

1SUPPORTING STATEMENT A:
REQUEST FOR CLEARANCE OF INFORMATION
COLLECTION FORMS FOR

“Understanding the Impact of Providing
Information to Parents about the Role of Algebra
II: An Opportunistic Study”

January 2014

Submitted to:

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Introduction

The U.S. Department of Education (ED) requests clearance for data collection under the Office of Management and Budget (OMB) clearance agreement (OMB number [IES to complete]) for activities related to the Regional Educational Laboratory (REL) Program. ED, in consultation with SEDL, intends to conduct a timely, policy relevant opportunistic experiment to determine if directly providing parents/guardians, prior to students' selection of their courses, with information on the importance of completing algebra II for college access and success has an impact on the percentage of students who enroll in and complete algebra II by the end of their junior year.

In 2013, the governor of Texas signed House Bill (HB) 5—the Foundation High School Program—into law. HB changed the high school graduation requirements and reduced the number of required state secondary school exams for public high school students in Texas. Prior to enactment of HB 5, high school students were required take four courses each in English, mathematics (including algebra II), science, and social studies—earning the credits they needed to be admitted to most state universities and colleges. Now, only one of the three new graduation plans¹, created for the Foundation High School Program requires completion of algebra II in order to graduate. Despite the change in high school graduation requirements, the public universities in Texas will still require students to have completed algebra I, geometry, and algebra II in order to gain admission

Thus, a relevant question is whether providing parents/guardians with information about the importance of completing algebra II will help prevent students who aspire to postsecondary degrees from opting to skip algebra II in high school. This study builds on research being conducted in a companion study that investigates the trends in the percentage of students in a school who complete algebra II by the end of their junior year for the graduating classes of 2009-10 through 2016-17.

The results of this study will provide Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) with information about the role that information dissemination can play in influencing students' course selection and completion. Information from this study will provide TEA with valuable information that will inform their attempts to stem the number of students who wish to go on to postsecondary education, but may not be aware of the importance completing algebra II has toward this goal. The intervention is relatively inexpensive, so if it is successful, it would demonstrate the benefit of low-cost interventions for influencing student course selection. TEA will be able to use this information to answer questions about changes in course taking patterns and course failure rates that may

¹ The STEM endorsement included in the Foundation plus Endorsement Plan also requires completion of algebra II.

arise from parents, education practitioners and administrators, policymakers, and researchers. It will also allow them to respond to inquiries regarding any variation in how districts responded to the HB 5 graduation requirements.

Additionally, if the results of the study show that schools in which students' parents were provided with information about the role of algebra II in college access and success have higher algebra II completion rates, TEA could recommend that districts conduct an information campaign similar to this one. The Texas Association for School Administrators has already expressed an interest in providing the materials to its members—all school principals in Texas. Similarly, if this study shows positive results, TEA could produce materials for districts to disseminate to parents when statewide policy changes occur. This would allow for a clear and consistent message that is currently lacking, as schools and districts must create their own materials based on their own interpretations of the policy.

Finally, results of our study will provide evidence to other states about the impact of providing parents/guardians with information about course completion. Due to the size and demographic makeup, many states look to Texas for guidance when making decisions about implementing statewide policies and programs. The findings of this study should be of particular interest to those states.

OMB approval is being requested to recruit public high schools in Texas to participate in this study, as well as to collect extant student data records from TEA.

This study will address the following research questions:

Confirmatory Research Questions

1. Does providing parents/guardians of students entering grade 9 after the enactment of House Bill 5 with information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, have an impact on:
 - a. The percentage of students in a school who enroll in algebra II by the end of their junior year?
 - b. The percentage of students in a school who complete algebra II by the end of their junior year?

Exploratory Research Questions

2. Are there differential impacts of providing information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, on students' algebra II enrollment for:
 - a. Schools with a high percentage of minority students?
 - b. Schools with a high percentage of low-income students?
 - c. Schools with a high percentage of low-achieving students?

3. Are there differential impacts of providing information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, on students' algebra II completion for:
 - a. Schools with a high percentage of minority students?
 - b. Schools with a high percentage of low-income students?
 - c. Schools with a high percentage of low-achieving students?

