Position Classification Standard for Data Transcribing Series, GS-0356

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SERIES DEFINITION

This series covers positions that involve operating or supervising the operation of keyboard controlled machines (such as card punch machines, paper tape recording machines, magnetic tape, or disc encoders, optical character equipment, and computer controlled data entry, update and remote inquiry devices) to transcribe or verify data in a form that can be used in automated data processing systems. The work requires (1) skill in operating typewriter or a modified typewriter style alphabetic and numeric keyboard with acceptable speed and accuracy, and (2) ability to understand and apply machine operating and data transcribing procedures. Data transcribing work that is combined with clerical work is covered in this series unless the clerical work requires specialized experience or training that constitutes the paramount qualification requirement of the position.

This series is an expansion of the former Card Punch Operation Series, GS-0356. The position classification standard for card punch operators, issued August 1959, is canceled.

EXCLUSIONS

Excluded from this series are:

1.   Positions involving the operation of specially adapted typewriters to produce typed copy and a punched tape, magnetic tape or card, or other medium that is used to produce the material automatically, either as it was typed or in an altered arrangement (e.g., converted to justified columns, or merged with other prerecorded information). This work requires typing skill and knowledge of grammar, spelling, punctuation, and arrangement of narrative and tabular material. Such positions are classified in the Clerk-Typist Series, GS-0322.

2.   Positions that involve the operation of computer consoles, or of related devices used solely in support of computer operations when such work requires a substantive knowledge of computer features and of the way in which data are transmitted through the computer system. Such positions are classified in the Computer Operation Series, GS-0332.

NOTE: Some data transcribing equipment has the capability of entering data directly into the computer system and of retrieving and modifying records stored in the system. Operators of such equipment follow a specified sequence of steps to activate the equipment and to respond to specified operating signals or data rejections from the computer, but are not required to understand the processes whereby the data are retrieved from or transmitted to the computer. The necessary operating procedures can be learned in a few days of training. Thus the keyboard operating skills and the knowledge of data transcribing procedures characteristic of the GS-0356 series represent the paramount qualification requirements of such positions.

3.   Positions that involve the operation of telecommunication equipment in transmitting and
        receiving data, which requires a knowledge of communications systems, operations, and
        procedures. Such positions are classified in the appropriate communications equipment
        operating series, (e.g., the Telecommunications Processing Series, GS-0390), or the
        General Telecommunication Series, GS-0392.

4.   Positions which require only the incidental use of data transcribing equipment. Such
        positions are classified in the series which represents the paramount qualification for that
        position. If data transcribing work is a significant portion of a position and must be
        performed with high speed and accuracy, the parenthetical title (Data Transcribing)
        should be added to the appropriate class title, e.g., Supply Clerk (Data Transcribing).

TITLES

The authorized titles for positions in this series are:

   -- Data Transcriber for all nonsupervisory positions. No specializations are provided
   because of the high degree to which operating skills are transferable from one kind of
   data transcribing equipment to another.

   -- Supervisory Data Transcriber for positions that involve significant supervisory duties
   and responsibilities. Such positions should be evaluated by reference to the General
   Schedule Supervisory Guide.
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CLASSIFICATION FACTORS

Equipment Characteristics

This occupation includes the operation of a number of different kinds of transcribing equipment.
Although there are still a large number of standard card punch machines in use, many agencies
have replaced card punch machines with new, more flexible equipment. Most of the new
equipments involve direct encoding of magnetic tape or discs. With such equipment there is no
visible product, such as a punched tape or card, although some provide a visual display of the
data as it is entered.

The nature of the equipment, by itself, does not affect the classification of the position of the
operator. Regardless of the nature of the output, the data transcribing equipment is operated by
using a typewriter style keyboard, normally modified to group numeric keys for one-hand
operation, with a few added special purpose keys. The keyboard skill required for operating the
various equipment is readily transferable from one type of machine to another. An experienced
data transcriber can learn the special operating requirements of a different kind of equipment in a
few days of training and normally becomes fully proficient in the use of the equipment within a
short period of time. Thus a requirement for operating a particular kind of equipment or a

requirement for operating more than one kind of equipment does not significantly affect the classification of the position.

