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ABSTRACT

This document contains validated activities and competencies needed by information professionals working in an information center/clearinghouse. The activities and competencies are organized according to the functions which information center professionals perform: acquisitions; thesaurus development and control; indexing/abstracting; reference/information analysis; and publications and product management. Within each function, competencies are grouped under the categories of Knowledge, Skills, and Attitudes, and three professional levels are dealt with: entry level (0-3 years experience), mid-level (4-9 years experience), and senior level (10 or more years experience). (THC)

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**NEW DIRECTIONS IN LIBRARY AND
INFORMATION SCIENCE EDUCATION
FINAL REPORT
VOLUME 2.7
INFORMATION CENTER/CLEARINGHOUSE
PROFESSIONAL COMPETENCIES**

1984

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INTRODUCTION

This document contains validated activities and competencies needed by information professionals working in an information center/clearinghouse. The following operational definition of competency was developed:

A competency is a generic knowledge, skill or attitude of a person that is causally related to effective behavior as demonstrated through external performance criteria, where:

- Knowledge is having information about, knowing, understanding, being acquainted with, being aware of, having experience of, or being familiar with something, someone, or how to do something.
- Skill is the ability to use one's knowledge effectively.
- Attitude is a mental or emotional approach to something, or someone.

We have identified several types of knowledge that are necessary to perform information work satisfactorily as follows:

- Basic knowledge in such areas as language, communication, arithmetic operations, etc.
- Subject knowledge of primary subject fields of users served such as medicine, chemistry, law, etc.
- Library and information work environments such as the information community, its participants and their social, economic and technical interrelationships, etc.
- Knowledge of what work is done such as the activities required to provide services and produce products, etc.
- Knowledge of the organization or user community served such as the mission, goals, and objectives of the user or the organization, user's information needs and requirements, etc.

There appear to be three kinds of skills necessary to perform information work satisfactorily including:

- Basic skills such as cognitive, communication, analytical, etc.
- Skills related to each specific activity being performed such as negotiation of reference questions, evaluation of search outputs, etc.
- Other skills such as managing time effectively, budgeting and making projections, etc.

Attitudes of information professionals are found to be extremely important to work performance. We have found it useful to subdivide attitudes into:

- Dispositional attitudes toward one's profession, the organization served, one's work organization, and other people such as users and co-workers.
- Personality traits/qualities such as confidence, inquisitiveness, sense of ethics, flexibility, etc.
- Attitudes related to job/work/organization such as willingness to accept responsibility, willingness to learn, desire to grow, etc.

The activities and competencies are organized according to the functions which information professionals perform, and by professional level as displayed in Figure 1. The competencies are cumulative across professional level, i.e., competencies of mid-level professionals include entries shown at the mid-level as well as those at the entry level, etc.

It is important to understand the distinction between functions performed and positions or job titles. Our rationale behind the functional approach was that we were more concerned with what information professionals do than with what they are called. In a single-person center, therefore, the information professional will undoubtedly perform more than a single function. In using and interpreting the competency data in this document, it is important to consider the functions being performed by

FUNCTIONS	ACTIVITIES		KNOWLEDGE		SKILLS		ATTITUDES	
	Essential Versus Desirable	More versus Less Important in Future	Essential Versus Desirable	More versus Less Important in Future	Essential Versus Desirable	More versus Less Important in Future	Essential Versus Desirable	More versus Less Important in Future
	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL	ENTRY LEVEL
	MID LEVEL	MID LEVEL	MID LEVEL	MID LEVEL	MID LEVEL	MID LEVEL	MID LEVEL	MID LEVEL
	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL	SENIOR LEVEL

Figure 1 Organization of Activities and Competencies

professionals and the activities being performed to determine which competencies are appropriate. The functions identified for information professionals working in information centers/clearinghouses are:

- acquisitions
- thesaurus development and control
- indexing/abstracting
- reference/information analysis
- publications and product management.

Three professional levels were defined as follows:

- entry level (up to 3 years of professional experience)
- mid level (4-9 years of professional experience)
- senior level (10 or more years of professional experience).

The activities performed are listed first and numbered sequentially. The actual assignment of individual activities to subcategories of the major activities and to the functions varies from one worksetting to another. The organization of activities that we developed provided us with the "best fit" case. Indented and unnumbered activities are essentially paraprofessional activities which, in small organizations, may be performed by professionals.

The activities are followed by the validated sets of knowledge, skills and attitudes. Two versions of each of the lists are provided. The first set have those competencies designated by the validators as essential in bold face print, and those designated as desirable in regular face print. The level of emphasis is denoted by asterisks as follows:

- * denotes each competency rated as essential or desirable by 50-70 percent of the validators of that competency
- ** denotes each competency rated as essential or desirable by 71-84 percent of that validators of that competency

*** denotes each competency rated as essential or desirable by 85-100 percent of the validators of that competency.

The second set of knowledge, skills, and attitudes have competencies designated by the validators as becoming more or less important in the future. Again, the level of emphasis is denoted by asterisks as follows:

* denotes each competency rated by 1-20 percent of those who validated it (as essential, desirable, or not applicable) as becoming more or less important in the future

** denotes each competency rated by 21-40 percent of those who validated it (as essential, desirable, or not applicable) as becoming more or less important in the future

*** denotes each competency rated by 41-100 percent of those who validated it (as essential, desirable, or not applicable) as becoming more or less important in the future

● denotes competencies rated as currently not applicable which have also been rated as becoming more important in the future.

INFORMATION CENTER/CLEARINGHOUSE COMPETENCIES
ACQUISITIONS

ACTIVITIES

ACQUISITION

ENTRY LEVEL

Selection

1. Develop a good understanding of the information center's/clearing-house's policies and guidelines for data collection
2. Receive citations from organization staff for serials/numbered series, selected monographs, reports, conference and workshop proceedings, audiovisuals, unpublished materials, free materials, research in progress, etc.
3. Select materials to order from publishers' catalogs, book reviews, bibliographies, etc.
4. Examine shipments of unsolicited materials (blanket orders/on-approval shipments, deposited materials, gifts, etc.) to select which items are suitable for retention; annotate processing slips for each item as required
5. Assign processing priorities to all material selected for processing
6. Maintain a statistical record of selection and the usefulness of various selection tools

Verification and Ordering

7. Determine source of procurement for each item ordered (jobber, direct, gift, exchange, etc.)
8. Supervise ordering/claiming of materials:
 - verify and locate additional bibliographic data as required; refer problems to supervisor
 - search records to determine if material is already on order/requested
 - prepare/input subscription and non-subscription orders/requests, including the proper "ship to" addresses for materials to be indexed off-site
 - prepare/generate purchase orders, if required
 - prepare order/request documentation for mailing, or place orders/requests online with the appropriate suppliers
 - forward order documentation to the fiscal control staff for coordination and mailing, if required
 - claim outstanding orders/requests
 - claim missing issues of serials/numbered series
 - cancel orders, as required
 - re-issue orders/requests to different sources as required

ACTIVITIES

ACQUISITIONS

ENTRY LEVEL

Verification and Ordering (cont'd)

8. Supervise ordering/claiming of materials (cont'd):

- order/request replacement copies of damaged/lost materials
- process subscription renewals
- maintain a statistical record of ordering operations

9. Supervise ordering/requesting sample issues of serials/numbered series for review by selection staff

10 Search for trade and non-trade bibliographic information that technicians are unable to locate; refer problems to higher level staff, as appropriate

Receipt Processing

11. Supervise receipt processing of all types of materials:

- sort incoming items, as appropriate
- search appropriate file to locate the records
- refer to the supervisor items which differ bibliographically from the item ordered/requested
- update records with receipt of individual items/issues/numbers/parts
- create records for unsolicited materials which are to be processed
- flag serial records for gap filling, as required
- assign an accession number or other locator information to each item received
- record/affix locator information on each piece; may be bar code/OCR label to allow for tracking of materials from time of receipt through completion of the processing cycle
- input bibliographic data (standard journal title abbreviation, volume, issue or bibliographic information for monographs, etc.) on the indexing form/record for each item received; (this activity may involve transfer of data from one automated file to another, rather than actual data input on the indexing form/record)
- mark materials with the organization's identification
- affix security labels, if required
- place new serial titles on the appropriate shelf for special file maintenance
- place serials which have title changes on the appropriate shelf for file maintenance
- place materials for indexing on the appropriate trucks
- deliver trucks to proper locations
- send form letters to acknowledge deposited materials/gifts, if appropriate

ACTIVITIES

ACQUISITIONS

ENTRY LEVEL

Receipt Processing (cont'd)

11. Supervise receipt processing of all types of materials (cont'd):

- annotate receipt on packing slips/invoice copies, if received, and forward to the fiscal control unit
- annotate packing slips/invoice copies for damaged/imperfect or unwanted hardbound series; forward documentation to the fiscal control unit
- prepare damaged/imperfect materials, incorrectly supplied materials, and unwanted materials for return to suppliers, if appropriate
- place surplus materials in specified area to await proper disposal
- maintain record of receipt processing statistics

File Maintenance

12. Supervise creation and maintenance of records for non-serial materials

- input orders/requests, unsolicited receipts
- update records based on correspondence received and actions taken
- update records with receipt, return and disposal information
- delete records at appropriate levels
- maintain statistical records of file creation and maintenance operations

13. Supervise creation and maintenance of serial records:

- input records for new serial titles
- update records with data re: cancellations, reissues, claims, and gap filling
- update records for newly-received titles with indexing assignment (in-house or contract), standard title abbreviation, ISSN, frequency, etc.
- update records with data re: change in frequency, change of title, change in publisher, cessation, change of indexing assignment
- input new records for newly changed titles
- input cross reference records as required
- remove records from the active file when appropriate
- delete records when appropriate
- maintain statistical records of file creation and maintenance operations

ACTIVITIES

ACQUISITIONS

ENTRY LEVEL

Other

14. Handle problems related to selection, ordering and receipt processing of all types of materials and to overall maintenance of the records; refer problems to higher level staff, as appropriate.
15. Conduct business by phone, when appropriate
16. Write memos and letters, as required
17. Prepare manuals of procedures
18. Make recommendations to the section manager for improvement in operations of the unit/section
19. Attend and participate in staff meetings
20. Provide an overview of the operations of the unit/section to visitors, as requested
21. Supervise technicians and other paraprofessional staff
22. Work to develop "esprit de corps" among staff supervised
23. Assist section manager in writing job descriptions for self and for staff supervised
24. Assist section manager in developing performance standards for self and for staff supervised
25. Assist section manager in the review and performance evaluation of staff supervised
26. Assist in the selection of new technicians and paraprofessionals
27. Keep abreast of developments in the information field, library practice, or legislation that affect acquisition and processing of serials/numbered series, monographs, conference proceedings, audio-visuals, unpublished materials, etc.
28. Attend professional meetings and prepare reports for dissemination to staff
29. Develop professional contacts both within and outside the organization

ACTIVITIES

ACQUISITIONS

MID LEVEL

Selection

30. Keep abreast of changing information needs in the subject field(s) which the center/clearinghouse supports; notify staff of any changes

