Roundtable on economics education in community colleges

Mark Maier*

Glendale Community College,
Glendale, CA 91208, USA
Email: mmaier@glendale.edu
*Corresponding author

Tim Thornton

Boston University,
Massachusetts, USA
Email: tim.thornton@tufts.edu

Abstract: Community colleges (often called two-year colleges) are an important part of the USA tertiary education system. Despite the sector's significance, relatively little research on economics instruction in the community colleges has occurred. This constrains the sector's capacity to understand its own needs, unique contributions, considerable strengths, and strong potential. It also adds to the risk – and often, the reality – of the sector being misunderstood, undervalued, and under-supported by the economics profession and by policymakers. To help address this research shortfall, we conducted a roundtable on community colleges during mid-2019. Participants were invited on the basis of either their extensive experience in the sector, previous research on community colleges, or their expertise on US economics education in general. Issues discussed include recent developments in the sector, the level of support and recognition provided, the content economics curriculum, and how economics instruction in community colleges could be better supported.

Keywords: community colleges; economics curriculum; economics teaching; economics profession; economics textbooks.

Reference to this paper should be made as follows: Maier, M. and Thornton, T. (2020) 'Roundtable on economics education in community colleges', *Int. J. Pluralism and Economics Education*, Vol. 11, No. 1, pp.30–54.

Biographical notes: Mark Maier is a Professor of Economics at Glendale Community College, California. He is the co-author of *The Data Game: Controversies in Social Science Statistics* (with Jennifer Imazeki); *Just-in-Time Teaching: Across the Disciplines, Across the Academy* (with Scott Simkins); *Introducing Economics: A Critical Guide for Teaching* (with Julie Nelson); and co-editor (with Heather Macdonald and Kathy Rowell) of a New Directions for Community Colleges special issue Community College Faculty Engagement with Disciplinary Societies to appear in 2021.

Tim Thornton is a Senior Research Fellow at the Economics in Context Initiative at the Boston University, Research Fellow at the Global Development and Environment Institute at the Tufts University, and the Director of the School of Political Economy, Melbourne. Most of his research and practice has been focused on promoting greater pluralism in the economics curriculum.

1 Introduction

Community colleges (often called two-year colleges) are an important part of the USA tertiary education system. There are currently 1,051 community colleges in the USA which enrol nearly half of all US undergraduates, offering instruction across a wide range of academic disciplines, including economics [AACC, (2019), p.1]. Despite its significance, relatively little research on economics instruction in the community colleges has occurred (Maier and Chi, 2006). The resulting knowledge deficit constrains the sector's capacity to understand its own needs. It also adds to the risk − and often, the reality − of the sector being misunderstood, undervalued, and under-supported by the economics profession and by policy makers. The knowledge deficit also limits the sector's ability to understand its own unique contributions, considerable strengths, and strong potential. For example, the sector's demonstrated capacities to address issues of diversity and inclusivity provide an obvious opportunity for four-year colleges to engage with, and learn from, community colleges.

To help address this research shortfall we conducted a roundtable on community colleges during mid-2019. Each roundtable participant was invited on the basis of either their extensive experience in the sector, their previous research on community colleges, or their expertise on US economics education in general. The participants, in alphabetical order, are as follows:

- Clare Battista, Santa Monica College, California.
- Amber Casolari, Riverside City College (RCC), Riverside, California.
- W. Edward Chi, Department of Economics, Cerritos College, Norwalk, California, and previously a researcher at the Pullias Center for Higher Education.
- KimMarie McGoldrick, Robins School of Business, University of Richmond, Virginia, co-editor of the *Journal of Economics Education* and Chair, American Economic Association Committee on Economic Education.

We asked participants five questions:

- Why is so little attention paid, and support given, to community college economics instruction even though it constitutes 30 to 40% of all introductory economics instruction?
- What are the most important recent developments in community colleges (recent developments include higher tuition; free tuition; online instruction; zero cost textbooks; prevalence of adjunct instructors). In what ways do they help or hinder the teaching of economics?

- Can (and should) a one-semester course in economics in the community college sector differ from a one-semester introductory economic course taught in the university sector? If so, how should it be different?
- Can pluralism be introduced into a traditional year-long micro/macro sequence? If so, how? Can pluralism be introduced into a traditional year-long micro/macro sequence intended as a transfer course for community college students? If so, how?
- In what ways can community college economics instructors contribute to pluralist economic education and how can such instructors be supported and encouraged?

The responses to the questions were detailed, diverse and illuminating. We highlight and comment upon five of the ideas, or themes, that emerged from the responses.

First, the community college sector is seeking greater recognition, understanding, and respect from the four-year college sector. There is clearly an appetite for deeper levels of cooperation and partnership, with clear benefits to all parties if this occurred. Deficits in recognition, understanding, and support of economics instruction in community colleges, may be due, in part, to a more general lack of attention and status accorded to teaching within the economics profession, and in four-year colleges in particular.

Second, the sector is underfunded and the staff is overworked. Greater professional development opportunities are needed. However, as one respondent points out, the problem of insufficient resourcing cannot be separated from the fact that community colleges serve low-income groups, minority groups and women. Remedying underfunding requires a multifaceted response. However, part of the remedy might involve better mobilising low income groups, minority groups and women to lobby for increased community college funding, given that together they form of an electorally significant block.

Third, there is significant scope for greater collective voice. Indeed, building a collective voice may be a prerequisite to resolving, or moving forward, many of the ideas discussed by roundtable participants. First steps could involve building up the depth and breadth of existing modest state and regional networks of mutual support. It could also involve creating new institutional structures. Reform of existing organisations is also another possibility. For example, it is pointed out in the responses that, in stark contrast to many other disciplines, there is no dedicated group within the American Economic Association specifically charged with supporting and advancing community colleges.

Fourth, curriculum reform in community college economics is often constrained by the lack of curricular reform in four-year colleges. In particular, the subject content of microeconomics and macroeconomics in community colleges needs to closely mimic the often very traditional microeconomic and macroeconomic content taught in four-year colleges if credit transfers are to be granted. It would be desirable for four-year colleges to reform their own house in order to allow two-year colleges the option to update and improve their own curriculum.

Whilst two-year colleges are constrained in the manner just described, they nonetheless still have a free hand to determine the curriculum in subjects not usually recognised for credit transfers. Such subjects include, single semester survey courses and many elective subjects. Given this, they could respond to the many calls for renovation of the curriculum to provide a more up to date and pluralistic instruction (see for example, Hodgson et al., 1992; King, 2002; Garnett et al., 2010; Reardon, 2009; Reardon et al., 2018). In doing so, community colleges could function as path-finders for four-year

colleges, including demonstrating how curricular reform can promote student learning, enrolments, and promote graduate attributes such as critical and creative thinking (O'Donnell, 2010).

Fifth, because community colleges support the educational development of a far more representative sample of the US population, they are uniquely placed to assist the economics profession to remedy its underperformance in promoting greater diversity within economics. Increased support for community colleges would assist them to increase the number of students transferring into four-year colleges. This would be a key avenue for greater diversity amongst the four-year college student cohort.

The existing contributions, strengths, and potential of the community college sector justify greater understanding, recognition and support. The returns on greater understanding, recognition and support are likely to be high. It is hoped that rich detail and careful thinking contained in the responses below can give rise to creative, collaborative initiatives that will benefit economics education in general, the discipline of economics and society.

We thank the roundtable participants for the quality of their responses. This roundtable complements survey evidence on the community college sector also published in this edition of the *IJPEE* as well as earlier survey evidence of the sector (Maier and Chi, 2016). It is hoped that these works can function as primary documents on which other more detailed forms of research can build.

2 Why is so little attention paid, and support given, to community college economics instruction even though it constitutes 30 to 40% of all introductory economics instruction?

2.1 KimMarie McGoldrick

While one might point to a number of sources for this lack of focus, I believe two major contributors are the absence of a community of researchers dedicated to understanding community college outcomes and a lack of collective voice by those who teach in those institutions.

