THE TERMINOLOGY OF JOB DESCRIPTIONS:
THE CASE OF LIBRARY ASSISTANTS WHO PROVIDE INFORMATION SERVICES

by

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ABSTRACT

The purpose of this study was to investigate whether the kinds of terminology used in writing job descriptions for library assistants who provide information services affected the job evaluation rating for the jobs described. The study provided background information on the importance of the problem, pay equity and job evaluation systems, the nature and purpose of contacts in information and reference services, the changing roles of information providers and the problem of terminology in writing job descriptions.

To examine whether the terminology in job descriptions made a difference in evaluation, three experienced job evaluators were asked to rate nine job descriptions representing three levels of jobs and three different terminologies: library, computer and generic. The respondents’ ratings, five sets of nine ratings each, were analyzed by comparing the individual job evaluation plans, the respondents’ numerical ratings and rationales. The findings revealed the similarities and differences in definitions used in each of the plans, the differences in ratings within and among plans and the extent to which the terminology used in the job descriptions could be attributed to differences in ratings. Some inconsistencies in ratings occurred. In most cases, the job description using library terminology was rated higher than its computer or generic counterparts but in two cases it was not. Of the three versions of terminology, the generic version led to the least favourable ratings. Considering the complexity of the responsibility of contacts present to some degree in all three levels of jobs, some of the jobs may have been undervalued.

Recommendations were made for action and for further study.
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CHAPTER 1
THE PURPOSE OF THE STUDY AND ITS BACKGROUND

This study concerns the writing of job descriptions for one particular kind of library assistant, the assistant who interacts with the public as a provider of information services. The study examines the effect on job classification of different kinds of terminology.

The purpose of this study is to investigate whether the kinds of terminology used in writing job descriptions for library assistants who provide information services affect the job evaluation rating and subsequent classifications and pay rates for the jobs described. The research questions are:

(1) Are information provider jobs performed by library assistants rated consistently in relation to other jobs?

(2) Does the use of library terminology in job descriptions for library assistants obscure the relative value of their jobs when compared with jobs written in computer terminology or in a non-library, non-computer, generic terminology?

This chapter provides background information on the importance of the problem, pay equity and job evaluation systems, the nature and purpose of contacts in information and reference services, the changing roles of information providers, and the problem of terminology in writing job descriptions. The chapter concludes with an overview of the study.
The Importance of the Problem

Information provision at the front line, the first contact point with library users, is often undervalued. In academic libraries, the provision of information to users at public service points is such a key role for employees at many classification levels that its importance needs to be recognized. This responsibility can be one of the determining criteria in deciding whether one library assistant position is differentiated from another in a job evaluation system for purposes of compensation.

Several reasons have been given for the undervaluation of information provision at the front line: it is considered “women’s work”, it is not easily described, and it is not always understood. Similar roles, such as consulting and counselling services, are often valued more, perhaps because they are frequently performed away from the front desk, may require appointments or appear to be more “professional.”

Ideally, a job evaluation system selects components of work (factors) for evaluation that can be assessed equitably and fairly, regardless of gender and regardless of whether the job is considered men’s work or women’s work. Further, job evaluation systems usually base their ratings on written questionnaires which include a description of the job duties. Hence, understanding of the terminology is critical for consistency.
Job evaluation systems are similar in many respects but are often customized for each institution or group, reflecting the values and culture of the institution. Each system develops its own definitions, categorizations, and interpretation of factors to assess the different levels of job responsibilities. Experienced evaluators strive for consistency and are trained to avoid bias of various kinds and to recognize common pitfalls in rating. Nevertheless, the evaluation process remains a subjective process, in part because of the variations in systems and in part because of the difficulty of capturing all pertinent levels of responsibility and components of job content in written job descriptions and describing them in a standard way.

That standard way has been developed up to a point through principles, procedures and definitions recommended by human resource managers. However, these guidelines are too general to cover all the possible meanings of action verbs and concepts related to specific jobs. It has been argued that the terminology of job descriptions can make a difference in how a job is perceived by evaluators. If so, the technical terminology used to describe certain jobs, such as library or computer jobs, may lead to misunderstanding of the role and level of the job. To overcome this potential problem, some job evaluation specialists suggest the use of a generic, non-technical terminology for writing job descriptions.

The significance of this topic is that it relates to the public policy issues of pay equity and the role of job evaluation systems in achieving pay equity, the importance of information
and communication skills in the “information age”, and the changing roles of information providers in libraries. The findings may contribute knowledge and understanding for the development of task lists and job descriptions in the implementation and maintenance of the job evaluation system at the University of British Columbia and elsewhere.

Pay Equity and Job Evaluation Systems

As a prerequisite for considering funding for pay equity, the Government of British Columbia required the University of British Columbia and other provincial post-secondary institutions to have a job evaluation system in place. This external requirement to review internal equity in compensation methods coincided with an internal need to update written job descriptions which had become outdated because of the introduction of new technology and the changing nature of information service jobs.

Job evaluation methodology is a means of achieving pay equity that assumes that identifiable elements of job content (or factors) can be measured or evaluated fairly and that factor definitions are clearly understood and interpreted in a consistent, objective manner. However, the tools may, in fact, work against equity if job content is misunderstood for any reason by evaluators and if factors to be considered for compensation are not selected or weighted equitably.
Job evaluation system plans vary, but all focus on job requirements, not an incumbent's personal attributes or performance. The most widely used plan is called the point factor (or factor point) method. Other methods are ranking, classification, and factor comparison. In large institutions, the method of collecting information about jobs often involves written questionnaires which include a section on job descriptions, to be filled out by the incumbents and reviewed by their supervisors.

The point factor method generally considers four broad criteria which are present in all jobs to some degree: skill, effort, responsibility, and working conditions. Within each criterion, an organization may select several factors tailored to its own situation for more detailed evaluation. Weights are applied to each factor to indicate its relative importance. Each job is rated on each factor and assigned the appropriate level of points. Factor scores are added to produce a total point score. Finally, scores are banded (grouped) and compensation values are assigned to each level of banding.

Under the criterion of responsibility, one of the possible factors is "contacts". It measures the relative value of the incumbent's responsibility for "the effective handling of personal contacts with students, faculty, other staff, members of other organizations and with the general public."¹ For purposes of this study, the contact is limited to the users of information services provided by library assistants.

The contacts factor in job evaluation is one of the more difficult categories of job content to evaluate. This may be because communication skills and responsibilities are sometimes "invisible" or difficult to observe and interpret or are difficult to describe. Some job evaluation systems omit this factor altogether or attempt to capture the content in other responsibilities, such as judgement, or hide it in such factors as knowledge and experience.

**The Contacts Factor in Information and Reference Services**

Information provision is as much a process as a product or commodity. The two key components of the process, the reference interview and the provision of the answer to the question, need to be understood in order to evaluate the complexity of information provision at the appropriate level. The reference interview is a communication process requiring a series of questions and confirmations of understanding between the library user and the information provider to discern the nature of the question. The ultimate answer to the question is also a result of a communication process, namely, the interpretation of meaning from an information source to the questioner. The problem of evaluating the worth of information provision in the library context is that the role played in these contacts with users is difficult to describe easily without an understanding of the cognitive processes underlying the encounter with users and without an understanding of the complexities of the process one is observing. Even managers may not know what their information providers are doing because they do not necessarily have this experience in their repertoire and cannot observe the mental processes of employees when the
information providers are analyzing and interpreting information from a screen, listening, empathizing, or problem solving with the information seeker. Furthermore, the process of translating an answer from technical to non-technical terminology so it can be understood by the questioner is not observable either.

Changing Roles of Information Providers

Librarians' roles in providing information and reference services are changing. Traditionally, they were required to answer the whole range of questions posed by users at the reference desk, from simple directional to research level. Now they are required to spend more time away from the reference desk, to maximize the amount of time they spend in consultations with faculty members, to instruct users in new technology in learning labs and to provide reference support at the research level, often by appointment only. If librarians no longer have the time to answer all information and reference questions, and users continue to require this service, the gap in information services is addressed in another way. It is being filled by library assistants, whose roles are also changing. More library assistants are combining “behind the scenes” technical skills with responsibilities for regular shifts at information and reference desks.

Information technology has transformed information and reference services for both library assistants and library users, but this is not always understood or acknowledged with appropriate pay. Two information technology groups, computer technicians and library
assistants, use hardware and software at varying degrees of complexity and responsibility. Common roles include analysis of users' needs, provision of consulting services and technical assistance, and instruction of users in the use of databases, hardware and software. However, the complexity and responsibility of providing information using library software (library online catalogues and files) is not always recognized by those not familiar with library jobs and library terminology and can be overlooked when library assistants use simple terminology to describe complex tasks. This terminology can also be misleading if the evaluator is not aware of the complexity of the responsibility represented by the simple words.

Overview of the Study

This study examines whether the terminology in job descriptions makes a difference in evaluating the contacts factor in job evaluation. Three evaluators were asked to rate nine job descriptions, using their own job evaluation systems, and to provide rationales for their ratings. The nine job descriptions represented three levels of jobs and three different terminologies. The ratings were analyzed to determine consistency within sets of ratings and across job evaluation systems.

This section explains the assumptions and delimitations of the study, its operational definitions, the rationale for the review of the literature, and the techniques used to carry out the study.
Assumptions

It was assumed that the three experienced job evaluators selected would easily recognize different levels of complexity based on the written job descriptions provided. It was also assumed that the three different job evaluation plans in the sample group would define contacts somewhat uniquely because each plan was customized for its own institution. However, these variations were welcome, because they added to the understanding of the contacts factor in general and of the level and complexity of the roles of information providers in this study in particular.

Delimitations

Delimitations were drawn in four respects. First, the choice of delimitation to the contacts factor only was made in part because of time and resource constraints, but primarily because it specifically measures the value placed on the responsibility of contacts, or the level of responsibility for communications required in the reference interview process.

Second, the number of institutions in the sample was limited to three. Job evaluation is a specialty in human resource management. Few institutions retain a specialist on staff after the job evaluation project phase is completed. The three institutions selected for inclusion in this investigation were chosen because:
a. the evaluators had the required experience and had not seen these job
descriptions before
b. the institutions used similar point factor methods
c. the institutions included the factor of contacts (called communications in one
of the plans)
d. their processes included evaluating a wide range and large number of jobs,
including library, computing, secretarial, clerical, and other one-of-a-kind
jobs in their institutions.

Third, only three benchmark jobs were to be examined: circulation assistant, periodicals
assistant, and information/reference assistant. These jobs were selected because they
represent the typical range of jobs performed by library assistants in reference and
information services in large academic libraries.

Fourth, three sets of terminology for each job were selected. The first two sets of
terminology, library and computer, were selected because both job families employ
information technology, using hardware, software, and communications technology. The
third, the non-specific generic terminology, was selected because it can describe any
information service job at the three levels, and because generic terminology is sometimes
recommended as a way to write job descriptions to minimize rater bias and improve
intrerrater reliability.
Operational Definitions

1. Internal/external contacts: this job evaluation factor refers to the nature and purpose of contacts with users. Contacts are in-person, by phone, and in writing (including electronic mail). Internal contacts are those inside the university; external contacts are those outside the university. The purpose is to provide information services and information technology services to users. Users are defined as students, faculty, staff (including peers at other sites), and off-campus clients using information services or information technology services. The term “user” is selected because it is mentioned more often than other related terms in the literature.

2. Job descriptions: are written sets of duties associated with the responsibility of internal/external contacts.

3. Job duties: are twelve separate or related functions performed by the library assistant.

4. Job evaluation manual: is the written manual documenting the job evaluation system (methodology) used, its factors, subfactors, degrees of ratings, definitions of factors/subfactors/degrees, and its other guidelines for evaluation.

5. Job evaluation plan: is the overall term used to denote the job evaluation system, the manual, the “rules of thumb”, and other guidelines.
6. Library Assistant: is a general term used to describe library employees who perform library-related duties at several levels of complexity but do not have a graduate degree in library and information studies.

7. Paraprofessional Library Assistant: is a term usually associated with the highest level or levels of library assistant, sometimes requiring the equivalent of a post-secondary library technician diploma or a bachelor’s level degree or diploma; often reserved for library assistants with supervisory responsibilities or responsibilities for information and reference services, or other advanced technical skills, such as cataloguing.

8. Reference and information services: The role of reference and information services is to determine what information the user needs, formulate a strategy to fill the information need and provide information to the user as accurately and completely as possible. The information may be a library source, an answer from a source, a referral to another specialist or information or instructions in how to access information. The terms “reference” and “information services” are defined variously. Sometimes the terms are used interchangeably and sometimes they are used to describe a continuum of complexity, with “reference” denoting the highest level of complexity. Sometimes the term “information services” is used as the umbrella term for directional, bibliographic, instructional and reference services. This study uses “information services” as the umbrella term, except where the review of the literature refers to “reference” specifically. This study characterizes
the duties of information services by level of complexity as defined in five different reference models.

9. Responsibility level: this study examines three levels of responsibilities of library assistants: entry level, intermediate, and high. The intermediate and high levels are each possible paraprofessional levels, depending on the classification system of the institution.

10. Rules of thumb: are additional guidelines for rating, usually developed in the course of rating to supplement the written manual. They constitute one component of the job evaluation plan.

The Review of the Literature

Understanding of the background and issues related to this study is supported by an interdisciplinary review of the literature in the subjects of library and information technology, human resource management, public policy, education, linguistics (semantics), psychology (communications, perception), and philosophy (information theory, values, beliefs, interpretation).

Organization of the Balance of the Study

The remaining chapters describe the methodology and procedures used to gather the data, the findings, the conclusions, and recommendations for action and further study.
CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this review is to describe the literature related to the role, status, classification and compensation of library assistants who provide information to users and to relate this theme to the methodology of job evaluation, a means of achieving pay equity. This review also includes related research that demonstrates the complexity of the responsibility of contacts with users. The interrelated subjects are:

1. pay equity and comparable worth
2. the job evaluation process
3. personnel policies and staffing issues
   a. roles of library assistants
   b. status, classification and compensation of library assistants
4. the contacts factor in information and reference services
   a. the problem of information
   b. the problem of communication
   c. the problem of technical terminology

This chapter concludes with the identification of gaps in the literature and the research.
Pay Equity and Comparable Worth

The issue of eliminating discrimination in pay between men and women and "men's work" and "women's work" is a major theme in the human resource management literature of the last two decades. The consensus of the scholarly writing is that the wage gap exists and must be reduced and eliminated. However, views on the means to that end differ.

Public policy on pay equity reaches directly into libraries with the provocative question posed by Feye-Stukas, Kirkland and Myers, "Do libraries pay fair?"2 They apparently do not, at least when compared to computing centres.3 Woodsworth, Maylone and Sywak studied sixty-three benchmark jobs in three large universities to discover the similarities and overlap between jobs in two related job families, libraries and academic computing centers. The authors' main concerns were the importance of change in technology in transforming information jobs, and the difficulty of existing job evaluation methods in capturing this change in its selection and weighting of factors. They found that, although library jobs were often similar or identical to computer jobs in the point-factor results of the particular job evaluation system they used, a significant percentage of library jobs were paid less than comparable computer jobs. Further, the University of Illinois at Chicago identified another complicating factor related to pay equity for library support staff: the

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difficulty of introducing new jobs or changes in jobs while providing appropriate compensation in the context of the civil service system.⁴

Although many U.S. states and most provinces and territories in Canada have implemented pay equity policies, the literature draws heavily on two cases, the State of Minnesota in the USA, which passed the State Employees Pay Equity Act in 1982,⁵ and the province of Ontario in Canada, which introduced the policy in its Green Paper in 1985.⁶ The debate on whether or not sex discrimination in the workplace is a problem and whether or not pay equity (or comparable worth) is a worthy policy continues even during its implementation.

