Description of Cost Component of Texas Dual Credit Study

Purpose
The purpose of the cost component of the Texas Dual Credit Education Study is to provide an accurate account of comprehensive costs of providing dual credit programs across the state. The cost analysis component of the study is designed to yield several types of information that will be useful to policymakers, practitioners, and researchers alike.

First, the cost analysis will provide a better understanding of the types and quantities of personnel and nonpersonnel resources used to deliver dual credit courses to students, as well as the corresponding cost of those resources. To this end, the cost information will show what it would cost to replicate a dual credit program at a new site and thus provide information to determine the feasibility of doing so. The information is valuable not only in providing a general account of the costs, but also as a reference that can be used to consider how resource usage might be adjusted to improve delivery of dual credit courses. In addition, knowing the costs of providing dual credit courses is important for understanding the total effort involved in sustaining such programs over time.

Second, the study will shed light on how the burden of these costs is shared among a variety of stakeholders, including community colleges (CCs), public school districts, and students and their families. This information can be used by policymakers in developing more equitable mechanisms for funding dual credit programs.

Finally, beyond understanding the cost structure of dual credit programs and who pays for these programs, ultimately policymakers want to know “is it worth it?” To this end, we will explore the feasibility of conducting a benefit-cost analysis. Doing so will require monetizing the outcomes analyzed in the impact analysis (a separate component of the study) and comparing those benefits to the costs of providing dual credit programming.

Selecting the Sample of Partnerships
For the cost analysis, we will first select a sample of dual credit partnerships, consisting of CCs and their partner public school districts and high schools (Figure 1). The partnerships will be sampled to encompass different geographic locations (including both urban and rural areas), dual credit delivery models (including courses offered onsite at community college campuses and offsite at high schools), and program types (early college high schools versus traditional dual credit programs). Developing the sample in this manner will allow for comparative analysis between dual credit programs in these various contexts. We will first select four CCs – two that serve relatively urban high school partners and two that

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1 Community colleges may refer to single colleges or community college districts having multiple campuses.
2 Due to the substantially different resources required for both CTE dual credit education and online courses, and the relatively small prevalence of each of these types of dual credit offerings, we are not planning to perform in-depth cost analysis of these types of programs. However, we will be performing a broad scan of the research literature on differential costs of these programs, as well as a less intensive investigation of extant data available on the resources used by these types of models.
serve more rural high schools partners. From those CCs, we will select a set of partnering public school districts, and high schools within those districts, that use various dual credit delivery models.

**Figure 1. Illustration of Sampling Plan for Cost Analysis**

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<tr>
<th>Community Colleges</th>
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<td>• Geographic representation within the state</td>
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<td>• Partnering with urban vs. rural high schools</td>
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<th>Public School Districts</th>
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<td>• Containing a variety of delivery models</td>
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<td>• Early college high school versus traditional high school delivery</td>
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<td>• On college campus versus off college campus delivery</td>
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<th>High Schools</th>
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<td>• Representing different models of delivery</td>
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**Cost Analysis Methods – The Ingredients Approach**
We will use the *ingredients approach* to costing out educational services, as documented by Levin et al. (2018), to identify the additional costs associated with providing dual credit above those that would be incurred in a traditional (non-dual credit) high school setting. The approach involves identifying the comprehensive list of “ingredients” – personnel and nonpersonnel resources, such as instructor time and textbooks – involved in providing dual credit education, as well as their quantities and unit prices. Quantities of ingredients and unit prices are used to cost out each ingredient, which can then be aggregated to provide an estimate of the overall cost in total, or on a per-student or per-semester credit hour basis. The ingredients generally fall into four categories – personnel, facilities, supplies/materials, and equipment – and will be organized by various components of dual credit provision (instruction, administration, transportation, etc.). In addition, we will track which stakeholder is bearing the costs associated with the resources used in delivering dual credit courses. In this way, we will be able to determine how costs are shared among various stakeholders (i.e., CCs, school districts, and students and public districts).