Outcomes associated with community college economic courses are often only researched in contrast to or as inputs into outcomes for students enrolled in four-year institutions. For example, Grimes et al. (2013) find some evidence that grades in introductory economics courses generate different degrees of overall college success based on a comparison of students across two- and four-year institutions. Specifically, when comparing students with the same letter grades in their introductory micro principles course they find that the expected cumulative GPA of community college transfer students is lower than those who matriculate initially at a four-year institution. Asarta et al. (2013, p.110) show that students who transfer credits from community colleges "underperform their peers in the intermediate course, unlike transfer students from four-year institutions" (p.110). On the whole, however, we know very little about outcomes specific to community college students who complete the principles of economics sequence whether or not they ultimately transfer to a four-year institution. If I were to speculate as to why there is a lack of academic economists conducting research in this area the reasons are likely to include an ignorance of the important role community colleges play in providing students with the introductory course sequence, a lack of easily

accessible data that could be used to explore related issues, and the fact that there is no champion that is motivating this area of study. While each of these barriers might be overcome, the level of difficulty in doing so increases as one moves through the list. For example, it would not be difficult to educate those who care about economic education as to the extent to which students receive their introductory economics exposure at the community college level and how this plays a key role in attracting and retaining majors. Yet this alone is not likely to engage researchers without the support of a community that understands the collective set of questions that are still unanswered about this population. That said, having a research group with well-defined questions is not sufficient as those researchers must also have access to resources, including relevant data or developmental workshops that teach techniques necessary to compile such data. Finally, because most researchers already have full agendas, they would have to be motivated to shift their focus to this agenda such as by the voice of a champion of the cause.

My second argument regarding the lack of attention is rooted in the fact that economics lags well behind other disciplines in terms of creating a space for the collective voice of community college educators to be heard. Disciplinary associations with either standing committees or repositories of resources dedicated to the community college teacher and student are prevalent and include the American Chemical Society, the Conference Board of the Mathematical Sciences, and the American Psychological Association. While the American Economic Association Committee on Economic Education has been in existence since 1955, and has sporadically motivated and supported research associated with economic education at the community college level, there is no dedicated group within the organisation specifically charged with community college interests. What one also recognises when exploring community college resources provided by other disciplinary organisations is the prominence of educational programs and resources more generally. Thus, there may be significant spillovers for the community college educator when the disciplinary organisation puts greater emphasis on teaching and learning more generally.

2.2 W. Edward Chi

Community college instructors' main responsibility is to teach courses rather than to undertake research and other activities that would support the development of economics teaching in community colleges (Cohen et al., 2014; Twombly and Townsend, 2008). Even though these instructors may be in the best position to research and develop economics instruction at community colleges, there is little expectation and support for them to do so. Supporting community college economics instructors in doing this work would benefit both the scholarship and practice of economics teaching.

A second reason is that prior to postsecondary (or tertiary) education, unlike in other disciplines, such as math, English, and the natural sciences, the economics curriculum is typically concentrated in the upper levels of secondary education (Walstad and Watts, 2015). In the primary and earlier levels of secondary education, economics content may be integrated into other subjects or taught only in short units (Bosshardt and Walstad, 2019). It is usually not taught as an independent subject as in the case of math, English, or biology. Because of this, there are fewer teachers of economics. This reduces the demand for, and supply of, resources that could support economics instruction at all levels of instruction, including at community colleges.

This limited reach of economics instruction in the primary and secondary levels is a constraint at the postsecondary level. With incoming postsecondary students less exposed to the study of economics, fewer may be interested and prepared to choose an economics course of study. This limits the size of postsecondary economics programs. Size brings economies of scale and more resources available to support work related to the study and improvement of economics education (e.g., the research and development of teaching materials and the participation of instructors in economics education professional organisations). Furthermore, the limited economics curriculum in primary and secondary schools, would seem to limit the number of postsecondary programs that train primary and secondary teachers of economics and the amount of research on teaching and learning of economics concepts at those levels. Such training and research could benefit economics courses at community colleges which may teach the same concepts and build upon them. In these ways, postsecondary institutions are limited in their support of economics education.

These reasons for why there is not more attention and support of community college economics instruction centre on institutional factors. Community colleges in the US are typically teaching-focused without requirements or supports for instructors in researching and publishing work to improve economics instruction. Economics is also not typically taught in the US until late in the secondary levels of education. This limits the number of teachers of economics and the amount students are exposed to economics prior to entering postsecondary education. As a result, economics programs at postsecondary institutions are smaller, generating fewer resources to devote to the research and improvement of economics education, including at community colleges.

2.3 Clare Battista

Decision makers such as academic administrators, college presidents and chancellors, as well as state and local policy makers do not necessarily correctly identify, and objectively process, all of the relevant information that is available to them. In the case of community colleges, there is substantial evidence and analysis that supports greater resourcing and support, but this information does not always inform decision making. Given this, the community college sector may benefit by presenting the relevant data in a way that will more effectively resonate with these decision makers and thus promote better decision making. In particular, aggregate data is problematic for certain types of decisions since it can conceal local and regional variations that are very relevant to state and local decision-makers. Furthermore, using the various insights of behavioural economics to better frame and communicate information may also elicit better outcomes.

Consider the following examples. According to the United States Census Bureau (2018), of the US adult population over 25 years of age, 35% have bachelor degrees or higher (United States Census Bureau, 2018). However, this figure is of limited relevance to policy makers in Clay County Kentucky where only 5.1% of those over 25 have a bachelor's degree. To cite another example, California ranks 25 among the 50 states in terms of educated populations (McCann, 2019a). However, this is not representative of San Jose-Sunnyvale-Santa Clara, CA which is one of the most educated metro areas in the country, ranking third in educational attainment among 150 of the largest metro areas, in associate, bachelor, and professional/graduate degree holders. Compare that to Porterville-Visalia, CA that is one of the least educated areas in the country, ranking at

the bottom in educational attainment across the same 150 metro areas (McCann, 2019b). Such examples illustrate that localised data is often more useful than aggregate data. Furthermore, it is likely to be more useful, accessible and influential when it is offered to decision makers in smaller chunks and packaged in a narrative to give it meaning and context.

Lack of attention and support for community college economics instruction might also be a function of a larger (mis)perception of community colleges as being less important than four-year institutions. This contrasts to the more accurate and useful perception of community colleges, and their faculty, being equal partners with those in four-year institutions. The key point to remember is that community colleges undertake a major share of the nation's tertiary-level education. Instructors do a lot of teaching, usually five courses a semester, meaning their jobs are as demanding and important for the nation as faculty in four-year colleges. Despite the reality of this, prestige and support are overly tied to research, not teaching institutions. The current prestige and funding hierarchy does not effectively serve the national interest well. It needs to be reformed to better reflect the importance of tertiary level teaching.

It is remarkable to consider how rarely community college faculty are invited to be involved in research and discussion on how teaching and learning can be improved despite our high level of engagement and expertise in this area. Conversations and analysis on teaching and learning innovation usually occur much earlier at community colleges, and they often are conducted at a deeper level. However, we often have to resort to 'crashing the party' in order to have any voice.

Thinking of community colleges as somehow less that four-year colleges might also be a product of outdated conceptions of community colleges as trade schools for non-traditional students. The contemporary reality is that community colleges are increasingly the first two years of many four-year degrees. To be more specific, students attend a community college for two years and then transfer to a four-year degree program to then graduate with a Bachelor of Arts or a Bachelor of Science degree. This is a cost-effective option that is particularly valued by women and socio-economically disadvantaged groups in general. Community colleges, with their far better representation of such students, offer a particularly potent means by which four-year institutions might finally start to achieve substantial improvement in their diversity targets. This includes improvement of the woeful levels of diversity and inclusion within the economics major.

More collaboration, co-informing dialogues and support across different college environments is also likely to result in better alignment between Associate of Arts and Associate of Science degree programs with Bachelor of Arts and Bachelor of Science degree programs, and as a result, better student learning outcomes. Because community college instructors teach 30–40% of all introductory economics courses, four-year colleges have a strong incentive to engage in a co-informing dialogue community college staff and to operate within a paradigm of cooperation, mutual understanding and respect.