4. To what extent are schools implementing the intervention with fidelity?

Data collection for this project consists of recruitment activities (e.g., telephone calls, email messages) and collection of extant data files from TEA. Specifically, in this OMB clearance package, ED is requesting clearance for the following data collection approach:

- Recruitment activities, including telephone calls and email messages, targeted at public school districts and public high schools in Texas
- Verification of dissemination of study materials to parents
- Extant data collection consisting of student records data and extant district survey data to be obtained from the Texas Education Agency

ED believes that the data collections for which clearance is being requested represent the bare minimum necessary to determine if providing parents/guardians, prior to students' selection of their courses, with information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, has an impact on the percentage of students who enroll in and complete algebra II by the end of their junior year.

A. Justification

1. Circumstances Necessitating the Data Collection

In June 2013, Texas Governor Rick Perry signed House Bill (HB) 5—the Foundation High School Program—into law, which changed high school graduation requirements and reduced the number of required state secondary school exams in the state. HB 5 also grants the Texas State Board of Education (SBOE) decision-making authority on a number of other graduation-related issues. Prior to HB 5, Texas students could choose between two graduation plans:

recommended and distinguished, with special provisions given for students to drop down to a minimum plan.² In both the recommended and distinguished plans, students were required to take four courses each in English, mathematics (including algebra II), science, and social studies—earning the credits they needed to be admitted to most state universities and colleges.

With the enactment of HB 5, these two high school graduation plans were replaced with three new graduation plans: foundation, foundation plus endorsement³, and foundation plus distinguished. The foundation plan was crafted to give students who want to go directly into career and technical fields the flexibility to take more classes focused on their interests, instead of college preparation classes. Under the foundation plan, the number of credits required to graduate has been reduced from 26 to 22, and students are required to complete only three courses each in science, social studies, and mathematics. The foundation plus endorsement plan requires students to continue to earn 26 credits to graduate. Students selecting this plan must continue to complete four courses each in English, mathematics, and science; however, the mathematics courses do not have to include algebra II, with the exception of the STEM endorsement.⁴ Only students completing the foundation plus distinguished plan and the foundation plus STEM endorsement plan will continue to be required to complete four courses each in English, science, and mathematics, including algebra II—the course requirements for admission to most state four-year colleges and universities.

² Only students meeting strict criteria were able to select the minimum plan, and a waiver acknowledging understanding of the Texas Minimum Graduation Plan had to be signed by a student's parent or guardian.

The endorsements include science, technology, engineering, and mathematics (STEM); business and industry; public services; arts and humanities; and multidisciplinary studies.

³ The endorsements include science, technology, engineering, and mathematics (STEM); business and industry; public services; arts and humanities; and multidisciplinary studies.

⁴ A student may earn a STEM endorsement by completing foundation and general endorsement requirements including Algebra II, chemistry, physics, a coherent sequence of four or more credits in Career and Technical Education (CTE) that consist of at least two courses in the same career cluster including at least one advanced CTE course which includes any course that is the third or high course in a sequence, and a coherent sequence of four credits in computer science selected from the approved list.

In response, the SBOE has opted to change the Texas 10 percent rule, which offers admission to state-funded universities to all Texas high school students who graduate in the top 10 percent of their class, to only include students who graduate in the top ten percent of their class and complete the foundation plus distinguished plan beginning with the 2014–15 incoming cohort of grade 9 students.

In addition, the public universities in Texas will still require students to have completed algebra I, geometry, and algebra II in order to gain admission, despite the disparity between some of the new graduation plans and admission requirements to state four-year colleges. Without information about the alignment between high school graduation requirements and college entrance requirements, parents may not be able to help their children make informed choices. This is particularly true for low-income and minority parents, whose children are most likely to be influenced by graduation requirements. Research has shown that these students are the most likely to respond to changes in graduation requirements, as they are the most likely to complete only the minimum graduation requirements (Chaney, Burgdorf, & Atash, 1997; Domina & Saldana, 2011; Saw & Broda, 2012; Schiller & Muller, 2003). As such, removing the algebra II graduation requirement for all high school students may affect some students' eligibility for admission to state four-year colleges and universities.