Verification and Ordering

31. Develop procedures for the verification and ordering of serials/numbered series and/or other materials selected for processing
32. Supervise the maintenance of an address file of procurement sources
33. Draft form letters for acknowledging deposited materials/gifts, requesting deposit of materials, ordering serials and other materials, claiming/cancelling orders, claiming missing issues, ordering replacement issues, etc.
34. Work with the appropriate fiscal office to schedule purchases of materials and renewal of subscriptions in order to operate within the budget
35. Work with the appropriate fiscal office to develop procedures for the handling of the final steps in ordering and invoice processing
36. Identify sources for filling gaps

Receipt Processing

37. Develop procedures for receipt processing of all types of materials

File Maintenance

38. Develop procedures for maintenance of records for order/receipt control of serial and non-serial materials
39. Make preliminary selection of forms and/or develop draft record formats for all section files

Fiscal Control

40. Work with the appropriate fiscal office of the parent organization to identify requirements and develop draft procedures for purchasing materials and services (e.g., open ended subscriptions, dealer check-in)

ACTIVITIES

ACQUISITIONS

MID LEVEL

Fiscal Control (cont'd)

41. Work with the appropriate fiscal office to develop procedures for proper packing slip/invoice handling and receipt certification by section staff
42. Assist the appropriate fiscal office in resolving any problems related to payment for materials
43. Remain aware of the expenditures and balances in the materials account(s); notify the section manager of situations which may require special action
44. Develop projected budget requirements for purchasing materials for the new fiscal year

Other

45. Assess performance of existing equipment/systems/services used in the section and investigate capabilities of other equipment/systems/services
46. Recommend acquisition of new/additional equipment/systems/services
47. Train staff in operation and in-house maintenance of equipment/systems
48. Supervise in-house operation and maintenance of equipment/systems
49. Gather information for maintenance contracts on equipment/systems
50. Draft statements of work for contract proposals for services, systems, equipment and/or maintenance
51. Evaluate contractors' proposals
52. Train and supervise entry level staff
53. Assist in the selection of new professional staff
54. Write articles for professional journals/newsletters when appropriate

ACTIVITIES

ACQUISITIONS

SENIOR LEVEL

Selection

55. Select and maintain an up-to-date collection of selection tools and aids to bibliographic verification
56. Work with senior level staff from the indexing/abstracting and reference/information analysis sections to formulate draft selection policies for all types of materials to be processed (fully or selectively) by the center/clearinghouse so that it may function as an information resource in the subject field(s); recommend revisions to the policies as required
57. Prepare draft selection guidelines to be used by section staff as an aid to interpreting selection policies; draft revisions as required
58. Periodically review staff selections to ensure more uniform interpretation of the selection policies; conduct training sessions as required
59. Together with senior level reference/information analysis staff, indexing/abstracting staff and thesaurus control staff, identify organizations/institutions which produce information in the subject field(s) which the center/clearinghouse supports
60. Work with senior level reference/information analysis staff to evaluate the existing data collection(s) and identify areas of weakness
61. Prepare lists of materials to be purchased or requested in order to upgrade areas of weakness in the data collection(s)
62. Together with reference/information analysis staff, compile lists of reference books and standard works that comprise a basic collection in each major subject area. New editions of these materials are purchased automatically

Receipt Processing

63. Work with senior staff of the indexing/abstracting section to establish procedures and resolve problems related to the timely receipt of materials for indexing and the input of bibliographic data on indexing forms/records by section staff
64. Work with senior staff and quality and production control staff of the indexing/abstracting section, reference/information analysis staff and data processing staff to develop plans and procedures for using the acquisitions files for tracking materials from the time of receipt through completion of the processing workflow

ACTIVITIES

ACQUISITIONS

SENIOR LEVEL

Publications Support

65. Work with senior staff of the indexing and publications management sections to develop procedures and resolve problems related to the regular publication of lists of materials indexed
66. Work with section staff to produce for publication the list of materials currently indexed; include standard journal title abbreviations, ISSNs, references from former title to current title for recent title changes, and standard bibliographic citations for all other materials indexed

Other

67. Function as a technical expert in all matters related to selection and acquisition of materials for processing
68. Interview dealers' representatives to learn about the particular services they offer
69. Identify dealers who have a good performance record in supplying irregular serials, congress proceedings, and other materials which are difficult to acquire
70. Assist the section manager in negotiating with dealers' representatives to obtain the required level of service in acquiring and/or processing materials
71. Evaluate dealers' performance and report to section manager
72. Draft documentation to support cooperative agreements with organizations/institutions which produce information in the subject field(s) of interest to the center/clearinghouse; request deposit of copyrighted and uncopyrighted materials, particularly fugitive documents (e.g., unpublished documents, project reports, preprints, texts of speeches, conference papers, curriculum guides, instructional materials)
73. Evaluate the participation of primary information producers in depositing unpublished and non-trade materials with the center/clearinghouse; suggest methods to effect increased cooperation from them
74. Draft section procedures and policies; draft revisions as required

ACTIVITIES

ACQUISITIONS

SENIOR LEVEL

Other (cont'd)

75. Flowchart and document section procedures
76. Assist section manager in on-going systems analysis of the section
77. Analyze statistics for all operations in the section and prepare draft statistical reports
78. Train and supervise mid level staff
79. Assist section manager in preparing the annual budget for section operations
80. Function as section manager in his/her absence

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

KNOWLEDGE

ACQUISITIONS

ENTRY LEVEL

Basic knowledge

*** knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- * knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- *** knowledge in greater depth in specific subjects (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- * knowledge of foreign languages

Library & Information Science Knowledge (Generic)

- * knowledge of definition, structure, and formats of information
- * knowledge of alternative approaches to the organization of information
- * knowledge of alternative approaches to retrieval of information
- * knowledge of available and emerging information technologies and their applications
- * knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- * knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- * knowledge of the functions performed within the various work settings and the services and products offered
- * knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- ** knowledge of the acquisitions function, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- * knowledge of the various resources that are necessary to support the activities
- ** knowledge of acquisitions tools and sources of bibliographic information
- ** knowledge of acquisitions methods and techniques
- * knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

KNOWLEDGE

ACQUISITIONS

ENTRY LEVEL

Knowledge of how to do work

- * knowledge of how to perform the various activities (e.g., request sample issues of selected serials/numbered series, supervise ordering/requesting of published and unpublished materials, audiovisual materials, etc.)
- * knowledge of how to use the acquisitions tools and sources of bibliographic information
- * knowledge of how to apply the acquisitions methods and techniques
- knowledge of personnel procedures

Knowledge of the organization and the specific work unit

- ** knowledge of the mission, goals and objectives of the organization
- ** knowledge of the structure of the organization and the role of the acquisitions section within the organization
- ** knowledge of the various projects and key personnel within the organization
- * knowledge of the policies and procedures relevant to section operations
- * knowledge of the various resources available within the organization (e.g. personnel, equipment, etc.)
- * knowledge of the users' information needs and requirements

ACQUISITIONS

MID LEVEL

- ** greater depths of knowledge specified above
- *** knowledge of the operations of other sections in the organization and how they relate to acquisitions
- knowledge of available vendor-supplied systems, services and products to support acquisitions
- * knowledge of the contracting process, both in general and within the organization
- * knowledge of evaluation methods and techniques to evaluate systems, services and products

KNOWLEDGE

ACQUISITIONS

SENIOR LEVEL

- *** greater depths of knowledge specified above
- *** knowledge of producers of unpublished and non-trade materials in specific subject areas
 - * knowledge of public relations techniques
 - * knowledge of statistical description, analysis, interpretation and presentation
- ** knowledge of the costs associated with resources (materials, personnel, space, etc.)
- ** knowledge of cost analysis and interpretation methods
- ** knowledge of methods of resource allocation
- * knowledge of standards, measures and methods for evaluating personnel
- * knowledge of alternative management structures and their implications for the operation of the section
- * state-of-the-art knowledge of library research and practice as it relates to the acquisition of print and non-print materials and the support of data collection in specific subjects

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

KNOWLEDGE

ACQUISITIONS

ENTRY LEVEL

Basic knowledge

- * knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- ** knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- *** knowledge in greater depth in specific subjects (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- ** knowledge of foreign languages

Library & Information Science Knowledge (Generic)

- ** knowledge of definition, structure, and formats of information
- ** knowledge of alternative approaches to the organization of information
- ** knowledge of alternative approaches to retrieval of information
- ** knowledge of alternative approaches to information management
- *** knowledge of available and emerging information technologies and their applications
- * knowledge of completed and ongoing research in the field and its applicability to practice
- * knowledge of career opportunities
- *** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- ** knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- ** knowledge of the variety of work settings and their organizational structures
- ** knowledge of the functions performed within the various work settings and the services and products offered
- ** knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- ** knowledge of the acquisitions function, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products

KNOWLEDGE

ACQUISITIONS

ENTRY LEVEL

Knowledge of what work is done (cont'd)

- ** knowledge of the various resources that are necessary to support the activities
- ** knowledge of acquisitions tools and sources of bibliographic information
- * knowledge of acquisitions methods and techniques
- ** knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- ** knowledge of how to perform the various activities
- ** knowledge of how to use the acquisitions tools and sources of bibliographic information
- ** knowledge of how to apply the acquisitions methods and techniques
- ** knowledge of personnel procedures

Knowledge of the organization and the specific work unit

- * knowledge of the mission, goals and objectives of the organization
- * knowledge of the structure of the organization and the role of the acquisitions section within the organization
- ** knowledge of the various projects and key personnel within the organization
- * knowledge of the policies and procedures relevant to section operations
- ** knowledge of the various resources available within the organization (e.g. personnel, equipment, etc.)
- ** knowledge of the users' information needs and requirements

ACQUISITIONS

MID LEVEL

- * greater depths of knowledge specified above
- ** knowledge of the operations of other sections in the organization and how they relate to acquisitions
- ** knowledge of available vendor-supplied systems, services and products to support acquisitions
- ** knowledge of the contracting process, both in general and within the organization
- *** knowledge of evaluation methods and techniques to evaluate systems, services and products

KNOWLEDGE

ACQUISITIONS

SENIOR LEVEL

- * greater depths of knowledge specified above
- ** knowledge of producers of unpublished and non-trade materials in specific subject areas
- ** knowledge of public relations techniques
- ** knowledge of statistical description, analysis, interpretation and presentation
- ** knowledge of the costs associated with resources (materials, personnel, space, etc.)
- ** knowledge of cost analysis and interpretation methods
- *** knowledge of methods of resource allocation
- * knowledge of standards, measures and methods for evaluating personnel
- ** knowledge of alternative management structures and their implications for the operation of the section
- * state-of-the-art knowledge of library research and practice as it relates to the acquisition of print and non-print materials and the support of data collection in specific subjects

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

SKILLS

ACQUISITIONS

ENTRY LEVEL

Basic Skills

***** literacy, numeracy, cognitive, analytical, communications, etc.**

Skills Related to Specific Activities

Ability to:

- * perform each activity
- * establish rapport with colleagues
- * communicate well by written, verbal and non-verbal means
- ** conduct meetings with individuals and groups
- * make decisions and recommendations based on available information
- * work independently and in groups
- ** develop criteria for evaluation
- * make effective, timely, and well-informed decisions
- * isolate and define problems and develop the necessary criteria and action for their solution
- ** manage time effectively

ACQUISITIONS

MID LEVEL

Skills Related to Each Specific Activity

***** Skills listed above are developed to a greater extent**

Ability to:

- * perceive the needs of the organization and not just the section
- * anticipate long-range needs of the section
- * design systems and procedures to improve section operations
- arbitrate and negotiate

ACQUISITIONS

SENIOR LEVEL

***** Skills listed above are developed to a greater extent**

Ability to:

- * apply methods of measurement and evaluation
- ** budget and make projections
- *** optimize the use of section and organizational resources**

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

SKILLS

ACQUISITIONS

ENTRY LEVEL

Basic Skills

- * literacy, numeracy, cognitive, analytical, communications, etc.