Sorensen says it is a worthy policy, at least for the U.S. federal government sector.⁷ She is less sure that it should be extended to the private sector and suggests examining the results of the Ontario policy first, since that province implemented comparable worth much more extensively than any other jurisdiction and included both private and public sectors. England concludes that comparable worth is a limited reform, deserving support, but that the policy is difficult to explain to everybody, including policymakers and the

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victims” themselves. Hill and Killingsworth find contradictions in the research, some researchers reasoning that the wage gap is related to sex discrimination, some not. Strom attributes the success of Ontario’s implementation in part to the “immense power of the Cabinet,” the commitment of the responsible minister, and the use of regulatory sanctions and inducements. Abbott highlights the substantially different findings of two researchers with respect to the effect of pay equity in Minnesota and concludes that there is still much to learn about the effectiveness of such policies in eliminating discrimination in pay.

The Job Evaluation Process

The job evaluation process, the usual means for achieving pay equity, has its supporters and critics. The issues related to this study are those of fairness in three respects: 1. reliability, including rater characteristics or biases, 2. validity, including convergence between systems, and 3. choice and weighting of factors to be compensated. The following writings disclose the two sides of the debate.

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11Ibid., 15.
13Ibid., 14.
England finds that job evaluation systems provide a reasonable level of reliability (consistency between raters, gender-neutrality) and validity (agreement between ratings when different job evaluation methods are used, lack of sex bias) and are able to detect some sex discrimination, with exceptions, notably in correlating human relations skills.\(^{14}\)

Sorensen, on the other hand, is concerned that raters can be biased, that different job evaluation methods produce different rankings and that factors can be arbitrary unless close-ended questions for gathering information about job content are posed, a single job evaluation method for all jobs in a firm is used, and factors that "make visible the work required in male- and female-dominated jobs"\(^{15}\) are included.

McArthur finds evidence that social judgment biases are weighted in the direction of underestimating the worth of women's work. He defines such biases as availability heuristic (the tendency to assess the frequency of events by the ease with which the event comes to mind), halo bias (the tendency to assess all factors positively because of the prestige or other positive attributes associated with the position), and expectancy bias (the tendency to assess a position according to its social or other stereotype).\(^{16}\) Killingsworth suggests that job evaluation points measure the job evaluator's own preferences and tastes.\(^{17}\) In her overview of Ontario's pay equity legislation, Robb cautions that job


\(^{15}\)Sorensen, *Comparable Worth*, 64-66.


evaluation plans are not necessarily gender neutral. Mattila fears that “ten different evaluators are likely to come up with ten different ordering of jobs” because the process is so subjective.

Manese acknowledges critics of job evaluation plans who argue that job evaluation is a subjective process and that the possibility of rater bias exists, including the common rater tendencies of haloing, mentioned earlier, central tendency (to assign mainly average ratings), and leniency (to rate high or low on the scale). To safeguard against rater bias, he developed standardized specifications for job descriptions, “for ensuring that differences in job evaluation scores reflect differences in job content (relative job worth), not stylistic differences among job analysts.” He also devoted training time to cover the subject of rater biases, documented ratings with rationales, and used a consensus process with a rating committee to reconcile widely differing scores.

The Ontario Pay Equity Commission emphasizes the need to include job content in job evaluation that includes aspects of women’s work that are important but are sometimes omitted if only traditional factors are selected. Examples of such content include communications with clients and the public and acting on behalf of absent supervisors.

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21 Ibid., 24.
22 Ibid., 93-5.
Quaid debunks the whole process, describing it as an example of “institutional rationalized myth” and a “murky concept.” She uses a case study from the 1980s to develop evidence that the process only perpetuates existing beliefs and values through coding and recoding “existing biases.”

She is critical of every step in the process and shows how the status quo and the myth of equality are perpetuated by every step: (1) the selling of the Hay system, the most common job evaluation method, (2) the selection of evaluation committees, (3) socializing employees through the ritual of writing job descriptions, (4) evaluating, (5) attaching pay for points, and (6) using job evaluation language and charts.

In a study funded by the Ontario Nurses Association, Steinberg also sees the Hay system as a powerful tool in maintaining the status quo, both of managerial power and white male power and Haignere argues that job evaluation factors “replicate existing wage hierarchies.” Bakker suggests that job evaluation systems and pay equity policies do not capture the current changes in skill and work process, particularly in the service sector, and are outmoded. Gaskell suggests that what counts as skill may be based on such biased assessments as credentialism, the tendency to value formal education but

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25 Ibid., 229
26 Ibid., 232
undervalue or ignore informal or on-the-job learning. This informal learning is often the only kind of training provided in women’s work and its value is recognized in four Canadian public policy reports on education and training, although no concrete prescription for measuring informal learning or compensating for it is offered.

Turning to the question of validity, Collins and Muchinsky examined the extent to which three different job evaluation methods measured the worth of a job similarly and found that, although there was some evidence of convergent validity, that is, agreement of ratings between methods, there was also evidence of method bias, that is, jobs were differently ordered depending on the method used. On the other hand, Cunningham and Graham found that experienced managers were consistent in evaluating jobs using four different methods. The evaluators were most consistent when using the point rating system, and the authors suggest that this method may be the most useful in assessing jobs that are more complex and difficult and possibly subject to pre-conceived notions (expectancy bias) created by previous classification systems.


Roles of Library Assistants

The use of library assistants or paraprofessionals at reference and information desks has been studied for several decades. In 1973 Boyer and Theimer conducted a national survey of academic libraries and found that 69% of them used staff other than librarians at reference desks, and that the amount of time spent by these employees was 33% of the service hours.\(^{34}\) A decade later, Cortois and Goetsch gathered more detailed information and found that 61% of academic libraries employed library assistants/paraprofessionals at the reference or information desk, that these staff members were an integral part of the reference service, and frequently worked alone at the desk, without backup from librarians.\(^{35}\) In 1991, an Association of Research Libraries (ARL) survey found that paraprofessionals were the predominant level of staffing at information desks.\(^{36}\)

Kreitz and Ogden surveyed support staff on the nine campuses of the University of California to identify areas of overlap between paraprofessionals' work and librarians' work. Twenty six percent of library assistants reported that they answered complex...
reference questions and 60 percent worked alone on the desk often or frequently.\(^{37}\)

Hammond described reference services at a new branch campus of the Arizona State University, where paraprofessionals were the only staff used at the information desk, spending three quarters of their work day at the desk. These paraprofessionals were described as information providers, mediators, and instructional assistants, providing assistance with electronic resources, telephone reference, document delivery procedures, and referrals.\(^{38}\)

Veaner rejected the idea of “continuity”, role blurring or overlap of work done by librarians and support staff. Instead, he suggested that the upper limits of the librarian’s expertise in programming and policy development are the criteria for defining professional work and that, in a time of evolution and adaptability in libraries, this does not preclude delegating complex functions to support staff.\(^{39}\) A decade later, he noted that work classification schemes have not caught up with the reality that almost all employees in academic libraries are now knowledge workers, and that tasks keep changing with technology. Nevertheless, he maintained that academic libraries are still work environments of duality, not creeping continuity; he found the existing classification scheme not appropriate, but had no new method of classification to suggest.\(^{40}\)

\(^{37}\)Patricia A. Kreitz and Annegret Ogden, “Job Responsibilities and Job Satisfaction at the University of California Libraries,” *College & Research Libraries* 51, no. 4 (July 1990), 297-312.


Mardikian and Kesselman identified three levels of staffing in their Hierarchical Reference Staffing Model and supplied a list of tasks for each level. The minimum level was largely self-help, but the middle level of staffing was the domain of the trained paraprofessional staff and included direction, ready reference, bibliographic assistance, instruction in search strategy, technical assistance with hardware/software, information and referrals.  

Rettig, in his case study of the University of Illinois at Chicago, described five categories of responses to questions: directional, known-item, simple reference (or ready reference), extended reference, and search strategy. Although the latter two categories usually required referral to a librarian, the initial questions were fielded by library assistants.

In the most comprehensive survey to date on paraprofessionals in academic libraries, Oberg, Mentges, McDermott, and Harusadangkal found that 88% of all ARL libraries and 66% of smaller college and university libraries regularly assigned reference work to paraprofessionals. Many also performed online database searches regularly, and some were assigned original cataloguing, book selection and collection development. The authors concluded that the profession must now take a leadership role in resolving the staffing dilemma, defining the role of both librarians and paraprofessionals. They described paraprofessionals as a distinct class of library employee whose transformation in

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the workplace has not occurred as a result of national standards or policies, but rather, from the ground up.\textsuperscript{43}

Zuboff explains one of the reasons for the ambiguity of roles in the "informated" environment, an expression she coined to describe the transformed workplace in the information age. Information is not visible - what people do in understanding and interpreting what they see at the "data interface" is not recorded and managers cannot see employees thinking. Furthermore, information is no longer centralized in the hands of the few, but available for many employees to see. They learn from seeing the bigger context, add value to what they learn, and pass that information on to their colleagues and to users. In this redistribution of knowledge and learning while one works, roles change and cannot be controlled in the same way as before by management.\textsuperscript{44}

Dyckman predicted the changes that will occur in library assistants' roles by the year 2000. One reason for change is the aging of the population and the trend towards better educated library staff. Work formerly performed by librarians is being delegated to support staff from original cataloguing, interlibrary loan, collection development and reference units. At Cornell University, this "middle class" of paraprofessionals is growing.\textsuperscript{45}


These general trends in changing roles were reconfirmed in a snapshot survey on restructuring at fifty-three member libraries of the Association of Research Libraries. This poll disclosed that, in response to changes in information technology and organizational restructuring, over half of the libraries are reallocating personnel, including library assistants, from technical services to public services.\(^{46}\)

**Status, Classification and Compensation of Library Assistants**

In the review conducted for this study, no single study of library assistants’ status, classification systems, and compensation has been found. Instead, the picture is pieced together through three multi-library surveys and a selection of reports on individual systems and individual surveys. The status and classification systems for library assistants vary greatly from one jurisdiction to another and, although responsibilities have frequently increased due to changes in technology and offloading of tasks from librarians to library assistants, classification and compensation have frequently not kept pace with increased responsibilities or are only recently beginning to be addressed.

In 1980, Mugnier surveyed 113 public libraries in an attempt to standardize the role and status of paraprofessionals, which she named and defined as library associate, a library employee with broad educational background who performs some part of the

responsibility of the librarian. This category of library employee evolved in part because of the shortage of graduate librarians at the time, economics, and/or difficulties of recruiting librarians to work in some geographic areas. Today this educational standard, an undergraduate program with liberal arts and library skills content, would fall somewhere between the current Canadian library technician program and the graduate degree in library and information studies. In Mugnier's study, the confusion over the status of library associates stems, in part, from the lack of standards for what constitutes basic professional education for librarianship and, in part, from the practice of assigning the same or similar tasks to entry level librarians as well as library associates, albeit generally at a lower rate of pay for the latter.

In their national survey, Oberg et al. studied only paraprofessionals, that is, senior level library assistants. The researchers found a broad band of overlap in tasks between librarians and paraprofessionals and some overlap in salary between the two groups, particularly in the larger academic libraries. They found that salaries depended heavily on job comparisons with other support staff on campus, and suggested that this was not always an appropriate comparison. They also observed that the more males there were employed in the library, the higher the salaries and benefits were.

In the most recent multi-library survey, St. Lifer found that the gender/compensation gulf was still a problem. Although library assistants make up 60-70% of the library staff, they

48 Oberg et al., “The Role, Status, and Working Conditions.”
still feel unrecognized and, even within their own group, female library assistants earn 11% less than their male counterparts. Furthermore, at least in the U.S., this occurs despite the male library assistants being younger on average, holding their positions for less time, and spending less time in total as library assistants.49

Two large scale reclassification studies and several smaller scale reclassification reviews used various methods to address inequities in classifications and salary structures. At Cornell University, librarians reviewed all classifications in an attempt to establish equity in classification levels throughout the system. The result was that thirty seven percent of 286 positions were upgraded.50 At the University of Michigan, more than one third of the library staff positions in the non-librarian “professional and administrative” job families were reclassified upwards and four new classification descriptions were added to the existing two to place library assistants into appropriate classifications.51 In a much smaller institution in Minnesota, the staff designed clear criteria for three levels of paraprofessionals for a limited number of one-of-a-kind jobs. This was necessary because the specific knowledge and technical expertise of these jobs could not be measured by standards applied to more well known clerical and secretarial responsibilities.52 At Texas Tech University Library changes in technology provided the catalyst for review of support

49Evan St. Lifer, “We Are the Library! Support Staff Speak Out,” Library Journal 120, no. 18 (Nov. 1, 1995), 30-34.
52Michael D. Kathman and Lenore Felix, “A Library Paraprofessional Pay System,” Library Administration and Management 4, no. 4 (Fall 1990), 202-204.
staff positions, and resulted in the upgrading of one third of the support staff positions.  

In Utah, seven original classifications were reduced to four classifications to create comparability among three campus libraries, which operated three separate classification systems independently from each other.  

After lengthy discussions about and attempts at improving the compensation and recognition for library assistants in Michigan described by Cohen, Voelck found that library assistants in Michigan academic libraries were still dissatisfied with opportunities for promotion, pay, and contingent rewards. Pay equity was suggested as a possible remedy.  

In his 1992 membership survey of the New York State Library Assistants’ Association (NYSLAA), Gillen found that forty eight percent of library assistants described their long-term career plan as “paraprofessional in a library”. In order to achieve their goal - to enhance the image and status of library assistants - they are organizing, although not necessarily unionizing, and communicating in their printed journal Library Mosaics, their electronic journal Associates: the Library Support Staff Journal, and in their online discussion group LIBSUP-L. 

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The Contacts Factor in Information and Reference Services

The literature search entailed looking for definitions, descriptions and studies of information, communication, and terminology, which would explain the skills required to provide information services and illustrate the complexities of the reference interview process.

The Problem of Information

The problem of "information" in this context is that information is both a commodity (an answer, a reference source) and a process (an information service) and does not lend itself to a simple operational definition. As a process, it is not easy to see or understand or describe. Furthermore, the concept of information generates a diversity of meanings, even for professionals and scholars. At least four different disciplines, each with its own definitions, claim the concept as their own: librarianship, management information systems, records management, and archives.57

In surveys of writings on meanings of "information", it has been described as diversely as an "all-purpose weasel-word", 58 a "category word", 59 "nebulous", 60 a "unit of thought", 61

and "ambiguous." 62 Mason defines information as an output, with the "concept of signs" as a "key link in the way one system affects another." 63 Shera describes it as bringing the "human mind and the graphic record together." 64 One of Rettig's several meanings includes "messages culled from an information source." 65 Lancaster matches "approximations of information needs with approximations of messages." 66 Finally, the process is defined most simply and eloquently by Machlup as "the telling of something" and "that which is being told," 67 requiring at least two persons in this process of communication.