This study will investigate the impact of providing parents/guardians with information about the role of algebra II in college access. To do so, ED's contractor will utilize an RCT in which the treatment schools provide parents/guardians with information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, while control schools provide parents/guardians with information describing changes to the Texas graduation requirements and providing parents with links to additional resources describing these changes included on state and regional websites. The study will utilize extant student- and school-level data collected and archived in the statewide longitudinal data system maintained by TEA.

The study will follow the grade 9 students who begin high school in study schools during the 2014–15 school year—the first cohort of students required to graduate under the state's new diploma plans—through the end of grade 11. All grade 9 students, including special education student and English learners, who enroll in algebra I in study schools during their freshman year will be included in the study. Data analyses for this study will consist of a confirmatory analysis and a set of exploratory analyses. The confirmatory analysis will examine the impact of providing parents/guardians with information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access. The exploratory analyses will

investigate differences in the effect of providing this information for various subgroups. Informational materials will be mailed to parents of students in treatment and control schools during January and February 2015. The timing of the mailing is intended to coincide with when parents and their students select junior year courses—late February through early March. Extant data from the Texas Education Agency will be used to answer all research questions. Additionally, data from a survey of all districts in Texas administered by TEA will be used to provide information regarding how districts have been communicating with parents and students about the new state graduation requirements.

The data burden timeline is shown in Table 2.

Table 2. Data Burden Timeline

| Data Collection | Purpose | Requesting OMB Clearance? | Oct /Dec 2015 | Jan/Feb 2016 | July 2017 |
|--|---|---------------------------|---------------|--------------|-----------|
| School recruitment | <ul style="list-style-type: none"> • Obtain consent from schools to participate in the study | Yes | X | | |
| School mailing verification | <ul style="list-style-type: none"> • Implementation fidelity assessment | Yes | | X | |
| Extant district survey, school characteristics, and student records data files from the Texas Education Agency | <ul style="list-style-type: none"> • Student mathematics course enrollment, completion, and failure data • Student background characteristics • Description of Texas public high schools • District parent information dissemination data | Yes | X | | X |

2. How, by Whom, and for What Purpose Information Is to Be Used

ED’s contractor for REL Southwest will analyze the data to be collected through this study using statistical models and procedures that are preapproved by the Institute of Education Sciences (IES). The contractor will then summarize the findings in a report that will undergo review for quality and relevance by the National Center for Education Evaluation and Regional Assistance’s (NCEE’s) external review contractor. After the report has undergone IES review, findings will be presented to TEA (the primary audience) and published through IES for educators and education researchers (secondary audience).

To provide this information to the primary audience and the secondary audience, ED's contractor is requesting OMB clearance to perform the three types of data burden activities listed in Table 2.

- 1. School recruitment.** In order to recruit high schools to participate in this study, ED's contractor will send email messages to all principals and conduct telephone calls with select principals from public high schools in Texas. Starting in fall 2015, ED's contractor will begin recruiting high schools to participate in the study.

Recruitment will be conducted via email and telephone. Around the third week of October, ED's contractor will send an email to all high school principals in the state introducing the study and inviting them to participate (see attachment A-2). The emails will outline the goals of the study, the content of the informational materials, and the school's role in information dissemination if randomized into the treatment condition. Principals will be made aware that this study is a randomized controlled trial (RCT) and that one-half of the participating schools will receive informational materials describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, while the other half of the schools will receive informational materials alerting them to changes in the Texas high school graduation requirements and providing them with information on how to access additional resources describing these changes included on several state and regional websites. They will also be informed that their schools will receive the informational materials describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, if desired, after the conclusion of the study—the 2017-18 school year. Interested principals will be directed to contact REL Southwest for additional information. A follow-up email will be sent to all non-responding principals one week after the initial email (see attachment A-3). A second follow-up email will be sent the following week to all non-responding principals. One week after distribution of the second follow-up email, if enough schools have not agree to participate in the study, REL Southwest will begin conducting telephone recruiting calls. The REL Southwest researcher will ensure that principals understand the nature of the study and the responsibilities of participating schools (see attachment A-4). Once principals have agreed to participate in the study, they will be asked to sign a memorandum of understanding/ consent form indicating that their school agrees to participate in the study (see attachment A-12).