Economics instructors in community colleges may also be inadequately supported because the curriculum is often limited to introductory teaching. This is due, in significant part, to many four-year institutions only accepting first-year introductory course as being transferable to their economics major. Acceptance of more second-year core subjects, and other economic electives, as transfer subjects would likely assist the development of economics teaching in community colleges.

2.4 Amber Casolari

An important part of the explanation is that policymakers and taxpayers are not prepared to properly invest and support the particular student cohort that attend community colleges. The majority of students at my own college, RCC, are low-income (80%), under-represented minorities (75%), and women (59%). The amount of money provided per full-time equivalent student from the state is very low. The lack of resourcing explains the high teaching load for faculty (5 courses per term) and large class caps (50 students per section). The scope to raise fees is limited by the socioeconomics disadvantage of the student cohort.

Add to that the constant barrage of additional duties that are added on to the full-time faculty with institutional service and committee work and frankly, the faculty are tired! Although there is no publishing requirement, faculty are expected to keep abreast of the newest pedagogy and changes to content in their discipline, typically with little to no support for travel. Given the heavy teaching and service loads, many faculty find it impossible to remain as up-to-date in either as they would like. Workload pressures mitigate against effective teaching and desired student outcomes.

3 What are the most important recent developments in community colleges (recent developments include higher tuition; free tuition; online instruction; zero cost textbooks; prevalence of adjunct instructors, among many others). In what ways do they help or hinder the teaching of economics?

3.1 Amber Casolari

As a professor of economics for over 23 years, 19 of those in the California Community College system, I can attest that high teaching loads and large class sizes make teaching difficult. The amount of interaction a faculty member can have with each student is limited. As a result, many faculty feel their pedagogical choices are limited due to workload constraints.

There are a number of demographic changes to the student cohort attending community colleges in California. This has given rise to an increasing number of Hispanic-serving institutions. Also, 60% of college students are now women, though in the case of economics only 30% are females (Goldin, 2015). Many community college students are socio-economically disadvantaged to the point that they struggle with homelessness and food insecurity. Faculty have begun an online educational resources initiative in 2018, including a zero-cost textbook initiative, as one way to assist students with the multi-faceted challenge of socio-economic disadvantage.

The guided pathways initiative is the single most important and possibly, detrimental, recent development in community colleges in the past two decades. According to the California State Chancellor's Office "The guided pathways framework creates a highly structured approach to student success that provides all students with a set of clear course-taking patterns that promotes better enrollment decisions and prepares students for future success." The idea is that students begin college with an idea of the path that they want to pursue and then will spend less time in college. In other words, if they

immediately begin on the correct path, students will be able to be more successful and take fewer classes and transfer sooner.

Since the publication of *Redesigning America's Community Colleges* in 2015, guided pathways reform has become a national movement in community colleges. As of spring 2018, more than 250 community colleges have committed to undertaking large-scale guided pathways reforms as part of national, state, or regional initiatives, or have simply decided to do so under their own volition (Jenkins et al., 2018). In particular, the state of California has been taking a leadership role (California Guided Pathways Project, 2019).

However, there are two large assumptions in *guided pathways* that can be questioned. The first is that time spent taking a variety of classes is time ill-spent. This idea likely comes from the fact that taxpayers do not want to spend large sums of money on students but rather, want them to minimise time in college. The next assumption is that students know what they wish to study when they arrive at the community college, and that they will not subsequently change their mind. In reality, most students have little or no idea of their future study or career plans.

This is a new initiative that is at the beginning stages at RCC but, based on my many years of experience, I suspect students will jump from path to path. If students are allowed to shift paths, this will obviously not save time and indeed may result in them spending more time in college then they otherwise would. If students are not allowed to change paths, this may lead to many dissatisfied students and may impact on student retention. Moreover, in the current labour market students will likely need to be retrained multiple times throughout their lives. This retraining will sometimes occur whilst the students are already in the workforce. I am not convinced that the system is flexible enough to respond to these demands.

There is also another issue that the guided pathways framework is silent about: part-time students. The majority of the students at RCC are not full-time, year-round students. These students are, in-fact, working full-time and taking classes little by little and chipping away at their degrees incrementally. This is not something we should discourage. However, this group of students face that the largest impediments to success and those who need to greatest encouragement (In the News, n.d.). A guided pathways approach, is not designed with the needs of students who make up the majority of students in my college, and in similar colleges.

3.2 KimMarie McGoldrick

My perspective is informed by outcomes rather than what specifically occurs during the educational process. It is critical to identify consequences of current practices so that we might motivate a more complete understanding of the underlying educational mechanisms. As such, I will not address the teaching of economics but rather the documented differential outcomes associated with one recent trend, the growth of online learning at the community college level.

As of the fall 2017, one-third of all students enrolled at the undergraduate level attended a community college for a total of nearly six million students of which about one third (just under two million) enrolled in online classes as a component of their education (Digest of Educational Statistics, 2013). What do we know about these students

and why is it relevant for economic education? Consider some detailed statistics associated the largest community college system in the nation. In the fall of 2013 nearly 1.6 million students were enrolled in the state of California's community college system and "[t]otal online course enrollment reached about one million in 2013–14" [Johnson and Mejia, (2014), p.4]. Advancing technology has enabled dramatic growth of online education over the past decade which in turn provides a variety of advantages for students (scheduling flexibility) and institutions (potential increased enrolment). Despite these advantages, online education can come at a high cost as students are less likely to complete online courses and when they do so they are less likely to complete them with a passing grade [Johnson and Mejia, (2014), p.4]. However, the degree to which this lack of success occurs varies dramatically across discipline specific courses. Johnson et al. (2015) report that there were a greater percentage of both introductory micro and macroeconomics courses with high pass rates (those in which at least 70% of students earn a C-) compared to introductory sociology, psychology, and business but a lower percentage than managerial accounting and developmental psychology. They point to the use of 'interactive course software that provides instantaneous feedback' as one potential source for the relatively stronger performance in introductory economics classes citing the fact that a subset of courses that used such software had even higher success rates.

The extent to which upward enrolment trends in online courses at the community college level continue will have a significant impact on the degree to which students pursue economics as performance in introductory courses have been shown to be a significant determinant of persistence in the major (McGoldrick et al., 2012). Great caution needs to be applied when interpreting such aggregate results, however, as a number of studies have found that performance differences in introductory economics courses across online and face-to-face courses vary by sex, race/ethnicity, and class rank (Brown and Liedholm, 2002; Coates et al., 2004). This is an even more important consideration since community colleges tend to attract a large proportion of minority students. For example, 44% of Black students were enrolled in public two-year colleges compared to 29% at public four-year institutions in 2014 [Ma and Baum, (2016), p.6]. What further complicates the role of online education (and associated performance) in generating interest in economics as a major is evidence suggesting that males and females differ in their responsiveness to course grades, with females demonstrating relatively higher sensitivity to grades (Rask and Tiefenthaler, 2008; Jensen and Owen, 2001). This becomes even more critical to the future of economics as a discipline as the recent attention to the lack of diversity in economics and its consequences attests (see Bayer and Rouse, 2016; Bayer and Wilcox, forthcoming).

3.3 Clare Battista

Online instruction is an important development because it promotes equity through access. Online instruction increases access to education for working students, students with family obligations, students with financial constraints, limited access to transportation, or students in geographic areas with limited options. Community are often heavily engaged with online instruction. Indeed, given the demand for it, community colleges can seldom (if ever) afford to not offer it.

While the student experience is very different in the online environment and it comes with clear challenges, community college instructors are nonetheless required to deliver a high-quality learning experience. Achieving this outcome requires the instructor to possess a sophisticated skill set and thus requires additional training and professional development. However, it is challenging to persuade online faculty to acquire training or professional development in order to deliver a course if on-ground faculty are exempt from such training. This situation is further exacerbated by the lack of funding for professional development.