Skills Related to Specific Activities

Ability to:

- * perform each activity
- ** establish rapport with colleagues
- ** communicate well by written, verbal and non-verbal means
- * conduct an interview
- ** conduct meetings with individuals and groups
- * collect, analyze and interpret data
- * make decisions and recommendations based on available information
- ** supervise staff
- * work independently and in groups
- ** develop criteria for evaluation
- *** make effective, timely, and well-informed decisions
- ** isolate and define problems and develop the necessary criteria and action for their solution
- ** manage time effectively

ACQUISITIONS

MID LEVEL

Skills Related to Each Specific Activity

- * Skills listed above are developed to a greater extent

Ability to:

- ** perceive the needs of the organization and not just the section
- *** anticipate long-range needs of the section
- * design systems and procedures to improve section operations
- ** arbitrate and negotiate

SKILLS

ACQUISITIONS

SENIOR LEVEL

* Skills listed above are developed to a greater extent

Ability to:

- * apply methods of measurement and evaluation
- * budget and make projections
- ** optimize the use of section and organizational resources

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

ATTITUDES

ACQUISITIONS

Dispositional Attitudes

Attitudes Toward Institutions

- * Respect for profession
- ** Respect for the section
- ** Respect for the parent organization

Attitudes Toward Other People

Toward Users

- *** Respect users
- * Like people in general
- * Like to help people
- * Like to meet people
- * Like to make others feel comfortable
- * Sensitive to others' needs

Toward Others in the Workplace

- ** Respect co-workers
- * Like to work with others/as a team
- * Like to work on own
- *** Willingness to draw upon and share knowledge and experience with others
- * Supportive of co-workers
- Enjoy managing/supervising others

Personal Qualities

- *** Alertness
- ** Assertiveness
- * Compassion/Kindness
- *** Confidence
- * Cheerfulness
- *** Dependability
- * Determination/Tenacity
- * Diplomacy
- * Emotional stability
- * Fairness
- * Flexibility/Versatility
- * Imagination
- Inquisitiveness
- *** Leadership ability
- * Neatness
- * Need for achievement

ATTITUDES

ACQUISITIONS

Personal Qualities (cont'd)

- * Objectivity
- * Open-mindedness
- * Optimism/Positive attitude
- * Organization
- * Patience
- * Physical endurance
- * Resourceful
- * Sensitive/Thoughtful
- * Sense of humor
- * Sense of ethics
- ** Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- *** Willingness to take/accept responsibility
 - * Willingness to take initiative
 - * Willingness to respond to authority, apply and follow policy
 - * Realization that there is no single "right" way to achieve the goals of the section/organization
 - * Desire to learn/try
 - * Willingness to fail
- *** Willingness to ask questions
 - * Desire to work to best of ability
- ** Responsiveness to time constraints
- *** Accuracy
 - Willingness to get hands dirty
- *** Attention to detail
 - Willingness to do clerical tasks
- *** Desire to follow-through
 - * Service orientation
 - * Organizational identity
- ** Willingness to promote parent organization and its services
 - * View of parent organization as part of a larger information environment
 - * Ability to see broad picture
- *** Ability to sacrifice short-term gains for long-term goals
- ** Political sense
 - * Curiosity
 - * Variety of interests
 - * Desire to grow personally
 - * Desire to grow professionally
 - * Desire to remain current in specific and general subject field
 - * Positive attitude toward job

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
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ATTITUDES

ACQUISITIONS

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**INFORMATION CENTER/CLEARINGHOUSE PROFESSIONAL COMPETENCY
THESAURUS DEVELOPMENT AND CONTROL**

ACTIVITIES

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Development

1. Determine the method (manual or automated) and procedures by which the thesaurus data will be compiled
2. Determine the data elements to be included for each subject term
3. Design the forms to be used for data collection
4. Develop a basic list of terms in the selected subject field(s) through review of basic texts, reference works, abstracting and indexing tools, existing thesauri in the field(s), etc.
5. Categorize the terms and develop taxonomies
6. Review the term lists for semantic and syntactic consistency
7. Develop written guidelines to ensure that the semantic and syntactic consistency may be maintained as the thesaurus is updated
8. Develop written guidelines concerning the nature and structure of the various types of cross references
9. Complete data entry forms for cross-references for hierarchically, horizontally, and otherwise related terms
10. Add annotations to subject terms, as required
11. Supervise the production of the alphabetical listing of subject terms and cross references and the listing of taxonomies
12. Review and correct term lists
13. Submit the term lists to subject experts for review, if appropriate
14. Supervise the correction of the master term lists
15. Prepare introductory material to be included in the printed thesaurus
16. Work with publications management staff and data processing staff (if appropriate) to arrange for publication of the thesaurus
17. Perform proofreading of assigned sections of the thesaurus, as required

ACTIVITIES

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Control

18. Review suggestion forms received from indexing and reference/information analysis staff for changes/additions to the approved thesaurus
19. Review assigned taxonomies on a regular basis to determine if changes/additions to the approved listings should be recommended
20. Check the subject literature and the indexing database for use of the suggested/questioned terms
21. Evaluate findings and determine the appropriate action to be taken: recommend establishment of a new subject term; recommend a change in an existing term; recommend replacement of an existing subject term by a new subject term; recommend conversion of a cross reference term to an approved thesaurus term; recommend establishment of a new cross reference term; recommend restructuring of an entire area of the taxonomy; recommend no change in the existing term, etc.
22. Prepare appropriate documentation to support each recommendation
23. Prepare appropriate data entry forms for each recommended addition/change to the thesaurus
24. Submit documentation re: changes to the thesaurus to the section manager for review and circulation to section staff and appropriate in-house staff
25. Attend and participate in meetings to discuss and act on proposed changes to the thesaurus
26. Supervise input of approved changes/additions to the master thesaurus database
27. Prepare introductory material to be included in each new edition of the thesaurus
28. Work with publications management staff and data processing staff (if appropriate) to develop procedures and establish schedules for the regular publication of new editions of the thesaurus
29. Work with senior staff of the indexing section and data processing staff to develop procedures for regular maintenance of the subject headings in the indexing database which have been changed in or deleted from the thesaurus database
30. Perform proofreading of assigned sections of new editions of the thesaurus, as required

ACTIVITIES

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Other

31. Function as an expert in assigned subject areas
32. Establish and maintain contact with subject experts in the field who are working in assigned subject areas and who may supply expert advice upon request
33. Maintain an up-to-date collection of reference works in assigned subject areas to support subject reference needs
34. Attend professional meetings in assigned subject areas and in the information field; prepare reports for dissemination to staff
35. Keep abreast of developments in the information field that affect thesaurus development
36. Develop contacts with other information professionals both within and outside the parent organization
37. Together with senior level staff from acquisitions, reference/information analysis, and indexing/abstracting sections, identify organizations/institutions which produce information in the subject field(s) which the information center/clearinghouse supports
38. Participate in in-house committees which require specific subject and/or language expertise
39. Perform special studies, as assigned
40. Forward recommendations for materials to be acquired to the selection/acquisition staff
41. Conduct business by phone, when appropriate
42. Write memos and letters, as required
43. Maintain a record of work performed
44. Make recommendations to the section manager for improvement in operation of the section
45. Attend and participate in staff meetings
46. Provide as overview of the operations of the section to visitors, as requested
47. Train and supervise support staff, as required

ACTIVITIES

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Other (cont'd)

48. Work to develop "esprit de corps" among co-workers and staff supervised
49. Assist section manager in writing job descriptions for self and for staff supervised
50. Assist section manager in developing performance standards for self and for staff supervised
51. Assess performance of existing equipment/systems used in the section and investigate capabilities of other equipment/systems
52. Recommend acquisition of new/additional equipment/systems
53. Train section staff in operation and maintenance of equipment/systems
54. Draft statements of work for contract proposals for services, systems, equipment and/or maintenance
55. Evaluate contractor's proposals
56. Write articles for professional journals/newsletters
57. Draft statements of section procedures and policies; draft revisions as required
58. Flowchart and document section procedures
59. Prepare manuals of procedures
60. Assist section manager in on-going systems analysis of the section
61. Analyze statistics for all operations in the section and prepare draft statistical reports
62. Assist section manager in preparing the annual budget for section operations
63. Function as section manager in his/her absence

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

KNOWLEDGE

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Basic knowledge

- *** knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- *** knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- *** knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- ** knowledge of foreign languages

Information Science Knowledge (Generic)

- ** knowledge of definition, structure, and formats of information
- * knowledge of alternative approaches to the organization of information
- * knowledge of alternative approaches to retrieval of information
- * knowledge of alternative approaches to information management
- knowledge of available and emerging information technologies and their applications
- ** knowledge of completed and ongoing research in the field and its applicability to practice
- *** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- knowledge of the variety of work settings and their organizational structures
- * knowledge of the functions performed within the various work settings and the services and products offered
- * knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- *** knowledge of the thesaurus development and control functions, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- ** knowledge of the various resources that are necessary to support the activities
- *** knowledge of reference tools in specific subject areas

KNOWLEDGE

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Knowledge of what work is done (cont'd)

- *** knowledge of methods and techniques for thesaurus development and control
- ** knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- *** knowledge of how to perform the various activities (e.g., develop basic list of terms in selected subject fields, develop taxonomies, complete data entry forms for cross-references, access and update the system, etc.)
- *** knowledge of how to use specific tools for thesaurus development and control
- *** knowledge of how to apply the methods and techniques of thesaurus development and control
 - * knowledge of proofreading techniques and procedures
 - knowledge of personnel procedures
 - * knowledge of evaluation methods and techniques to evaluate systems, services and products
 - * knowledge of statistical description, analysis, interpretation and presentation
- ** knowledge of available systems, services and products to support thesaurus development and control
 - * knowledge of the costs associated with resources (materials, personnel, space, etc.)
 - * knowledge of cost analysis and interpretation methods
 - knowledge of methods of resource allocation
 - * knowledge of alternative management structures and their implications for the operation of the section
- ** state-of-the-art knowledge of research and practice in thesaurus development and control techniques

Knowledge of the organization and specific work unit

- ** knowledge of the mission, goals and objectives of the organization
 - * knowledge of the structure of the organization and the role of the section within the organization
 - * knowledge of the various projects and key personnel within the organization
 - * knowledge of the policies and procedures relevant to section operations
- ** knowledge of the various resources available within the organization (e.g., personnel, equipment, etc.)
- *** knowledge of how the thesaurus terms are used by indexers
- ** knowledge of the operations of other sections in the organization and how they relate to thesaurus development and control