Analyses show that approximately 144 high schools out of the 1,499 total public high schools in Texas are needed to participate in the study. ED's contractor anticipates being able to recruit about 80 high schools via email. ED's contractor also anticipates needing to contact approximately 150 high school principals via telephone in order to recruit an additional 64 high schools. To recruit additional high schools, ED's contractor will begin by contacting other high schools within the same districts as those that have already agreed to participate. If this does not result in a sufficient number of high schools, random numbers will be assigned numbers to each of the high schools in Texas that have not responded to the recruitment emails, and the schools will be sorted in chronological order by these random numbers. Starting with the smallest number, high schools will be contacted via telephone and asked to participate in the study.

2. **School mailing verification.** The intervention for this study consists of dissemination of informational materials to the parents of sophomores who entered grade 9 in a Texas public high school during the 2014-15 school year. Informational materials will be sent to parents via the U.S. mail. Participating schools will be supplied with enough postage paid envelopes containing study materials for these parents. Along with these materials, schools will be provided with one postage-paid envelope addressed to ED's contractor. The envelope will contain the name of the school from which it was sent, and schools will be asked to mail this envelope at the same time as the informational materials. ED's contractor will use these envelopes to determine which high schools have mailed the informational materials and when they were sent. If schools have not mailed the informational materials within one week of the mailing deadline, ED's contractor will conduct reminder telephone calls to high school principals. OMB approval is being sought for mailing of the envelopes to ED's contractor, as the receipt (or non-receipt) of these letters provides data which will be used to assess implementation fidelity.
3. **Extant district, school and student data files from the Texas Education Agency.** For this project, REL Southwest will use de-identified versions of TEA's Public Education Information Management System (PEIMS), statewide assessment files and Texas Academic Performance Report (TAPR) files data (see attachment A-6)⁵. Since ED's contractor is requesting data for all students in participating schools in the state as opposed to requesting a customized report, it is not anticipated that this data collection activity will place much of a time burden on TEA staff—not more than 32

⁵ TEA will provide ED's contractor with data files in which student identification numbers have been encrypted. The encryption process will be the same for both files, which will allow us to link the files.

hours (16 hours each of two times). TEA regularly prepares files in this manner for inclusion in the state longitudinal database housed in the Education Resource Centers located in Austin and Dallas, Texas. Additionally, REL Southwest will request a district survey data file from TEA. The district survey data file contains data obtained via a survey administered electronically to all districts in Texas. As part of the survey, districts were asked to describe the methods they used to disseminate information regarding the new high school graduation requirements to parents and students. The data contained in this file has already been cleaned and made ready for analysis⁶.

3. Use of Automated, Electronic, Mechanical, or Other Technological Collection Techniques

The data collection plan reflects sensitivity to issues of efficiency, accuracy, and respondent burden. To address the study's research questions, the contractor will collect data using electronic data collection tools. The electronic tools include the following:

- A secure electronic file transfer protocol site that allows TEA to transfer extant student and school records to ED's contractor in an efficient and secure way.
- Email messages to district superintendents and high school principals containing information about the study and inviting them to participate.
- Email reminders to the principals of high schools that have not disseminated study materials by the mailing deadline.

4. Efforts to Avoid Duplication of Effort

To the extent possible, this project will rely on extant administrative data or existing documents that are available for students, schools, and districts in Texas, rather than asking individuals to provide the data for this study. The only data to be collected that will be unique to this study will be obtained through the school recruitment activities that we will conduct. All other data used in this study will come from extant data sources.

⁶ The information in the district survey will have been collected and shared with ED's contractor already as a part of the companion study on HB5. Because the burden hours for doing so were already included on the OMB package for that study, which has been approved, collection of this data was not included in the time burden or cost calculations for this study.

We are unaware of any other efforts to provide parents with this type of information about the new high school graduation mathematics requirements and how the extent to which they are aligned with the admissions requirements for most public colleges and universities in the state. Through a separate project, we have determined that many Texas public school districts and high schools have disseminated materials regarding the new high school graduation requirements, but we are unaware of any that focus explicitly on mathematics.