According to the CCCC *2017 Distance Education Report*, of the 2.1 million students registered in the 114 Californian community colleges, 28% of these students are online students. Roughly 60% of those students are female. The typical online student is Latinx female between 20–24 years of age (Woodyard and Larson, 2017). Indeed, Latinx is one of the few ethnic groups whose Associate degree attainment continues to grow, in a climate of declining enrolment (Digest of Education Statistics, 2018). Given the nature of student cohort just described, and the capacity of online learning to promote access, diversity and growth in the economics major needs will be considerably assisted by the support and development of online teaching-learning. However, the potential of well-designed online learning to play this role is currently under appreciated.

In some instances, online instruction may hinder the teaching of economics. For example, publishers have increasingly colonised the online environment and now offer a fully packaged online course with adaptive quizzing, discussions, formative and summative assessments, automatic email responses to students, and with some publishers, even accessibility capabilities. In on-ground courses, faculty tend to pick and choose publisher resources and have some flexibility to package them with other non-publisher resources. The use of non-publisher resources usually allows one to offer a broader range of perspectives in economics. However, the online environment is more difficult to customise so faculty may default to, or be incentivised to adopt only publisher materials and simply deliver the publisher course with little or no customisation or inclusion of other resources.

The package deal nature of online learning resources restricts the diversity of perspectives presented in the course. The situation is not really all that much better with conventional learning resources with little variation in economic textbooks. The overwhelming majority of economics textbooks are neoclassical. Offering a slightly different spin on neoclassical economics does not equate to a diversity of perspectives or pluralist economic education.

The corrective to the problems just identified would be to build open educational resource modules that are easily integrated into the online teaching-learning environment and represent alternative perspectives in economics or coverage of topics like inequality, discrimination, and economic history, for example, that are typically ignored. Of course, these OER modules should meet high quality standards and come packaged with a variety of accessible formative and summative assessments, discussions, etc. and makes use of a variety of modalities such as video, audio, text.

Online courses are easy to schedule and respond easily to increases in student demand because they do not require any additional classroom space. Unlike on-ground classes, the number of online offerings is not constrained by physical infrastructure. However, since this means that courses may be added last minute, full-time faculty can find

themselves suddenly overloaded. This results in hiring adjunct faculty at very short notice. The staff might not necessarily have the online training or experience to deliver a quality online course. This mitigates against quality economics instruction. It also increases the ratio of part-time to full-time faculty.

One of the problems associated with increasing the ratio of part-time faculty is that they do not have the same kind of support or access to resources as their full-time counterparts. Even if we could hold instructor quality constant, hiring more under resourced and unsupported instructors does not serve our students well. Part-time faculty are also less likely to have a PhD degree (11%) than their full-time counterparts (Fain, 2014).

Online courses can exhibit greater equity gaps than on-ground courses when there are fewer professional development resources, outdated instructional technology and a shortage of online tutors or counsellors. While moving economics courses online increases *access* to education and thereby improves equity, it does not necessarily improve student learning outcomes. In order to improve success and retention rates among racially minoritised, low income, or first-generation college bound students, we need to have adequate support and resources for students in these online teaching-learning environments.

Zero cost textbooks (ZCT) or low cost textbooks (LCT) are an important development because it increases affordability and access and addresses equity issues. LCTs (which cost less than $40) provide ownership or access to not only textbooks but often additional resources like adaptive quizzes at little or no further cost.

ZCTs and LCTs are a welcome alternative to the infamously high cost of many traditional textbooks. There is a portion of the student population that does not purchase textbooks because of their steep price tag. A ZTC/LTC would ensure that all students have access to the resources required to be successful in the course. It is relevant to note that most instructors in economics never use the entire textbook in principles of microeconomics or macroeconomics for their courses even though students are required to purchase the entire text.

The existence of ZCT and LCT prompts instructors toward thinking about, and perhaps even addressing, the cost of a course. It certainly makes an instructor more cognizant of their diverse populations of students and perhaps more sensitive and responsive to the constraints confronted by different groups within their student population. This awareness, even if no change is made with respect to textbooks, can help with instructor sensitivity and behaviour in the classroom.

If ZCTs prompts instructors to explore OER resources more extensively, then they can potentially deliver a higher quality course. They might also be encouraged to offer alternative approaches in economics, which are not typically covered in textbooks but which might find coverage in OER resources. Likewise, they would have more freedom to introduce economic history and history of economic thought since there is more resource support for those subjects in OER. The potential benefits of OER depend on appropriate, high quality OER resources. There are developments in this regard. For example, I am currently involved in an OER project with economics faculty across community colleges in California in which we are developing OER-resourced modules on more topics such as economic inequality, behavioural economics, climate change, economic history, and history of economics thought, to name a few.

3.4 W. Edward Chi

The two key developments are increased student enrolments and increased focus on math and English instruction in the K-12 grades. Postsecondary enrolments in the USA have increased significantly in recent decades from 51% of recent high school completers in 1975 to 70% in 2016 [Snyder et al., (2019), p.395]. This means that post-secondary institutions, including community colleges, are serving a broader swathe of the population than before. This includes growing shares of lower-income students and students of colour, which are the largest at community colleges [Bailey and Dynarski, 2011; McFarland et al., 2019; Snyder et al., (2019), pp.431–435]. These trends are relevant as lower income students and students of colour have lower graduation rates (de Brey et al., 2019; The Pell Institute for the Study of Opportunity in Higher Education, 2019). The demographic changes mean that community colleges, including their economics programs, need to adapt in order to improve students' academic outcomes. Changes have been forthcoming, including new student support programs at community colleges involving increased financial aid, dedicated courses, and enhanced advising, such as in the Accelerated Study in Associate Programs (ASAP) (Sommo et al., 2018). In economics and other disciplines, open educational resources (i.e., free textbooks) have been developed to reduce the cost of postsecondary attendance (Pitt, 2015). Adaptations such as these are necessary to better serve today's community college economics student.

A second change in the US is a shift in focus by K-12 schools towards math and English and away from science and social studies as measured by instructional time (Dee et al., 2013). This shift is attributed to the implementation of school accountability policies beginning in the 1990s, culminating in the 2001 No Child Left Behind Act (NCLB), which sanctioned public schools whose students did not achieve proficiency targets on states' standardised test scores in math and English, primarily in the elementary and middle grades. While it is possible improved proficiency in both math and English would seem to benefit subsequent learning in economics, it may also be possible that reduced early exposure to economics and other science and social science disciplines may have negative consequences for economics instruction. For instance, diminished understanding of how to apply the scientific method, or reduced interest in economics and the other social sciences may result. Though the NCLB has been replaced by the 2015 Every Student Succeeds Act, which gives states more leeway in designing their accountability systems, the focus on math and English proficiency and testing remains.

In summary, changes in college student demographics and prior academic preparation suggests that economics instruction at community colleges needs to adapt to students with different backgrounds and prior exposure to science and social science subjects.

4 Can (and should) a one-semester course in economics in the community college sector differ from a one-semester introductory economic course taught in the university sector? If so, how should it be different?

4.1 W. Edward Chi

As community college students have different backgrounds than university students, instructional content and practices at community colleges, including in economics, should

be tailored specifically to community college students. As mentioned, community colleges, compared to universities, serve higher shares of students with backgrounds from low income and racially underrepresented backgrounds. Community college students are also more likely to be working full-time, attending college part-time, and without a parent holding a bachelor's degree or having enrolled in higher education (McFarland et al., 2019; Velez et al., 2018). Economics should be taught differently than in the university sector in order to better serve students.

Tailoring content to students' backgrounds and prior experiences can be helpful in several ways. For instance, when information is tailored to be more relevant to a student, it is more readily remembered and motivates student learning (Kember et al., 2008; Rawson and Van Overschelde, 2008). Thus, applications of economic theory used in instruction are more effective if they are more relatable to students' backgrounds and prior experiences. An economics textbook example involving airline ticket pricing may be less relatable to community college students than the pricing of cellular phone contracts. Adaptations, particularly of textbook content that is more suited to university students, can improve learning in economics courses.

