicators, such as graduation rates, transfer rates, and employment outcomes, can create a composite score.
- *Faculty Quality* – Not just a single metric, but an evaluation of instructor qualifications, student engagement, and faculty-to-student ratios.
- *Career Placement & Earnings* – Schools should be rated on the effectiveness of their job placement programs and postgraduate earning potential.
- *Student Support & Satisfaction* – Rather than a ranked list, colleges can be scored on accessibility of resources, mentorship, and overall student experience, including housing and safety.

It's clear that by using clusters rather than a simplistic ranked order, prospective students and policymakers gain a more holistic view of each college's unique strengths. This approach recognizes the complexity of community college education, ensuring that institutions are judged in ways that reflect their diverse missions.

Demonstration of rating on university transfer admission (UTA)

Since many readers are international, it is essential to first provide an overview of the U.S. secondary and postsecondary education systems, setting the context for understanding transfer education. The practice of transferring courses and students between institutions is largely unique to the United States, rooted in the country's egalitarian tradition. It emphasizes educational efficiency while also promoting equal opportunity.

Community colleges, a distinctive feature of American higher education, were founded with a specific academic purpose. Initially known as junior colleges or two-year colleges, they trace their origins to the Morrill Act of 1862 (the Land Grant Act), which greatly expanded public access to higher education. William Rainey Harper, the first president of the University of Chicago, is credited with creating the junior

college. In the 1890s, Harper divided the new University of Chicago into a senior college and a junior college (Drury, 2004).

Over time, community colleges have evolved into comprehensive institutions, offering more than the first two years of baccalaureate education. They serve community educational needs through lifelong learning, vocational and technical programs, and community and contract education. These programs provide entry points for both domestic and international students seeking to eventually earn a university degree (StateUniversity.com, 2023).

In the mid-20th century, California began aligning its three major segments of higher education. The Donahoe Higher Education Act, also known as the California Master Plan for Higher Education, was enacted on April 6, 1960. The Act organized the University of California, California State University, and community college systems to ensure that Californians had guaranteed access to higher education. Among its notable achievements was the creation of a course articulation system linking community colleges with the UC and CSU systems.

The academic credit system and its fundamental importance

In the U.S., college courses taken at a properly accredited institution are granted permanent academic credit, which contributes to degree requirements. Each semester or quarter course is assigned credits based on hours of instruction: typically, one credit represents one hour of classroom instruction plus two hours of supplementary study, as defined by the Carnegie Credit System (Silva, 2013). This system standardizes student assessment across institutions, providing a reliable measure of academic progress despite the variability of oral or written evaluations. Credits earned are a permanent academic asset, applicable toward graduation or course prerequisites.

The U.S. credit system also strengthens the transfer college entry point. Credits earned at one institution can be applied to another institution that recognizes the course content, either to satisfy core requirements or to count as elective credits. This enables students to complete transferable courses at community colleges and then carry those credits toward a bachelor's degree at a four-year university. For international students, this provides assurance that community college coursework can seamlessly transfer to other institutions. Combined with articulation agreements and institutional support, the credit system makes the transfer pathway a secure and advantageous option for both domestic and international students pursuing undergraduate degrees.

University Transfer Admission (UTA)

While familiar to domestic students and guidance counselors, transfer education as an entry point remains less known to international students. Most are aware of the traditional freshman admission route for high school seniors but are unfamiliar with the community college transfer option.

Over decades, research has shown that international educators and professionals often lack detailed knowledge of U.S. transfer statistics. For example, in California:

- Approximately 30% of juniors at University of California (UC) campuses are community college transfers (University of California Office of the President, 2015).
- At California State Universities (CSUs), this figure rises to 51% (California Community Colleges Chancellor's Office, 2023).

- At UC Berkeley, the transfer admission rate is four times higher than the freshman rate (24% vs. 6%) (University of California InfoCenter, 2019).
- Nationally, nearly half of bachelor's degree earners begin at a community college (NCSES, 2019; Craft, 2021), equating to approximately 2 million transfer students per year.