The Problem of Communication

The problem of communication relates to the particular kind of interpersonal communication technique required to provide information to users, called the reference interview. Analogies, descriptions, and models from the literature assist in the

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understanding of this communication process and provide the justification for establishing
the relative value of this responsibility and skill.

Neill explains that the reference process is a communication process of a “peculiar” kind:
a sequence of problems from start to finish. 68 In his models of communication, Winograd
provides structure to this process by defining it as a “cooperative process” between the
speaker and hearer. 69 Lancaster tracks the possible imperfections in the communication
process through all parts of the information retrieval process, from representations of text
by indexers, to requests for information, to imperfect search statements based on requests,
to the possible lack of congruity between the requester’s frame of reference and that of the
information intermediary. 70 Although addressed in a somewhat different context, that of
technical writing, Green’s metaphors can be applied equally to the reference interview. He
suggests that clarity is achieved through “expansions” 71, “drawing out” thought, and
exploring thought by “unpacking” it. 72 Mount refers to earlier writings on the art of the
reference librarian as the “knack of divining what the inquirer really wants.” 73 Smith
advocates using a “horizontal relationship”, an empathic form of communication from

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71 David W. Green, “Writing, Jargon, and Research,” Written Communication 3, no. 3 (July 1986), 364.
72 Ibid., 378.
psychotherapy which emphasizes synergy and respect, or a side by side plane, as a means for effective question-negotiation between user and librarian. Cummins adds counselling skills, active listening, filtering (a systematic series of interview questions to clarify) and problem-solving to the description of the reference interview.

The complexity of the communication process in the reference interview is also demonstrated in two key studies in expert systems. Richardson challenges the research community to address the complexity of "answering questions" by undertaking a research agenda for the development of expert systems to ensure that they are truly expert. Meghabghab and Meghabghab take up the challenge in their query-negotiation module for an online catalogue, including some of the steps in the filtering process in their expert system. Their report captures the steps in three different sessions of a search in the online catalogue to illustrate the different levels of complexity in query-negotiation.

Finally, Mishler demonstrates the inadequacy of scientific models of experimental design to study situational meanings of human action and language and recommends, instead, the use of methods from the fields of phenomenology, sociolinguistics, and ethnomethodology to study and analyze how people understand language. Nothing illustrates the complexity

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and possible dimensions of the research problem of analyzing "talk" more vividly than one of his examples. He refers to a study of one therapy session that entailed a fifteen-minute stretch of talk, that took eleven years to study and resulted in a 400-page book of analysis.\(^7\)

**The Problem of Technical Terminology**

Technical terminology can be a barrier to communication and understanding. Naismith and Stein tested students' comprehension of technical language used by librarians and found that they understood the language only about half of the time. Words and phrases like "nonprint", "citation", "online database search", were misunderstood often, and even words like "call number", "search terms", "catalog screen", were misunderstood by students some of the time.\(^7\) Snow acknowledged how difficult it is to talk about online searching without using specialized vocabulary. She uses definitions and paraphrasing to clarify technical language and provides a "searcher's dialect,"\(^8\) a glossary of searching terminology. Crystal describes some characteristics of "language for special purposes" in the fields of science, medicine, religion, the law, and in advertising, the press, and in broadcasting.\(^9\) With respect to legal language, Crystal provides examples of common


\(^9\) Bonnie Snow, "What Jargon is Really Necessary When Teaching (and Learning) Online Skills?" *Online* 10, no. 4 (July 1986), 103.

words with uncommon meanings, such as “action”, “avoid”, “hand”, and “said” and technical terms with precise and well-understood meanings, such as “appeal”, and “libel”. He also describes the Plain English movement, an attempt to promote a clear form of expression, and acknowledges its critics, lawyers, scientists, and others, who favour technical terminology as a means of communicating “succinctly and unambiguously.”

In summary, the review of the literature confirms that there is a wage gap between men’s work and women’s work but views differ on why it exists and how the gap should be reduced or eliminated. A job evaluation process is thought to be one way of achieving pay equity but questions persist about the objectivity of ratings with respect to reliability, consistency between raters, and validity, agreement between ratings across job evaluation methods. Furthermore, bias which underestimates the worth of women’s work can creep into the rating when factors are selected that favour men’s work and minimize the importance of jobs requiring human relations skills, such as contacts with users. Communications with users are an important role of library assistants, requiring expert communication and information technology skills, but the complexity of the role is difficult to observe and describe, especially when roles are changing constantly. Classification and compensation have frequently not kept pace with increased responsibilities, in part because the responsibilities are difficult to capture in job descriptions, especially when these use library terminology that may be misunderstood because of its specialized terminology.

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82 Ibid., 387.
83 Ibid., 379.
A search in dozens of library and interdisciplinary databases revealed a paucity in the research literature related to library assistants, although the literature devoted to opinions by and about library assistants is voluminous. Authoritative manuals and guidelines for library assistants are few, and those that exist are either out of date or limited in scope. Chirgwin’s manual covers very traditional tasks and does not acknowledge the changes brought about by technology.\(^4\) The Canadian Library Association’s guidelines list only the minimum competencies required of library technicians.\(^5\) Cope’s syllabus is out of date and addresses a four-year undergraduate program\(^6\) which in Canada exists only in two Ontario institutions. Myers devotes a mere three pages to support staff in her chapter on staffing patterns.\(^7\) Hickey contributes a more specific chapter on paraprofessionals at the reference desk.\(^8\) The American Library Association Committee on Pay Equity’s guide is intended to assist all levels of library staff to carry out job evaluation processes; however, the guide uses very general and broad job classifications for its “library aide” positions, whose roles do not appear to include the provision of information services.\(^9\) Guidelines for job duties must, therefore, be derived from less formal sources, such as the Association

information desks, the Cornell University Library's task lists, and the reference models, all described in more detail in the section on methodology.

Studies related to job evaluation were also disappointing for the purposes of this study. They were often too general, not specific to the contacts factor, did not deal with library assistants' jobs, dealt with library assistants only in technical services or in one-of-a-kind positions, or defined contacts in a different way. Sometimes the reports implied that library assistants were included in their study samples, but the resulting report did not provide the specific examples that were needed for comparison. Some cases may have been relevant, but the studies were not research-based and were described only anecdotally.

No study was found on the factor of contacts as it relates specifically to communications with users. Other studies tend to emphasize contacts with officials, suppliers, and professionals. No study was found comparing the differences in interpreting the contacts factor between job evaluation plans, or testing the terminology of job descriptions for the purpose of rating the contacts factor.

Woodsworth, Maylone and Sywak's report, the catalyst for this study, invited further research in a number of areas, including the need for more precise definition and selection of factors that reflect changing job requirements, and finer analytical measures to value the worth of jobs that are being changed. They also emphasized the importance of using
appropriate terminology to describe these changing jobs. Woodsworth and Maylone found that library jobs "were often disadvantaged in point assignment until tasks...were 'translated'" into language which eliminated as much jargon as possible, particularly library jargon. They emphasized the importance of using appropriate terminology in describing jobs that contribute to a common understanding of the roles and do not obscure the value of the job simply through misunderstanding of the technical or professional jargon.

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CHAPTER 3
METHODS AND PROCEDURES

In order to investigate whether library terminology of job descriptions for library assistants obscures the relative value of their jobs when compared with jobs written in computer terminology or in generic terminology, the following methods and procedures were used.

Methods

Research Design

This study used three cases, the three jobs (circulation, periodicals and information assistant), and three job evaluation plans to answer the research questions: 1. are information provider jobs performed by library assistants rated consistently in relation to other jobs? 2. does the use of library terminology in job descriptions for library assistants obscure the relative value of their jobs when compared with jobs written in computer terminology or in a generic terminology?

Data sources available came from the following printed sources: the printed manuals developed for each of the job evaluation systems; additional documents that corroborate and augment the manuals, such as notes to raters (if not already in the manuals); and “rules of thumb” notes, developed by the implementing teams as helpful hints in applying
the definitions and criteria. The other main source of evidence was the rating form in the instrument, used to record the ratings, rationales, and other comments. The instrument included nine written job descriptions.

Selection of Positions (Jobs). The three positions (jobs) selected for study represent three levels of information provision at the University of British Columbia Library. The first is an entry level circulation assistant, the second is a periodicals assistant, usually classified at a mid range level of the library assistant job family, and the third is an information desk/reference assistant (for brevity, called information assistant), usually classified at the high range level of library assistants. These levels are justified further by comparing them with other typical reference models, of which the five described below, and summarized in Table 1 (page 48), have been selected as benchmarks.

The Hierarchical Reference Staffing Model (the "Mardikian model"), lists three categories of questions with four levels in each category in a continuum from least complex to most complex. For bibliographic access questions, the progression from least to most complex is: location of materials, holdings information, bibliographic verification, and hard-to-locate resources. For instruction questions, the progression is from general tours, to introductory instruction, to general instruction, to subject specific instruction. For information questions, the progression is from questions on hours and directions, to repetitive questions, to less defined questions, and to hard-to-locate information. 91

91Mardikian and Kesselman, "Beyond the Desk,” 23.
The second model was developed by two separate Cornell University Committees, the Library Task Force on Classification and the Library Job Review Committee, and resulted in a catalogue of generic library tasks from which to evaluate a wide range of jobs, including those in circulation, information and periodicals (collection maintenance/preservation) functions. Their list of tasks, descriptions, and bands of job classifications are used as benchmarks in this study for assessing equivalents in responsibilities and range of resources, manual and online, used to answer information questions. The Cornell model employs five bands in the non-exempt staff category, of which bands B, C, and D are equivalents for the three jobs selected here. At the low level, information provided includes answering questions on hours, policies and procedures, layout, holdings information, and routine problem solving. At the middle level, information provided includes interpretation of catalogue records and demonstration/instruction to users. At the high level, information provision includes the reference interview, answering bibliographic and other information and reference questions from a variety of printed and electronic sources, and instructing users in the use of multiple electronic systems and files.92

The third model, Pinzelik's comprehensive description of a periodicals information service, is used in this study for constructing the description of the periodicals assistant. Pinzelik calculates the number of decision points possible in accessing periodicals, enumerating a minimum of six major steps in the search process, with as many as twenty four questions

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possible for any title search. The questions fall into five categories: identification, status of the subscription, physical location, acquisitions status of the issue, and circulation status. Questions on policies and procedures relate to maintenance, reference, acquisitions, circulation, and interlibrary loan. Instructions to users require interpretation and explanation of a variety of catalogue records created for four different functions: acquisitions, processing, maintenance, and use.  

Meghabghab and Meghabghab provide a model for applying the reference interview process, called query negotiation, to their expert system. In response to the observation that users approach information services with poorly articulated queries, with either too broad or too narrow search terms, they implement four of the possible filters, a series of questions which translates the user’s query into a well formulated query, in their system modules. These filters are:

1. to identify the subject matter of the query
2. to identify the types of sources available for answering the query
3. to determine the type of literature or level
4. to identify any constraints, such as time frame.

More filters than these can be used in the traditional reference query negotiation process; however, these suffice for this study at the level of the information assistant’s job.

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Finally, Rettig’s reference model defines five categories of responses to questions, developed at the University of Illinois at Chicago, which can be applied to this study. The categories and definitions of questions are summarized as:

1. directional: questions which ask for physical locations
2. known-item: questions which concern location of information sources
3. simple reference: questions that use one information source
4. extended reference: questions which use more than one information source
5. search strategy: questions which involve the use of several sources of different types in a progressive order.

The three test jobs are described in relation to these models as follows.

Job “Low” is an entry-level circulation assistant position, providing basic information services. Instruction to users includes explanation of policies and procedures, explanation of how to use self-service facilities in circulation procedures, such as renewing books, placing holds on books that are signed out to others, checking the user’s own loan status records online, and self-serve check-out of library materials. Basic bibliographic verification services are provided by this assistant by looking up catalogue information online using the call number as the access point, or perhaps the author’s name and/or title of the book. Technical assistance is provided to users with questions about machine problems, such as copiers and copycard vending machines. Directional assistance to users

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includes referral services to other library services and campus facilities, including the explanation of alternatives available at various times of the day, evening or weekend. The incumbent requires some comprehension of the subject nature of the request, enough to refer to the appropriate subject reference unit, an understanding that another service point may be better equipped to answer the question, and a recognition of the need for a specific format of material, such as a periodical, a microfilm, or a video.

According to the Mardikian model, this position provides instruction at an introductory level, information to questions on hours, and provides directions, repetitive information, and information on known-item questions. According to the Cornell model, this position corresponds primarily to band B, with tasks gleaned from a combination of the following functions, primarily circulation I-3 (standard procedures and policies), information I-2 (location of facilities, directions when call number is known), but also some of the functions of circulation II-2 (interpretation of policy), information I-3 (directional level in locating specialized areas/collections), and public service level III (for security services on nights and weekends). According to the Rettig model, this position is responsible for categories of questions of a directional and known-item level and accurate referral to other services for simple reference, extended reference and search strategy questions.

Job "Medium" is a periodicals information assistant at an intermediate library assistant level, providing information on identifying periodical titles, locating periodicals, and interpreting information on the availability of periodicals. Instruction to users is limited to
the specific format of periodicals. All of Pinzelik's steps in the search process of
identification of periodicals (bibliographic access) and getting the issue or volume in hand
(physical access) are possible. The complexity arises from such services as interpretation
of a variety of catalogue records created by others during four different functions
(acquisitions, processing, maintenance, use), from such problems as the possibility of
errors in the records, and from such communication skills as discerning the nature of the
problem by clarifying what steps the user has taken to find the periodical, prior to asking
for assistance.

According to the Mardikian model, bibliographic access questions are at the level of
location of materials, holdings information, and bibliographic verification (in a limited
number of files). Instruction questions are limited to introductory explanation on
identifying and finding periodicals online, and explanations include interpreting catalogue
records. According to the Cornell model, the job corresponds to band C, with
components from the functions of information I-3 and II-2 (referral, interpretation of
catalogue records in several files, demonstration, and instruction in searching for
periodicals). According to the Rettig model, this position is responsible for categories of
questions at the levels of directional, known-item, simple reference using one main
information source, and extended reference for known-item periodical questions only.

Job "High" is the information assistant, providing information services either for a broad
range and level of questions, or for using a broad range of online files, including remote
databases, or for specialized formats, such as media or microforms, or for a broad range of referrals, from routine to hard-to-discern. In sorting out how and where questions are best answered, this level of information assistant clarifies the question and formulates a search strategy through query negotiation, using the “filters” of questioning incorporated by Meghabhab and Meghabhab.

