

MUSEUM STUDIES

Perspectives and Innovations

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CURRICULUM STANDARDS FOR MUSEUM STUDIES PROGRAMS

Stephen L. Williams and John E. Simmons

Abstract – Organizational, functional and disciplinary, and academic strategies for developing curricular standards for museum studies programs are reviewed. From this review four levels of museum studies coursework are identified and characterized. The model was evaluated by comparing it to competencies regarded as essential to the future work force by the United States Department of Labor. This approach provides new insights to the direction and needs that should be considered in developing the academic standards for museum studies programs.

INTRODUCTION

Museum studies concerns the history and function of museums, their role in society, and how and why museums acquire, preserve and interpret collections. This includes collecting, collection care, exhibition, public programs, architecture, management, finances, research, and conservation.

The *Oxford English Dictionary* defines *museography* as the systematic description of the contents of a museum (for example, a written catalog), and *museology* as the science of arranging museums. For purposes of this contribution, *museum studies* includes museology, museography, and museum science.

Formal museum studies training was not available before 1900. Museum workers tended to be people “. . . of culture and resource” (Murray 2000), trained in other professions, but working in museums. George Brown Goode (1901) opined that to be successful in the museum field one needed “Intelligence, a liberal education, administrative ability, enthusiasm, and that special endowment which may be called ‘the museum sense’.”

The first museum studies program in the United States was started in 1908, at the Pennsylvania Museum’s School of Industrial Art (now the Philadelphia College of Art) by Sarah Yorke Stephenson. The second museum studies program (and the first to train museum professionals for natural history museums) was started in 1911 by Homer R. Dill, director of the Museum of Natural History at the State University of Iowa, in Iowa City (Cushman 1984). Programs started at the Fogg Art Museum of Harvard University, the Newark Museum, and a few other universities in the 1920s. The biggest growth of museum studies programs was in the 1970s, in response to a rapid increase in the number of museums and a growing awareness of the need for trained

museum professionals. Currently, there are approximately 100 graduate museum studies programs in the United States (Adams and Ritzenthaler 1999).

Museum studies programs have established themselves as a resource for the museum community. While academic education and training in museum studies is a growing expectation for those pursuing a museum career, there are various perceptions about the content and nature of coursework critical for such education and training. For the sake of professional development of the field, academic program compatibility, and individual career planning, there is a need to recognize basic curriculum standards. The study described below reviews current directions in an attempt to recognize those standards that are materializing as a result of strategies based on organizational initiatives, functional or disciplinary orientations, and academic applications.

ORGANIZATIONAL STRATEGIES

American Association of Museums (AAM).

The American Association of Museums has maintained an active interest in museum studies programs for three decades, beginning with the initial work of the AAM Museum Studies Curriculum Committee, and continuing through the work of the AAM Museum Studies Committee and AAM Committee on Museum Professional Training (COMPT). The missions of the committee are to “advance career learning experiences of museum professionals and pre-professionals, and educators who provide scholarship and training; to address the continuous need to develop and enhance professional knowledge and goals; and to engage with new trends, innovations and best practices across the field” (American Association of Museums, Committee on Museum Professional Training 2004). Because the committee serves the interests of the museum community in the United States, it has the potential to be an important influence on the direction and nature of museum studies programs. Current museum studies programs have been influenced by the publications of the American Association of Museums that list curricula believed to be important for museum careers (American Association of Museums, Museum Studies Committee 1978, 1980; American Association of Museums, Museum Studies Curriculum Committee 1973; American Association of Museums, Professional Practices Committee 1983). Reynolds (2000) redefined the core curriculum expectation for the training of entry-level museum workers into three categories: (1) museum-focused courses; (2) courses that may or may not be museum-focused; and (3) courses in other academic disciplines.

Appendix A lists the topics that the AAM Museum Studies Curriculum Committee, AAM Museum Studies Committee, and AAM Committee on Museum Professional Training viewed as important for museum training. While there is some consistency in the lists of topics recommended, there have been changes over time. Most recommended topics are either introductory or deal with administration, collections, or programming. More recently, changes include a growing emphasis on public accountability and service, and a reduced emphasis on research. The secondary group of related courses emphasizes personal skills, such as interpersonal relations, teamwork, and communication (Reynolds 2000).