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

KNOWLEDGE

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Basic knowledge

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Subject knowledge

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- ** knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- * knowledge of foreign languages

Information Science Knowledge (Generic)

- * knowledge of definition, structure, and formats of information
- * knowledge of alternative approaches to the organization of information
- ** knowledge of alternative approaches to retrieval of information
- ** knowledge of alternative approaches to information management
- ** knowledge of available and emerging information technologies and their applications
- * knowledge of completed and ongoing research in the field and its applicability to practice
- * knowledge of career opportunities
- ** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- ** knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- ** knowledge of the variety of work settings and their organizational structures
- ** knowledge of the functions performed within the various work settings and the services and products offered
- *** knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- * knowledge of the thesaurus development and control functions, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- * knowledge of the various resources that are necessary to support the activities
- * knowledge of reference tools in specific subject areas

KNOWLEDGE

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Knowledge of what work is done (cont'd)

- * knowledge of methods and techniques for thesaurus development and control
- * knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- * knowledge of how to perform the various activities (e.g., develop basic list of terms in selected subject fields, develop taxonomies, complete data entry forms for cross-references, access and update the system, etc.)
- * knowledge of how to use specific tools for thesaurus development and control
- * knowledge of how to apply the methods and techniques of thesaurus development and control
- * knowledge of proofreading techniques and procedures
- * knowledge of personnel procedures
- * knowledge of the contracting process, both in general and within the organization
- ** knowledge of evaluation methods and techniques to evaluate systems, services and products
- * knowledge of public relations techniques
- ** knowledge of statistical description, analysis, interpretation and presentation
- ** knowledge of available systems, services and products to support thesaurus development and control
- * knowledge of the costs associated with resources (materials, personnel, space, etc.)
- * knowledge of cost analysis and interpretation methods
- * knowledge of methods of resource allocation
- * knowledge of standards, measures and methods for evaluating personnel
- * knowledge of alternative management structures and their implications for the operation of the section
- ** state-of-the-art knowledge of research and practice in thesaurus development and control techniques

Knowledge of the organization and specific work unit

- * knowledge of the mission, goals and objectives of the organization
- * knowledge of the structure of the organization and the role of the section within the organization
- * knowledge of the various projects and key personnel within the organization

KNOWLEDGE

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Knowledge of the organization and specific work unit (cont'd)

- * knowledge of the policies and procedures relevant to section operations
- * knowledge of the various resources available within the organization (e.g., personnel, equipment, etc.)
- ** knowledge of how the thesaurus terms are used by indexers
- * knowledge of the operations of other sections in the organization and how they relate to thesaurus development and control

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

SKILLS

THESAURUS DEVELOPMENT & CONTROL

SENIOR LEVEL

Basic Skills

******* literacy, numeracy, cognitive, analytical, communications, etc.

Skills Related to Specific Activities

Ability to:

- ***** perform each activity
- ***** apply consistently the guidelines for thesaurus development and control
- ***** locate and use appropriate reference tools to provide subject support in thesaurus development and control
- ***** perceive the information needs of the thesaurus user
 - * establish rapport with colleagues
- ***** communicate well by written, verbal and non-verbal means
 - * collect, analyse and interpret data
- **** make decisions and recommendations based on available information
- **** work independently and in groups
 - * perform sedentary work
 - * develop criteria for evaluation
- **** make effective, timely, and well-informed decisions
- **** isolate and define problems and develop the necessary criteria and action for their solution
- **** manage time effectively
 - conduct meetings with individuals and groups
 - arbitrate and negotiate
 - * anticipate long-range needs of the section
 - * design systems and procedures to improve section operations
 - apply methods of measurement and evaluation
 - budget and make projections
- **** optimize the use of organizational and section resources

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- * work independently and in groups
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- * isolate and define problems and develop the necessary criteria and action for their solution
- * manage time effectively
- * conduct an interview
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- * supervise staff
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ATTITUDES

THESAURUS DEVELOPMENT & CONTROL

Dispositional Attitudes

Attitudes Toward Institutions

- * Respect for profession
- * Respect for the thesaurus development and control section
- * Respect for the parent organization

Attitudes Toward Other People

Toward Users

- ** Respect users
- ** Like people in general
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 - Like to meet people
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 - * Sensitive to others' needs

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- ** Respect co-workers
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ATTITUDES

THESAURUS DEVELOPMENT & CONTROL

Personal Qualities (cont'd)

- ** Objectivity
- ** Open-mindedness
 - * Optimism/Positive attitude
- ** Organization
 - * Patience
 - * Resourceful
- ** Sensitive/Thoughtful
 - Sense of humor
 - * Sense of ethics
 - * Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- *** Willingness to take/accept responsibility
- ** Willingness to take initiative
- ** Willingness to respond to authority, apply and follow policy
 - * Realization that there is no single "right" way to achieve the goals of the section/organization
- ** Desire to learn/try
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INFORMATION CENTER/CLEARINGHOUSE PROFESSIONAL COMPETENCIES
INDEXING/ABSTRACTING

ACTIVITIES

INDEXING/ABSTRACTING

ENTRY LEVEL

1. Receive material to be indexed
2. Log in each piece as indexing begins
3. Review preliminary data (standard journal title abbreviation or other title information, volume, issue, pagination, article/chapter title, author(s), author affiliation, other bibliographic information, abstract) entered on the indexing form/record for accuracy
4. Make corrections to preliminary data, if required
5. Translate titles, if required, and enter on the indexing form/record
6. Read/scan the item to be indexed and identify the main theme and sub-themes
7. Enter check tag data on the indexing form/record, if applicable
8. Select the appropriate headings/heading-subheading combinations from the approved thesaurus
9. Enter the headings/heading-subheading combinations on the indexing form/record
10. Mark the subject terms under which the item should be cited in the printed index, if applicable. Additional unmarked subject terms, representing sub-themes in the item, will retrieve the cited item online only
11. Prepare abstracts or annotations, as required
12. Add comments/questions for the reviser on the indexing form/record, if necessary
13. Flag pieces which may require additional processing for inclusion in other indexes/databases and/or which should be routed to reference/information analysis staff for their review

Other

14. Perform proofreading of printed index page proofs as required
15. Complete necessary forms to suggest changes/additions to the approved thesaurus; forward forms to the revisor
16. Make recommendations to the section manager for improvement in the operations of the section

ACTIVITIES

INDEXING/ABSTRACTING

ENTRY LEVEL

Other (cont'd)

17. Maintain a statistical record of work performed
18. Write memos, as required
19. Attend and participate in staff meetings
20. Provide an overview of the operations of the section to visitors, as requested
21. Assist section manager in writing/updating the job description for entry level indexers
22. Assist section manager in developing performance standards for entry level indexers
23. Keep abreast of developments in the information field that affect indexing and abstracting
24. Attend professional meetings and prepare reports for dissemination to staff
25. Develop professional contacts both within and outside the section and the parent organization

INDEXING/ABSTRACTING

MID LEVEL

26. Index and abstract the more difficult materials and the selectively indexed/abstracted materials

Quality and Production Control

27. Receive materials to be indexed from the acquisitions section
28. Review materials for presence of proper locator labels; may be bar code/OCR labels to allow for tracking of materials in process
29. Review indexing forms/records for accuracy of bibliographic data input by acquisitions staff
30. Forward materials for descriptive indexing to in-house/contract staff:

editorial staff mark off article/chapter title, author(s), author affiliation, and abstract keyboarding staff input data

ACTIVITIES

INDEXING/ABSTRACTING

MID LEVEL

Quality and Production Control (cont'd)

31. Keep a record (manual/automated) of the location of materials in process
32. Review/spot check accuracy of editorial and keyboarding staff/contractor
33. Forward materials to be distributed for indexing to the appropriate senior indexer. Notify him/her of any problems which may affect the volume of material to be indexed
34. Train and supervise technicians who proof the completed indexing forms/records before they are released for publication processing
35. Run established search profiles and forward/release indexing data to the designated organizational unit for publication/product processing according to established schedules
36. Coordinate the proofreading of page proofs by section staff
37. Draft statements of work for request-for-proposals for contract data entry
38. Evaluate contractors' proposals
39. Act as project officer for contract services for data entry

Other

40. Review periodically the contents of the online dictionary, if applicable. Delete terms, as required
41. Work with a senior indexer (reviser) on a one-to-one basis to learn revision procedures and to develop the necessary skills
42. Participate in in-house committees which require specific subject and/or language expertise
43. Perform special studies, as assigned
44. Work to develop "esprit de corps" among staff supervised
45. Assist section manager in writing job descriptions for self and for staff supervised

ACTIVITIES

INDEXING/ABSTRACTING

MID LEVEL

Other (cont'd)

46. Assist section manager in developing performance standards for self and for staff supervised
47. Assist section manager in the review and performance evaluation of staff supervised
48. Assist section manager in the selection of new technicians
49. Prepare manuals of procedures for in-house technicians and for data entry contractors

INDEXING/ABSTRACTING

SENIOR LEVEL

50. Function as a technical expert/reviser in the section
51. Distribute work to indexers according to priority and language and/or subject expertise
52. Revise/review the work of all in-house/contract indexers
53. Respond to questions posed by revisees
54. Supervise the forwarding of all processed materials to the proper organizational unit for storage or disposal
55. Document performance of revisees
56. Prepare and conduct formal training/update classes for all in-house/contract indexers

Other

57. Keep abreast of bibliographic standards for indexing and abstracting; incorporate these standards into section procedures
58. Work with the section manager to determine/revise the processing priority assigned to each title indexed
59. Prepare introductory material to be included in each issue of the printed index and in cumulations

ACTIVITIES

INDEXING/ABSTRACTING

SENIOR LEVEL

Other (cont'd)

60. Together with the indexing quality and production control supervisor, work with data processing staff (if appropriate) and publications management staff to establish procedures and resolve problems related to the publication/release of the indexes/databases on a regular basis
61. Work with senior staff of the thesaurus development and control section and data processing staff (if applicable) to develop procedures for regular maintenance of subject headings in the indexing database which have been changed in or deleted from the thesaurus database
62. Develop and maintain appropriate search profiles to retrieve subsets of the master indexing database for processing for distribution as separate publications/databases
63. Recommend new products which may be developed from the master indexing database
64. Work with senior staff of the acquisitions section to establish procedures and resolve problems related to the timely receipt of materials for indexing, input of bibliographic data on the indexing form/record by acquisitions staff, and the regular production of lists of titles indexed for inclusion in the printed index
65. Work with senior level staff from the acquisitions and reference/information analysis sections to formulate draft selection policies for all types of materials to be acquired and processed (fully or selectively) by the center/clearinghouse; recommend revisions as required
66. Together with senior level staff from acquisitions, reference/information analysis, and thesaurus control sections, identify organizations/institutions which produce information in the subject field(s) which the information center/clearinghouse supports
67. Review indexing staff suggestions for changes/additions to the approved thesaurus; confer with section manager and other senior level indexers, as appropriate
68. Act as liaison between the indexing section and the thesaurus control section on all questions related to use/modification of the approved thesaurus
69. Prepare/update manuals of indexing and abstracting policies and procedures for in-house/contract indexers