According to the Mardikian model, bibliographic access includes providing information in location of materials, holdings information, bibliographic verification (in a wide range of files), and in hard-to-locate resources (known-item primarily, and limited in scope when queues develop). Instruction is general, not subject specific, unless the assistant works in a specialized area such as music or audiovisual services. Information questions include less defined questions, with accurate referrals to appropriate services for specialized subjects and formats. According to the Cornell model, the position corresponds to band D, for the functions of information II-3 (reference interview, bibliographic access, directional information from many sources, referral), for the functions of information III (bibliographic verification in local and remote databases, broad range of information services), and for the functions of information IV (instruction in using multiple electronic systems and files). Furthermore, the services are performed independently when the reference librarian is not available. According to the Rettig model, all levels of questions are possible: directional, known-item, simple reference, extended (depending on available time and individual experience), and search strategy.
Selection of Job Duties. The job duties selected cover typical responsibilities of library assistants at these three levels of information provision and can be grouped into five characteristics, derived from the reference models:

1. information requested by user
2. information provided
   a. as a commodity, e.g., the answer, the documentation
   b. as a service, e.g., directional, search, instructional, referral, etc.
3. communication skills employed
4. sources/systems consulted
5. problem solving methods.

These characteristics are referred to later in the data analysis phase of the study to identify themes and compare job evaluation system definitions. The characteristics are summarized in table 1 along with the five reference models mentioned earlier. The characteristics are matched with their corresponding job duties in tables 2, 3 and 4.
<table>
<thead>
<tr>
<th>Characteristics of Duties</th>
<th>Cornell</th>
<th>Rettig</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of information requested</td>
<td>Band B: Circ I-3, II-2, Info I-2, I-3: procedures and policies (some interpretation), location, directional, referral</td>
<td>Directional</td>
<td>Low: Mardikian: bibliographical access to locations and holdings (for referral)</td>
</tr>
<tr>
<td>Level of information provided</td>
<td>Band C: Info I-3, II-2: interpretation of catalogue records, instruction/demo of periodicals searching, referral</td>
<td>Known-item</td>
<td>Medium: Pinzelik: bibliographic information to identify/determine availability/instruct; Mardikian: same, limited number of files</td>
</tr>
<tr>
<td>Level of communication</td>
<td>Band D: Info II-3, III, IV: reference interview, bibliographic access/verification, various sources (local/remote databases), broad range of info services, instruction in multiple electronic systems/files, referral, independent when reference librarian not available</td>
<td>Simple/ready reference</td>
<td></td>
</tr>
<tr>
<td>Range of sources/systems</td>
<td></td>
<td>Extended reference</td>
<td></td>
</tr>
<tr>
<td>Level of problem solving</td>
<td></td>
<td>Search strategy</td>
<td>High: Meghabghab: query negotiation to identify subject, identify types of sources available, determine type of literature or level, identify any constraints; Mardikian: wide range of files</td>
</tr>
<tr>
<td>Library duties</td>
<td>A Information requested</td>
<td>B Information provided</td>
<td>C Communication</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------</td>
<td>------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Issues and renews library cards</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Determines user's eligibility for library card categories</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Signs out library materials</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Accepts requests for holds, traces, renewals, retrievals</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explains circulation procedures and policies</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hands out information sheets on circulation procedures and policies</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolves routine questions about cards, fines, suspensions, overdues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtains further information from users to resolve problems</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Encourages dissatisfied users to complete appeal procedure forms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refers inquiries not related to circulation to information and reference service</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Trains users to use the online circulation file</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**
A. Level of information requested by user
B. Level of information provided
C. Level of communication
D. Range of sources/systems used
E. Level of problem solving
### Table 3
**Job “Medium” Characteristics of Duties**

<table>
<thead>
<tr>
<th>Library duties</th>
<th>A Information requested</th>
<th>B Information provided</th>
<th>C Communication</th>
<th>D Range sources/systems</th>
<th>E Problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receives inquiries about finding periodicals</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assists users in finding periodicals</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides directional information to periodicals</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determines holdings by searching online files</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Looks up catalogue information online to identify periodicals</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describes basic search strategy to users for finding location and status of periodical</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Deciphers bibliographic citations provided by user</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Refers user to appropriate information, reference or other services</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Explains procedures and policies related to periodicals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors or senior staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Encourages users to complete trace forms for unlocated items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Signs out periodicals from restricted shelves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**
A. Level of information requested by user  
B. Level of information provided  
C. Level of communication  
D. Range of sources/systems used  
E. Level of problem solving
### Table 4
Job “High” Characteristics of Duties

<table>
<thead>
<tr>
<th>Library duties</th>
<th>A Information Requested</th>
<th>B Information provided</th>
<th>C Communication</th>
<th>D Range sources/systems</th>
<th>E Problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answers broad range of questions, from directional to reference</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Solves users’ problems with using computer terminals and printers to access the catalogue</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Queries users by paraphrasing and confirming understanding of both the question and answer</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Determines appropriate level of information to communicate to satisfy user’s needs</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Suggests sources to use to find the answer</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Answers questions posted to feedback board in writing</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Demonstrates searching techniques to individual users</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitors success of users in finding what they want in online public access catalogue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Makes appropriate referrals to reference and other services</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Trains users to use the catalogues for author/title/subject inquiries</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Trains and coaches peers from other units about information/reference service</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Writes manuals, instructions, guidelines for peers and users</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**KEY:**  
A. Level of information requested by user  
B. Level of information provided  
C. Level of communication  
D. Range of sources/systems used  
E. Level of problem solving
Instrument

The instrument consisted of nine job descriptions and a questionnaire, the job evaluation rating form (Appendix 1).

Job Descriptions. Job descriptions were drafted, using library terminology, for the job duties of the three levels of information provider jobs. Each of these was rewritten in parallel phrases, that is, each duty was "translated" into terminology associated with the computer job and with the generic job, as shown in tables 5, 6 and 7 (pages 59 to 61). The authenticity of the job descriptions was established by asking a library human resources specialist and two computer systems managers to review the job descriptions for duties, terminology, and levels of responsibility and verify that the job descriptions were accurate.

The results of the validators' scrutiny of the job descriptions follow. The content of the job duties, with one exception, was not a problem for the validators. This exception was a suggestion to add another function to the medium level computer job. However, this additional function was not present in the library job, so the function was left out of the computer job as well, in order to retain a parallel list of duties among the three versions of job descriptions.
Some phrases were improved stylistically and these changes in verbs or nouns, some of which were individual preferences, were accepted where the words did not alter the content. A suggestion to arrange the order of duties in a logical order that reflects the flow of activities wherever possible was noted. However, this suggestion could not be incorporated because the duties were to be arranged in random order for research purposes, that is, to minimize bias in the perception of the versions of terminology.

Guidance for writing the job descriptions in this study came from several sources. Samson provided a comprehensive guide to writing job descriptions with practical instructions for format, wording, and factor descriptions. She also described the various purposes for job descriptions and provided a checklist for implementation.\(^9\) A similar guide to developing job information statements in the context of job evaluation steps was provided by the Ontario Pay Equity Commission.\(^7\) Specific duties related to information provision tasks were found in a procedures kit published by the Association of Research Libraries, which included printed training materials from seven ARL libraries.\(^8\) Sir Ernest Gowers' *The Complete Plain Words* provided a good source of "words and phrases to be used with care."\(^9\) Snow provided some specific vocabulary to use as examples of technical terminology.\(^10\) Pinzelik provided statements on duties specific to answering questions on

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\(^7\) *How to Do Pay Equity Job Comparisons*.


the identification and availability of periodicals,\textsuperscript{101} and Meghabghab and Meghabghab provided descriptions of levels of question complexity in their expert system.\textsuperscript{102} Other sources of information on job descriptions came from the University of British Columbia Library’s unpublished job descriptions. Finally, the seriousness of the challenge of writing job descriptions was demonstrated by the Cornell University Library’s classification committees, which spent two years developing the \textit{Generic Library Tasks by Function,}\textsuperscript{103} a guide which was useful in this study in conveying the level and complexity of library tasks.

Job descriptions generally consist of a job title, a job summary, job qualifications, and job duties. In the job evaluation process, the incumbent’s job title is usually omitted to avoid bias. In this study, the job summary for the responsibility of contacts and information about the supervisory context was provided to the evaluators in the “Instructions to Evaluators” (Appendix 1). Job qualifications, also called specifications or requirements, are covered in factors other than contacts, such as knowledge, experience, judgement, consequence of error, and are not the primary subject of the research instrument. The knowledge level and experience was not specified in the “Instructions to Evaluators” because this information could have provided explicit clues that could detract from the variable in question, terminology.

\textsuperscript{101}Pinzelik, “The Serials Maze,” 89-94.
\textsuperscript{102}Meghabghab and Meghabghab, “INN,” 668.
\textsuperscript{103}Cornell University Library. \textit{Generic Library Tasks by Function Area}. 
The job duties (or tasks), and levels, are the most informative component of the job description for job evaluation purposes. In this study they were the primary source of clues in the job description for rating.

The written duties provided clues for rating by including:

1. level of information requested by user
2. level of information provided, either as a commodity or service
3. level and complexity of communication skills required
4. range of sources and systems consulted
5. level and complexity of problem solving required.

The style and arrangement of the job descriptions conformed to recommendations in the literature:

1. impersonal
2. active verbs
3. terse, concise, precise, direct
4. logical ordering of duties (note: in their original form, the duties were presented in their logical order, but this order was negated when the duties were arranged in random order for research purposes).

The job description explained what is done and how. Explanation of the "why" was provided in the "Instructions to Evaluators" (Appendix 1). Other considerations included
readability, avoiding over-writing and under-writing (exaggerating or minimizing), balancing the number of duties from job to job and listing only the most important duties.

The job duties of the three positions and the three versions of terminology used are presented in tables 5, 6 and 7 (pages 59-61). The set of descriptions as seen by the respondents is reproduced in Appendix 1.

Ideally, job descriptions avoid technical terminology to provide clarity and avoid bias. However, the purpose of this investigation was to determine whether language made a difference in interpreting the level of responsibility. Therefore, two of the versions of the descriptions used specific technical terminology and one used a generic, non-specific terminology.

The often simple words used to describe the job duties of library assistants sometimes obscure the complexity of the duty and can be a barrier to communication. Misunderstandings of terminology and assumptions that one understands but, in fact, does not, are equally problematic in interpreting job duties. Examples of what constitutes technical terminology in the three versions of the job descriptions follow.
The job titles for the parallel positions in the computer column and generic column are named:

<table>
<thead>
<tr>
<th>Library</th>
<th>Computer</th>
<th>Generic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low: Circulation assistant</td>
<td>Help desk assistant</td>
<td>Assistant 1</td>
</tr>
<tr>
<td>Medium: Periodicals assistant</td>
<td>CD ROM assistant</td>
<td>Assistant 2</td>
</tr>
<tr>
<td>High: Information assistant</td>
<td>Troubleshooting assistant</td>
<td>Assistant 3</td>
</tr>
</tbody>
</table>

Examples of technical terminology are shown in the following lists:

1. Library terminology:
   a. circulation assistant
      
      verbs  
      "issues"  
      "signs out"  
      
      nouns  
      "card"  
      "circulation"  
      "file"  
      
      concepts  
      "eligibility"  
      
      processes  
      "holds, traces, renewals, retrievals"  
      "overdues"  

   b. periodicals assistant
      
      verbs  
      "looks up"  
      "signs out"  
      
      nouns  
      "holdings"  
      "citations"  
      "periodicals"  
      "catalogue"  
      
      concepts  
      "restricted shelves"  
      "bibliographic citations"  

   c. information assistant
      
      verbs  
      "searching"  
      
      nouns  
      "information" (as a commodity and as a service)  
      "catalogues"
adjectives
- "directional"
- "reference"
- "author/title/subject" (search)

2. Computer terminology:
   a. help desk assistant
      
      nouns
      - "status"
      - "manuals"
      - "orders"
      - "applications"

      concepts
      - "access codes"

   b. CD ROM assistant
      
      verbs
      - "analyzes"
      - "searches"

      nouns
      - "hardware"
      - "software"
      - "documentation"
      - "manuals"

      concepts
      - "online catalogue"

   c. troubleshooting assistant
      
      verbs
      - "troubleshooting"

      nouns
      - "documentation"
      - "system"

      concepts
      - "users' requirements"
      - "computer applications"