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3 Urban and rural definitions are based on census locale definitions that are also used by the National Center for Education Statistics (see [https://nces.ed.gov/programs/edge/docs/LOCALE_DEFINITIONS.pdf](https://nces.ed.gov/programs/edge/docs/LOCALE_DEFINITIONS.pdf)).


5 For personnel, the “prices” are defined as full compensation, including both salaries and benefits.
their families). The cost burden to students and their families is of special interest, given the student debt goal in 60x30TX.⁶

The costs we will consider will be only those related directly to the provision of dual credit and are extraneous to the general operation of schools. The intention of the analysis is to isolate the differential costs of dual credit instruction compared to traditional high school instruction. That is, how much more (or less) does it cost to provide students with dual credit instruction compared to traditional high school instruction. As described below, the benefit-cost analysis will account for cost savings that result from granting college credits through dual credit coursework.

**Data Collection**

To conduct the cost analysis, we will gather extant data and conduct primary data collection. Specifically, extant data will consist of statewide data obtained from the Texas Higher Education Coordinating Board (THECB), as well as the Texas Education Agency (TEA), on dual credit enrollment and instructor salaries. We will also analyze extant data from the sampled set of study sites. These data will include fiscal data on dual credit spending from CC and school-district accounting systems and any documentation of service arrangements between colleges and partnering school districts and high schools. This documentation will include information obtained through memoranda of understanding (MOUs) between the CC, district, and school partners, as well as fiscal arrangements, such as tuition payments, leases, etc. The extant data will be used to determine quantities of certain ingredients that are clearly identified in the data (e.g. the number of dual credit instructors that are full-time college faculty) and will be used to establish average prices of ingredients (e.g. the compensation associated with a typical full-time college faculty member providing dual credit instruction).

Because extant data are generally not detailed or comprehensive enough to identify all costs involved in the delivery of dual credit programs, we will also conduct interviews at each site. These interviews will be necessary to obtain further detail on how dual credit is delivered within each study site, the specific resources that are required for such delivery, and the funding used to support each of the resources used. For example, there might be a school district administrator who is responsible for overseeing dual credit as one of their many responsibilities. To identify the cost of administering dual credit we will need to understand how much time that administrator spends on dual credit relative to the many other tasks that administrator might have.

**Benefit-Cost Analysis**

Upon completion of the cost analysis – which will yield an estimate of the cost of delivering dual credit programs – we will also explore conducting a benefit-cost analysis to understand whether the benefits of dual credit outweigh the costs of providing this intervention. To assess benefits, we will attempt to assign dollar values associated with outcomes measured in the impact analysis such as: a) increases in the rates of enrollment and credit completion in postsecondary education programs, b) increases in the graduation rates from postsecondary education programs, and c) decreases in the time and semester credit hours taken to complete postsecondary education programs. These outcomes will provide monetary benefits for both students and the state of Texas.

⁶ See [http://www.60x30tx.com/goals/goal-four-student-debt/](http://www.60x30tx.com/goals/goal-four-student-debt/)
We can think of benefits both in terms of those that are short-term and long-term. Short-term benefits for students might include paying less for college since they already earned credits toward college completion while still enrolled in high school. Additionally, accelerated college completion results in earlier entry into the workforce, reducing the cost of college and allowing recent graduates to begin earning a full-time salary. This last piece is salient to the student debt goal in 60x30TX, as less time in college and earlier entry into the workforce should also decrease student debt. Long-term outcomes accrue from differential earnings over the course of an individual’s lifetime. Long-term societal benefits may also include lower crime levels, reduced use of social welfare or healthcare systems, and higher tax revenues associated with a more educated and higher paid workforce.\(^7\)

\(^7\) We will not measure these benefits directly as part of this study, but will instead apply estimated benefits based on prior research and knowledge on the benefits of increased education.