Despite these figures, this knowledge has not widely reached international schools, students, and families. Many prospective international students, discouraged by limited freshman spots at top-tier universities, either settle for less-preferred institutions or abandon U.S. study altogether. Others never apply because the university freshman admissions (UFA) process is daunting, competitive, and often biased toward prestige.

What many students do not realize is that community colleges offer an alternative entry point. Through university transfer admission (UTA), students can:

1. Enroll in a community college, completing lower-division courses.
2. Transfer as juniors to a university.
3. Complete upper-division courses to earn a bachelor's degree.

Global outreach is crucial to informing students, educators, and families about UTA, broadening opportunities and diversifying U.S. institutions. Students can prepare for both UFAs and UTA to maximize options and improve their chances of admission.

The UFA system has historically favored privilege. Prestige bias advantages families and schools with abundant resources, while middle-class and international students often face barriers. Children from ultrawealthy families have a 34% higher chance of Ivy League admission than others (Zou, 2023), and legacy admissions further limit opportunities for students from less affluent backgrounds (Murrell, 2019).

Community colleges, as equalizers of opportunity, allow students of all backgrounds to start fresh and transfer to universities, legally protected to complete their degrees. Establishing an appropriate rating system for UTA can help prospective university-bound students recognize community colleges as a viable and valuable choice.

One major obstacle in promoting the benefits of university transfer admission (UTA) is the absence of a fundamental tool: a rating system for community colleges. This need becomes apparent among audiences who understand UTA's advantages but are uncertain which colleges to consider. As of 2019–2020, the U.S. had 1,303 community colleges and 2,679 four-year institutions (NCES, 2020). Accustomed to the convenience of university rankings, students and advisors often seek a similar system for community colleges. Unfortunately, no such educationally sound ranking system exists, and there has been no widely accepted method for creating one.

Rating community colleges on university transfer admissions (UTA)

Tangible data can be gathered to guide students in selecting community colleges that excel in UTA outcomes. In their chapter University Transfer Admission and Community College Ranking, Habte and Luan (2024) identify three critical data points, summarized as TLC:

Transfer Outcomes – the number or rate of students successfully transferring to four-year institutions. For example, in California, some community colleges maintain

strong relationships with nearby universities, resulting in higher transfer rates. For smaller colleges, the transfer rate is often a more meaningful measure than absolute numbers.

Location – proximity to major universities. Colleges situated near universities, especially in regions such as California, tend to have higher transfer success. Location may also incorporate safety as a mediating factor, reflecting a holistic consideration of the student environment.

Caring College – the level of transfer support services available on campus. This includes factors such as the presence of a transfer center, the number of full-time transfer counselors, and the number of university partnerships. These elements strongly influence campus culture and students' readiness to transfer successfully.

A cluster-based approach

Habte and Luan (2006, 2024) propose a data-driven, cluster-based approach rather than traditional rankings. Using methods derived from their early adoption of data mining, Big Data, machine learning and artificial intelligence, community colleges can be grouped in a three-dimensional Euclidean space based on TLC metrics. The theoretical foundation for this system was developed by Luan and Zhao (2006) in their foundational book on data mining for American higher education, which anticipated many of the analytical methods now common in Big Data and machine learning. The result is clusters of colleges for further exploration, serving as a decision-support tool rather than a competitive ranking.

According to Dunbar's number, a manageable cluster contains no more than 150 entities. Empirically, approximately 100 U.S. community colleges actively recruit international students, making clustering an ideal method for organizing options. Unlike conventional rankings, clustering avoids their shortcomings by emphasizing fit and relevance rather than prestige.

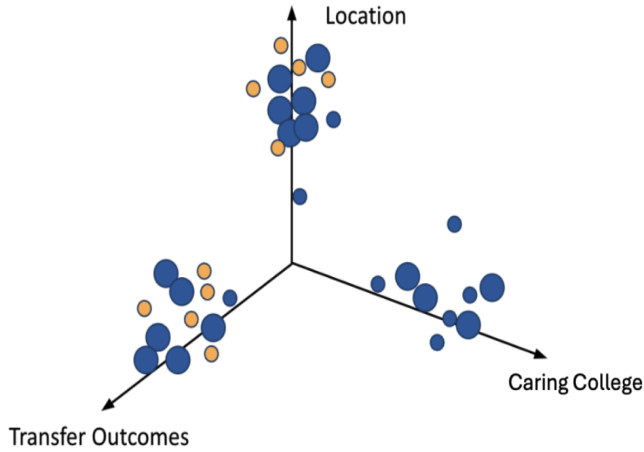

Figure 1. Identifying Community Colleges Most Advantageous to UTA Based on Clusters of T.L.C.

