

Texas Higher Education Coordinating Board

Survey of Research Expenditures at Universities and Health-Related Institutions - Instructions

Background

The Texas Higher Education Coordinating Board collects data from Texas higher education institutions annually through the Survey of Research Expenditures. Beginning in Fiscal Year 2010, the survey was issued as part of the Academic Sources and Uses Template. The collection of these data is required by law per Texas Education Code, Chapter 61 Subchapter C, Section 61.0662. The data collected are published and accessible in an on-line report system (www.highered.texas.gov/Research).

The figures from this survey are used by institutions of higher education and other state agencies. In addition, the data provides the basis for public policy and management decisions. Therefore, it is critical that the data reported are accurate and complete.

The information provided in the report should be consistent with an institution's Annual Financial Report (AFR). For additional guidance in business operations of higher education institutions, please refer to the National Association of College and University Business Officers, [NACUBO](http://www.nacubo.org) (www.nacubo.org).

The data collection form and definitions are modeled after similar forms used by the National Science Foundation. This approach is an effort to provide comparability of data with national data and reduce the data collection efforts of the institutions.

Code of Federal Regulations:

The Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Title 2 Part 200 of the Code of Federal Regulations (CFR) in December 2013. Previous references in this document for the definition of Research and Development (R&D) to OMB Circular A-110, subpart A, definition A.2dd and to OMB Circular A-21 B.1.b were updated to reference Title 2, CFR 200.87. The full text of 2 CFR Part 200 is available on the Code of Federal Regulations website (www.ecfr.gov).

Concepts and Definitions

A. Research and Development (R&D) activities are defined as follows (Title 2 CFR 200.87):

Research is systematic study directed toward fuller scientific knowledge and understanding of the subject studied.

Development is systematic use of knowledge and understanding gained from research, directed toward the production of useful materials, devices, systems, or methods including design and development of prototypes and processes.

Research and Development (R&D) also includes activities involving the training of individuals in research techniques where such activities utilize the same facilities as other research and development activities and where such activities are not included in the instruction function.

Exclusions from research and development:

- Training of scientific manpower
- Mapping and surveys
- Routine product testing
- Quality Control
- Experimental production
- Collection of general purpose statistics (statistics not collected as part of a specific R&D project)

NOTE: Certain activities may or may not be classified as research and development depending upon circumstances. Examples of such activities are given below in Reporting Guidelines for R&D versus Non-R&D Activities.

B. Selected financial terms

Expenditures - All amounts of money paid out by the institution to support R&D activities. Include funds "passed through" to other institutions of higher education. Include earned indirect costs and fringe benefits. Do not include non-monetary awards.

Federal Funds - All Federal monies used in support of the R&D activities of the institution. These include reimbursements, contracts, grants, and any identifiable amounts spent from Federal programs including Federal monies passed through state agencies.

Fiscal Year - The 12-month accounting period beginning September 1 and ending August 31 of each year.

Institution Resources - Include expenditures of funds that are locally controlled. This includes Permanent University Funds (PUF) and Available University Funds (AUF), other local funds, etc.

Private - Include expenditures of funds from both for-profit and non-profit corporations and individuals. Also, include in this category funds from agencies from other states.

State Sources - Include all expenditures of funds appropriated by the state of Texas not included in institutionally controlled funds listed under Institution Resources. Included in this category are state appropriated "Special Items" and state research contracts and grants, interagency contracts, contracts with Texas local governments, etc.

C. Definitions for specific line items used in the Research Expenditure Survey

Survey Section: Summary of R&D Expenditures

Total R&D Expenditures - All expenditures except those for R&D plant.

Capital outlay for research equipment - According to the Government Accounting Standards Board, annual financial reports use expenses rather than expenditures. The major difference is that capital outlays for research equipment will be depreciated over the life of the equipment and will not be separately identified as research items in the annual financial reports. This line allows inclusion of expenditures for equipment that are not included in research expenses. The research definition used for this report does not allow inclusion of expenses for R&D plant or construction.

R&D Expenses not meeting the narrow definition of R&D used in the Research Expenditure Survey - Externally-funded activities that cannot be classified as R&D using the definitions appearing in Section A are included. Do not include projects funded with "development" funds unless they are related to research activities.

Reporting Guidelines for R&D versus Non-R&D Activities:

Collection of statistical data - The collection of statistics is an R&D activity only if conducted as part of a specific research or development program. For example, the regular collection and publication of statistics on the incidence of various diseases within a state by a state health department is general purpose data collection and not research or development. The data gathering is not part of a research program and is designed for use by a range of persons, such as practicing physicians, public health officials, and school officials. If the data on incidence of diseases are gathered as part of a project on the origin and nature of particular diseases, however, or to establish generalizations on why certain individuals or groups contract certain diseases, this would be research.

Demonstration - Demonstration activities that are part of research or development (i.e., that are intended to prove or to test whether a technology or method does, in fact, work) should be included. Demonstration intended to make available information about new technologies or methods should not be included. For example, an educational demonstration on new teaching methods should be reported as an R&D activity if the demonstration is established as an experiment to produce new information, is accomplished within a definite time period, and is accompanied by a thorough evaluation. An educational demonstration to apply or exhibit new teaching methods, or a demonstration without a scheduled termination or a thorough evaluation, should not be reported as an R&D activity.