Program Requirements

Although the keyboard skills are very similar, the newer equipment often allows programming flexibility that may significantly affect the procedures applied by the operator. Identical equipment may be used in substantially different ways. The internal programming may make the operators' work more difficult, by requiring more decisions, or may make the work less difficult, by automatically accomplishing functions previously required of the operator.

The nature of the program requirement and related procedures significantly affect the difficulty of the work.

Program requirements include:

--   The form of the data (i.e., entry of numeric data, alphabetic data, special symbols that require double-keying, or various combinations of these);

--   The format of the records produced (i.e., the number of characters that can be entered, the division of a record into separate fields in which specific data are to be entered, the need to fill all spaces, skip specific spaces, etc);

--   The pattern in which data are keyed (i.e., the transcribing sequence and the combination of manual keying and automated skipping or duplicating);

and

--   In some equipment, the error conditions or rejections of data that can occur and the sequence of steps required to clear those conditions.

Normally there are established programs for each transcribing assignment that adjust or control the equipment to produce the output in the required form. The data transcriber sets up the appropriate program controls by inserting a program card, adjusting switches on the machine, or keying a code symbol that activates an internally stored program. On new assignments or other situations when there is no established program, data transcribers may be required to punch program cards or key in detailed instructions to establish the program controls. Program preparation of this nature that is performed on the basis of detailed instructions is substantially the same level of difficulty as the transcription of the data in accordance with that program. Program preparation may be of a higher level of difficulty when it is performed under general instructions or when the data transcriber must recommend suitable program features.

Verification

Normally data transcribing work is verified, either 100 percent or in accordance with a prescribed sampling plan.

1. Some verification work is performed by rekeying the data and correcting any entries that do not match. Such verification work is of the same level of difficulty as the original transcribing work.

2. Some equipment is programmed to verify by performing a series of internal checks and by rejecting data that are not sequential, do not zero balance, or otherwise do not meet the programmed controls.

   a. In some programs the original entry operator must correct the error conditions to get the entry accepted.

   b. In other programs, the internal verification is done after the entry is completed and the verification operator receives a signal of an error condition that must be corrected.

   In either case a. or b., the difficulty must be evaluated in terms of how specifically the error is identified and the complexity and variety of the instructions for correcting error conditions.

Number of procedures

The number of different transcribing assignments performed is not, by itself, a grade distinguishing criterion. As automated data processing systems have expanded, there has been a proliferation of source documents and transcribing procedures. In this process, however, the procedures normally have been simplified and the source documents standardized (and often specifically designed to present data exactly as it is to be transcribed). Under these circumstances a large number of different procedures may present less difficulty than a few more complicated procedures for transcribing less standardized data. Thus the number and variety of procedures applied are to be considered only in conjunction with the complexity of those procedures.

Source documents

Typically data transcribers work from source documents that have been edited and coded, or otherwise marked to indicate the data to be transcribed. Often the documents are specifically designed to present the data in the same form and sequence as they are to be transcribed. Documents originally designed for other purposes may require the transcriber to skip from one location to another, to fill in missing data (from other information in the document or in the data transcribing instructions) or to code data during the transcribing process. The length and complexity of the source documents and the degree to which the transcriber must vary from entering data exactly as it appears on the source document affect the difficulty of the work.

Another element that affects the classification of data transcriber positions is the degree of responsibility for detecting and questioning or correcting errors or omissions in the source documents. This may vary from recognizing that there should be an entry in a space that has

been left blank or correcting nonstandard abbreviations, to questioning entries that are abnormal for the kind of transaction involved (e.g., a cost figure that is much too high or too low for the goods or services involved), to more substantive determinations (e.g., that the authority cited is not proper for the action involved). There are also situations in which an employee both takes a substantive action and transcribes the data to reflect that transaction. For example, an employee in a supply office may adjust inventories and operate data transcribing equipment to record the changes made.

The continuing effort toward standardization of source documents and of both the reporting and transcribing procedures reduces or eliminates the need for the data transcriber to apply a knowledge of the nature of the data being transcribed. However, in some situations, data transcribers must acquire and apply substantial substantive knowledges that may have a grade level impact on the position.

Any data transcribing work that requires substantive knowledge of the transactions being recorded must be analyzed to determine the paramount qualifications required, the grade level of the substantive decision made, and the career identification of the position. Most such positions should be classified in the subject matter series, but positions that require substantive knowledges may be properly classified in the Data Transcribing Series where knowledge of data transcribing is the paramount qualification requirement and where the career identification of the position clearly relates to data transcribing.