Generic terminology avoids any technical terminology. For Assistants 1, 2, and 3, plain English verbs and nouns were selected from such sources as Samson's *How to Write Job Descriptions*. Words such as "information", "goods", "services", and "guides" are examples of plain English.
<table>
<thead>
<tr>
<th>Library Terminology</th>
<th>Computer Terminology</th>
<th>Generic Terminology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues and renewals library cards</td>
<td>Assigns access codes</td>
<td>Registers users for service</td>
</tr>
<tr>
<td>Determines user's eligibility for library card categories</td>
<td>Determines user's status for access to services</td>
<td>Determines appropriate registration category</td>
</tr>
<tr>
<td>Signs out library materials</td>
<td>Loans manuals</td>
<td>Loans documents</td>
</tr>
<tr>
<td>Accepts requests for holds, traces, renewals, retrievals</td>
<td>Accepts orders for services</td>
<td>Receives orders for services</td>
</tr>
<tr>
<td>Explains circulation procedures and policies</td>
<td>Explains procedures and policies related to access</td>
<td>Explains procedures and policies related to services</td>
</tr>
<tr>
<td>Hands out information sheets on circulation procedures and policies</td>
<td>Distributes information sheets on procedures and policies</td>
<td>Provides handouts on procedures and policies</td>
</tr>
<tr>
<td>Resolves routine questions about cards, fines, suspensions, overdues</td>
<td>Resolves basic questions about codes, passwords, accounts</td>
<td>Resolves registration problems</td>
</tr>
<tr>
<td>Obtains further information from users to resolve problems</td>
<td>Verifies and records details in order to resolve problems</td>
<td>Asks users for information to discover the nature of the problem</td>
</tr>
<tr>
<td>Encourages dissatisfied users to complete appeal procedure forms</td>
<td>Encourages dissatisfied users to complete complaint forms</td>
<td>Encourages dissatisfied users to complete feedback forms</td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors</td>
<td>Refers dissatisfied users to supervisors and/or complaint procedures</td>
<td>Refers dissatisfied users to supervisors</td>
</tr>
<tr>
<td>Refers inquiries not related to circulation to information and reference service</td>
<td>Directs inquiries not related to access to appropriate staff</td>
<td>Refers questions not related to registration to appropriate services</td>
</tr>
<tr>
<td>Trains users to use the online circulation file</td>
<td>Instructs users on basic functions of several applications</td>
<td>Instructs users in using self-serve services</td>
</tr>
<tr>
<td>Library Terminology</td>
<td>Computer Terminology</td>
<td>Generic Terminology</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Receives inquiries about finding periodicals</td>
<td>Receives questions about finding hardware/software</td>
<td>Receives questions about finding information/goods/services</td>
</tr>
<tr>
<td>Assists users in finding periodicals</td>
<td>Assists users in finding hardware/software</td>
<td>Guides users to information/goods/services</td>
</tr>
<tr>
<td>Provides directional information to periodicals</td>
<td>Provides directional information to appropriate workstation, manuals</td>
<td>Provides directions to location of information/goods/services</td>
</tr>
<tr>
<td>Determines holdings by searching online files</td>
<td>Determines location of indexes by searching online catalogue</td>
<td>Checks database to determine availability of information/goods/services</td>
</tr>
<tr>
<td>Looks up catalogue information online to identify periodicals</td>
<td>Searches catalogue to identify software</td>
<td>Checks database to identify information/goods/services</td>
</tr>
<tr>
<td>Describes basic search strategy to users for finding location and status of periodical</td>
<td>Instructs users in finding software</td>
<td>Describes how information/goods/services are arranged/organized</td>
</tr>
<tr>
<td>Deciphers bibliographic citations provided by user</td>
<td>Analyzes information supplied by user to find software</td>
<td>Analyzes user’s requirements from information provided by user</td>
</tr>
<tr>
<td>Refers user to appropriate information, reference or other services</td>
<td>Refers questions to other appropriate staff</td>
<td>Refers user to appropriate services</td>
</tr>
<tr>
<td>Explains procedures and policies related to periodicals</td>
<td>Explains procedures and policies related to hardware/software</td>
<td>Explains procedures and policies for obtaining information/goods/services</td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors or senior staff</td>
<td>Refers dissatisfied users to supervisors or appropriate staff</td>
<td>Refers dissatisfied users to supervisors</td>
</tr>
<tr>
<td>Encourages users to complete trace forms for unlocated items</td>
<td>Encourages users to complete feedback procedures for problems with software</td>
<td>Encourages users to fill in follow-up forms</td>
</tr>
<tr>
<td>Signs out periodicals from restricted shelves</td>
<td>Provides software and user documentation</td>
<td>Gives out information/goods/services</td>
</tr>
<tr>
<td>Library Terminology</td>
<td>Computer Terminology</td>
<td>Generic Terminology</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Answers broad range of questions, from directional to reference</td>
<td>Provides user assistance for broad range of software</td>
<td>Provides answers/data on broad range of questions for information/goods/services</td>
</tr>
<tr>
<td>Solves user’s problems with using computer terminals and printers to access the catalogue</td>
<td>Troubleshoots user’s problems related to hardware/software/communications networks</td>
<td>Solves user’s problems related to information/goods/services</td>
</tr>
<tr>
<td>Queries users by paraphrasing and confirming understanding of both the question and answer</td>
<td>Analyzes user’s requirements through systematic interview procedure</td>
<td>Clarifies user’s requirements, confirming understanding of both the need and solution</td>
</tr>
<tr>
<td>Determines appropriate level of information to communicate to satisfy user’s need</td>
<td>Determines appropriate level of detail to answer user’s question</td>
<td>Determines appropriate level of information to convey to users</td>
</tr>
<tr>
<td>Suggests sources to use to find the answer</td>
<td>Recommends alternative sources to solve the problem</td>
<td>Recommends solutions and suggests alternatives to users</td>
</tr>
<tr>
<td>Answers questions posted to feedback board in writing</td>
<td>Responds to questions posted to feedback system</td>
<td>Replies to user’s questions in writing</td>
</tr>
<tr>
<td>Demonstrates searching techniques to individual users</td>
<td>Demonstrates computer applications to individual users</td>
<td>Demonstrates database features to individual users</td>
</tr>
<tr>
<td>Monitors success of users in finding what they want in online public access catalogue</td>
<td>Follows up questions to ensure problem is resolved</td>
<td>Confirms that users have found what they are looking for</td>
</tr>
<tr>
<td>Makes appropriate referrals to reference and other services</td>
<td>Refers questions to other appropriate staff</td>
<td>Refers questions to appropriate services</td>
</tr>
<tr>
<td>Trains users to use the catalogues for author/title/subject inquiries</td>
<td>Instructs users in using software</td>
<td>Trains users to use computer help screens, manuals, instructions</td>
</tr>
<tr>
<td>Trains and coaches peers from other units about information/reference service</td>
<td>Trains and coaches other staff in troubleshooting services</td>
<td>Trains and coaches other staff in providing services</td>
</tr>
<tr>
<td>Writes manuals, instructions, guidelines for peers and users</td>
<td>Writes and revises documentation for other staff and users</td>
<td>Writes guides, instructions for other staff and users</td>
</tr>
</tbody>
</table>
**Questionnaire.** The questionnaire was devised, eliciting quantitative evaluation in the form of a rating, as well as qualitative answers, in the form of a rationale. The questionnaire method was appropriate because the information solicited required thoughtful individual answers to a written question and a written source, the job descriptions, without benefit of a group discussion for consensus decision-making. The question was open-ended because the study attempted to discover the “what” and “why” of a phenomenon, that is, what decision was made, and why it was made. The questionnaire allowed respondents to be candid, and avoided potential influence of the researcher’s perceptions and biases. The quantitative responses are used in job evaluation systems for quantifying points in an ordinal level of measurement in ranking all jobs in the group.

The rating scale was a means to an end, forcing the evaluator to quantify value. The 1-9 scale on the rating form permitted evaluators to choose the same number for rating more than one job description or to distinguish more finely between the job descriptions in order to differentiate between them. The scale used 1 as the lowest rating and 9 as the highest, because that is the direction of complexity used in rating job evaluation factors. The descriptive data were potentially even more interesting than the numerical ratings in terms of providing insight into the relative importance of the contacts factor within the plan, the variation in interpretation between plans, and the variation in expert opinion of experienced evaluators.
Population and Sample

Three local institutions were selected for inclusion in the study: Simon Fraser University, the University of British Columbia, and Vancouver Community College; all are located in the lower mainland of British Columbia. The reasons for the selection are explained in the section on delimitations (pages 9 to 10).

Data Collection

Data were collected by means of the questionnaire sent by courier to the three respondents.

Instrument. The questionnaire and job descriptions followed patterns used in actual job evaluation processes and were familiar to the job evaluators. Respondents were required to rate according to the respondents' own plans. This requirement minimized respondent burden and, at the same time, provided the source data for examining several plans, their definitions of contacts, and their degrees of measurement.

"Instructions to Evaluators" were prepared, explaining the objectives of the study and the procedures to be followed in completing the questionnaire. To ensure that respondents would not be biased by prior knowledge of the target job descriptions, the following
precautions were taken. First, evaluators were not told that they were evaluating three levels of jobs. Second, evaluators were not restricted to using the same rating only once. Third, jobs and duties were sorted in random order. Fourth, the covering letter to evaluators avoided the use of the word "terminology" in describing the purpose of the project.

Pilot Study. A pilot study was conducted to pretest the instrument with two human resource specialists in two other libraries, not included in the sample group. The purpose was to eliminate potential bias in the questions, eliminate unintentional ambiguity, clarify instructions, simplify form completion, and ensure reliability and validity in the data analysis. Comments from both pretesters were incorporated in the revised instructions and instrument.

Data Analysis

The data were analyzed by scrutinizing:

1. the individual job evaluation plans: for definitions, degrees of measurement, criteria
2. the respondents' numerical ratings of the job descriptions
3. the respondents' comments explaining the ratings.
The analysis was designed to compare ratings assigned to the three levels of jobs and the nine job descriptions and, where the ratings were different within the same level, to assess the degree of difference and the reason for it.

For ease of identification during the analysis stage, the job descriptions and duties were converted back from their random order to their original sequence and named simply as follows:

- Library Low
- Library Medium
- Library High
- Computer Low
- Computer Medium
- Computer High
- Generic Low
- Generic Medium
- Generic High

The purpose of the analysis was to extract understanding from the written data in relation to the research objective, that is, to determine if the language used in the job description made a difference in the rating. In addition, serendipitous findings, other questions answered, and other uses for the data, were all noted.

The data were handled in a systematic way by matching the words or phrases in the rating forms with the words or phrases in the plans, by noting all comments in relation to the job in question, and by grouping identical comments or similar comments, based on an understanding of the plan. The process of analysis included identification and charting of themes, issues, words, marking direct quotations, as well as noting patterns and contradictions. Individual cases were interpreted and comparisons between cases were
made. The evidence is accessible for authentication, but stored in confidential files by the researcher, as guaranteed to the respondents.

**Limitations**

Two limitations emerged during the course of the study. First, one of the respondents did not provide a set of ratings on the requested scale of 1-9. Numerical ratings on this particular scale could only be compared between two of the respondents. Second, differences and ambiguities in definitions among the three job evaluation plans for the contacts factor made it difficult to compare ratings among respondents precisely. These limitations were overcome by the fact that all three respondents provided ratings using his/her own plan's rating method. This resulted in five sets of ratings to be used for analysis, two on the requested scale of 1-9 and three on the respective plans' scales. Further, clarification of definitions was achieved by preparing tables which correlated the definitions with the respective rating scales.

**Procedures**

**Approvals and Permissions**

In December 1995, a preliminary thesis proposal was prepared for the chair of the thesis committee. After discussions, a revised proposal was prepared in April 1996 and endorsed by the thesis committee members. Subsequently, the Request for Ethical Review
form was submitted to the University of British Columbia Office of Research Services. This form included the thesis proposal, the covering letter to evaluators, the instructions to evaluators, and the study instrument. In May 1996, the Office of Research Services issued the Certificate of Approval.

Implementation

Data Collection. Prior to administering the instrument, a pilot study was conducted in which two human resources specialists, not in the sample group, were requested to recommend improvements in the instrument. Their comments were incorporated. The revised questionnaire, job descriptions, and covering letter were sent to the three respondents by courier in mid June 1996. The covering letter explained the purpose of the research and use of the data inasmuch as possible and guaranteed confidentiality to the respondents. The job descriptions and lists of duties were sorted in random order to minimize bias in the perception of levels of jobs as well as in the versions of terminology. Responses were requested in approximately two weeks time and all evaluators complied with the deadline. In July 1996, data analysis of the questionnaire was undertaken and the findings reported.

Problems Encountered. Aside from the limitations discussed earlier, no other problems were encountered.
Summary

In order to address the problem and the questions to be answered, a study using job evaluation methodology was undertaken to rate nine job descriptions at three levels of complexity using three kinds of terminology. The questionnaire was based on a typical job evaluation rating form and the data sources included printed manuals and other documents for each job evaluation system in the sample group. The data were analyzed in three ways: the individual plans were examined for definitions, degrees of measurement and rating criteria; the respondents' numerical ratings were compared to assess differences; and the respondents' comments were analyzed to discover the reasons for the differences, if any.
CHAPTER 4

FINDINGS

The problem addressed in this study concerned the writing of job descriptions for information providers. It was the purpose of the study to examine the effect on job classification of different kinds of terminology. The following questions guided the study:

1. Are information provider jobs performed by library assistants rated consistently in relation to other jobs?

2. Does the use of library terminology in job descriptions for library assistants obscure the relative value of their jobs when compared with jobs written in computer terminology or in a non-library, non-computer, generic terminology?

The steps taken to analyze the data were to:

1. analyze the ratings and rationales from the questionnaires, the job evaluation plans (manuals), the definitions, the notes to raters, and any additional rules of thumb that clarify the evaluations. The plans were analyzed to discover the context in which the contacts factor was placed in the job evaluation plan and to understand the definitions of the factor and how the evaluations were applied to that factor.

2. develop charts showing relationships, similarities and differences between plans and within plans where they were useful in clarifying interpretations, definitions, criteria for decision making, and justification for ratings.
Presentation of Findings

The findings are reported as follows: definition of the contacts factor; the numerical ratings; and qualitative data.

The definitions of the contacts factor in each plan were similar in some respects but differed in other respects. All three plans used the same number of degrees of measurement (five) but two of the plans assigned no responsibility for contacts or negligible contacts at the lowest degree of measurement. Differences in definitions of degrees of measurement were noted.

The numerical ratings were presented and interpreted in three ways: comparing ratings between plans using the scale of 1-9; comparing ratings within plans; and combining all five sets of ratings.

On the rating scale of 1-9, the library version of the job description was rated higher than its equivalent computer version in four cases, lower in two cases, higher than its equivalent generic version in five cases and lower in one case. On the respondents' own rating scales, and comparing ratings within plans, the library version of the job description was rated higher than the computer version in two cases and higher than the generic version in three cases. In all three plans, the three versions of terminology for the High
Job were rated the same. Combining all five sets of ratings showed how the numerical ratings differed but, because of differences in definitions and degrees of measurement, these variations required examination of the qualitative data for explanation.

The qualitative data revealed some of the reasons for the choices of the numerical ratings. The respondents' comments in the rationales showed how the ratings were justified and how the respondents differentiated between jobs, job duties and terminologies in the job descriptions. Key words extracted from the rationales provided the clues to which words or phrases triggered the respondents' decision making. Mapping the occurrences of differences and the corresponding key words led to the finding that terminology made a difference in the ratings in some cases, that certain words and phrases were used to differentiate the ratings and that certain characteristics of job duties were considered for rating decisions more frequently than others.

Tables

Definition of the Contacts Factor

Each of the three institutions uses its own methodology and systematic process of analysis and evaluation to establish the relative ranking of jobs within a group of jobs. The data gathering for job content consists of a written questionnaire in all three cases. The methodology for evaluation is documented in the institutions' manuals, or guide to raters,
and is supplemented by a written statement on rules of thumb that evaluators developed during the initial phase of implementing the particular job evaluation methodology. Together, the questionnaire to incumbents, the manual, the rules of thumb, and terms of reference for evaluators comprise the particular job evaluation plan. For purpose of analysis, the plans in this study are named Plan A, B, and C.

The manuals define each factor and the degrees of responsibility within each factor, as well as providing "Notes to Raters" to assist them in understanding and interpreting the job content in a consistent way. All three manuals in this study categorize the components of job content under the general headings of skill, effort, responsibility, and working conditions, and subdivide these heads further with more specific components, one of which is contacts (called the communications subfactor in Plan C). For purpose of clarity, this analysis uses the term "factor," rather than "subfactor," and the term "contacts," rather than "communications" for the name of the factor.

The definitions and degrees of measurement of the contacts factor in the three manuals require explanation in order to understand the ratings and rationales. The definitions of contacts are similar to each other in several general respects. All list and define contacts in terms of oral and written communications, levels of questioning, levels of information provision and levels of counselling. In some respects, the definitions and degrees of measurement differ, and these differences in terminology, meaning, and application are variables to consider when analyzing the ratings and rationales.
Plan A defines contacts as the effective handling of personal contacts, excluding contacts between supervisor/subordinate. It uses a matrix chart, a two dimensional set of criteria, to evaluate the nature and purpose of personal contacts. The purpose is listed along the Y axis and consists of two levels:

(a) to exchange/discuss information in accordance with current policies and technical practices

(b) to clarify/exchange and discuss information of a detailed or specialized nature requiring specialized knowledge; gain cooperation; coordinate activities or programs; mitigate high tension or emotional situations.

The nature of the contact is represented in four possible levels of responsibility, and is listed along the X axis:

(1) courtesy,

(2) tact and discretion,

(3) communication, empathy, and/or sensitivity skills,

(4) human relations and communications skills.\(^{104}\)

Three possible combinations of x and y, 1b, 3a, and 4a, were eliminated from consideration as possible degrees of responsibility in Plan A’s manual by the Job Evaluation Systems Project committee, leaving five possible degrees of responsibility. These are labeled 1a, 2a, 2b, 3b, and 4b in the manual, but for purposes of simplicity and

\(^{104}\)

clarity in this study, are renumbered as 1-5. For example, the lowest degree (1) is assessed when the incumbent has responsibility for contacts at a basic level of courtesy to exchange/discuss information in accordance with current policies and technical practices, and the highest degree is assessed when the incumbent requires human relations and communications skills to clarify/exchange and discuss information of a detailed or specialized nature requiring specialized knowledge; gain cooperation; coordinate activities or programs; mitigate high tension or emotional situations (degree 5).