ACTIVITIES

INDEXING/ABSTRACTING

SENIOR LEVEL

Other (cont'd)

70. Maintain an up-to-date collection of reference works to support the respective subject reference needs of the indexers
71. Work with the section manager to establish and/or revise standards of performance for all levels of indexers
72. Flowchart and document section procedures
73. Assist section manager in on-going systems analysis of the section
74. Assess performance of existing equipment and/or systems (manual or automated) used in the section and investigate capabilities of other equipment/systems
75. Recommend acquisition of new/additional equipment/systems
76. Train staff in operation and in-house maintenance of equipment/systems
77. Supervise in-house operation and maintenance of equipment/systems
78. Assist in the selection of new professional staff
79. Write articles for professional publications when appropriate
80. Analyze statistics for all operations in the section and prepare draft statistical reports
81. Assist the section manager in preparing the annual budget for section operations
82. Function as section manager in his/her absence

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

KNOWLEDGE

INDEXING/ABSTRACTING

ENTRY LEVEL

Basic knowledge (Assumed)

*** Knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- * knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- * knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- ** knowledge of foreign languages

Information Science Knowledge (Generic)

- ** knowledge of definition, structure, and formats of information
- ** knowledge of alternative approaches to the organization of information
- * knowledge of alternative approaches to retrieval of information
- * knowledge of alternative approaches to information management
- ** knowledge of available and emerging information technologies and their applications
- ** knowledge of completed and ongoing research in the field and its applicability to practice
- ** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- * knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- * knowledge of the variety of work settings and their organizational structures
- * knowledge of the functions performed within the various work settings and the services and products offered
- * knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- * knowledge of the indexing and abstracting functions, the range of services and products offered (both actual and potential)
- knowledge of the activities that are required to offer the services and produce the products
- knowledge of the various resources that are necessary to support the activities
- *** knowledge of indexing tools
- *** knowledge of indexing and abstracting methods and techniques
- *** knowledge of performance expected and how it can be measured
- *** knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

KNOWLEDGE

INDEXING/ABSTRACTING

ENTRY LEVEL

Knowledge of how to do work

- ** knowledge of how to perform the various activities (e.g., review descriptive indexing for accuracy, perform subject indexing, enter data on the indexing form/record, etc.)
- *** knowledge of how to use the indexing tools
- *** knowledge of how to apply the indexing and abstracting methods and techniques
 - * knowledge of proofreading techniques and procedures
 - * knowledge of personnel procedures

Knowledge of the organization and specific work unit

- * knowledge of the mission, goals and objectives of the organization
- * knowledge of the structure of the organization and the role of the section within the organization
- ** knowledge of the various projects and key personnel within the organization
- * knowledge of the policies and procedures relevant to the section operations
- * knowledge of the various resources available within the organization (e.g., personnel, equipment, etc.)
- * knowledge of the users' information needs and requirements

INDEXING/ABSTRACTING

MID LEVEL

- ** greater depths of knowledge specified above
- ** knowledge of the operations of other sections in the organization and how they relate to indexing/abstracting
- knowledge of the contracting process, both in general and within the organization
- ** knowledge of evaluation methods and techniques to evaluate systems, services and products
- * knowledge of quality and production control techniques and procedures

KNOWLEDGE

INDEXING/ABSTRACTING

SENIOR LEVEL

- *** greater depths of knowledge specified above**
- * knowledge of statistical description, analysis, interpretation and presentation**
- * knowledge of available vendor-supplied systems, services and products to support indexing/abstracting**
- * knowledge of the costs associated with resources (materials, personnel, space, etc.)**
- * knowledge of cost analysis and interpretation methods**
- * knowledge of methods of resource allocation**
- * knowledge of standards, measures and methods for evaluating personnel**
- * knowledge of alternative management structures and their implications for the operation of the section**
- * state-of-the-art knowledge of research and practice in indexing and abstracting techniques**

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

KNOWLEDGE

INDEXING/ABSTRACTING

ENTRY LEVEL

Basic knowledge

** knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

*** knowledge of the primary subject field of users served (e.g., medicine, chemistry, law, etc.)

*** knowledge in greater depth in specific subjects, (e.g., neuroanatomy, neurophysiology, neurosurgery, etc.)

*** knowledge of foreign languages

Information Science Knowledge (Generic)

* knowledge of definition, structure, and formats of information

* knowledge of alternative approaches to the organization of information

** knowledge of alternative approaches to retrieval of information

* knowledge of alternative approaches to information management

* knowledge of available and emerging information technologies and their applications

* knowledge of completed and ongoing research in the field and its applicability to practice

• * knowledge of career opportunities

** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

** knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)

** knowledge of the variety of work settings and their organizational structures

** knowledge of the functions performed within the various work settings and the services and products offered

*** knowledge of the users of the services and products, their characteristics and information habits

KNOWLEDGE

INDEXING/ABSTRACTING

ENTRY LEVEL

Knowledge of what work is done

- ** knowledge of the indexing and abstracting functions, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- ** knowledge of the various resources that are necessary to support the activities
- * knowledge of indexing tools
- * knowledge of indexing and abstracting methods and techniques
- * knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- * knowledge of how to perform the various activities
- * knowledge of how to use the indexing tools
- * knowledge of how to apply the indexing and abstracting methods and techniques
- * knowledge of proofreading techniques and procedures
- * knowledge of personnel procedures

Knowledge of the organization and specific work unit

- * knowledge of the mission, goals and objectives of the organization
- * knowledge of the structure of the organization and the role of the section within the organization
- * knowledge of the various projects and key personnel within the organization
- * knowledge of the policies and procedures relevant to the section operations
- * knowledge of the various resources available within the organization (e.g., personnel, equipment, etc.)
- *** knowledge of the users' information needs and requirements

KNOWLEDGE

INDEXING/ABSTRACTING

MID LEVEL

- * greater depths of knowledge specified above
- * knowledge of the operations of other sections in the organization and how they relate to indexing/abstracting
- ** knowledge of the contracting process, both in general and within the organization
- ** knowledge of evaluation methods and techniques to evaluate systems, services and products
- ** knowledge of quality and production control techniques and procedures

INDEXING/ABSTRACTING

SENIOR LEVEL

- * greater depths of knowledge specified above
- * knowledge of public relations techniques
- * knowledge of statistical description, analysis, interpretation and presentation
- * knowledge of available vendor-supplied systems, services and products to support indexing/abstracting
- * knowledge of the costs associated with resources (materials, personnel, space, etc.)
- ** knowledge of cost analysis and interpretation methods
- * knowledge of methods of resource allocation
- * knowledge of standards, measures and methods for evaluating personnel
- * knowledge of alternative management structures and their implications for the operation of the section
- ** state-of-the-art knowledge of research and practice in indexing and abstracting techniques

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

SKILLS

INDEXING/ABSTRACTING

ENTRY LEVEL

Basic Skills

***** literacy, numeracy, cognitive, analytical, communications, etc.**

Skills Related to Specific Activities

Ability to:

- * perform each activity
- ** apply indexing and abstracting rules consistently
- * perceive the information needs of the data user
- ** establish rapport with colleagues
- *** communicate well by written, verbal and non-verbal means**
- * collect, analyze and interpret data
- * make decisions and recommendations based on available information
- * work independently and in groups
- * perform sedentary work
- develop criteria for evaluation
- * make effective, timely, and well-informed decisions
- * isolate and define problems and develop the necessary criteria and action for their solution
- ** manage time effectively

INDEXING/ABSTRACTING

MID LEVEL

Skills Related to Each Specific Activity

***** Skills listed above are developed to a greater extent**

Ability to:

- conduct an interview
- * conduct meetings with individuals and groups
- supervise staff
- ** arbitrate and negotiate

SKILLS

INDEXING/ABSTRACTING

SENIOR LEVEL

***** Skills listed above are developed to a greater extent**

Ability to:

- ** anticipate long-range needs of the section**
- ** design systems and procedures to improve section operations**
 - * apply methods of measurement and evaluation**
- ** budget and make projections**
- *** optimize the use of organizational and section resources**

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

SKILLS

INDEXING/ABSTRACTING

ENTRY LEVEL

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INDEXING/ABSTRACTING

MID LEVEL

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INDEXING/ABSTRACTING

SENIOR LEVEL

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Ability to:

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- * design systems and procedures to improve section operations
- * apply methods of measurement and evaluation
- * budget and make projections
- ** optimize the use of organizational and section resources

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

ATTITUDES

LEARNING/ABSTRACTING

Dispositional Attitudes

Attitudes Toward Institutions

- * Respect for profession
- ** Respect for the section
- ** Respect for the parent organization

Attitudes Toward Other People

Toward Users

- * Respect users
- ** Like people in general
- ** Like to help people
- * Like to meet people
- * Like to make others feel comfortable
- Sensitive to others' needs

Toward Others in the Workplace

- ** Respect co-workers
- * Like to work with others/as a team
- * Like to work on own
- * Willingness to draw upon and share knowledge and experience with others
- * Supportive of co-workers

Personal Qualities

- ** Alertness
- * Assertiveness
- * Compassion/Kindness
- * Confidence
- * Cheerfulness
- *** Dependability
- * Determination/Tenacity
- ** Diplomacy
- * Emotional stability
- * Fairness
- * Flexibility/Versatility
- * Imagination
- * Inquisitiveness
- * Leadership ability
- * Neatness
- * Need for achievement

ATTITUDES

INDEXING/ABSTRACTING

Personal Qualities (cont'd)

- ** Objectivity
- ** Open-mindedness
 - * Optimism/Positive attitude
- ** Organization
 - * Patience
 - * Resourceful
 - * Sensitive/Thoughtful
 - * Sense of humor
- ** Sense of ethics
 - * Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- ** Willingness to take/accept responsibility
- * Willingness to take initiative
- * Willingness to respond to authority, apply and follow policy
- * Realization that there is no single "right" way to achieve the goals of the section/organization
- *** Desire to learn/try
 - Willingness to fail
- ** Willingness to ask questions
 - * Desire to work to best of ability
- ** Responsiveness to time constraints
- ** Accuracy
 - Willingness to get hands dirty
- ** Attention to detail
 - * Willingness to do clerical tasks
- ** Desire to follow-through
 - * Service orientation
 - * Organizational identity
- ** Willingness to promote parent organization and its services
 - * View of parent organization as part of a larger information environment
 - * Ability to see broad picture
 - * Ability to sacrifice short-term gains for long-term goals
- ** Political sense
 - Curiosity:
 - Variety of interests
 - * Desire to grow personally
 - * Desire to grow professionally
 - * Desire to remain current in specific and general subject field
 - * Positive attitude toward job

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

ATTITUDES

INDEXING/ABSTRACTING

Dispositional Attitudes

Attitudes Toward Institutions

- * Respect for the parent organization

Attitudes Toward Other People

Toward Users

- * Sensitive to others' needs

Toward Others in the Workplace

- ** Willingness to draw upon and share knowledge and experience with others
- * Supportive of co-workers
- * Enjoy managing/supervising others