Controls over the work

Data Transcribers normally work within a highly controlled production work setting. In such a setting, records of production and the number of errors (as revealed by verification or in the subsequent processing of the data) are maintained for each transcriber on both original entry and verification assignments. These records are used both as an indication of the need for additional training and for evaluation of the transcriber's performance. In most cases there are established production quotas and error-rate standards that experienced transcribers are expected to meet.

The work is performed in accordance with detailed instructions. Supervisors explain new assignments and changes in procedures, but after the initial explanation, experienced transcribers are expected to apply the instructions independently. They are also expected to learn the procedures that apply to recurring assignments so that they rarely need to refer to the written instruction. Similarly, although the supervisor is available to answer questions on procedures, equipment operation, source data, or any other problem, experienced transcribers are expected to require such assistance rarely. Transcribers who need to refer to instructions or obtain assistance frequently, normally would not be able to meet production standards.

This type of control is presumed in the grade level criteria of this standard. If the controls over a position vary substantially from those described above, the nature and extent of that difference must be considered in the grade level evaluation of the position.

Knowledges, skills, and abilities required

The basic requirement for all data transcriber positions is ability to operate keyboard controlled data transcribing equipment at an acceptable rate of speed and accuracy. To achieve this requires:

-- Good eye -- hand coordination and finger dexterity;

-- Knowledge of the operating features of the data transcribing equipment used and ability to remember and apply basic operating instructions;

-- Skill in the use of a typewriter or modified typewriter keyboard;

-- Ability to recognize the source documents used and to associate those documents with the appropriate program controls and transcribing procedures;

-- Ability to maintain accuracy in performing repetitive work where speed and accuracy are of prime importance.

Some positions require in addition:

-- Ability to determine the cause of errors and the appropriate corrective action;

-- Ability to locate and identify data on uncoded and unstandardized documents;

-- Knowledge of the coding systems used, and ability to assign codes to uncoded data or to correct coding errors;

-- Sufficient knowledge of the data being transcribed to detect errors or omissions;

-- Sufficient knowledge of program controls or prepare program cards or make equivalent entries.

GRADE LEVEL CRITERIA

Specific criteria are provided for grades GS-1, 2, 3, and 4. Grade GS-3 is a full performance level for positions involving the transcription of an extensive number of source documents which require diverse formats, coding, and program controls and are covered by detailed, but extensive instructions. Nonsupervisory positions may be classified at GS-4 if they significantly exceed the GS-3 level in a number of aspects. The kinds of programs and operating situations that allow more difficult or responsible work vary widely. However, the criteria in the GS-4 level of the standard reflect likely ways in which positions may differ from normal patterns and provide a framework within which these positions may be classified. Cases of positions which warrant classification higher than the GS-4 level are rare and would significantly exceed the characteristics described at that level. The elements that differentiate grade levels have been grouped and presented in two factors.

Nature of Assignments

This factor measures (1) the variety and complexity of the procedures applied, in terms of how specifically they cover the work and the extent to which they are complicated by variations and exceptions; (2) the variety and complexity of source documents and the extent to which they are standardized, edited, and coded; and (3) the nature of the machine's program requirements and the degree to which they vary from one assignment to another. This factor progresses from repetitive transcription of numerical data exactly as they appear on the source document, to transcribing from a variety of complex source documents requiring the application of complicated instructions and conversion of data from one form to another.

Mental Demands

This factor measures the degree of alertness, adaptability, and judgment required in shifting from one assignment to another, identifying the data entries to be made, recognizing and correcting errors, and testing new procedures or program controls. The factor progresses from the alertness required to maintain accuracy in performing simple, repetitive work, to the mental demands required to shift frequently to different assignments, determine the cause of errors, and test and recommend changes in new procedures and program controls.

DATA TRANSCRIBER, GS-0356-01

GS-1 positions involve (1) continuing performance of repetitive assignments of the level of difficulty described below, or (2) trainee assignments designed to develop the skills and abilities required for grade GS-2 work.