The manual for Plan A is unique among the three in recognizing visual presentation skills in its definition of communications. It also provides the most detailed statement of the three on possible interpretations in different work situations. The contacts factor receives a weighting of 10% in this plan, a higher percentage than either of the other two plans.

Plan B defines contacts as communications, written or oral, including sign language, for handling contacts tactfully and harmoniously, excluding contacts of a normal supervisory nature. It assesses the level of responsibility using five degrees:

1. negligible contacts; work does not regularly require the obtaining or provision of information or data to others,
2. courtesy and tact required in obtaining and/or handing out data or information,
3. courtesy and tact required in explaining, exchanging data or information,
4. tact and discretion required to deal with or settle requests, complaints, or clarification of information,
(5) persuasive diplomacy required when either recommending, discussing to clarify information, or negotiating matters with others.\textsuperscript{105}

Plan B differs from Plan A in several respects in its measurement of degrees of responsibility. The lowest degree implies almost no contact with others. Courtesy/tact are combined in both the second and third degrees. Tact/discretion are considered at the fourth degree of responsibility. The weighting for the factor also differs from Plan A. In Plan B, the factor receives a range of points from 4 to 20 in increments of 4, for degrees one to five, and a maximum of 7\% of the total number of points at the highest degree of 5.

Plan C defines contacts (communications) as verbal or written communication, including communicating in a language other than English. Each mode of communication, verbal and written, is further divided into two levels of emphasis: a primary level, and a secondary level. Each mode of communication is assigned one of five degree levels of responsibility. In the manual, these are coded A-E, but are converted to degrees 1-5 here for clarity and comparison in this study:

1. does not require any primary and/or secondary verbal/written communication,
2. provides/records straightforward information,
3. provides straightforward information so that others understand/reads, proofs and/or edits instructions or information so that others understand. This level of communication requires consideration and/or questioning before

responses are given/before instructions or information can be composed, proofed or edited.

(4) provides information that is subject to interpretation/writes, proofs and/or edits instructions or information that is subject to interpretation. This level of communication requires reasoning and analysis before responses are given/before instructions or information can be composed, proofed or edited.

(5) provides information/writes instructions or information to influence others to agree or take preferred action.106

Like Plan B, Plan C assigns a value to the first degree level, although it implies that no communication is required at this level. Unlike either Plan A or B, Plan C includes the definitions for the factor verbatim in the text of the job questionnaire, so that both incumbents and evaluators work from the same text. Plan C is unique in considering a primary and secondary level of emphasis. The weighting assigned for communications (called contacts from now on) is 8%, 4% for written and 4% for oral.

For a comparison, in summary form, of the three plans’ definitions and degrees of measurement of responsibility for the contacts factor, see table 8.

---

106 SFU and CUPE, Local 3338 Weighted Job Questionnaire (WJQ) Custom, 1992, unpublished.
## Table 8
### Definitions and Degrees of Measurement

<table>
<thead>
<tr>
<th>D</th>
<th>Plan A Definitions</th>
<th>D</th>
<th>Plan B Definitions</th>
<th>D</th>
<th>Plan C Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>courtesy to exchange/discuss information</td>
<td>1</td>
<td>negligible contacts</td>
<td>1</td>
<td>does not required any primary/secondary verbal/written communication</td>
</tr>
<tr>
<td>2</td>
<td>tact and discretion to exchange/discuss information</td>
<td>2</td>
<td>courtesy and tact required in obtaining and/or handing out data or information</td>
<td>2</td>
<td>provides/records straightforward information</td>
</tr>
<tr>
<td>3</td>
<td>tact and discretion to clarify/exchange and discuss information of a detailed/specialized nature</td>
<td>3</td>
<td>courtesy and tact required in explaining, exchanging data or information</td>
<td>3</td>
<td>provides straightforward information so that others understand/writes, proofs and/or edits instructions or information...requires consideration and/or questioning</td>
</tr>
<tr>
<td>4</td>
<td>communication, empathy, and/or sensitivity skills to clarify/exchange and discuss information of a detailed/specialized nature</td>
<td>4</td>
<td>tact and discretion required to deal with or settle requests, complaints, or clarification of information</td>
<td>4</td>
<td>provides information that is subject to interpretation/writes, proofs and/or edits instructions or information that is subject to interpretation...requires reasoning and analysis</td>
</tr>
<tr>
<td>5</td>
<td>human relations and communications skills to clarify/exchange and discuss information of a detailed/specialized nature</td>
<td>5</td>
<td>persuasive diplomacy required when either recommending, discussing to clarify information, or negotiating matters</td>
<td>5</td>
<td>provides information/writes instructions or information to influence others to agree or take preferred action</td>
</tr>
</tbody>
</table>

Notes to raters: adds listening, writing, articulation

Notes to raters: adds writing

Writing is one of the two modes of communication.

D=Degree of measurement
Numerical Ratings

The respondents were asked to provide a set of ratings, using their own manual, for the nine job descriptions developed for this study (see Appendix 1), based on a hypothetical scale of 1-9, with 1 as the lowest level of responsibility and 9 as the highest level.

If the terminology did not make a difference in the ratings, it was expected that the ratings would be identical for all three versions of the equivalent job descriptions, library, computer, and generic. For example, on the scale of 1-9, the three levels of jobs might be rated as:

- Low 1 (library) 1 (computer) 1 (generic)
- Medium 4 (library) 4 (computer) 4 (generic)
- High 7 (library) 7 (computer) 7 (generic).

It was also expected that the three respondents would differentiate the three levels of responsibilities as low, medium, high, although the wording in the rationales to describe these levels would vary depending on the wording in the respective plans.

Two of the three respondents provided ratings on the requested scale of 1-9, as shown in table 9. These ratings are labeled as the already discussed Plan A and Plan B ratings. The third respondent did not provide a set of ratings on this scale, but supplied a set of ratings in keeping with his/her own plan, labeled Plan C1, and discussed later.
### Table 9
Ratings Using the Scale of 1-9

<table>
<thead>
<tr>
<th>Job Description, Level and Terminology</th>
<th>Plan A Ratings</th>
<th>Plan B Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Library</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Low Computer</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Low Generic</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Medium Library</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Medium Computer</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Medium Generic</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>High Library</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>High Computer</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>High Generic</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: 1=lowest level of responsibility, 9=highest level

On this scale, the library version of the job description was rated higher than its equivalent computer version in four cases:

- **Low Job Plan A**: 4 (library) and 1 (computer)
- **Medium Job Plan A**: 6 (library) and 5 (computer)
- **Medium Job Plan B**: 4 (library) and 3 (computer)
- **High Job Plan B**: 8 (library) and 7 (computer)

lower than its equivalent computer version in two cases:

- **Low Job Plan B**: 5 (library) and 6 (computer)
- **High Job Plan A**: 8 (library) and 9 (computer)
and lower than its equivalent generic version in one case:

High Job        Plan B        8 (library) and 9 (generic).

The generic job description was rated lower than its equivalent library version in five cases:

Low Job           Plan A          3 (generic) and 4 (library)
Low Job           Plan B          2 (generic) and 5 (library)
Medium Job        Plan A          2 (generic) and 6 (library)
Medium Job        Plan B          1 (generic) and 4 (library)
High Job           Plan A          7 (generic) and 8 (library).

Plan A and B ratings differ from each other in the ratings for the Low and Medium Library and Computer versions, with Plan A rating Medium Library and Computer at 6 and 5 on the scale, and Plan B rating Low Library and Low Computer at 5 and 6 on the scale.

All three respondents provided another set of ratings, based on the scale, or ranking methodology, used in their own respective plans. These sets of ratings provide another way to interpret the respective plans and are labeled as Plan A1, Plan B1, and Plan C1.

Ratings in table 10. These ratings correspond to the numbering system used in the respective factor definitions, all with a maximum degree (score) of 5.
Table 10
Ratings Using the Scale of Each Respective Plan

<table>
<thead>
<tr>
<th>Plan Rating</th>
<th>Job Level</th>
<th>Library Rating</th>
<th>Computer Rating</th>
<th>Generic Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Low</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>B1</td>
<td>Low</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>C1</td>
<td>Low</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

In these sets of ratings, the raters showed more consistency within their own plans between the three different versions of the job description. Only two ratings for library and computer job descriptions were different from each other and, in these two cases, the library job was rated higher in both cases:

Low Job Plan A1 3 (library) and 1 (computer)
Medium Job Plan B1 3 (library) and 2 (computer).

The ratings for the generic version of the job description were lower than those for the library version of the job description in three cases:
Low Job Plan B1 2 (generic) and 3 (library)
Medium Job Plan A1 1 (generic) and 4 (library)
Medium Job Plan B1 2 (generic) and 3 (library).

The numerical ratings for the three versions of the High Job were identical within each plan when the respondents used their own rating methodology. Plan A1 rated them all as 4’s, Plan B1 rated them all as 5’s, and Plan C1 rated them all as 4’s.

One other difference in the numerical ratings is that Plan C1 rated all versions of both the low and medium jobs the same, as 2’s. Possible reasons for this rating are described more fully in the analysis of the qualitative data.

The final numerical rating table displays all five sets of ratings together, combining the two sets of ratings from the scale of 1-9 (Plan A and B ratings) and the three sets of ratings from the respective plans (Plan A1, B1, and C1 ratings).

Comparisons of numerical ratings between respondents when they used their own respective methodologies for rating are more difficult because the numbers in the respective scales do not represent equivalent definitions in levels of responsibility between plans. These differences are described in the analysis of the qualitative data.
Table 11
The Five Sets of Ratings

<table>
<thead>
<tr>
<th>Job Description, Level and Terminology</th>
<th>Plan A Rating</th>
<th>Plan B Rating</th>
<th>Plan A1 Rating</th>
<th>Plan B1 Rating</th>
<th>Plan C1 Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Library</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Low Computer</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Low Generic</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Medium Library</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Medium Computer</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Medium Generic</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>High Library</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>High Computer</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>High Generic</td>
<td>7</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Qualitative Data

Analysis of the qualitative data reveals the reasons for the choice of ratings. The qualitative data are derived from a thorough charting of key words and phrases from the rationales and other notes. It was expected that job duties familiar to the respondents would elicit more responses than those that were less well known and that the low job would be rated at a degree of measurement of 3 in plans A1, B1 and C1, the medium job at 4 and the high job at 5, the highest degree possible, even though the definitions of the contacts factor would differ.
The first qualitative analysis concerned the definitions of the contacts factor in the respective plans. Table 12 shows which definitions in the respective plans were applied to the degree of responsibility to match the rating. The table was constructed by matching the key words in the rationales with the respective key words in the plan's definitions. The table shows the similarities and differences in words between jobs, within plans, and from plan to plan. It also uncovers the ambiguity of definition when the same word occurs in different plans at different degrees of responsibility. For example, "exchanged information" is a degree level 1 in Plan A1 and a degree level 3 in Plan B1. "Courtesy" is a degree level 1 in Plan A1 and a degree level 2 and 3 in Plan B1. "Tact" is a degree level 2 and 3 in Plan A1 and is possible in degree levels 2, 3 and 4 in Plan B1. See also table 8 (page 77), Definitions and Degrees of Measurement, for comparison.
Table 12

**Key Words in Rationales Matching Key Words in Definitions**

<table>
<thead>
<tr>
<th>LOW Job</th>
<th>Library (R) Key Word</th>
<th>Computer (R) Key Word</th>
<th>Generic (R) Key Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A1</td>
<td>3 exchange</td>
<td>1 exchange</td>
<td>3 exchange</td>
</tr>
<tr>
<td></td>
<td>specialized</td>
<td>basic</td>
<td>listening</td>
</tr>
<tr>
<td></td>
<td>clarifies</td>
<td>courtesy</td>
<td>clarifies</td>
</tr>
<tr>
<td>Plan B1</td>
<td>3 explain</td>
<td>3 explain</td>
<td>2 obtain</td>
</tr>
<tr>
<td></td>
<td>tact</td>
<td>exchange</td>
<td>information</td>
</tr>
<tr>
<td>Plan C1</td>
<td>2 straightforward</td>
<td>2 straightforward</td>
<td>2 straightforward</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEDIUM Job</th>
<th>Library (R) Key Word</th>
<th>Computer (R) Key Word</th>
<th>Generic (R) Key Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A1</td>
<td>4 clarify</td>
<td>4 detail</td>
<td>1 courtesy</td>
</tr>
<tr>
<td></td>
<td>communication</td>
<td></td>
<td>exchange</td>
</tr>
<tr>
<td>Plan B1</td>
<td>3 explain</td>
<td>2 obtain</td>
<td>2 courtesy/tact</td>
</tr>
<tr>
<td></td>
<td>exchange</td>
<td>information</td>
<td></td>
</tr>
<tr>
<td>Plan C1</td>
<td>2 straightforward</td>
<td>2 straightforward</td>
<td>2 straightforward</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIGH Job</th>
<th>Library (R) Key Word</th>
<th>Computer (R) Key Word</th>
<th>Generic (R) Key Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A1</td>
<td>4 writing</td>
<td>4 listening</td>
<td>4 writing</td>
</tr>
<tr>
<td></td>
<td>specialized</td>
<td>articulate</td>
<td>specialized</td>
</tr>
<tr>
<td></td>
<td>detailed</td>
<td></td>
<td>detailed</td>
</tr>
<tr>
<td></td>
<td>clarifies</td>
<td></td>
<td>communications</td>
</tr>
<tr>
<td>Plan B1</td>
<td>5 clarify</td>
<td>5 clarify</td>
<td>5 clarify</td>
</tr>
<tr>
<td></td>
<td>written</td>
<td>written</td>
<td>explanation</td>
</tr>
<tr>
<td></td>
<td>discretion</td>
<td>discretion</td>
<td>discretion</td>
</tr>
<tr>
<td></td>
<td>diplomacy</td>
<td></td>
<td>diplomacy</td>
</tr>
<tr>
<td>Plan C1</td>
<td>4 interpretation</td>
<td>4 interpretation</td>
<td>4 interpretation</td>
</tr>
<tr>
<td></td>
<td>analysis</td>
<td>analysis</td>
<td>analysis</td>
</tr>
</tbody>
</table>

Note: (R)= Rating
Tables 13 to 15 show how each set of numerical ratings was supported by the rationales. These tables were constructed by extracting key words from the rationales, or from the notes and marginalia attached to the rationales or the job duties. Only key words which match words in the manuals or in the job duties were extracted, except where noted. In cases where two sets of ratings were provided, both ratings are shown in the same table.