Personal Qualities

- * Alertness
- * Dependability
- * Flexibility/Versatility
- * Imagination
- * Inquisitiveness
- * Leadership ability
- * Neatness
- * Open-mindedness
- * Resourceful
- * Sensitive/Thoughtful
- * Sense of humor
- * Sense of ethics

ATTITUDES

INDEXING/ABSTRACTING

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- * Willingness to take/accept responsibility
- ** Willingness to respond to authority, apply and follow policy
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- ** Desire to learn/try
- * Willingness to fail
- * Desire to work to best of ability
- * Responsiveness to time constraints
- * Desire to follow-through
- * Service orientation
- * Organizational identity
- * Willingness to promote parent organization and its services
- * View of parent organization as part of a larger information environment
- ** Ability to see broad picture
- * Ability to sacrifice short-term gains for long-term goals
- ** Desire to grow professionally
- ** Desire to remain current in specific and general subject field
- * Positive attitude toward job

**INFORMATION CENTER/CLEARINGHOUSE PROFESSIONAL COMPETENCIES
REFERENCE/INFORMATION ANALYSIS**

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Custom Searches

1. Log in and review search request forms submitted by requesters
2. Contact requesters if clarification of information requirements is required
3. Supervise the return of search request forms/letters to requesters if the forms/letters lack essential information; use form letters to indicate why the requests have not been accepted for processing
4. Develop the strategy for obtaining, evaluating, and packaging the information and data to meet requesters' needs
5. Perform online searches, using proper thesaurus terms and advanced search techniques to retrieve the requested information
6. Review retrieval output for relevancy
7. If additional searching is required, determine appropriate source(s) (vertical files, printed publications, consultation with subject experts, etc.)
8. Refer requests to higher-level reference staff, as appropriate
9. Refer requesters to other information services/sources, as appropriate
10. If copies (hard or microfiche) of original documents are required, forward/transfer document numbers and requester identification to the appropriate contract distributor for separate mailing/delivery of the copies
11. Supervise preparation of search results for mailing/delivery to requesters
12. Supervise the transfer of billing documentation/data to the appropriate fiscal control staff

Subscription Searches

13. Run stored search profiles/programs at specified intervals
14. Supervise preparation of offline printouts for mailing delivery

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Information Analysis

15. Perform searches (online and manual) to support the information analysis activities of higher level section staff; obtain copies of the cited documents
16. Translate titles and abstracts, as required
17. Assist in proofreading information analysis products
18. Recommend development of information analysis products on specific topics
19. Recommend topics/news notes for inclusion in the center's/clearing-house's newsletter(s)

Other

20. Perform bibliographic verification as required
21. Supervise handling of phone and written requests for information on the services provided by the information center/clearinghouse
22. Assist senior staff with procedures, documentation and communication to support the implementation of special online training classes and system demonstrations
23. Participate in training representatives of database distributors/services, contractors and organizational staff in searching the online database(s) and using the controlled vocabulary developed by the information center/clearinghouse
24. Suggest ways in which the online system may be made more user-friendly
25. Participate as a team member in staffing exhibits and demonstrating the online system at professional meetings and conferences
26. Assist mid level staff in investigating requesters' problems related to search charges and to lack of satisfaction with search results
27. Participate in cross-education of staff by filling out and distributing staff alert forms describing new information discovered about the subject fields(s) of interest to the information center/clearinghouse, the online system, specific databases, specific types of equipment, telecommunications systems, etc.

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Other (cont'd)

28. Recommend materials/data for inclusion in reference source files (vertical files, in-house indexes)
29. Complete necessary forms to suggest changes/additions to the approved thesaurus; forward forms to senior level section staff
30. Recommend new publications/products which could be developed from the databases produced by the center/clearinghouse
31. Use interdisciplinary reference sources/services to identify materials which are in-scope for the center/clearinghouse and which should be acquired
32. Forward to the selection/acquisitions staff recommendations for materials to be acquired and indexed
33. Recommend acquisition of materials for the reference collection
34. Perform special studies, as assigned
35. Conduct business by phone, whenever appropriate
36. Write memos and letters, as required
37. Maintain a record of work performed and prepare a monthly report of activities
38. Prepare manuals of procedures
39. Make recommendations to the section manager for improvement in operations of the section
40. Attend and participate in staff meetings
41. Provide an overview of the operations of the section to visitors, as requested
42. Supervise technicians and other paraprofessional staff
43. Work to develop "esprit de corps" among staff supervised
44. Assist section manager in writing job descriptions for self and for staff supervised

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Other (cont'd)

45. Assist section manager in developing performance standards for self and for staff supervised
46. Assist section manager in the review and performance evaluation of staff supervised
47. Assist in the selection of new technicians and paraprofessionals
48. Keep abreast of new and changing reference sources, services and tools
49. Keep abreast of new and developing technologies applicable to reference searching and information analysis
50. Keep abreast of developments in the subject field(s) supported by the information center/clearinghouse
51. Attend professional meetings and prepare reports for dissemination to staff
52. Develop professional contacts both within and outside the parent organization

REFERENCE/INFORMATION ANALYSIS

MID LEVEL

Custom Searches

53. Perform more complex searches
54. Assist entry level staff with any questions related to search formulation or strategy, including use of the approved thesaurus terms

Subscription Searches

55. Develop and maintain stored search profiles for subscription searches
56. Obtain feedback from requesters on the relevancy of retrievals
57. Modify stored search profiles, as required

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

MID LEVEL

Search Service Administration

58. Work with fiscal control staff and data processing staff to develop systems and procedures for forwarding/transferring billing data to the fiscal control office
59. Work with data processing staff and representatives of document distributors to develop procedures/programs for forwarding/transferring retrieved document numbers to the appropriate contractor for document distribution
60. Work with representatives of document distributors to resolve any problems related to document delivery
61. Prepare information brochures/fact sheets on the search programs and other services provided by the center/clearinghouse
62. Prepare application forms and all necessary form letters to support the search services
63. Supervise all activities related to enrollment of new subscribers in the current awareness subscription search service
64. Develop and supervise operation of a tracking system in order to maintain knowledge of the status of all information requests
65. Coordinate the investigation of requesters' problems related to search charges and to lack of satisfaction with search results

Information Analysis

66. Review published information on selected topics, analyze the information, consult with subject experts as required, and draft information analysis products for review by senior staff
67. Coordinate the proofreading of all information analysis products approved for publication
68. Prepare the center's/clearinghouse's regular newsletter(s) on specific topic(s) with input from section staff

Other

69. Organize and maintain reference source files (vertical files, in-house indexes)

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

MID LEVEL

Other (cont'd)

70. Make preliminary selection of forms and/or develop draft record formats for all reference files and operations
71. Assess performance of existing equipment/systems/services used in reference and investigate capabilities of other equipment/systems/services
72. Recommend acquisition of new/additional equipment/systems/services
73. Train staff in operation and in-house maintenance of equipment/systems/services
74. Supervise in-house operation and maintenance of equipment/systems/services
75. Gather information for maintenance contracts on equipment/systems
76. Draft statements of work for contract proposals for services, systems, equipment and/or maintenance
77. Evaluate contractors' proposals
78. Train and supervise entry level staff
79. Assist in the selection of new professional staff
80. Write articles for professional journals/newsletters when appropriate

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

Search Service Administration

81. Supervise the overall planning and operation of the custom and subscription search services
82. Assign search requests to the appropriate entry and mid level staff for processing
83. Assist mid level staff in formulating the search strategies for particularly difficult topics; confer with senior level indexing and thesaurus development staff as required

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

Search Service Administration (cont'd)

84. Spot check the search results obtained on custom and subscription searches; recommend additional search strategies as appropriate
85. Work with publications/product management staff and data processing staff to identify charging requirements for custom and subscription searches

System Training and Demonstration

86. Work with publications/product management staff in scheduling online training for contractors and representatives of database distributors/services
87. Plan and coordinate all training activities and demonstrations/exhibits related to the information center's/clearinghouses's online database(s)
88. Monitor and evaluate all training activities and system demonstrations/exhibits by direct observation and by review of attendees' written evaluations
89. Advise section staff of ways in which they may improve training sessions, training aids, and system demonstrations/exhibits

Information Analysis

90. Receive and review newly-indexed materials that have been flagged for forwarding to the reference/information analysis section (selected journals, state-of-the-art reviews in selected subjects and information prepared by selected experts/organizations)
91. Select topics for information analysis
92. Plan information analysis products, developing the objectives and general outline for each one
93. Work with publications/product management staff to establish production and distribution plans, procedures, and estimated budget for each publication/product
94. Work with selected staff to develop a detailed outline for each information analysis publication/product

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

Information Analysis (cont'd)

95. Assign various section staff to prepare part(s) of each publication/product

96. Function as editor of each information analysis publication/product

Other

97. Function as a technical expert in all matters relating to reference search services and to preparation of information analysis publications/products

98. Work with publications/product management staff to plan a marketing program to make potential user groups aware of the search services and information analysis publications/products

99. Identify organizational mailing lists that publications/product management staff should obtain for marketing purposes

100. Obtain input from users regarding changes that they would recommend in the search services and in the information analysis publications/products

101. Represent the center/clearinghouse at professional meetings and conferences in the subject field(s) of interest to the center/clearinghouse

102. Together with senior level staff from the selection/acquisitions, indexing/abstracting and thesaurus control sections, identify organizations/institutions which produce information in the subject field(s) which the information center/clearinghouse supports

103. Work with senior level staff from the selection/acquisitions and indexing/abstracting sections to formulate draft selection policies for all types of materials to be acquired and processed (fully or selectively) by the center/clearinghouse; recommend revisions as required

104. Work with senior level selection/acquisitions staff to evaluate the existing data collection(s) and to identify areas of weakness

105. Review suggestions by section staff for changes/additions to the approved thesaurus; forward recommended changes/additions to thesaurus development and control staff

ACTIVITIES

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

Other (cont'd)

106. Review and weed reference source files on a regular basis
107. Compile lists of reference books and standard works which comprise a basic collection in each major subject area of interest to the center/clearinghouse. New editions of these materials are to be acquired when published. Forward the lists to acquisitions for processing
108. Draft section procedures and policies; draft revisions as required
109. Flowchart and document section procedures
110. Assist section manager in on-going systems analysis of the section
111. Analyze statistics of section operations and prepare draft statistical reports
112. Train and supervise mid level staff
113. Assist section manager in preparing the annual budget for section operations
114. Function as section manager in his/her absence

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

KNOWLEDGE

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Basic knowledge

*** knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- * knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- * knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- ** knowledge of foreign languages

Information Science Knowledge (Generic)

- * knowledge of definition, structure, and formats of information
- * knowledge of alternative approaches to the organization of information
- * knowledge of alternative approaches to retrieval of information
- * knowledge of alternative approaches to information management
- ** knowledge of available and emerging information technologies and their applications
- * knowledge of completed and ongoing research in the field and its applicability to practice
- * knowledge of career opportunities
- ** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- ** knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- * knowledge of the variety of work settings and their organizational structures
- * knowledge of the functions performed within the various work settings and the services and products offered
- * knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- ** knowledge of the reference and information analysis functions, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- * knowledge of the various resources that are necessary to support the activities
- ** knowledge of reference tools