Nature of Assignments

Nontrainee assignments at the GS-1 level involve the operation of data keying equipment in the repetitive performance of one or a few data transcribing or verifying assignments that meet the following conditions:

1.   The data transcribed normally require use of numeric keys only. However, limited use of alphabetic keys does not remove a position from this class, if all other characteristics are typical of GS-1 assignments.

2.   Specific oral and written instructions cover all aspects of the work. These instructions are brief and easy to follow.

3.   Normally the source documents are designed to present the data exactly as they are to be transcribed. If this is not the case, the specific data to be recorded are circled, underlined, or otherwise marked and any variation in sequence is clearly indicated.

4.   Coding normally is not required because the data are transcribed as they appear on the source document. If coding is needed, the GS-1 uses a few recurring codes. Established reporting procedures or prior editing assure that the data are accurate, legible, and complete.

Mental Demands

The primary requirement at the GS-1 level is to develop speed and maintain accuracy in repetitively transcribing clearly indicated numerical data. GS-1 data transcribers consult the supervisor on any item that they do not understand or that does not seem to match their instructions. When performing verification assignments (by repeating the data transcribing work performed by another GS-1 transcriber), the transcriber refers all discrepancies to the supervisor or a higher graded employee who is responsible for making the corrections. If a change in program controls is required, the supervisor provides the appropriate program card or gives step by step instructions for the actions required. Thus, although alertness and attention to detail are needed for accuracy, there is no requirement for independent judgment.

GS-1 trainee positions sometimes include assignments of the nature described above but also include assignments involving more complicated procedures typical of the GS-2 level. The assignments include a substantial amount of alphabetic keying, to assure that trainees acquire skill in using the full keyboard. Each new procedure is explained in detail. Typically the supervisor (or an experienced data transcriber) observes initial transcribing, answering questions as they arise and assuring that the trainee understands and is following the instructions. There is some continuing observation and discussion of any problems or errors while trainees repeat assignments until they have learned the procedure thoroughly. Trainees must demonstrate ability to learn varied instructions and the procedures and program controls to be used on different assignments. They must also learn to identify data on source documents that do not always present the data in the same sequence as it is to be transcribed.

DATA TRANSCRIBER, GS-0356-02

GS-2 data transcribing work involves (1) continuous performance of assignments of the level of difficulty described below or (2) trainee assignments designed to develop the skills and abilities required for grade GS-3 work. In comparison to GS-1, the work typically involves use of the full alphabetic and numeric keyboard and requires knowledge of more varied procedures and source documents.

Nature of Assignments

GS-2 data transcribers operate one or more kinds of data keying equipment to transcribe or verify data under the following conditions:

1.   Assignments require skill in use of the full keyboard to transcribe both alphabetic and numeric entries and often a few code symbols that require double keying.

NOTE: Positions involving numeric keying only may be included in this class provided such assignments involve (1) a variety of procedures and source documents, and (2) the application of instructions that are complicated by exceptions or special processing of specified data items or by a need to code or convert data (e.g., change narrative data to numeric codes) as it is being transcribed, or (3) similar features requiring knowledge and judgment that exceed the GS-1 level.

2.   All aspects of the work are covered by detailed and specific written instructions but, in contrast to the GS-1 level, the procedures may typically include some exceptions or special instructions that require transcribing specified data items in a different manner from that required for other data. GS-2 data transcribers also apply standing instructions for coding or converting a few kinds of data (e.g., abbreviating names of States, entering designated codes to identify organizational units, locations, etc.).

3.   Assignments involve transcribing from a greater variety of source documents or more complex documents than work at the GS-1 level. For example:

--   Transcribing from a variety of brief source documents from which normally all data are transcribed onto one card (or an equivalent entry on tape or other record). There may be substantial variation in formats, transcribing procedures, and program controls from one assignment to another. Within each assignment, the data on all documents are presented and transcribed in the same way. Normally reporting sources are controlled or documents are pre-edited so that there are few, if any, errors or omissions in the data.

or

--   Transcribing from one or a few more complex source documents e.g., documents that are (1) several pages long and require a number of separate cards or equivalent entries involving different formats and transcribing procedures, or (2) received from uncontrolled sources and frequently involve incomplete or illegible entries, data entered in the wrong location, or similar errors that the transcriber must recognize and correct when the appropriate entry is obvious from other entries or instructions, or must refer to others for correction.