The words used in the rationales provide clues to the criteria used for decision making. In Plan A/A1 for Job Low, “obtains further information” is rated higher than “verifies and records details”, for Job Medium, “deciphers” is rated higher than “analyzes” and “assists users” is rated higher than “guides users”, and for Job High, “analyzes user’s requirements” is rated higher than “queries users”. In Plan B/B1 for Job Low, “access to service” is rated higher than “resolving fines, suspensions”, for Job Medium, service from “restricted shelves” is rated higher than “directional” service, and in Job High, “recommends solutions/alternatives” is rated higher than “reference”. In Plan C1, ratings are not differentiated within any of the three levels, but “searching”, “user’s requirements”, “solutions”, and “problems” differentiate the high level jobs from the other two levels.
Table 13  
Numerical Ratings and Key Words: Plan A/A1

<table>
<thead>
<tr>
<th></th>
<th>Library</th>
<th>Computer</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A, A1</td>
<td>Key Words</td>
<td>A, A1</td>
</tr>
<tr>
<td>Low</td>
<td>4, 3</td>
<td>trains,</td>
<td>1, 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>obtains further</td>
<td>verifies/records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>information</td>
<td>details</td>
</tr>
<tr>
<td>Medium</td>
<td>6, 4</td>
<td>deciphers,</td>
<td>5, 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assist users in</td>
<td>assist users in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>finding periodicals,</td>
<td>finding hardware &amp; software,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>describes</td>
<td>instructs</td>
</tr>
<tr>
<td>High</td>
<td>8, 4</td>
<td>writes,</td>
<td>9, 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>trains peers,</td>
<td>troubleshoots,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>coaches,</td>
<td>instructs users,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>queries users</td>
<td>follows up questions,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Library</th>
<th>Computer</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A, A1</td>
<td>Rating</td>
<td>A, A1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Medium</td>
<td>6</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>High</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>
Table 14
Numerical Ratings and Key Words: Plan B/B1

<table>
<thead>
<tr>
<th></th>
<th>Plan B Library</th>
<th>Computer</th>
<th>Generic</th>
<th>Plan B Library</th>
<th>Computer</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>High</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Library Rating B,B1 Key Words</th>
<th>Computer Rating B,B1 Key Words</th>
<th>Generic Rating B,B1 Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>5,3 resolves fines, suspensions, trains</td>
<td>6,3 access to service, several applications</td>
<td>2,2 [repetitive]*</td>
</tr>
<tr>
<td>Medium</td>
<td>4,3 restricted shelves, search</td>
<td>3,2 search catalogue, directional</td>
<td>1,2 [routine, repetitive]*</td>
</tr>
<tr>
<td>High</td>
<td>8,5 broad range, reference, demonstrates, trains, coaches</td>
<td>7,5 writes, resolves problems, demonstrates, instructs, follows up, alternative sources</td>
<td>9,5 writes, broad range, clarifies, level, demonstrates, trains/coaches, recommends solutions &amp; alternatives</td>
</tr>
</tbody>
</table>

*Note: words from respondents, not appearing in definitions or job duties verbatim*
### Table 15
Numerical Ratings and Key Words: Plan C1

<table>
<thead>
<tr>
<th></th>
<th>Plan C Library</th>
<th>Computer</th>
<th>Generic</th>
<th>Plan C1 Library</th>
<th>Computer</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Library Rating C1</th>
<th>Key Words</th>
<th>Computer Rating C1</th>
<th>Key Words</th>
<th>Generic Rating C1</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>2</td>
<td>circulation</td>
<td>2</td>
<td>[similar to circulation]*</td>
<td>2</td>
<td>routine</td>
</tr>
<tr>
<td>Medium</td>
<td>2</td>
<td>periodicals, refers, decipher, directional, explains, identify, finding, describes</td>
<td>2</td>
<td>refers, assists, provides software</td>
<td>2</td>
<td>[generic statement broadly defined]*</td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>searching, solutions, problems, user's requirements</td>
<td>4</td>
<td>hardware &amp; software, solutions, problems, user's requirements</td>
<td>4</td>
<td>solutions, problems, user's requirements</td>
</tr>
</tbody>
</table>

*Note: words from respondent, not appearing in definitions or job duties verbatim*
The differences in ratings were tracked in two steps: first, by mapping the occurrences of
the cases in which a given description yielded a higher rating than the others at the same or
higher level of job (table 16) and counting the number of occasions for each case (table
17) and second, by extracting the differentiating key words from definitions and job duties
which would explain the reasons for the differences in each case (table 18). Note that Plan
C1 ratings are omitted from these tables because the respondent did not differentiate
among the three versions of the job description, rating all six low and medium jobs as
equivalent and all three high jobs as equivalent.

Table 16, Occurrences of Higher Ratings: Same or Higher Job, is constructed by listing
the nine jobs (numbered 1-9) down the first column, and again in the same order (this time
lettered as a-i) across the first row. Each cell of the table compares the job at the left with
the job at the top. Where the job at the left is rated higher than the job at the top, the
relevant cell contains the name of the plan yielding the compared scores.

Table 17, Number of Occasions for Each Case in Table 16, should be read the same way
as Table 16 and shows the number of occasions in which differences occurred in Table 16.

Tables 16 and 17 document the differences for the five different results:

1. the three cases where the job description using computer terminology were
   rated higher than those using library terminology, cells 2a, 2d, 8g, (one
case, cell 2d, involved the low job being rated higher than the medium job)
2. the eight cases where the job description using library terminology were rated higher than those using computer terminology, cells 1b, 1e, 4e, 7h, (two cases, cell 1e, involved the low job being rated higher than the medium job)

3. the one case where the generic terminology was rated higher than the library terminology, cell 9g

4. the twelve cases where the library terminology was rated higher than the generic terminology, cells 1c, 1f, 4f, 7i, (four cases, cell 1f, involved the low job being rated higher than the medium job)

5. the eight cases where the computer terminology was rated higher than the generic terminology, cells 2c, 2f, 5f, 8i, (two cases, cell 2f, involved the low job being rated higher than the medium job).
### Table 16 Occurrences of Higher Ratings: Same or Higher Job

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>i</th>
<th>j</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Low Lib</td>
<td>LL</td>
<td>LC</td>
<td>LG</td>
<td>ML</td>
<td>MC</td>
<td>MG</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>2 Low Comp</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>B1</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>3 Low Gen</td>
<td>A1</td>
<td>A1</td>
<td>A</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>4 Med Lib</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B1</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>5 Med Comp</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>6 Med Gen</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>7 High Lib</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>8 High Comp</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
<tr>
<td>9 High Gen</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B1</td>
<td>B</td>
<td>HL</td>
<td>HC</td>
<td>HG</td>
<td></td>
</tr>
</tbody>
</table>

### Table 17 Number of Occasions for Each Case in Table 16

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>i</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Low Lib</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Low Comp</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Low Gen</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Med Lib</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Med Comp</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Med Gen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 High Lib</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 High Comp</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 High Gen</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 18 lists the differentiating key words as tracked from the definitions in the manuals and the words in the job duties to the rationales from the respondents. Those cases where the job at the low level yielded a higher rating than the job at the medium level are not shown in Table 18, because the job descriptions were not written in parallel statements of duties between levels of jobs and the rationales are, therefore, not comparable either.

Table 18
Differentiating Key Words from Definitions and Job Duties

**Computer Terminology Rated Higher than Library Terminology:**

<table>
<thead>
<tr>
<th>Job Low</th>
<th>Plan B</th>
<th>Computer Definition</th>
<th>Library Definition</th>
<th>Computer Job Duties</th>
<th>Library Job Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>explain/ exchange</td>
<td>explain with tact</td>
<td>access, applications</td>
<td>fines, suspensions</td>
</tr>
<tr>
<td>Job High</td>
<td>Plan A</td>
<td>articulation/ listening</td>
<td>clarify detailed/ specialized</td>
<td>troubleshoots, analyzes requirements</td>
<td>queries</td>
</tr>
</tbody>
</table>

**Library Terminology Rated Higher than Computer Terminology:**

<table>
<thead>
<tr>
<th>Job Low</th>
<th>Plan A,A1</th>
<th>Library Definition</th>
<th>Computer Definition</th>
<th>Library Job Duties</th>
<th>Computer Job Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>clarify</td>
<td>exchange information</td>
<td>trains, obtains information</td>
<td>instructs, verifies</td>
</tr>
<tr>
<td>Job Medium</td>
<td>Plan A</td>
<td>communication</td>
<td>detail</td>
<td>deciphers</td>
<td>analyzes</td>
</tr>
<tr>
<td>Job Medium</td>
<td>Plan B,B1</td>
<td>explain/ exchange</td>
<td>obtains information</td>
<td>restricted shelves</td>
<td>directional</td>
</tr>
<tr>
<td>Job High</td>
<td>Plan B</td>
<td>discuss to clarify</td>
<td>discuss to clarify</td>
<td>reference, searches</td>
<td>user assistance, applications</td>
</tr>
</tbody>
</table>

**Generic Terminology Rated Higher than Library Terminology:**

<table>
<thead>
<tr>
<th>Job High</th>
<th>Plan B</th>
<th>Generic Definition</th>
<th>Library Definition</th>
<th>Generic Job Duties</th>
<th>Library Job Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>discretion, diplomacy, explain</td>
<td>discretion</td>
<td>recommends solutions, alternatives, clarifies</td>
<td>suggests sources</td>
</tr>
</tbody>
</table>
Table 18 (continued)

Library Terminology Rated Higher than Generic Terminology:

<table>
<thead>
<tr>
<th>Job</th>
<th>Plan</th>
<th>Library Definition</th>
<th>Generic Definition</th>
<th>Library Job Duties</th>
<th>Generic Job Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Low</td>
<td>A</td>
<td>clarify, specialized</td>
<td>clarify</td>
<td>trains</td>
<td>instructs</td>
</tr>
<tr>
<td>Job Low</td>
<td>B,B1</td>
<td>explain, exchange</td>
<td>courtesy/ tact</td>
<td>resolves, trains</td>
<td>[repetitive]</td>
</tr>
<tr>
<td>Job Medium</td>
<td>A,A1</td>
<td>communications</td>
<td>exchange</td>
<td>deciphers, assists</td>
<td>analyzes, guides</td>
</tr>
<tr>
<td>Job Medium</td>
<td>B,B1</td>
<td>explain, exchange</td>
<td>courtesy/ tact</td>
<td>searching, restricted</td>
<td>[routine, repetitive]</td>
</tr>
<tr>
<td>Job High</td>
<td>A</td>
<td>clarify detailed specialized</td>
<td>communicate detailed/ specialized</td>
<td>trains, coaches, writes</td>
<td>trains, writes</td>
</tr>
</tbody>
</table>

Computer Terminology Rated Higher than Generic Terminology:

<table>
<thead>
<tr>
<th>Job</th>
<th>Plan</th>
<th>Computer Definition</th>
<th>Generic Definition</th>
<th>Computer Job Duties</th>
<th>Generic Job Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Low</td>
<td>B,B1</td>
<td>exchanges</td>
<td>obtains information</td>
<td>several applications</td>
<td>[repetitive]</td>
</tr>
<tr>
<td>Job Medium</td>
<td>A,A1</td>
<td>detailed</td>
<td>courtesy, exchange</td>
<td>instruction</td>
<td>[straight-forward]</td>
</tr>
<tr>
<td>Job Medium</td>
<td>B</td>
<td>obtains information</td>
<td>[hands out] gives* information</td>
<td>directional</td>
<td>[routine, repetitive]</td>
</tr>
<tr>
<td>Job High</td>
<td>A</td>
<td>listening, articulation</td>
<td>detailed, specialized</td>
<td>analyzes</td>
<td>writes, trains</td>
</tr>
</tbody>
</table>

*Note: words from respondents, not appearing in definitions or job duties verbatim.

To generalize further on how the levels of jobs were differentiated, the data were examined by comparing table 18, Differentiating Key Words from Definitions and Job Duties, with tables 2, 3 and 4 (pages 49 to 51), Characteristics of Duties. Tables 5, 6 and 7 (pages 59 to 61) were also used to identify the parallel phrases of duties in each of the versions. The purpose was to discover which words or phrases in the rationales matched the categories in the characteristics of duties. The results are shown in tables 19, 20 and 21.
### Table 19
Job “Low” Characteristics of Duties - Matching Occurrences

<table>
<thead>
<tr>
<th>Library duties</th>
<th>A Information requested</th>
<th>B Information provided</th>
<th>C Communication</th>
<th>D Range sources/systems</th>
<th>E Problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues and renewals library cards</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>(1)</td>
<td>x</td>
</tr>
<tr>
<td>Determines user’s eligibility for library card categories</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>(1)</td>
<td>x</td>
</tr>
<tr>
<td>Signs out library materials</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepts requests for holds, traces, renewals, retrievals</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Explains circulation procedures and policies</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Hands out information sheets on circulation procedures and policies</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolves routine questions about cards, fines, suspensions, overdues</td>
<td></td>
<td></td>
<td>x</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Obtains further information from users to resolve problems</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Encourages dissatisfied users to complete appeal procedure forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Refers inquiries not related to circulation to information and reference service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Trains users to use the online circulation file</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**
- A. Level of information requested by user
- B. Level of information provided
- C. Level of communication
- D. Range of sources/systems used
- E. Level of problem solving

(*) = Number of occurrences
Table 20
Job “Medium” Characteristics of Duties - Matching Occurrences

<table>
<thead>
<tr>
<th>Library duties</th>
<th>A Information requested</th>
<th>B Information provided</th>
<th>C Communication</th>
<th>D Range sources/systems</th>
<th>E Problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receives inquiries about finding periodicals</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Assists users in finding periodicals</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>(2)</td>
</tr>
<tr>
<td>Provides directional information to periodicals</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>(2)</td>
</tr>
<tr>
<td>Determines holdings by searching online files</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Looks up catalogue information online to identify periodicals</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describes basic search strategy to users for finding location and status of periodical</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Deciphers bibliographic citations provided by user</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Refers user to appropriate information, reference or other services</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Explains procedures and policies related to periodicals</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Refers dissatisfied users to supervisors or senior staff</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourages users to complete trace forms for unlocated items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Signs out periodicals from restricted shelves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2)</td>
</tr>
</tbody>
</table>

KEY:  
A. Level of information requested by user  
B. Level of information provided  
C. Level of communication  
D. Range of sources/systems used  
E. Level of problem solving

(*) = Number of occurrences
### Table 21
Job “High” Characteristics of Duties - Matching Occurrences

<table>
<thead>
<tr>
<th>Library duties</th>
<th>A Information Requested</th>
<th>B Information provided</th>
<th>C Communication</th>
<th>D Range sources/systems</th>
<th>E Problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answers broad range of questions, from directional to reference</td>
<td>x (2)*</td>
<td>x (2)</td>
<td>x (2)</td>
<td>x (2)</td>
<td>x (2)</td>
</tr>
<tr>
<td>Solves users' problems with using computer terminals and printers to access the catalogue</td>
<td>x (1)</td>
<td>x (1)</td>
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<tr>
<td>Queries users by paraphrasing and confirming understanding of both the question and answer</td>
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<td>x (4)</td>
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<tr>
<td>Determines appropriate level of information to communicate to satisfy user’s needs</td>
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<tr>
<td>Suggests sources to use to find the answer</td>
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<td>x (2)</td>
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<tr>
<td>Answers questions posted to feedback board in writing</td>
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<td>x</td>
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</tr>
<tr>
<td>Demonstrates searching techniques to individual users</td>
<td>x (2)</td>
<td>x (2)</td>
<td>x (2)</td>
<td>x (2)</td>
<td>x (2)</td>
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<tr>
<td>Monitors success of users in finding what they want in online public access catalogue</td>
<td></td>
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<td>x</td>
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<tr>
<td>Makes appropriate referrals to reference and other services</td>
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<td></td>
<td>x</td>
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<tr>
<td>Trains users to use the catalogues for author/title/subject inquiries</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Trains and coaches peers from other units about information/reference service</td>
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<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Writes manuals, instructions, guidelines for peers and users</td>
<td>x (4)</td>
<td>x (4)</td>
<td>x (4)</td>
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<td>x (4)</td>
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<tr>
<td><strong>Total Occurrences:</strong></td>
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<td>(12)</td>
<td>(27)</td>
<td>(34)</td>
<td>(30)</td>
<td>(28)</td>
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</tbody>
</table>

**KEY:**
A. Level of information requested by user
B. Level of information provided
C. Level of communication
D. Range of sources/systems used
E. Level of problem solving

(*) = Number of occurrences
Based on these tables, the decisions on ratings appear to be made more frequently on the basis of three of the characteristics, and less on two. The characteristics of communications, range of sources, and problem solving triggered more written responses from the respondents, while the characteristics of information provided and information requested elicited fewer responses.