Additionally, the many community college students without a parent who previously attended college or earned a bachelor's degree may be less familiar with the college environment, including the resources in place to help students, such as faculty office hours (Duncheon, 2015). Moreover, as more community college students work full-time and attend college part-time, community college students may be less academically and socially engaged in their colleges. These factors mitigate against student persistence (Hausmann et al., 2009; Kuh et al., 2008), which is lower at community colleges (Shapiro et al., 2018). To improve academic outcomes, community college economics instructors can directly address the different needs of their students. Instruction can involve more interaction, both student-to-student and student-to-instructor, to help students build social supports, become more engaged, and to learn from others about college resources to support their learning. Practices that promote student interaction with instructors and peers have been linked to greater student learning and academic engagement (Gasiewski et al., 2012).

While tailoring content and instruction to better serve economics students at community colleges may involve additional effort, the combination of the growing returns to completing college and the low rates of persistence at community colleges, means that supporting community college students is more important than ever. As an example, the previously mentioned ASAP student support program at the City University of New York's community colleges was estimated to yield a three- to four-times return to taxpayers in the form of subsequent increased tax revenues and savings on public expenditures (Levin and García, 2017).

4.2 Amber Casolari

Community colleges face a dilemma in determining the curriculum: all courses must align with what will be accepted by four-year transfer institutions. In many cases the one-semester course will not count toward major transfer requirements – even though a one semester course may serve as the best introduction to economics in particular for women and underrepresented minorities who are unfamiliar with economics and are not currently on an economics or business track.

The reason we are not attracting more majors and more women and under-represented minorities is that we are teaching economics in a way that discourages them from the profession. We tend to send signals that this discipline is not for them and frankly, we gate-keep. We do so by providing examples directed to white males and use our math not as a tool but a way to 'weed out' students. Let's be honest with ourselves. Think back to how you felt when you took economics and spent your time doing meaningless math that was not connected to intuition and social problems.

Additionally, most of the students in the community college are business students and non-majors. I suggest that the courses have material relevant to the student who may never see another economics course but who may also be treated poorly in the market. In other words, do not overwhelm students with graphs but rather give them life skills and intuition for a lifetime. For example, when I discuss the financial markets, I always include segments about personal finance and saving. Students inevitably have many questions about this segment and they many never take another economics course or see this material again. Further, I have a colleague who teaches about unemployment insurance and then provides a brief explanation on how to apply in the event that a student might ever need to apply. I have yet another colleague who has students research their potential career and corresponding income at the Bureau of Labor Statistics website (bls.gov). There are many creative ways to implement this engagement technique.

4.3 Clare Battista

There is so much variation in one-semester courses in economics across four-year colleges and universities that I am not sure that commenting on whether they would be similar or different from two-year colleges would lend any clarity to the conversation. However, it is worth pointing out that four-year colleges and universities do not usually offer credit for one semester survey courses that combine microeconomics and macroeconomics. Community colleges therefore have considerable choice over the design of these courses. Furthermore, because non-economic majors undertaking a survey course do not need to be prepared to take intermediate neoclassical economic theory the degrees of freedom increase further. The survey course can therefore potentially function is a markedly different, and much more interesting way to introduce students to economics. For example, it could be themed or real-world problem-based, and designed to integrate with a specific major or set of majors in other disciplines.

One-semester courses can potentially articulate effectively with the guided pathways initiative. This program is designed to improve student outcomes in community colleges by streamlining the curriculum and making it more visible to students. This can potentially create a clear and engaging curricular pathway through the education system and also promote a student's employment prospects. For example, if an incoming student is interested in people and society (social sciences) rather than just economics, an appropriately designed survey course in economics could serve as the introduction to the social sciences. It will be all the better if such a course is then made to be transferable. Better again if the subject is capable of functioning as a stepping stone to the economics major or another major such as a political science (Bailey n.d).

4.4 KimMarie McGoldrick

I do not believe this question can be answered without also raising the question that so many principles of economics professors face: should a more theoretical orientation be used in order to prepare students to continue within the major or should the course be viewed as the only economics course students will ever take, suggesting an alternative orientation such as via an issues or literacy framework. I do not think the courses should differ across institution types, but perhaps the course itself ought to move beyond the encyclopaedic theory-oriented approach that is presented by most introductory textbooks.

The question of content and framing is an important one as students who are enrolled in a course that is not necessarily 'representative' of subsequent courses in the major might have a very different expectation of what, for example, intermediate micro or macroeconomics would entail. That said, the evidence is mixed as to whether 'alternative' approaches necessarily put students at a performance disadvantage in subsequent courses. In order to shed some light on the impact of different approaches for teaching a one-semester introductory course, consider the following two studies. Grimes and Nelson (1998) investigate the degree to which students in a social issues course perform on the standardised TUCE exam in comparison to students completing a full, semester-long principles of macro or a micro course. Controlling for student characteristics, experience, and aptitude they find no significant difference in performance between students completing a Social Issues course and students completing the principles of macroeconomics course, although students in the principles of microeconomics course performed better on the TUCE. Gilleskie and Salemi (2012) compare students completing a traditional one-semester introductory course with a one-semester literacy-targeted course with respect to their performance in a subsequent intermediate (micro or macro) economics course. The literacy-targeted course covered fewer topics, emphasised core fundamentals to a greater degree, and included assignments designed to develop a deeper understanding of the covered material (p.113). Their results suggest that students completing the literacy-targeted course performed equally in both intermediate courses compared to students completing the more traditional principles course. We might conclude from these two studies that it is possible to develop a one-semester introductory course, one that focuses on a topical approach and develops economic literacy, that serves both the students who will never take another economics course and those that are preparing to progress through to major in economics.

An important complementary discussion addresses the question of the outcomes associated with a one-semester principles course relative to the more traditional two-semester sequence. Unfortunately, there is little research exploring potential differences in learning outcomes and progression through the major and most studies are decades old (see for example, Klos and Trenton, 1969). Given that most institutions still require a two-course sequence in principles of macro and microeconomics in order to progress in the major (Dean and Dolan, 2012), what are the advantages and disadvantages of a single-semester course? I think the argument rests on the degree to which we want to expose students to economics in a manner that generates interest in the topic, promotes economic literacy, and generates positive behavioural outcomes that are sustained over time. Unfortunately, this is yet another area of research in which there are few studies [a few exceptions include Allgood et al. (2004, 2011, 2012) and Bosshardt and Walstad (2017)].

5 Can pluralism be introduced into a traditional year-long micro/macro sequence? If so, how? Can pluralism be introduced into a traditional year-long micro/macro sequence intended as a transfer course for community college students? If so, how?

5.1 KimMarie McGoldrick

As I have argued elsewhere, one approach to introducing pluralism at any level of economic education is through "employ[ing] learning theory to provide scaffolding" to develop effective learning experiences [Peterson and McGoldrick, (2009), p.87]. Backwards course design suggests that such experiences are grounded in well-defined learning objectives that are then used to identify supporting pedagogical practices and specific course content. For example, Peterson and McGoldrick (2009) describe how pedagogical practices such as cooperative learning and service learning can be used to develop 'significant learning experiences' (Fink, 2003) that go beyond more standard modes of teaching which tend to focus on transmitting foundational knowledge and developing rote application skills. Such alternative approaches include opportunities to teach students how to learn, to integrate their knowledge across ideas and people, to address the human dimension of learning, and to acknowledge peoples vested interests and values, all of which are also arguably consistent with a pluralistic approach [Peterson and McGoldrick, (2009), p.79]. That said, the emphasis on these skills is not the end game for the pluralist agenda, "[r]ather, these create an environment in which students evaluate existing economic models based on individual and collective life experiences, thereby critically assessing the applicability of these models to the world in which they live" [McGoldrick, (2009), p.228]. I agree with the perspective of Nelson (2009) when, in reviewing potential approaches to integrating a pluralistic perspective, argues that a "broader questions and bigger toolbox approach … may be more appropriate for the learning stage of the typical introductory economics student" as opposed to either an alternative single paradigm or a competing paradigms approach" (p.60). This might be achieved by expanding course content to include greater emphasis on policy discussions and behavioural economics which would in turn provide opportunities to meet specific learning objectives such as empowering students to be able to "choose and use appropriate concepts and models to analyze and evaluate choices, outcomes, and policies in diverse settings" [Allgood and Bayer, (2017), p.662].