5. Sensitivity to Burden on Small Entities

The use of state-level administrative records will reduce the burden on districts by ensuring that only the minimum amount of original data is requested from districts in order to meet the objectives of this study. Aside from recruitment activities, ED's contractors will not contact districts to request additional data.

All principals agreeing to allow their schools to participate in the study will be asked to sign an agreement to participate form (Attachment A-12). Schools participating in the study will be asked to print and place address labels on the envelopes containing the intervention and control materials. However, there is no data collection, and therefore no data collection burden, associated with the intervention itself beyond sending one envelope to ED's contractor. By agreeing to participate in the study, principals agree to disseminate the materials. Schools will be reimbursed for the cost of student address labels, printing, and staff time. The envelopes will be postage paid.

Schools will be asked to mail an envelope addressed to ED's contractor at the same time as the intervention and control materials. These envelopes will be pre-addressed and postage paid. As such, they place very minimal burden on participating schools.

6. Consequences to Federal Program or Policy Activities if the Collection Is Not Conducted or Is Conducted Less Frequently Than Proposed

The Education Science Reform Act of 2002 states that the central mission and primary function of the regional education laboratories is to support applied research and provide technical assistance to state and local education agencies within their region (ESRA, Part D, section 174[f]) (see attachment A-8). If the proposed data were not collected, REL Southwest would not be fulfilling its central mission to serve the states in the region and provide support for evidence-based research. The research questions addressed in this study respond to questions raised by TEA, which is a constituent member of the REL Southwest. If the proposed data were

not collected, TEA would not know if providing parents/guardians with information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, has an impact on the percentage of students who enroll in and complete algebra II by the end of their junior year. Because Texas is a leader among states as it relates to high school graduation standards (they were one of the first states to adopt a requirement that students complete Algebra II to graduate), the results of this study may also inform decisions regarding high school graduation requirements nationwide.

7. Special Circumstances

This request for OMB clearance does not include any of the stipulated special circumstances and thereby fully complies with regulations.

8. Federal Register Announcement and Consultation

Federal Register Announcement

A 60-day Federal Register Notice was published on April 17, 2015. There have not been any comments posted during the 60-day comment period. A 30-day notice was published on [DATE TO BE COMPLETED BY IES].

Consultations Outside the Agency

ED and/or the REL Southwest contractor have consulted with individuals regarding the availability of data, the soundness of the evaluation design for addressing evaluation questions, and the clarity of measures. Specifically, a technical working group (TWG) comprising experts in research methodology and REL Southwest's core areas of emphasis, which was assembled by the REL Southwest contractor to review studies. The TWG met twice, April 29, 2014 and August 4, 2014, to discuss the changes to the graduation requirements being implemented as a result of HB 5, the study methodology, and measures. The contractor was required to submit to ED the TWG comments and the contractors' plan for addressing those comments (see attachment A-11).

Members of the TWG include:

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Unresolved Issues

There are no unresolved issues.

9. Payment or Gift to Respondents

This request for OMB clearance does not include any monetary incentives to respondents. Schools participating in the study will be asked to print and place address labels on the envelopes containing the intervention and control materials. However, there is no data collection, and therefore no data collection burden, associated with the intervention itself beyond sending one envelope back to ED's contractor. By agreeing to participate in the study, principals agree to disseminate the materials. Schools will be reimbursed for the cost of student address labels, printing, and staff time—up to \$150. The envelopes will be postage paid. Schools will be provided with free study materials and will be offered copies of the final report.

10. Data Confidentiality

The data collection efforts that are the focus of this clearance package will be conducted in accordance with all relevant federal regulations and requirements. The Southwest REL will be following the new policies and procedures required by the Education Sciences Reform Act of 2002, Title I, Part E, Section 183 requires "All collection, maintenance, use, and wide dissemination of data by the Institute" to "conform with the requirements of section 552 of title 5, United States Code, the confidentiality standards of subsection (c) of this section, and sections 444 and 445 of the General Education Provision Act (20 U.S.C. 1232g, 1232h)." These citations refer to the Privacy Act, the Family Educational Rights and Privacy Act, and the Protection of Pupil Rights Amendment.