In the Low Job, the responsibility for applying and explaining policies and procedures, except for solving problems with cards, fines, suspensions and overdues, were not noted by the respondents, nor were the responsibilities for referrals or information requested singled out for comment, although communication skills in relation to obtaining further information were noted. In the Medium Job, except for the significant responsibility for deciphering citations, the level of information requested and the referral services were not addressed by the respondents. In the High Job, the information requested was noted, but was not linked to the other component in the filtering process, the responsibility for determining what level of information to communicate. The followup step of monitoring success and the responsibility for referrals to more specialized services were not singled out for comment either. Although the writing of manuals and other instructional materials was noted by the respondents, the instructional role of training users to use the catalogues was not, except for demonstrating searching techniques, which, by itself, would not assure learning had been successful.
Finally, words considered by critics of job evaluation to indicate the possibility of expectancy bias, the tendency to rate a job according to a pre-conceived notion of its worth, were extracted from the rationales. As shown in the earlier numerical analysis, the Low Job was rated at the lowest possible degree in measurement in seven cases and the Medium Job was also rated at the lowest degree in seven cases. The Low and Medium Jobs elicited such descriptive words as “front counter”, “clerical”, “generic”, “repetitive”, and “straightforward”, denoting lower levels of responsibility. These words did not appear in the job duties, but were noteworthy because they may explain some of the reasons for the relatively low ratings in some cases. Furthermore, although the High Job was recognized as “advanced” and “complex” by all respondents, it was not rated consistently at the highest degree of measurement, suggesting that some of the job duties may have been overlooked.

Summary

The definition of the contacts factor among plans was similar in some respects but differed in others, and the degrees of measurement of the factor differed enough to necessitate caution when drawing conclusions about comparisons among plans, especially where identical words had variant meanings. Five sets of nine ratings each were analyzed. Some inconsistencies in ratings occurred. The terminology of the job descriptions made more of a difference in the finer numerical ratings of Plan A and B, less of a difference in the

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107 See Table 11. The reader will recall that in Plans B1 and C1 the rating of 2 was really the lowest value for contacts, since the rating of 1 implied no contact or negligible contact.
numerical ratings of Plans A1 and B1, and no difference in the numerical ratings of Plan C1. In most cases, the job description using library terminology was rated higher than its computer or generic counterparts. In two cases it was rated lower. Except in the few cases noted, the library terminology did not obscure the relative value of the library assistants' jobs when compared with the jobs written in computer or generic terminology. However, jobs at all three levels may have been undervalued in several cases. The criteria for decision making appear to have been weighted in favour of the characteristics of the level of communication, problem solving and range of sources/systems used, somewhat less in terms of the level of information provided, and least in terms of the level of information requested. The absence of respondents' comments on some of these characteristics may indicate that the terminology of all three versions of job duties obscured the value of information provision.
CHAPTER 5
DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study examined one aspect of job evaluation as it related to the jobs of information providers in academic libraries in Vancouver, British Columbia. The purpose was to investigate whether the terminology of job descriptions, the source of information about job content, affected the job evaluation rating. The technique used was to have three experienced human resource specialists rate nine job descriptions representing three levels of jobs, using three different terminologies, and to provide rationales for determining the ratings. Differences in ratings within each job evaluation plan, within each level of job and among plans would signify that the terminology made a difference and consistency in ratings within plans, within job levels and among plans would signify that the terminology did not make a difference. Based on earlier studies using library and computer terminology to describe jobs, it was expected that the computer terminology would tend to be rated higher than the library terminology and that the generic terminology would elicit consistent ratings.

Discussion of Findings

The numerical ratings showed a number of inconsistencies in ratings within two of the job evaluation plans, but the number of differences between the library and computer version of the job description was lower than expected, with the library version being rated lower
than its equivalent computer version in only two cases, and, surprisingly, higher than the computer version in six cases. The generic version fared least well, except in one case in which it topped all three versions in the ratings. This result suggests that, at least with these respondents, these job evaluation plans and these nine job descriptions, the terminology presented some problems in rating consistency. In particular, the generic terminology appeared to be too general for precise interpretation of the job content and, of the three versions, led to the least favourable rating of job worth, at least in these cases.

However, these numbers do not tell the whole tale. Considering the complexity of all three levels of jobs and the degree of independence in carrying out the responsibility of contacts, some of the jobs appear to be underrated. Although under-writing, that is, minimizing, of job descriptions was deliberately avoided in the design, the terminology may still have been so simple that it was misinterpreted. This finding is corroborated by the rationales themselves in which only some of the characteristics of the jobs were noted or only some of the characteristics were emphasized by the respondents. Most notably, references to the importance of the reference interview process, or similar statements that indicate recognition of this process, are missing from the respondents' comments. This suggests that this characteristic of the information provision role, present to some degree in all three levels of jobs, is either not seen as worthy of consideration in the contacts factor or perhaps not understood.
Conclusions

This study uncovered some of the difficulties in rating information provider jobs using job evaluation methodology based solely on written job descriptions.

This study focused on a particular role of the library assistant, the front line information provision role, a responsibility which is difficult to "see" and describe and which involves specialized information and communication skills. None of the definitions of the contacts factor in the three job evaluation plans captured this role precisely.

Duties associated with the reference interview process may have been particularly problematic to evaluate. Problems associated with imperfect or poorly articulated questions, drawing out thought and analyzing the talk between information requester and information provider may not have been "seen" by the respondents, and, therefore, may have been overlooked as one of the considerations for rating. Ways of describing these characteristics of job duties will need to be improved but, since the use of generic terminology in job descriptions appears to be the least helpful of the three versions to these experienced evaluators, this terminology ought to be avoided.
Recommendations

Recommendations for Action

The Cornell University's example, development of a *Generic Library Task List*, may serve as a guide to an alternative approach for gathering information about jobs.

The written job duties as source data for job evaluations may not be sufficient in themselves to foster understanding of job worth and the methodology of writing job descriptions may need to be revised. In a rapidly changing workplace, where jobs are evolving and individual incumbents transform the jobs through applying information technology as they learn it on the job, the traditional job description does not fit these one-of-a-kind jobs and the process of writing job descriptions is too inflexible and cumbersome for a slow-moving job evaluation process.

Cornell University's *Generic Library Task List* retains the library terminology in its descriptions of library functions, categorizes the levels of complexity and responsibility of jobs, including those related to information provision, and is adaptable to the matrix organizational structure and multi-function jobs, now common in restructured library environments. Furthermore, its method of categorization by function and level takes into account both changing job requirements and changing individual competencies. In describing their own jobs, library assistants can select the appropriate components of the
job from a whole range of library functions and apply the appropriate level from a ranked list of definitions. It may still be necessary to supplement the written data with further explanations and briefings for non-library colleagues in order for them to interpret library jobs and library function levels accurately, but the List provides a well-designed and carefully thought out scheme as a starting point.

Recommendations for Further Study

This study was delimited to the contacts factor. A comparison of the relationship of the contacts factor with other factors in the three plans might provide additional insight into the emphasis placed on information provision and the value attached to information provider jobs.

A further study of specific words and their effect regardless of whether library, computer or generic, may also provide guidance in words to choose and words to avoid to achieve consistent ratings.

This study examined only one aspect of job descriptions used in job evaluation systems in the three institutions. Diachronic or comparative studies of job evaluation systems relating the methodology of each of the plans to the final results of the incumbents' ratings may yield results that suggest a preference for selecting factors for compensation or a preference for applying one methodology over the other.
Finally, a comparison of job evaluation methodology in general with competency-based or other methodologies may provide new ideas for describing job content, determining what counts as skill and for achieving appropriate compensation for library assistants and other information providers.
BIBLIOGRAPHY


Appendix 1
Instructions to Evaluators

INSTRUCTIONS TO EVALUATORS

Objective:
To determine the relative rating in responsibility of job descriptions A-I for the job evaluation
factor of Internal/External Contacts.

Enclosed in this package are:
1. Instructions
2. Response form
3. A series of nine different job descriptions.

Instructions:

You are asked to rate each of the nine job descriptions. You need to know that each of the jobs
described refers only to the factor of internal/external contacts.

The internal and external contacts (users) for all nine positions are students, faculty, staff
(including peers at other sites), and off-campus clients using information services or information
technology services.

Contacts are in-person, by phone, and in writing (including electronic mail).

All positions work independently without the opportunity to consult a supervisor at least some of
the time.

In the job descriptions, the duties are arranged in random order for research purposes.

Keeping all this in mind, would you please:

1. On the Rating Form, rate jobs A-I from 1-9 (1 = lowest responsibility, 9 = highest), using the
job evaluation manual or system for your own institution.

2. In column headed “Why?”, please provide reason for your answer and/or any other explanatory
comments.

3. Please enclose a copy of:
   a. your institution’s job evaluation manual or instructions for the factor: Internal/External Contacts.
   b. any additional guidelines or rules of thumb that explain the methodology or criteria that
you use in your institution.

Thank you for your help.

You have the right to refuse to participate or withdraw at any time for this project.
## Appendix 1

### Rating Form

<table>
<thead>
<tr>
<th>Job</th>
<th>Rating (1=lowest, 9=highest)</th>
<th>Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
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<tr>
<td>B</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>Rating (1=lowest, 9=highest)</td>
<td>Why?</td>
</tr>
<tr>
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<td>-----------------------------</td>
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<td>E</td>
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<td>F</td>
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<td>H</td>
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<tr>
<td>I</td>
<td></td>
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</tr>
</tbody>
</table>
Appendix 1
Job Duties in Random Order: Jobs A-I

Internal/External Contacts

Job A

Job duties:
Encourages users to fill in follow-up forms
Checks database to determine availability of information/goods/services
Analyzes users’ requirements from information provided by user
Explains procedures and policies for obtaining information/goods/services
Checks database to identify information/goods/services
Guides users to information/goods/services
Refers user to appropriate services
Provides directions to location of information/goods/services
Gives out information/goods/services
Receives questions about finding information/goods/services
Refers dissatisfied users to supervisors
Describes how information/goods/services are arranged/organized

Internal/External Contacts

Job B

Job duties:
Looks up catalogue information online to identify periodicals
Signs out periodicals from restricted shelves
Encourages users to complete trace forms for unlocated items
Deciphers bibliographic citations provided by user
Refers user to appropriate information, reference or other services
Assists users in finding periodicals
Provides directional information to periodicals
Explains procedures and policies related to periodicals
Determines holdings by searching online files
Receives inquiries about finding periodicals
Describes basic search strategy to users for finding location and status of periodical
Refers dissatisfied users to supervisors or senior staff
Internal/External Contacts

Job C

Job duties:

Recommends solutions and suggests alternatives to users
Provides answers/data on broad range of questions for information/goods/services
Solves users' problems related to information/goods/services
Clarifies user's requirements, confirming understanding of both the need and solution
Writes guides, instructions for other staff and users
Trains users to use computer help screens, manuals, instructions
Demonstrates database features to individual users
Trains and coaches other staff in providing services
Confirms that users have found what they are looking for
Replies to users' questions in writing
Refers questions to other appropriate services
Determines appropriate level of information to convey to users

Internal/External Contacts

Job D

Job duties:

Determines appropriate level of detail to answer user's question
Responds to questions posted to feedback system
Troubleshoots users' problems related to hardware/software/communications networks
Follows up questions to ensure problem is resolved
Writes and revises documentation for other staff and users
Instructs users in using software
Refers questions to other appropriate staff
Trains and coaches other staff on troubleshooting services
Analyzes users' requirements through systematic interview procedure
Recommends alternative sources to solve the problem
Provides user assistance for broad range of software
 Demonstrates computer applications to individual users
Internal/External Contacts

Job E

Job duties:

- Refers inquiries not related to circulation to information and reference services
- Accepts requests for holds, traces, renewals, retrievals
- Explains circulation procedures and policies
- Obtains further information from users to resolve problems
- Resolves routine questions about cards, fines, suspensions, overdues
- Issues and renews library cards
- Encourages dissatisfied users to complete appeal procedure forms
- Determines user’s eligibility for library card categories
- Trains users to use the online circulation file
- Signs out library materials
- Refers dissatisfied users to supervisors
- Hands out information sheets on circulation procedures and policies

Internal/External Contacts

Job F

Job duties:

- Explains procedures and policies related to access
- Encourages dissatisfied users to complete complaint forms
- Verifies and records details in order to resolve problems
- Accepts orders for services
- Resolves basic questions about codes, passwords, accounts
- Loans manuals
- Distributes information sheets on procedures and policies
- Assigns access codes
- Determines user’s status for access to services
- Instructs users on basic functions of several applications
- Directs inquiries not related to access to appropriate staff
- Refers dissatisfied users to supervisors and/or complaint procedures
Internal/External Contacts

Job G

Job duties:

Determines appropriate level of information to communicate to satisfy user’s need
Trains users to use the catalogues for author/title/subject inquiries
Solves users’ problems with using computer terminals and printers to access the catalogue
Queries users by paraphrasing and by confirming understanding of both the question and answer
Makes appropriate referrals to reference and other services
Answers questions posted to feedback board in writing
Suggests sources to use to find the answer
Demonstrates searching techniques to individual users
Writes manuals, instructions, guidelines for peers and users
Trains and coaches peers from other units about information/reference services
Monitors success of users in finding what they want in online public access catalogue
Answers broad range of questions, from directional to reference

Internal/External Contacts

Job H

Job duties:

Registers users for service
Resolves registration problems
Explains procedures and policies related to services
Asks users for information to discover the nature of the problem
Instructs users in using self-serve services
Refers questions not related to registration to appropriate services
Receives orders for service
Refers dissatisfied users to supervisors
Loans documents
Provides handouts on procedures and policies
Determines appropriate registration category
Encourages dissatisfied users to complete feedback forms
Internal/External Contacts

Job I

Job duties:

Refers dissatisfied users to supervisors and appropriate staff
Searches catalogue to identify software
Assists users in finding hardware/software
Explains procedures and policies related to hardware/software
Instructs users in finding software
Receives questions about finding hardware/software
Provides directional information to appropriate workstation, manuals
Refers questions to other appropriate staff
Determines location of indexes by searching online catalogue
Analyzes information supplied by user to find software
Provides software and user documentation
Encourages users to complete feedback procedures for problems with software