Despite the potential benefits for developing learning objectives, economists lag behind other disciplines in their adaptation. Allgood and Bayer (2017) document this lack of attention (as a discipline and more specifically on course syllabi) and provide a method for "combin[ing] content and competencies to create learning objectives in economics" (p.661), showcasing a model set of objectives for a principles of microeconomics course. What is perhaps most useful about this process is that the competencies and objectives presented "retains great flexibility in allowing instructors to discuss concepts, models, and topics of their choosing" (p.664). One might also argue that this process provides a more rigorous methodology for integrating course content and pedagogic practices that can be assessed for learning efficacy and ultimately compared across both standard and pluralist approaches. The broader process of developing courses based on detailed learning objectives and evaluating the degree to which these approaches generate expected outcomes would be the ultimate litmus test for how pluralism might be

effectively integrated in either course, regardless of whether it is intended for transfer or not.

5.2 Clare Battista

Yes, pluralism can be introduced into a micro/macro sequence for students intending to transfer. An instructor can introduce pluralism in microeconomics through topics such as behavioural economics, income inequality, discrimination, immigration, and game theory, to name a few. An instructor can also take a specific topic and integrate it throughout the course in different ways. For example, integrating the notion of market power throughout a microeconomics course, or using market power as a way to develop an understanding of power relations as a part of a more general integration of power relations throughout the course.

An instructor can introduce pluralism in macroeconomics by including the history of thought, economic history, and policy debates. Instructors could also introduce topics like climate change and instability, inequality, technology, joblessness, and economic sustainability. Pluralism could also be introduced in discussions on what constitutes a good macroeconomics outcome. This focus on outcomes invites a diversity of positions and compels students to think more critically about the process of determining outcomes as opposed to merely accepting any given definition of a good outcome.

An instructor can also introduce pluralism in macro/micro through innovative course design and pedagogy. Approaches to teaching that invite questions and open dialogue foster pluralism in the economics classroom, as questions invariably represent a diversity of perspectives. In this way, pluralism can be strategically weaved into responses to these questions. Furthermore, fielding questions from students and formulating thoughtful responses also makes the instructor more accessible to students. In addition, approaches to teaching like team-based learning (TBL) or problem-based learning (PBL) that have diverse student teams working on real-world problems or addressing important issues also introduces pluralism into the classroom.

Principles of microeconomics or macroeconomics courses could be taught with more flexibility and thereby be more open to pluralist economic education. Not having time to cover all of the topics, might deter faculty from introducing alternative perspectives in their course. However, if we approach the teaching and learning of economics as a means to foster critical thinking in economics (logical, abstract and quantitative reasoning), rather than primarily about retaining knowledge of specific economic concepts, we might create the necessary space in our courses. This might allow us to create opportunities for our students to process the information in a variety of ways and also enable us to pursue more pluralist educational goals by using diverse content to achieve critical thinking proficiency.

5.3 Amber Casolari

A greater plurality of illustrative examples can be introduced into any introductory economics course. This is particularly important for non-traditional students who benefit by the use of things that are familiar to them from their everyday lives and choices. Doing this can often allow students to speak with an authority drawn from their experience. This enlivens class discussion. For example, since I am a wife and mother, I

often use examples that relate to my role in that capacity. Doing so, I have found, privileges the female perspective in the course without harming the understanding of the males in the course.

Plurality within the student cohort can be promoted by informing female and underrepresented minority undergraduates about the plurality of topics one could study in economics, which can increase the likelihood of them taking a one semester economics class (Mester, 2019). Students are interested in learning about how economics can help them to give back or aid their communities. Such topics include poverty and inequality, environmental economics and behavioural economics. Taking related courses in other disciplines, either simultaneously or in a sequence, would provide students with a richer experience and understanding.

5.4 W. Edward Chi

Pluralist economic theory can complement topics typically covered in a first-year economics curriculum in college. To do so, instructional time would have to be taken from other areas of the course with attention to transfer agreements with universities that stipulate that certain content is covered at community colleges. Existing units of instruction could be abbreviated to incorporate pluralist views alongside more traditional views. Alternatively, pluralist content may be presented in one or more separate units of instruction. Including pluralism in the curriculum can help students see that knowledge, including in economics, is evolving and under constant critique. This can help students think more critically and deeply about economics, which can only be helpful for their learning in the field.

6 In what ways can community college economics instructors contribute to pluralist economic education and how can such instructors be supported and encouraged?

6.1 W. Edward Chi

As resources for the instruction of pluralistic economics are not as readily available as resources for teaching mainstream content, particularly in mass-market economics textbooks, there is a need for pluralistic teaching and learning materials. With experience in teaching at community colleges and less constraints imposed by disciplinary orthodoxy that may be stronger in university departments, community college economics instructors may be in the best position to develop pluralist economics learning materials at the community college level. However, attracting interest and resources to such a project is difficult, with less awareness of pluralism in economics and competition from mass-market textbooks. The best solution may be government intervention that sustains a separate market for learning materials used at community colleges. For instance, a requirement that textbooks used at community colleges address the learning needs of community college students more than the needs of university students may result in such a market. If such a market were to exist, community college economics instructors may become more frequent contributors of content, including pluralism, to economics textbooks and other learning resources.

6.2 Amber Casolari

Instead of the traditional theoretical supply and demand approach to learning economics, Professor Raj Chetty at Harvard University uses big data to examine and understand important social issues that students are concerned about. He argues that doing so is more in-line with what economists actually do, interests non-traditional economics students, and may have a larger impact on those students who will be making an impact on larger national decisions in the future. Can this be supported at the community college? This would require a new manner of teaching and learning from both faculty and students. I suspect this will require lots of encouragement and support.

Institutions need to support teaching faculty in their pursuit of scholarship of teaching and learning (SOTL) in several ways that they currently do not. The most important reform would be to grant staff time for professional development activities such as attending teaching and learning conferences, and being give the scope to test and evaluate new strategies in their own classrooms. Sabbaticals for larger projects would also be appropriate.

To increase efficiency, there could also be a system-wide approach to SOTL. California has 114 colleges, meaning it has the largest community college system. Accordingly, the state of California could provide grants to several faculty each year to travel and conduct research on effective teaching and learning for our students. Given that we are the faculty that is the most engaged in an environment that is generally more challenging than at four-year colleges, this is where we could potentially learn the greatest lessons for all post-secondary education.

6.3 Clare Battista

Community college faculty focus almost exclusively on teaching and learning, and thereby are in a unique position to contribute to a pluralist economics education.

Community college instructors serve a much more demographically diverse population of students. This necessarily impacts how we teach. For example, we are compelled to address equity and inclusion because our student success depends on it. Pluralist economic education can be viewed as an approach to equity and inclusion in the economics classroom.

Teaching and understanding economics through the lens of 21st century problems like poverty, inequality, climate destabilisation, food insecurity, sustainability, to name a few, makes the study of economics more interesting and appealing to women and students from minority populations (Bayer, 2011; Avilova and Goldin, 2018). This creates a much more inclusive classroom environment.

Critically evaluating standard approaches to assessment and evaluation and redesigning to meet the needs of all students is important to a pluralist economics education as well as an equitable and inclusive environment. For example, a multiple-choice quiz format for summative assessment is a standard way for students to demonstrate what they know. However, not all students are able to effectively demonstrate their knowledge in what is an inherently constricted form of assessment. Over reliance on such approaches is constraining. A variety of assessment formats allows students to utilise their experiences and strengths as a means to demonstrate their knowledge and to foster deeper engagement and learning.

Analysing and modifying our own (instructor) behaviour in the classroom to ensure that all of our students feel welcome, and a part of the learning community, is also an aspect of a pluralist economics education (Zarghamee, 2017).

Information sharing is also important. Community college faculty need more opportunities to share their innovative course designs and best pedagogical practices across two-year and four-year institutions. For example, funding to present or attend the American Economic Association's Conference on Teaching and Research in Economic Education (CTREE) is one option among others. In general, community college faculty need to be supported and encouraged to reach across to four-year institutions, and to attend and present at conferences in order to promote a co-informing dialogue of mutual learning.