KNOWLEDGE

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Knowledge of what work is done (cont'd)

- ** knowledge of reference and information analysis methods and techniques
- ** knowledge of performance expected and how it can be measured
- *** knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- ** knowledge of how to perform the various activities (e.g., review search request forms, develop search strategies, perform online and manual searches to support information analysis activities, etc.)
- *** knowledge of how to use the reference tools
- *** knowledge of how to apply the reference methods and techniques
- * knowledge of personnel procedures

Knowledge of the organization and specific work unit

- * knowledge of the mission, goals and objectives of the organization
- * knowledge of the structure of the organization and the role of the section within the organization
- * knowledge of the various projects and key personnel within the organization
- * knowledge of the policies and procedures relevant to the section operations
- ** knowledge of the various resources available within the organization (e.g., personnel, equipment, etc.)
- ** knowledge of the users' information needs and requirements

REFERENCE/INFORMATION ANALYSIS

MID LEVEL

- *** greater depths of knowledge specified above
- ** knowledge of how to apply the information analysis methods and techniques
- ** knowledge of the operations of other sections in the organization and how they relate to reference and information analysis
- ** knowledge of the contracting process, both in general and within the organization
- * knowledge of evaluation methods and techniques to evaluate systems, services and products
- * knowledge of quality and production control techniques and procedures

KNOWLEDGE

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

- *** greater depths of knowledge specified above
- ** knowledge of public relations techniques
- ** knowledge of statistical description, analysis, interpretation and presentation
- ** knowledge of available vendor-supplied systems, services and products to support reference and information analysis
- ** knowledge of the costs associated with resources (materials, personnel, space, etc.)
- * knowledge of cost analysis and interpretation methods
- ** knowledge of methods of resource allocation
- ** knowledge of standards, measures and methods for evaluating personnel
- * knowledge of alternative management structures and their implications for the operation of the section
- * state-of-the-art knowledge of research and practice in reference and information analysis techniques

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

KNOWLEDGE

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Basic knowledge

- * knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

- *** knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)
- ** knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)
- ** knowledge of foreign languages

Information Science Knowledge (Generic)

- * knowledge of definition, structure, and formats of information
- * knowledge of alternative approaches to the organization of information
- * knowledge of alternative approaches to retrieval of information
- * knowledge of alternative approaches to information management
- ** knowledge of available and emerging information technologies and their applications
- * knowledge of completed and ongoing research in the field and its applicability to practice
- * knowledge of career opportunities
- ** knowledge of how to learn on an ongoing basis

Knowledge about information work environments

- * knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
- * knowledge of the variety of work settings and their organizational structures
- * knowledge of the functions performed within the various work settings and the services and products offered
- *** knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

- * knowledge of the reference and information analysis functions, the range of services and products offered (both actual and potential)
- * knowledge of the activities that are required to offer the services and produce the products
- * knowledge of the various resources that are necessary to support the activities
- ** knowledge of reference tools

KNOWLEDGE

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Knowledge of what work is done (cont'd)

- * knowledge of reference and information analysis methods and techniques
- * knowledge of performance expected and how it can be measured
- * knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- * knowledge of how to perform the various activities
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**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

SKILLS

REFERENCE/INFORMATION ANALYSIS

ENTRY LEVEL

Basic Skills

***** literacy, numeracy, cognitive, analytical, communications, etc.**

Skills Related to Specific Activities

Ability to:

- * perform each activity
- * teach adults
- * use computer and telecommunications equipment with ease
- * perceive the information needs of the data user
- * establish rapport with colleagues
- ** communicate well by written, verbal and non-verbal means
- collect, analyze and interpret data
- * make decisions and recommendations based on available information
- * work independently and in groups
- * develop criteria for evaluation
- * make effective, timely, and well-informed decisions
- ** isolate and define problems and develop the necessary criteria and action for their solution
- ** manage time effectively
- conduct an interview
- * supervise staff

REFERENCE/INFORMATION ANALYSIS

MID LEVEL

Skills Related to Each Specific Activity

**** Skills listed above are developed to a greater extent**

Ability to:

- ** analyze, evaluate and synthesize information
- * communicate with data processing staff on a technical level
- * conduct meetings with individuals and groups
- arbitrate and negotiate

SKILLS

REFERENCE/INFORMATION ANALYSIS

SENIOR LEVEL

**** Skills listed above are developed to a greater extent**

Ability to:

- ** anticipate long-range needs of the section and of the organization**
- *** design systems and procedures to improve operations of the section and of the organization**
- ** apply methods of measurement and evaluation**
- ** budget and make projections**
- ** optimize the use of organizational and section resources**

SKILLS

REFERENCE/INFORMATION ANALYSIS

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**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

ATTITUDES

REFERENCE/INFORMATION ANALYSIS

Dispositional Attitudes

Attitudes Toward Institutions

- * Respect for profession
- ** Respect for the section
- * Respect for the parent organization

Attitudes Toward Other People

Toward Users

- * Respect users
 - * Like people in general
- ** Like to help people
- ** Like to meet people
 - * Like to make others feel comfortable
- ** Sensitive to others' needs

Toward Others in the Workplace

- * Respect co-workers
- * Like to work with others/as a team
- * Like to work on own
- ** Willingness to draw upon and share knowledge and experience with others
- * Supportive of co-workers
- ** Enjoy managing/supervising others

Personal Qualities

- ** Alertness
- * Assertiveness
- * Compassion/Kindness
- * Confidence
- * Cheerfulness
- *** Dependability
- * Determination/Tenacity
- * Diplomacy
- * Emotional stability
- * Fairness
- ** Flexibility/Versatility
- * Imagination
- * Inquisitiveness
- ** Leadership ability
- * Neatness
- ** Need for achievement

ATTITUDES

REFERENCE/INFORMATION ANALYSIS

Personal Qualities (cont'd)

- * Objectivity
- ** Open-mindedness
- * Optimism/Positive attitude
- * Organization
- * Patience
- * Physical endurance
- * Resourceful
- * Sensitive/thoughtful
- ** Sense of humor
- ** Sense of ethics
- * Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- ** Willingness to take/accept responsibility
- * Willingness to take initiative
- ** Willingness to respond to authority, apply and follow policy
- * Realization that there is no single "right" way to achieve the goals of the section/organization
- ** Desire to learn/try
- * Willingness to fail
- ** Willingness to ask questions
- * Desire to work to best of ability
- ** Responsiveness to time constraints
- * Accuracy
- * Willingness to get hands dirty
- * Attention to detail
- * Willingness to do clerical tasks
- ** Desire to follow-through
- ** Service orientation
- * Organizational identity
- * Willingness to promote parent organization and its services
- * View of parent organization as part of a larger information environment
- * Ability to see broad picture
- * Ability to sacrifice short-term gains for long-term goals
- ** Political sense
- * Curiosity
- * Variety of interests
- * Desire to grow personally
- * Desire to grow professionally
- ** Desire to remain current in specific and general subject field
- ** Positive attitude toward job

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MORE VERSUS LESS IMPORTANT
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ATTITUDES

REFERENCE/INFORMATION ANALYSIS

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- * Variety of interests
- * Desire to grow personally
- * Desire to grow professionally
- ** Desire to remain current in specific and general subject field
- * Positive attitude toward job

**INFORMATION CENTER/CLEARINGHOUSE PROFESSIONAL COMPETENCIES
PUBLICATIONS AND PRODUCT MANAGEMENT**

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Planning

1. Work with senior staff of various sections to identify publications (in hardcopy and/or microform) and special data products (computer tapes for distribution to database distributors, special reports and listings, reprints, data supplied to special subject interest groups for publication of bibliographies, etc.) which may be developed from the master indexing, thesaurus, and acquisitions databases or which may be prepared by organization staff
2. Contract for/conduct market surveys to identify the potential need, demand for, and response to the various planned publications/products
3. Recommend modifications to planned publications/products based on analyses of market survey results
4. Work with the section manager, staff of the respective sections, and data processing staff to prepare the production plans and requirements for each new publication/product. Provide special assistance by helping them visualize the publications/products and minimizing production costs in planning
5. Following approval/modification of new publication/product plans by senior management, work with the appropriate senior staff to develop procedures and establish schedules for the production of each publication/product
6. Estimate the cost which must be charged for each publication/product in order to cover costs and make a profit, if applicable
7. Work with representatives of database distributors and other organizations to arrange preliminary details related to the use of and reimbursement for the supplied data
8. Draft documentation required to support the production and distribution of each approved publication/product
9. Work with appropriate organizational staff to plan and identify in-house procedures and contract requirements to support distribution of publications/products on demand or on a subscription basis.
10. Work with appropriate organizational staff to negotiate and monitor contracts and other agreements in support of production and distribution of publications/products

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Planning (cont'd)

11. Work with appropriate organizational staff to develop plans and procedures for distribution of copies (hardcopy or microform) of materials indexed by the center/clearinghouse
12. Work with legal counsel to develop documentation which may be completed by a copyright holder to grant permission to the center/clearinghouse and/or its distributing agent to reproduce and sell copies of the original material
13. Work with appropriate organizational staff to negotiate and monitor contracts and other agreements in support of microfilming original materials, converting the film to fiche, and supplying hard/fiche copies of the materials on demand or on a subscription basis; all microforms should meet federal and national standards.

Database Coordination

14. Keep abreast of industry-wide standards for online databases
15. Work with senior data processing staff and staff of the respective sections to ensure that established standards are maintained in online files developed by the organization
16. Work with senior staff in the respective sections and data processing staff to develop methods for testing the technical integrity of each database/software package prior to release of tapes for publication processing, for distribution to database distributors, or for sale
17. Work with appropriate staff in the respective sections to ensure that the content data in each database is ready for release on schedule and fulfills quality and quantity requirements
18. Work with data processing staff, representatives of database distributors and photocomposition/videocomposition contractors to ensure that the data is released in formats compatible with the receivers' systems
19. Coordinate in-house preparation of documentation and training programs for representatives of database distributors; provide them with an overview of the content and potential uses of the data contained in each database
20. Coordinate staff review of database documentation created by database distributors for their clients

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Database Coordination (cont'd)

21. Coordinate the sending of computer tapes to the database distributors on schedule
22. Supervise the maintenance of documentation files for each database released to database distributors
23. Maintain a statistical record of the use of each database by database distributors' clients
24. Maintain a financial record of the royalty/usage charges received from database distributors

Publications Coordination

25. Work with in-house staff and contractors to ensure that all deadlines are met in the production schedule for each publication
26. Coordinate operations related to the processing of illustrations for publications:
 - make/obtain half-tone photos and/or line cuts
 - crop photos as required and mark their locations on galleys
 - write captions
 - choose type
 - paste up boards
 - ensure return of negatives from publisher and file
 - return artwork obtained on loan
27. Provide guidance, as needed, to senior staff of the respective sections in development of objective, user-oriented introductory materials for publication
28. Send galleys of introductory materials for typesetting
29. Coordinate the proofreading of the introductory materials by senior staff in the respective sections
30. Obtain computer tapes of the content data for each publication and send to the appropriate source for computerized photocomposition/videocomposition
31. Receive the positive or negative camera-ready copy
32. Work with senior staff of the respective sections to coordinate the proofing of the camera-ready content data