The project has been approved by E&I Review Services, which serves as SEDL's Institutional Review Board to review research involving human subjects. E&I is registered with the Office of Human Research Protection (OHRP). E&I's IRB Organization number is 000065. E&I's IRB Registration number, effective until November 28, 2015, is IRB00007807 (see attachment A-7).

For student information, the data collection efforts will ensure that all individually identifiable information about students, their academic achievements, their families and information with respect to individual schools, shall remain confidential in accordance with section 552a of Title 5, United States Code, the confidentiality standards of subsection (c) of this section, and

sections 444 and 445 of the General Education Provision Act. The study will also adhere to requirements of subsection (d) of section 183 prohibiting disclosure of individually identifiable information as well as making the publishing or inappropriate communication of individually identifiable information by employees or staff a felony. All administrative records will be sent to ED's contractor by TEA using a file transfer protocol (FTP). Access to the FTP site will be password protected, and all data will be immediately deleted from the FTP site upon successful download by ED's contractor. All data files will be stored on secure server administered by ED's contractor. Extant student data records will already have been de-identified by TEA prior to transfer. That is, all student identification numbers and school identification numbers will have been systematically replaced by TEA using algorithm designed by TEA.

ED's contractor will protect the confidentiality of all information collected for the study and will use it for research purposes only. No information that identifies any study participant will be released publicly. Information from participating institutions and respondents will be presented at aggregate levels in reports. Information on respondents will be linked to their institution but not to any individually identifiable information. No individually identifiable information will be maintained by the study team upon study completion.

To protect confidential data, only the contractor's data management staff, investigators, and research staff will have access to the data files on a "need-to-know" basis. Any identifiable variables, raw data, or derived variables will be stored in encrypted files on a secure data management site. Access to this site will be limited to staff assigned to the project. Any data obtained for this study will be used only for statistical and descriptive analyses. All identifiers will be destroyed as soon as they are no longer required. Study reports will not identify the name of any specific analysis unit (e.g., students, school staff members, or schools). In no case will information be reported when the total number for a quantity represents fewer than four cases. Moreover, any data that permit identity disclosure, when used in combination with other known data, will not be published or made available in restricted-use files.

All members of the study team have obtained their certification on the protection of human subjects in research, and REL Southwest staff members will also have obtained federal security clearances. The REL study team will submit to the NCEE security officer a list of the names of all people who will have access to respondents and data. All staff members working on the project who have access to the data or to respondents will be required to sign a confidentiality pledge and affidavits of non-disclosure (see copies of the forms in Attachment A-10; we will obtain the appropriate signatures). The project team will track new staff and staff who have left the study and ensure that additional signatures will be obtained or clearances will be revoked.

11. Additional Justification for Sensitive Questions

No questions of a highly sensitive nature appear in any study materials, including the recruitment materials.

12. Estimates of Hour Burden

There are three components for which ED's contractor has calculated hours of burden for this clearance package: (1) school recruitment activities, (2) school mailing verification, and (3) extant district, school and student records data collection. Table 3 shows the hourly burden overall and for each component. The total burden associated with this study is 399 hours. For each of the three years of the study, the annualized burden is estimated to be 133 hours. This burden estimate includes the time required to recruit schools to participate in the study—350.6 hours—the time to verify mailing of study materials—16 hours—and the burden estimate for extant data collection—32 hours. For this data collection, the burden was estimated based on the contractor's performance of recruitment activities, as well as the contractor's previous experience obtaining extant data from TEA. The annualized number of responses is 1,468 (a total of 4,404 across three years).