Professional support networks are also important. Community college economics faculty need more opportunities to work together across community college campuses (regionally) so that we do not feel isolated and have a cohort of colleagues that are in a position to help and offer feedback on ongoing teaching and learning related initiatives. Initiatives such as this roundtable can function as catalysts for the establishment of such networks and collaborations.

References

Allgood, S. and Bayer, A. (2017) 'Learning outcomes for economists', *American Economic Review, Papers & Proceedings*, Vol. 107, No. 5, pp.660–664.

Allgood, S., Bosshardt, W., van der Klaauw, W. and Watts, M. (2004) 'What students remember and say about college economic years later', *American Economic Review*, Vol. 94, No. 2, pp.259–265.

Allgood, S., Bosshardt, W., van der Klaauw, W. and Watts, M. (2011) 'Economics coursework and long-term behavior and experiences of college graduates in labor markets and personal finance', *Economic Inquiry*, Vol. 49, No. 3, pp.771–794.

Allgood, S., Bosshardt, W., van der Klaauw, W. and Watts, M. (2012) 'Is economic coursework, or majoring in economics, associated with different civic behaviors?', *Journal of Economic Education*, Vol. 43, No. 3, pp.248–268.

American Associate of Community Colleges (AACC) (2019) *Fact Sheet*, American Associate of Community Colleges [online] https://www.aacc.nche.edu/wp-content/uploads/2019/05/AACC 2019FactSheet_rev.pdf (accessed 21 June 2019).

Asarta, C.J., Fuess Jr., S.M. and Perumal, A. (2013) 'How do transfer students perform in economics? Evidence from intermediate macroeconomics', *Journal of Economic Education*, Vol. 44, No. 2, pp.110–128.

Avilova, T. and Goldin, C. (2018) 'What can UWE do for economics?', *American Economic Review, Papers and Proceedings,* May, Vol. 108, pp.186–190.

Bailey, M.J. and Dynarski, S.M. (2011) 'Gains and gaps: a historical perspective on inequality in college entry and completion', in Duncan, G.J. and Murnane, R.J. (Eds.): *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, pp.117–129, Russell Sage Foundation, New York, NY.

Bailey, T.R. (n.d.) *Guided Pathways at Community Colleges: From Theory to Practice* [online] https://www.aacu.org/diversitydemocracy/2017/fall/bailey (accessed 18 June 2020).

Bayer, A. (2011) *Diversifying Economic Quality: A Wiki for Instructors and Departments* [online] http://www.diversifyingecon.org/ (accessed 18 June 2020).

Bayer, A. and Rouse, C.E. (2016) 'Diversity in the economics profession: a new attack on an old problem', *Journal of Economic Perspectives*, Vol. 30, No. 4, pp.221–242.

Bayer, A. and Wilcox, D. (Forthcoming) 'The unequal distribution of economic education: a report on the race, ethnicity, and gender of economics majors at U.S. colleges and universities', *The Journal of Economic Education*, Vol. 50, No. 3, pp.299–320.

Bosshardt, W. and Walstad, W. (2017) 'Some lasting effects of undergraduate economics on retirement planning', *American Economic Review*, Vol. 107, No. 5, pp.650–654.

Bosshardt, W. and Walstad, W.B. (2019) 'The undergraduate economics coursework of elementary and secondary school teachers', *The Journal of Economic Education*, Vol. 50, No. 4, pp.1–8.

Brown, B.W. and Liedholm, C.E. (2002) 'Can web courses replace the classroom in principles of microeconomics?', *The American Economic Review*, Vol. 92, No. 2, pp.444–448.

California Guided Pathways Project (2019) *California Guided Pathways Project* [online] http://www.caguidedpathways.org (accessed 18 June 2020).

Coates, D., Humphreys, B.R., Kane, J. and Vachris, M.A. (2004) 'No significant distance between face-to-face and online instruction: evidence from principles of economics', *Economics of Education Review*, Vol. 23, No. 5, pp.533–546.

Cohen, A.M., Brawer, F.B. and Kisker, C.B. (2014) *The American Community College*, 6th ed., Jossey-Bass, San Francisco.

de Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A. and Wang, X. (2019) *Status and Trends in the Education of Racial and Ethnic Groups 2018*, U.S. Department of Education, No. NCES 2019-038, p.228 [online] https://nces.ed.gov/pubs2019/2019038.pdf (accessed 18 June 2020).

Dean, D.H. and Dolan, R.C. (2012) 'Curricular and co-curricular aspects of the economic major at highly ranked institutions', in Hoyt, G. and McGoldrick, K. (Eds.): *The International Handbook on Teaching and Learning Economics*, pp.733–744, Edward Elgar Press, Cheltenham, UK.

Dee, T.S., Jacob, B. and Schwartz, N.L. (2013) 'The effects of NCLB on school resources and practices', *Educational Evaluation and Policy Analysis*, Vol. 35, No. 2, pp.252–279 [online] https://doi.org/10.3102/0162373712467080.

Digest of Education Statistics (2018) *Table 321.10: Associate's Degrees Conferred by Postsecondary Institutions, By Race/Ethnicity and Sex of Student: Selected Years, 1976–77 through 2016–17*, National Center for Education Statistics [online] https://nces.ed.gov/programs/digest/d18/tables/dt18_321.20.asp?current=yes (accessed 18 June 2020).

Digest of Educational Statistics. (2013) *Number and Percentage of Students Enrolled in Degree-Granting Postsecondary Institutions, by Distance Education Participation, Location of Student, Level of Enrollment, and Control and Level of Institution: Fall 2012 and Fall 2013* [online] https://nces.ed.gov/programs/digest/d14/tables/dt14_311.15.asp (accessed 18 June 2020).

Duncheon, J.C. (2015) 'The problem of college readiness', in Tierney, W.G. and Duncheon, J.C. (Eds.): *The Problem of College Readiness*, pp.3–44, State University of New York Press, Albany, NY.

Fain, P. (2014) *Low Expectations, High Stakes* [online] https://www.insidehighered.com/news/2014/04/07/part-time-professors-teach-most-community-college-students-report-finds (accessed 18 June 2020).

Fink, D.L. (2003) *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*, Jossey-Bass, San Francisco.

Garnett, R., Olsen, E.K. and Starr, M. (2010) *Economic Pluralism*, Routledge, New York.

Gasiewski, J.A., Eagan, M.K., Garcia, G.A., Hurtado, S. and Chang, M.J. (2012) 'From gatekeeping to engagement: a multicontextual, mixed method study of student academic engagement in introductory STEM courses', *Research in Higher Education*, Vol. 53, No. 2, pp.229–261 [online] https://doi.org/10.1007/s11162-011-9247-y.

Gilleskie, D.B. and Salemi, M.K. (2012) 'The cost of economic literacy: how well does a literacy-targeted principles of economics course prepare students for intermediate theory courses?', *Journal of Economic Education*, Vol. 43, No. 2, pp.111–132.

Goldin C. (2015) 'How to achieve gender equality', *Milken Institute Review*, July, Quarter 3, pp.24–33.

Grimes, P. and Nelson, P.S. (1998) *The American Economist*, Vol. 42, No. 1, pp.56–64.

Grimes, P., Rezek, J.P. and Campbell, R.C. (2013) 'Academic success and the transfer of community college credits in the principles of economics', *American Economist*, Vol. 58, No. 1, pp.27–40.

Hausmann, L.R.M., Ye, F., Schofield, J.W. and Woods, R.L. (2009) 'Sense of belonging and persistence in white and African American first-year students', *Research in Higher Education*, Vol. 50, No. 7, pp.649–669 [online] https://doi.org/10.1007/s11162-009-9137-8.

Hodgson, G.M., Maki, U. and McCloskey, D. (1992) 'A plea for a rigorous and pluralistic economics', *American Economic Review*, Vol. 82, No. 2, p.25.