4.   Normally source documents are precoded and the instructions clearly identify the data to be transcribed and the location of that data. However, unlike the GS-1 level, GS-2 assignments may require the transcriber to locate easily identified data (e.g., dates, dollar amounts) that appear in various locations, or to skip from one part of the document to another when the data are not in the same sequence as they are to be transcribed.

Many positions also include training on the more varied and complicated assignments characteristic of grade GS-3 work. On each such assignment, the transcribers initially receive detailed instructions, immediate assistance on any questions, and explanation of errors made, but this close review and assistance is gradually reduced as the transcribers learn and acquire proficiency in applying the procedures.

Mental Demands

Except on training assignments, GS-2 data transcribers normally get batches of documents covered by standing instructions that they are expected to apply independently. They are required to recognize different kinds of source data and to remember and apply the proper procedures and program controls for each recurring kind of work.

Although errors or omissions in source documents normally are referred to others for correction, the transcriber must be more alert than at grade GS-1 to recognize when corrections are required. Data transcribers who are verifying GS-2 or GS-1 level work may be required to determine the correct entry (by going back to the source document) and the probable cause of errors (e.g., finger error, machine malfunction, or procedural error) but refer any questionable entries to the supervisor.

On training assignments, transcribers must demonstrate ability to learn varied and complicated procedures and to identify data in unspecified locations, apply special instructions for designated entries, supply missing codes, and similar responsibilities.

DATA TRANSCRIBER, GS-0356-03

GS-3 data transcribing work involves a variety of complicated data transcribing and verifying assignments which require knowledge of an extensive body of procedures. In comparison, GS-2 transcribers perform a variety of uncomplicated assignments or repetitively perform one or a few more complicated ones.

Nature of Assignments

GS-3 data transcribers operate one or more kinds of data keying equipment to perform data transcribing or verifying work complicated by the following conditions:

1.   Assignments require skilled use of the full keyboard in transcribing interspersed alphabetic and numerical characters and special symbols requiring double keying. GS-3 assignments also require frequent use of all or most special function keys or the preparation of program controls to perform those functions automatically (i.e., punching program cards or keying detailed program instructions).

2.   The procedural instructions applied are extensive in both number and content. Although they are detailed and specific, they are difficult to learn and apply. At grade GS-3 the instructions involve numerous special procedures for processing

data in different forms and often require determining the number and kind of entries to be made, based on the content of designated data items. In comparison, GS-2 transcribers apply procedures that involve few special transcribing actions applicable to some but not all of the data.

3.   GS-3 assignments involve source documents that have some or all of the following characteristics:

--   Contain numerous data items to be transcribed and require a number of separate cards or equivalent entries;

--   Involve diverse formats, coding, and program controls;
--   Require different transcribing procedures for various sections of one document; or

--   Include data that are not in the same form or sequence as they are to be transcribed.

The format of the source documents for any one assignment normally is standardized but there are variations in the entries to be made. The GS-3 transcriber must recognize the entry to be made from the content of designated items (e.g., if item nine is blank, enter 00 and skip to item 14; if item nine is completed, enter items 10 through 13 in columns 21 through 28).

4.   Normally, not all items are precoded or, because of the volume of transactions or the variety of reporting sources there are frequent errors or omissions in the coding of the source documents used. Often the items to be entered must be located by the transcriber, by memory, because the data are not in the same sequence as they are to be transcribed.

Mental Demands

GS-3 data transcribers, as at the GS-2 level, normally receive assignments without accompanying instructions for each assignment, but at this level the transcribers must select and apply substantially more extensive and complicated procedures than at GS-2. They must be alert to data items that require variations in the transcribing procedures. They must also apply a good knowledge of the coding systems used to supply coding for uncoded documents or to correct coding errors.

GS-3 data transcribers frequently must shift rapidly from one assignment to another involving different transcribing procedures, formats, coding, or other features. Assignments in progress may be interrupted for higher priority work and then resumed later. GS-3 transcribers must have the adaptability to adjust to such changes as well as to apply variations in procedures within an assignment.

GS-3 data transcribers performing verification work normally are responsible for identifying the cause of discrepancies and making appropriate corrections. Although they may consult the supervisor in unusual circumstances, (e.g., when the source document is susceptible to more than one interpretation) GS-3 transcribers resolve most of the questions that at the GS-2 level would be referred to the supervisor or a higher grade employee.