Economic studies - To be classified as research, the activities under this heading should be systematic and intensive. They should not include program planning, implementation, and evaluation unless these activities are designed as a fairly rigorous research effort. For example, a study to determine the impact of proposed tax changes on state revenues, or on statewide employment, consumption, or industrial output could be reported as economic research. The collection of economic data on tax revenues, personal income, or industrial output would be reported as economic research only if collected as part of the research project.

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Evaluation - Evaluation qualifies as research when it is part of a specific research undertaking. Evaluation conducted separately from a research project is considered research when it involves scientific method and hypothesis testing procedures with fairly rigorous standards. Evaluation activities that do not involve systematic design and testing should not be included.

Satellite information - Photographs and tapes purchased from Federal agencies (or others) sponsoring satellite operations are not considered research and development unless they are used primarily in support of a research or development program. Tapes and photographs that are stored in documentation centers or used primarily for the formulation of regulations are excluded from this survey.

Technology transfer - Technology transfer involves the adoption, and perhaps adaptation, of new techniques or products that have already been brought to a usable condition. The adoption and use of a technology is not research and development, but the adaptation of a technology to meet unique regional or local needs could involve R&D activities. For example, a new method of treating water to make it potable is developed in one state. If another state adopts the same treatment process, the adoption costs for facilities, equipment, personnel, etc., are not R&D expenditures. However, if further systematic, intensive study is required by the second state to modify the treatment process to adapt it to unique local conditions, the costs of modification and adaptation could be R&D expenditures.

Survey Section: R&D Expenditures by Funding Source

Agricultural Sciences deal with the production of food and fiber. They include work in plant sciences, animal sciences, aquaculture, agricultural economics, and other topics related to the agricultural enterprise.

Biological and other Life Sciences are those life sciences (apart from medical sciences and agricultural sciences) that deal with the origin, development, structure, function, and interaction of living things. Examples of biological sciences are anatomy, animal sciences, bacteriology, biochemistry, biogeography, biophysics, ecology, embryology, entomology, evolutionary biology, genetics, immunology, microbiology, molecular biology, nutrition and metabolism, parasitology, pathology, pharmacology, physical anthropology, physiology, plant sciences, radiobiology, and systematics.

Computer Science is concerned with the application of mathematical methods to automated information systems, the development of computer technology, and advanced applications of computers.

Engineering is concerned with studies directed toward developing engineering principles or toward making specific principles usable in engineering practice. Engineering fields include aeronautical, astronautical, chemical, civil, electrical, mechanical, metallurgy and materials, and engineering not elsewhere classified, such as agricultural, bioengineering, biomedical, industrial, nuclear, ocean, and systems.

Environmental Sciences (terrestrial and extraterrestrial) are concerned with the gross, non-biological properties (with one exception) of the areas of the solar system that directly or indirectly affect human survival and welfare. They comprise the fields of atmospheric sciences, geological sciences, and oceanography. The one exception is that expenditures for studies pertaining to life in the sea or other bodies of water are to be reported as support of oceanography and not biology.

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Mathematical Sciences employ logical reasoning with the aid of symbols and are concerned with the development of methods of operation employing such symbols.

Medical Sciences are concerned with the causes, effects, prevention, or control of abnormal conditions in humans or their environment as they relate to health. Included are the clinical medical sciences, which are concerned with the study of the origins, diagnosis, or treatment of a particular disease in living human subjects under controlled conditions, and other medical sciences. Examples of the medical sciences are family medicine, internal medicine, neurology, ophthalmology, preventive medicine and public health, psychiatry, radiology, surgery, veterinary medicine, dentistry, physical medicine and rehabilitation, and podiatry.

Physical Sciences are concerned with the understanding of the material universe and its phenomena. They comprise the fields of astronomy, chemistry, physics, and physical sciences not elsewhere classified.

Psychology deals with behavior, mental processes, and individual and group characteristics and abilities. Examples of disciplines within psychology are experimental psychology, animal behavior, clinical psychology, comparative psychology, ethnology, social psychology, educational personnel, vocational psychology and testing, industrial and engineering psychology, and development and personality.

Social Sciences are directed toward an understanding of the behavior of social institutions and groups and of individuals as members of a group. These include anthropology, economics, history, linguistics, political sciences, and sociology.

Other Sciences not elsewhere classified is a category to be used for multidisciplinary and interdisciplinary projects and cannot be classified within one of the broad fields of science listed above.

Arts and Humanities include topics such as art, music, history, languages, religion, and other aspects of human culture and heritage.

Business Administration deals with the management and operation of business enterprises. It includes work in management, marketing, accounting, and related topics.

Education includes research related to any aspect of education. This includes educational policy, education administration, etc., and elementary, secondary, and higher education.

Law and public administration include research related to legal systems and to public policy at the federal, state, or local levels.

Other Non-Science Activities include all other non-science disciplines.

Survey Section: Select Areas of Special Interest

This section is intended to provide information on expenditures in areas of special interest to the public. The list is not all-inclusive. The totals of the Areas of Special Interest will not normally be equal to the "Total Expenditures for Conduct of R&D". Further, expenditures may overlap two or more categories (e.g., a given project may be reported both as materials science and microelectronics or as aging and mental health). Institutions may need to use ad hoc estimators to come up with these numbers.

Human embryonic stem cell research and adult stem cell research were added to the areas of special interest section beginning in Fiscal Year (FY) 2013 as required by Texas Education Code, Chapter 61 Subchapter C, Section 61.0662 (b).