Jenkins, D., Lahr, H., Fink, J. and Ganga, E. (2018) *What We Are Learning About Guided Pathways*, Community College Research Center, New York.

Jensen, E.J. and Owen, A.L. (2001) 'Pedagogy, gender, and interest in economics', *Journal of Economic Education*, Vol. 32, No. 4, pp.323–343.

Johnson, H.P. and Mejia, M.C. (2014) *Online Learning and Student Outcomes in California's Community Colleges*, Public Policy Institute of California, San Francisco.

Johnson, H.P., Mejia, M.C. and Cook, K. (2015) S*uccessful Online Courses in California's Community Colleges*, Public Policy Institute of California, San Francisco.

Kember, D., Ho, A. and Hong, C. (2008) 'The importance of establishing relevance in motivating student learning', *Active Learning in Higher Education*, Vol. 9, No. 3, pp.249–263 [online] https://doi.org/10.1177/1469787408095849.

King, J.E. (2012) 'A case for pluralism in economics', in *Academy of the Social Sciences in Australia*, *Keith Hancock Lecture*, Melbourne, 7 August.

Klos, J.J. and Trenton, R.W. (1969) 'One semester or two', *Journal of Economic Education*, Vol. 1, No. 1, pp.51–55.

Kuh, G.D., Cruce, T.M., Shoup, R., Kinzie, J. and Gonyea, R.M. (2008) 'Unmasking the effects of student engagement on first-year college grades and persistence', *The Journal of Higher Education*, Vol. 79, No. 5, pp.540–563 [online] https://doi.org/10.1080/00221546.2008.11772116.

Levin, H.M. and García, E. (2017) 'Accelerating community college graduation rates: a benefit-cost analysis', *The Journal of Higher Education*, Vol. 89, No. 1, pp.1–27 [online] https://doi.org/10.1080/00221546.2017.1313087.

Ma, J. and Baum, S. (2016) *Trends in Community Colleges: Enrollment, Prices, Student Debt, and Completion*, College Board Research Brief.

Maier, M. and Chi, W.E. (2016) 'Community college economics instruction: results from a National Science Foundation Project', *The Journal of Economic Education*, Vol. 47, No. 1, pp.84–88.

Matthews, D. (2019) *The Radical Plan to Change How Harvard Teaches Economics*, Vox, May, Vol. 22 [online] https://www.vox.com/the-highlight/2019/5/14/18520783/harvard-economics-chetty (accessed 18 June 2020).

McCann, A. (2019a) *Most & Least Educated States in America* [online] https://wallethub.com/edu/e/most-educated-states/31075/ (accessed 18 June 2020).

McCann, A. (2019b) *Most & Least Educated Cities in America* [online] https://wallethub.com/edu/e/most-and-least-educated-cities/6656/ (accessed 18 June 2020).

McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, S. and Barmer, A. (2019) *The Condition of Education 2019*, U.S. Department of Education, Washington, DC, No. NCES 2019-144, p.396.

McGoldrick, K. (2009) 'Promoting a pluralist agenda in undergraduate economic education', in Garnett, R., Olsen, E. and Starr, M. (Eds.): *Economic Pluralism*, pp.221–235, Routledge, New York.

McGoldrick, K., Emerson, T. and Mumford, K. (2012) 'Women and the choice to study economics', *Journal of Economic Education*, Vol. 43, No. 4, pp.349–362.

Mester, J. (2019) *Increasing Diversity, Inclusion, and Opportunity in Economics: Perspectives of a Brown-Eyed Economist*, Website, 28 February [online] http://www.clevelandfed.org/en/newsroom-and-events/speeches/sp-20190228-increasing-diversity-inclusion-and-opportunity-in-economics.aspx.

Nelson, J.A. (2009) 'The principles course', in Reardon, J. (Ed.): *The Handbook of Pluralist Economics Education*, pp.57–68, Routledge, London.

O'Donnell, R. (2010) 'Economic pluralism and skill formation: adding value to students, economies, and societies', in Garnett, R., Olsen, E.K. and Starr, M. (Eds.): *Economic Pluralism*, pp.262–277, Routledge, New York.

Peterson, J. and McGoldrick, K. (2009) 'Pluralism and economic education: a learning theory approach', *International Review of Economics Education*, Vol. 8, No. 2, pp.72–90.

Pitt, R. (2015) 'Mainstreaming open textbooks: educator perspectives on the impact of OpenStax college open textbooks', *The International Review of Research in Open and Distributed Learning*, Vol. 16, pp.133–155 [online] https://doi.org/10.19173/irrodl.v16i4.2381.

Rask, K. and Tiefenthaler, J. (2008) 'The role of grade sensitivity in explaining the gender imbalance in undergraduate economics', *Economics of Education Review*, Vol. 27, No. 6, pp.676–687.

Rawson, K.A. and Van Overschelde, J.P. (2008) 'How does knowledge promote memory? The distinctiveness theory of skilled memory', *Journal of Memory and Language*, Vol. 58, No. 3, pp.646–668 [online] https://doi.org/10.1016/j.jml.2007.08.004.

Reardon, J. (2009) *Advances in Heterodox Economics*, Routledge, London.

Reardon, J., Madi, M. and Cato, M.S. (2018) *Introducing a New Economics*, Pluto Press, London.

Shapiro, D., Dundar, A., Huie, F., Wakhungu, P.K., Bhimdiwala, A. and Wilson, S.E. (2018) *Completing College: A National View of Student Completion Rates-Fall 2012 Cohort*, National Student Clearinghouse Research Center, Signature Report No. 16 [online] https://nscresearchcenter.org/wp-content/uploads/SignatureReport16.pdf (accessed 18 June 2020).

Snyder, T.D., de Brey, C. and Dillow, S.A. (2019) *Digest of Education Statistics 2017*, 53rd ed. [online] https://nces.ed.gov/pubs2018/2018070.pdf.

Sommo, C., Cullinan, D. and Manno, M. (2018) *Doubling Graduation Rates in a New State [Policy Brief]*, MDRC [online] https://www.mdrc.org/publication/doubling-graduation-rates-new-state.

The Pell Institute for the Study of Opportunity in Higher Education (2019) *Indicators of Higher Education Equity in the United States: 2019 Historical Trend Report* [online] http://pellinstitute.org/downloads/publications-Indicators_of_Higher_Education_Equity_in_the_US_2019_Historical_Trend_Report.pdf (accessed 18 June 2020).

Twombly, S. and Townsend, B.K. (2008) 'Community college faculty: what we know and need to know', *Community College Review*, Vol. 36, No. 1, pp.5–24 [online] https://doi.org/10.1177/0091552108319538.

United States Census Bureau (2018) *Educational Attainment in the United States: 2018, Table 2* [online] https://www.census.gov/data/tables/2018/demo/education-attainment/cps-detailed-tables.html (accessed 18 June 2020).

United States Census Bureau (2018) *Educational Statistics*, United States Census Bureau, Washington.

Velez, E.D., Bentz, A. and Arbeit, C.A. (2018) *Working Before, During, and After Beginning at a Public 2-Year Institution: Labor Market Experiences of Community College Students*, U.S. Department of Education, No. NCES 2018-428 [online] https://nces.ed.gov/pubs2018/2018428.pdf (accessed 18 June 2020).

Walstad, W.B. and Watts, M. (2015) 'Perspectives on economics in the school curriculum: coursework, content, and research', *The Journal of Economic Education*, Vol. 46, No. 3, pp.324–339 [online] https://doi.org/10.1080/00220485.2015.1040185.

Woodyard, L. and Larson, E. (2017) *2017 Report: Distance Education Report*, Academic Affairs Division, California Community Colleges Chancellor's Office [online] https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Reports/Files/2017-DE-Report-Final-ADA.ashx?la=en&hash=4355069E3B2E3371FBF401A0788013DD0188EE3D (accessed 18 June 2020).

Zarghamee, H. (2017) *Missing Women in Economics: A More Inclusive Classroom*, Blog post, 22 September [online] https://www.core-econ.org/missing-women-economics-inclusive-classroom/ (accessed 18 June 2020).