DATA TRANSCRIBER, GS-0356-04

GS-4 data transcribing work involves substantial judgment in interpreting and applying an extensive body of general procedures as well as applying specific procedures to a wide variety of complicated data transcribing assignments. A substantive knowledge of the data being transcribed is required to edit or complete entries and to correct errors. In comparison, GS-3 transcribing work is complicated and involves extensive procedures, but these procedures are usually directly applicable, therefore, a substantive knowledge of the data being transcribed is not needed to interpret and apply the procedures to transcribing assignments.
Nature of Assignments

GS-4 data transcribers operate one or more kinds of data keying equipment to perform data transcribing or verifying work complicated by at least three of the following or similar conditions presenting situations of equivalent difficulty and complexity. In order to be creditable at the GS-4 level, each of the listed or a similar condition must apply to a significant proportion of the work assigned (i.e., at least 10 percent). This is a minimum requirement and should be considered along with sound position management principles to assure maximum utilization of the skill of each employee and to assure economical accomplishment of the workload.

1.   The data transcriber works from unedited and uncoded source documents; or from complex documents that are not controlled by (a) format, (b) reporting instructions, or (c) source. For example, the data transcriber transcribes source documents that are prepared by the public, which increases the likelihood of errors or misplaced data. The data received from various sources are in different form and often contain errors or omissions. The data transcriber must locate the proper data and correct errors before or while transcribing the material.

2.   Based on a substantive knowledge of the data, the data transcriber corrects errors or refers the document to the proper person for correction. For example, there are two names on a source document and only one can be entered into the record. The data transcriber must determine which name is the correct name to transcribe by reviewing other information in the document.

or

The data transcriber recognizes that a total for a transaction is too high for that type of transaction and searches the source document(s) for data that will permit immediate correction of the error or, if that is not possible, returns the source document for correction.

3.   The work regularly involves assignments for which standardized forms and procedures have not been developed. The data transcriber must develop, select, or recommend appropriate recording and transcribing procedures or adapt general instructions, based on an understanding of the nature and purpose of the data.

4.   The data transcriber performs transcribing or verifying assignments to retrieve and change records that are already in the data processing system as well as to enter records into the system. Because there are too many variables to be covered by specific instructions, the data transcriber must interpret substantive data in the record or the source document to determine the specific changes required.

5.   The data transcriber participates in testing and debugging new data transcribing programs and keying unrefined programs. This may involve a limited knowledge of the programming language to make less difficult changes in the programs as they are keyed.

6.   The data transcriber provides guidance and procedural instructions to other employees on complicated data transcribing assignments and trains new transcribers in the work of the unit.

7.   The data transcriber transcribes/verifies data when the work requires the ability to reconstruct mentally the entries to identify sources of error because the transcribing machine gives only a message that there is an error in the system. The transcriber must determine actions needed to find and correct errors or discrepancies in the data transcribed. Verifying assignments involve final responsibility for correcting the data before they are entered into the computer.

8.   The data transcriber transcribes from complex source documents that are designed to be used for more than one type of transaction. Therefore, one type of source document is entered under different programs that require different transcribing procedures. The transcriber must be mindful to key the information in the proper sequence.

Mental Demands

GS-4 data transcribers receive accompanying instructions only on the most complicated assignments. They must be alert to data items that require variations in the transcribing procedures and, based on the type of document and on the information in the document, they must apply a very good knowledge of the coding systems to supply coding for uncoded documents or to correct coding errors.

As at the GS-3 level, GS-4 data transcribers frequently must shift rapidly from one assignment to another involving different transcribing procedures, formats, coding, or other features. Assignments in progress may be interrupted for higher priority work and then resumed later. GS-4 transcribers must have the adaptability to adjust to such changes as well as apply variations

in procedures within an assignment. In some situations, GS-4 data transcribers must have the ability to determine for themselves when they must shift from one assignment to another which has higher priority.

Data transcribers at this level must have the ability to conceptualize the form in which the output is needed and the specific operator and machine actions needed to convert the source data to that form.

The extensive variety of source documents places more mental demands on data transcribers at this level because of the voluminous procedures and guidelines with which they must be familiar and because of the variance in procedures and guidelines for similar assignments.