



PERSONNEL COMMISSION

Class Code: 3302
Salary Range: 44 (M2)

EDUCATIONAL RESEARCH ANALYST II

JOB SUMMARY

Under direction, design, conduct and analyze a variety of sophisticated educational research studies, surveys, demographic reports, program evaluations and similar studies, and report findings, using complex, multi-dimensional psychometric statistical tools; perform related duties as assigned.

EXAMPLES OF DUTIES

The classification specification does not describe all duties performed by all incumbents within the class. This summary provides examples of typical tasks performed in this classification.

- Design and conduct studies for specialized and recurring reports on data obtained through surveys, student test results, enrollment information, census data, qualitative methods and other research methodologies. **E**
- Design data collection instruments appropriate to the program or subject matter under study and select appropriate scaling techniques, utilizing a broad range of advanced research and statistical methodologies such as descriptive statistics, exploratory data analysis, Bayesian estimations, psychometric indices for item quality, reliability and validity, factor analysis, scaling, regression, multilevel modeling, multivariate analysis, and focus group, interviewing, assessments for qualitative analysis. **E**
- Analyze complex information on various district testing programs, indicating summary statistics scores and disaggregated distributions for specified student groups; analyze and report validity and reliability for performance assessments. **E**
- Analyze, summarize and interpret data for program evaluations, grant applications and/or public information. **E**
- Operate a computer and utilize a variety of computer program software to input, retrieve, and manipulate large data sets for statistical analyses and generating reports. **E**
- Prepare reports with explanations and interpretations of data in tabular, graphical and/or narrative form. **E**
- Keep current in research design and statistical methodologies in education, psychology and the social sciences. **E**
- Assist with the development and validation of standards based assessments and reporting strategies. **E**
- Estimate time and resources for the conduct of studies, surveys and production of reports; set up schedules of these activities. **E**

- Attend a variety of meetings; may conduct in-services on the uses and purposes of research studies and program evaluation. ***E***
- May plan, direct, train and evaluate the work of assigned staff. ***E***

Note: At the end of some of the duty statements there is an italicized E which identifies essential duties required of the classification. This is strictly for use in compliance with the Americans with Disabilities Act.

DISTINGUISHING CHARACTERISTICS

An Educational Research Analyst I performs the more routine design, analysis and preparation of reports of findings for District assessment programs; conducts surveys, research projects and evaluation studies of varying scope and purpose. An incumbent applies a variety of statistical analyses in determining the validity and reliability of assessments and studies. An incumbent also works with databases in the manipulation and extraction of data.

An Educational Research Analyst II performs the advanced level tasks of a more complex and complicated nature, utilizing database tools. An incumbent in this class is expected to perform the more intricate multiple computer database programming functions, including data manipulation and conversion, with greater independence and discretion.

EMPLOYMENT STANDARDS

Knowledge of

Educational research design and program evaluation.

Ethical guidelines in statistics and research.

Theory guided practices of research design.

Descriptive and inferential statistics including regression and HLM, Bayesian estimations, multilevel modeling and multivariate analysis.

Psychometrics including developing item quality indices, using theories and techniques of reliability, validity, generalizability, IRT, factor analysis, and structural equation modeling.

Strategies for test equating.

Exploratory and confirmatory data analysis, survey analysis techniques, including optimal scaling and unidimensional and multi-dimensional scaling

Sampling theory and variations of random sampling.

Computer systems including hardware, programming, software and database management.

Structured Query Language (SQL) and SQL Server Reporting Services (SSRS).

Ability to:

Analyze, interpret, evaluate and summarize complex data to produce reports.

Design and conduct educational research studies and surveys.

Keep abreast of changes in research design and statistical methodologies in education, psychology and the social sciences.

Develop operational definitions for research questions and resources.

Prepare reports using tabular, graphical and narrative forms.

Calculate measurement errors for commonly used statistics

Apply specific statistical techniques appropriately and accurately.

Use computer on-line retrieval systems.

Perform intricate, multiple computer database programming functions, including data manipulation and conversion.

Utilize Structured Query Language (SQL) and SQL Server Reporting Services (SSRS).

Operate office equipment such as telephone, copier and computer and assigned software.

Establish and maintain effective collaborative working relationships with others.

Conduct in-service on assessment and program evaluation.

Adapt to changing priorities and work assignments.

Education and Training:

Graduation from an accredited four-year college or university with a bachelor's degree in education, psychology, behavioral or social science or a related field with course work in statistics, research methodology or psychological testing. A master's degree or higher is desirable.

Experience:

Three years of technical/professional experience in the development, administration and analysis of tests or behavioral research, utilizing SQL and SSRS, in a school system, university or other institution conducting social science research.

A master's or doctorate degree in one of the designated fields may substitute for one year of the required experience.

Any combination of training and/or experience which demonstrates that the applicant is likely to possess the required skills, knowledge, and abilities may be considered.

WORKING ENVIRONMENT:

Office environment.

Constant interruptions.

Changing priorities.

PHYSICAL DEMANDS

Dexterity of hands and fingers to operate office equipment including a computer keyboard.

Seeing to read a variety of materials.

Hearing and speaking to exchange information in person or on the telephone.

Sitting for extended periods of time.

Lifting and carrying office supplies and equipment weighing up to 15 pounds.

AMERICANS WITH DISABILITIES ACT

Persons with certain disabilities may be capable of performing the essential duties of this class with or without reasonable accommodation, depending on the nature of the disability.

APPOINTMENT

In accordance with Education Code Section 45301, an employee appointed to this class must serve a probationary period of one (1) year during which time an employee must demonstrate at least an overall satisfactory performance. Failure to do so shall result in the employee's termination.

PCA: 3/2/2000

Revised: 3/28/2013

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