Table 3. Time Burden Estimates for the REL Southwest Study of HB 5

| Instrument | Person Incurring Burden | Number of Respondents | Responses per Respondent | Hours per Response | Total Burden (Hours) |
|--|--------------------------------|------------------------------|---------------------------------|---------------------------|-----------------------------|
| 1. Recruitment emails to principals | High school principal | 1499 | 1 | 0.08 | 119.9 |
| 2. First follow-up recruitment email to principals | High school principal | 1350 | 1 | 0.08 | 108 |
| 3. Second follow-up recruitment email to principals | High school principal | 1215 | 1 | 0.08 | 97.2 |
| 4. Recruitment telephone calls with principals | High school principal | 150 | 1 | .17 | 25.5 |
| 5. School mailing verification | School administrative staff | 144 | 1 | .08 | 11.5 |
| 6. School mailing verification follow-up phone calls | School administrative staff | 45 | 1 | .08 | 3.6 |
| 7. Extant district, school and student data files | State data manager | 1 | 2 | 16 | 32 |
| Total | -- | 4404 | -- | -- | 399 |

We assume an average of 5 minutes per respondent for the initial and follow-up emails (a total of 15 minutes for email recruitment) and an additional 10 minutes for telephone call recruitment. We need approximately 144 high schools out of the 1499 total public high schools in Texas to participate in the study. We anticipate that we will be able to recruit about 80 high schools via email. We also anticipate needing to contact approximately 150 high school principals via telephone in order to recruit an additional 64 high schools. To recruit additional high schools, we will begin by contacting other high schools within the same districts as those that have already agreed to participate. If this does not result in a sufficient number of high schools, random numbers will be assigned to each of the high schools in Texas that have not responded to the recruitment emails, and the schools will be sorted in chronological order by these random numbers. Starting with the smallest number, high schools will be contacted via telephone and asked to participate in the study.

Burden for Recruitment Activities

The total estimated burden for recruiting schools to participate in the study is 350.6 hours, including 325.1 hours for email message to high school principals, and 25.5 hours for telephone calls with high school principals. Recruitment activities will take place during year 1 of the study.

Burden for School Mailing Verification

The total estimated burden for verifying that high schools have disseminated study materials is 16 hours. It should take minimal time for schools to mail the pre-addressed, postage-paid envelopes, and follow-up phone calls with school administrative staff assigned to mail study materials are assumed to take no more than 5 minutes. It assumed that follow-up telephone calls will need to be conducted with administrative staff from approximately one-third of the participating schools.

Burden for Extant Data Collection

The total estimated burden for TEA to compile and transmit secondary data to ED's contractors is 32 hours. This calculation assumes one data manager works a collective total of 32 hours (4 total days) on compiling the data request. ED's contractor is requesting complete data sets (all variables) from the data files maintained by TEA, rather than requesting a customized dataset, which would be more time consuming. The complete files will contain extraneous variables, such as data flags, variables that provide duplicate data, and variables used to create other variables. These extraneous variables will be deleted by ED's contractor prior to analysis of the data files. As such, the burden to downloading the data files and transmitting them to ED's contractor is very low.

The total cost to respondents for the components of this study that require burden from outside sources—the recruitment activities, school mailing verification, and the extant student records data collection—is provided in Table 4. The total respondent cost associated with this study is approximately \$15,526. The annualized cost for this three-year study is \$5,175.33. The cost of the recruitment activities is \$14,024 (\$13,004 for the high school principal emails; \$1,020 for the high school principal telephone calls); the cost of school mailing verification is \$254 (\$207 for mailing the envelopes; \$47 for follow-up phone calls) the cost of the extant data collection is \$1,280. There are no start-up costs associated with this data collection.

Table 4. Estimates of Annualized Costs for Respondents

| Tasks | Type of Respondent | Total Burden Hours | Hourly Wage Rate¹ | Monetary Cost of Burden |
|--|-----------------------------|---------------------------|-------------------------------------|--------------------------------|
| 1. Recruitment emails to principals | High school principal | 119.9 | \$40 | \$4,796 |
| 2. First follow-up recruitment email to principals | High school principal | 108 | \$40 | \$4,320 |
| 3. Second follow-up recruitment email to principals | High school principal | 97.2 | \$40 | \$3,888 |
| 4. Recruitment telephone calls with principals | High school principal | 25.5 | \$40 | \$1,020 |
| 5. School mailing verification | School administrative staff | 11.5 | \$18 | \$207 |
| 6. School mailing verification follow-up phone calls | School administrative staff | 3.6 | \$18 | \$47 |
| 5. Extant student records data | State data manager | 32 | \$39 | \$1,248 |
| Total | -- | 396.7 | -- | \$15,526 |

NOTE: The hourly wage rates for district administrative staff are based on mean wage rates in Texas reported by the Bureau of Labor Statistics (2013). For district superintendents and high school principals the mean wage for education administrators of elementary and secondary schools is used (\$39.59). For school administrative staff the mean wage for office and administrative support workers is used (\$17.90). For state data managers the mean wage for statisticians is used (\$38.80).