Currently, students must compile data on transfer outcomes, location, and caring colleges from multiple disparate sources. Systematically collecting and presenting TLC information would fill this gap, providing a practical and educationally sound tool for students and advisors. Such efforts would improve transparency, empower students to make informed decisions, and strengthen the UTA pathway for both domestic and international students.

Figure 1 illustrates three distinct clusters of community colleges based on TLC metrics—transfer outcomes, location, and caring college. These clusters serve as a decision-support tool, enabling students to explore colleges according to their personal priorities rather than relying on a simplistic ranking. Students can use the figure in several ways:

1. Filtering by priority:
    - If a student requires robust support services, they can focus on colleges scoring high in Caring College.
    - If proximity to universities is important for access to advanced courses or faculty engagement, location becomes the guiding factor.
    - While Transfer Outcomes are critical, considering this factor alone may not capture the broader support, environment, and opportunities offered by a college.
2. Exploring subclusters: The clusters can be subdivided to match specific student goals. For example:
    - A subcluster with high Caring College, moderate Location, and strong Transfer Outcomes might be labeled "Transfer Caring", suitable for students seeking guidance and support.
    - Another subcluster emphasizing Location as the main factor could be labeled "First Dip", which is ideal for students prioritizing early exposure to university-level courses.
    - Students can further combine or compare subclusters to refine their search, producing a personalized shortlist for deeper research.
3. Comparative evaluation: By plotting colleges in a three-dimensional Euclidean space, the figure allows students to visualize trade-offs between factors. For instance, a college with slightly lower transfer rates may compensate with stronger support services or proximity to a partner university. This multidimensional perspective highlights that the "right college" depends on individual priorities rather than a single metric.

Discussion and conclusion

The cluster-based TLC approach represents a fundamentally new way of assessing community colleges. Rather than creating a single ranking, it provides context-sensitive insights that reflect the diverse missions of these institutions and the varied needs of students. This approach encourages a student-centered perspective, where the best choice is defined not by prestige but by alignment with individual goals, learning style, and circumstances.

Developing richer, context-sensitive approaches to evaluating educational institutions is essential. Such approaches must recognize the diverse missions of community colleges and celebrate multiple forms of excellence. In doing so, we foster an educational landscape that is inclusive, dynamic, and forward-looking—one that

serves the broad spectrum of student needs rather than privileging a narrow notion of prestige.

This framework represents a paradigm shift in evaluating community colleges. There are no universally "best" colleges; there are only the "right" colleges for a given student's goals, learning style, and circumstances. By generating multiple performance clusters, this method provides a nuanced, transparent, and student-centered tool. It moves the conversation from "Which college is best?" to "Which college is best for me?", a question central to the success of every prospective community college student.

In demonstration, a cluster-based approach as the primary method to rate community colleges not only addresses the limitations of traditional rankings but also empowers students, advisors, and policymakers with actionable insights. It emphasizes the fit, context, and support structures that truly determine student success in university transfer admissions, offering a rigorous, evidence-based framework for guiding educational decisions in a complex and evolving landscape.

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Bio

Jing Luán, Ph.D. is Provost Emeritus of San Mateo Colleges of Silicon Valley (San Mateo Community College District). His strengths are strategic thinking and logistical execution that led to the publication of the seminal work on data mining (big data) for American higher education in 2003 and the Presidential Award of Excellence in higher education export through the US Commerce Department on behalf of the White House in 2020. PIE awarded him one of the 50 Voices of the Americas in 2025. As an executive in higher education over the span of decades, he has been a speaker, writer, promoter on the topics of data mining, strategic planning, global mobility, leadership, organization development, and board governance.
E-mail: jingluan@my.smccd.edu