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Publications Coordination (cont'd)

33. Design or contract for the design of the covers for each publication
34. Establish a color rotation cycle for the covers of successive year's issues/cumulations
35. Obtain/assign publication numbers for each publication, as required (e.g., volume and issue numbers, in-house document numbers, publisher's series numbers)
36. Obtain an ISSN for each title published as a serial
37. Obtain Cataloging-in-Publication (CIP) data for each publication/series
38. Apply for copyright for each publication, if appropriate
39. Send the complete package of camera-ready copy to the printer with specifications for the size of the publication, the cover color(s), the type of binding, the type of paper, the number of copies (for in-house use and shipment to the distributing agent), etc.
40. For data to be published by special subject interest groups, send the camera-ready content data to the respective organizations for publication processing
41. For microform publications, send computer-output-microfilm (COM) and introductory copy to the appropriate contractor for the creation of the masters and production of copies. Specify the number of copies for in-house use and for shipment to the distributing agent
42. For special or occasional publications, provide guidance, as needed, to senior staff of the respective sections regarding writing the introductory material, so that the publication will not be outdated too quickly by use of time-linked wording
43. For approved reprint publications, send negatives, if available, to the reprint publisher; ensure that all negatives are returned
44. Keep track of costs related to production of each publication; note cost trends
45. Notify the respective sections of the costs associated with production of each of the publications
46. Supervise the maintenance of files related to production of each publication

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Marketing

47. Prepare advertising brochures for each publication/product; coordinate review by appropriate in-house staff prior to publication
48. Request/purchase mailing lists from appropriate sources to reach the target audience for each publication/product
49. Coordinate mailing of samples of new publications to the editors of journals and reference guides in the appropriate subject fields
50. Work with a graphics designer to prepare copy for paid advertisements
51. Purchase advertising space in appropriate journals
52. Plan and staff exhibits of publications/products at professional meetings and conferences
53. Coordinate the preparation of a list of publications/products produced; publish the list as a separate or include the list (full or partial) in each title published
54. Contact known users of each publication/product to get feedback on ways the publication/product may be improved

Other

55. Assist users, as requested, in resolving problems which they may encounter in obtaining/using the publications/products from the designated distributing agent(s)
56. Plan and coordinate a marketing program to make potential user groups aware of the services provided by the information center/clearinghouse
57. Contact users of the services of the information center/clearinghouse to get feedback on ways that the service may be improved
58. Attend professional meetings in the information field and in publications and data products management; prepare reports for dissemination to staff
59. Keep abreast of developments in the information field that affect publications and product management and information centers/clearinghouses
60. Develop contacts with other professionals in publications and data products management

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Other (cont'd)

61. Perform special studies, as assigned
62. Conduct business by phone, when appropriate
63. Write memos and letters, as required
64. Maintain a record of work performed
65. Make recommendations to the section manager for improvement in operation of the section
66. Attend and participate in staff meetings
67. Provide an overview of the operations of the section to visitors, as requested
68. Train and supervise support staff, as required
69. Work to develop "esprit de corps" among co-workers and staff supervised
70. Assist section manager in writing job descriptions for self and for staff supervised
71. Assist section manager in developing performance standards for self and for staff supervised
72. Assess performance of existing equipment/systems used in the section and investigate capabilities of other equipment/systems
73. Recommend acquisition of new/additional equipment/systems
74. Train section staff in operation and maintenance of equipment/systems
75. Draft statements of work for contract proposals for services, systems, equipment and/or maintenance
76. Evaluate contractor's proposals
77. Write articles for professional journals/newsletters
78. Draft statements of section procedures and policies; draft revisions as required
79. Flowchart and document section procedures

ACTIVITIES

PUBLICATIONS AND PRODUCT MANAGEMENT

SENIOR LEVEL

Other (cont'd)

80. Prepare manuals of procedures
81. Assist section manager in on-going systems analysis of the section
82. Analyze statistics for all operations in the section and prepare draft statistical reports
83. Assist section manager in preparing the annual budget for section operations
84. Function as section manager in his/her absence

**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS DESIRABLE**

KNOWLEDGE

PUBLICATION/PRODUCT MANAGEMENT

SENIOR LEVEL

Basic knowledge

***** knowledge related to literacy, numeracy, communications, etc.**

Subject knowledge

- ** knowledge of the primary subject field of users served (e.g., education, medicine, chemistry, law, etc.)**
- * knowledge in greater depth in specific subjects, (e.g., science, math, and environmental education; handicapped and gifted children; reading and communication skills, etc.)**
- * knowledge of foreign languages**

Information Science Knowledge (Generic)

- ∪ knowledge of definition, structure, and formats of information**
- * knowledge of alternative approaches to the organization of information**
- * knowledge of alternative approaches to retrieval of information**
- * knowledge of alternative approaches to information management**
- ** knowledge of available and emerging information technologies and their applications**
- * knowledge of completed and ongoing research in the field and its applicability to practice**
- * knowledge of career opportunities**
- ** knowledge of how to learn on an ongoing basis**

Knowledge about information work environments

- * knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)**
knowledge of the variety of work settings and their organizational structures
- * knowledge of the functions performed within the various work settings and the services and products offered**
- * knowledge of the users of the services and products, their characteristics and information habits**

Knowledge of what work is done

- *** knowledge of the publications and product management functions, the range of services and products offered (both actual and potential)**
- *** knowledge of the activities that are required to offer the services and produce the products**
- *** knowledge of the various resources that are necessary to support the activities**
- *** knowledge of methods and techniques for publications and product management**

KNOWLEDGE

PUBLICATION/PRODUCT MANAGEMENT

SENIOR LEVEL

Knowledge of what work is done (cont'd)

- ** knowledge of performance expected and how it can be measured
- ** knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

Knowledge of how to do work

- *** knowledge of how to perform the various activities (e.g., conduct market surveys, plan new publications/products, coordinate production of publications/products, etc.)
- ** knowledge of how to apply the methods and techniques of publications and product management
- ** knowledge of proofreading techniques and procedures
- * knowledge of personnel procedures
- * knowledge of the contracting process, both in general and within the organization
- * knowledge of evaluation methods and techniques to evaluate systems, services and products
- ** knowledge of quality and production control techniques and procedures
- * knowledge of public relations techniques
- * knowledge of statistical description, analysis, interpretation and presentation
- * knowledge of available systems, services and products to support publications and product management
- ** knowledge of the costs associated with resources (materials, personnel, space, etc.)
- ** knowledge of cost analysis and interpretation methods
- * knowledge of methods of resource allocation
- * knowledge of standards, measures and methods for evaluating personnel
- * knowledge of alternative management structures and their implications for the operation of the section
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- ** knowledge of the various resources that are necessary to support the activities
- ** knowledge of methods and techniques for publications and product management
- * knowledge of performance expected and how it can be measured

KNOWLEDGE

PUBLICATION/PRODUCT MANAGEMENT

SENIOR LEVEL

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- *** make decisions and recommendations based on available information**
- ** work independently and in groups**
 - * perform sedentary work
- ** develop criteria for evaluation**
- ** make effective, timely, and well-informed decisions**
- ** isolate and define problems and develop the necessary criteria and action for their solution**
- ** manage time effectively**
 - * conduct an interview
- ** conduct meetings with individuals and groups**
- ** supervise staff**
- ** arbitrate and negotiate**
- ** anticipate long-range needs of the section and of information users**
 - * design systems and procedures to improve section operations/products
 - * apply methods of measurement and evaluation
- ** budget and make projections**
- ** optimize the use of organizational and section resources**

**COMPETENCIES VALIDATED AS BECOMING
MORE VERSUS LESS IMPORTANT
IN THE FUTURE**

SKILLS

PUBLICATION/PRODUCT MANAGEMENT

SENIOR LEVEL

Basic Skills

- * literacy, numeracy, cognitive, analytical, communications, etc.

Skills Related to Specific Activities

Ability to:

- * perform each activity
- * establish rapport with colleagues
- * communicate well by written, verbal and non-verbal means
- * collect, analyze and interpret data
- * make decisions and recommendations based on available information
- * work independently and in groups
- * develop criteria for evaluation
- * make effective, timely, and well-informed decisions
- * isolate and define problems and develop the necessary criteria and action for their solution
- * manage time effectively
- * conduct meetings with individuals and groups
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**COMPETENCIES VALIDATED AS
ESSENTIAL VERSUS FASTINABLE**

ATTITUDES

PUBLICATION/PRODUCT MANAGEMENT

Dispositional Attitudes

Attitudes Toward Institutions

- ** Respect for profession
- *** Respect for the publications and product management section
- ** Respect for the parent organization

Attitudes Toward Other People

Toward Users

- ** Respect users
 - * Like people in general
 - * Like to help people
- ** Like to meet people
- ** Like to make others feel comfortable
 - * Sensitive to others' needs

Toward Others in the Workplace

- * Respect co-workers
- ** Like to work with others/as a team
 - * Like to work on own
- ** Willingness to draw upon and share knowledge and experience with others
 - * Supportive of co-workers
 - * Enjoy managing/supervising others

Personal Qualities

- ** Alertness
 - * Assertiveness
- ** Compassion/Kindness
 - * Confidence
- ** Cheerfulness
- ** Dependability
 - * Determination/Tenacity
- ** Diplomacy
 - * Emotional stability
- ** Fairness
- ** Flexibility/Versatility
 - * Imagination
 - * Inquisitiveness
 - * Leadership ability
 - * Neatness
 - * Need for achievement
- * Objectivity

ATTITUDES

PUBLICATION/PRODUCT MANAGEMENT

Personal Qualities (cont'd)

- ** Open-mindedness
 - * Optimism/Positive attitude
- ** Organization
- ** Patience
- ** Physical endurance
 - * Resourceful
 - * Sensitive/Thoughtful
- ** Sense of humor
 - * Sense of ethics
- * Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- *** Willingness to take/accept responsibility
- *** Willingness to take initiative
- *** Willingness to respond to authority, apply and follow policy
 - ** Realization that there is no single "right" way to achieve the goals of the section/organization
- *** Desire to learn/try
 - * Willingness to fail
- *** Willingness to ask questions
 - ** Desire to work to best of ability
- *** Responsiveness to time constraints
- *** Accuracy
 - * Willingness to get hands dirty
- *** Attention to detail
- *** Desire to follow-through
 - * Service orientation
 - * Organizational identity
- ** Willingness to promote parent organization and its services
- ** View of parent organization as part of a larger information environment
- *** Ability to see broad picture
 - ** Ability to sacrifice short-term gains for long-term goals
- *** Political sense
 - * Curiosity
 - Variety of interests
 - * Desire to grow personally
 - * Desire to grow professionally
 - ** Desire to remain current in specific and general subject field
- *** Positive attitude toward job

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ATTITUDES

PUBLICATION/PRODUCT MANAGEMENT

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PUBLICATION/PRODUCT MANAGEMENT

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