13. Estimate of Total Annual Cost Burden to Respondents or Record-Keepers

There are no start-up costs to respondents.

14. Estimates of Annualized Cost to the Federal Government

The annualized cost to the federal government for all project activities is \$162,933.33. The estimated total cost for the three-year project is \$488,800.

15. Reasons for Program Changes or Adjustments

This is a new study.

16. Plan for Tabulation and Publication and Schedule for Project

Tabulation plans

All results for REL studies are made available to the public through peer-reviewed reports that are published by IES. The extant student records data will not be turned over to the REL's IES project officer.

Publication plans

To answer the confirmatory research questions, ED's contractor will utilize multilevel models to compare algebra II enrollment and completion rates by the end of junior year for students in schools that received information about changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, and students in schools that received alternative information about changes to the Texas high school graduation requirements. To answer the exploratory research questions, ED's contractor will include interaction terms into the model used to analyze our confirmatory research question in order to look for differential impacts of providing information describing changes to the Texas high school graduation requirements, with a specific emphasis on changes to the mathematics requirements and how these changes may impact college access, for schools with high minority populations and high low-income populations. ED's contractor will also assess whether there are differential impacts in schools with a higher percentage of low-achieving schools.

The project schedule is presented in Table 5.

Table 5. Schedule of Activities

| Product/Activity | Date |
|---|----------------|
| Draft study proposal to REL Southwest COR | May 2014 |
| Revised draft proposal to RPR | September 2014 |
| Draft OMB package to COR | December 2014 |
| Grade 9 cohort begins high school | August 2014 |
| Final study proposal | November 2014 |
| Notice of IRB clearance | November 2014 |
| Final OMB approval | August 2015 |

| | |
|--|--------------------------------------|
| Recruit high schools to participate in study | October 2015 - December 2015 |
| Send research/informational brochures | January 2016 - End-February 2016 |
| Students begin selecting courses for their junior year | End-February 2016 - Early March 2016 |
| Data analysis: Course completion data available for students who took algebra I in grade 9 | June 2017 |
| Dissemination of limited distribution memo to TEA | Late Summer- Early Fall 2017 |
| Dissemination of public reports | Late Fall 2017 |

17. Approval Not to Display the Expiration Date for OMB Approval

Approval not to display the expiration date for OMB approval is not requested.

18. Exception to the Certification Statement

No exceptions to the certification statement are being sought.

References

Bureau of Labor Statistics (2013). May 2012 state occupational employment and wage estimates: Minnesota. Washington, DC: Author. Retrieved http://www.bls.gov/oes/current/oes_mn.htm#00-0000.

U.S. Department of Education. (2010). A blueprint for reform: The reauthorization of the Elementary and Secondary Education Act. Washington, DC: Author. Retrieved from <http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>

Attachment A-1. Information Materials (Treatment Group)

See attachment

Attachment A-2. School Principal Email

See attachment

Attachment A-3. School Principal Follow-up Email

See attachment

Attachment A-4. School Principal Telephone Call Script

See attachment

Attachment A-5. School Mailing Verification Telephone Script

See attachment

Attachment A-6. Extant Data

See attachment

Attachment A-7. IRB Approval

See attachment

Attachment A-8. Educational Sciences Reform Act (ESRA)

See attachment

Attachment A-9. Federal Register Notices

See attachment

Attachment A-10. Confidentiality Form and Affidavits

See attachment

Attachment A-11. Technical Working Group Suggestions

See attachment

Attachment A-12. School Agreement to Participate Form

See attachment

Attachment A-13 Information Materials (Control Group)

See attachment