Canadian Museums Association (CMA).

The Canadian Museums Association has focused on the future work force of the museum community through the efforts of the Canadian Museums Human Resource Planning Committee (1993, 1995, 1997). The goal of the CMA committee reviewing future human resources for Canadian museums is “. . . to establish an integrated approach to human resource planning, management and development within the museum sector which will positively contribute towards achieving the highest performance from the museum workforce and

consequently, from museums and galleries across Canada” (Canadian Museums Human Resource Planning Committee 1995: 3). Because the committee serves the interests of the museum community in Canada, it also is a potentially important influence on the direction and nature of museum studies programs.

The efforts of the CMA committee resulted in the recognition of “competencies” defined as “. . . the abilities necessary to perform successfully in areas specified. They include knowledge, skills and attributes and can be defined in ways which include one, two, or all three of those elements” (Canadian Museums Human Resource Planning Committee 1997: 1). In turn, each competency was subdivided into four broad categories, each of which included two to ten topics. Competencies are categorized as “shared” or “functional” in application. Shared competencies are those that are important to, and expected of, all museum workers. Functional competencies are defined as those required “. . . to perform the specific work and specific tasks which are necessary in the museum” (Canadian Museums Human Resource Planning Committee 1997: 18). Functional competencies include the categories of “administration,” “knowledge creation and preservation,” and “knowledge sharing” (Canadian Museums Human Resource Planning Committee 1997: 18). Each of these three categories is subdivided into seven to 25 topics (Appendix B). The CMA committee has taken the competency concept a step further by profiling specific competencies for five distinct levels (Canadian Museums Human Resource Planning Committee 1997).

The concept of recognized knowledge, skills, and attributes for museum workers as competencies is a significant change in the approach to the education and training needs of the museum community. The strength of the competency concept is reflected in its subsequent use by other museum organizations, including the International Council of Museums, International Committee for the Training of Personnel (2000) and the American Institute for Conservation of Historic and Artistic Works (Perkinson 2002). The shared competencies proposed by the CMA committee closely follow the AAM introductory topics (for example, philosophy and ethics, public value, organizational qualities), but also include individual and interpersonal skills. The functional competencies, subdivided into “administration,” “knowledge creation and preservation,” and “knowledge sharing” (Canadian Museums Human Resource Planning Committee 1997: 18), correspond closely with administration, collections, and programming and service, respectively.

International Council of Museums (ICOM).

The International Council of Museums has pursued standards for museum studies programs through the work of the International Committee for the Training of Personnel (ICTOP). The mission of ICTOP is “to encourage and promote relevant professional or technical education and training, to appropriate standards, for all people working in museums and related areas, including students in museum-related pre-entry training programs” (International Council of Museums, International Committee for the Training of Personnel 2000). This committee is important because it serves the international museum community, and is an influential voice in the direction of museum training programs.

Recently, ICTOP completed a list of suggested curriculum topics subdivided into five competencies—“general,” “museology,” “management,” “public programming,” and “information and collections management and care.” The general competencies and museology competencies are regarded as the shared competencies that are considered important for all museum workers. The remaining competencies are regarded as the functional competencies that are important to individuals with specific responsibilities. Each competency is supplemented with additional topics arranged in a multi-tiered system (International Council of Museums, International Committee for the Training of Personnel 2000; Appendix C).

Similar to the previous strategies, the primary topics are either introductory or deal with administration, collections, or programming. The usefulness of the multi-tiered listing of secondary (46 total) and tertiary topics

(222 total) may be compromised by the quantity, diversity, and ambiguities of the topics. This exhaustive list is a work in progress, representing the diversity of perceptions, interests, and directions of museum studies within the international museum community.

Secretary's Commission on Achieving Necessary Skills (SCANS).

The SCANS report of the United States Department of Labor is relevant to the museum community because it defines competencies and foundation skills that generally are needed by the future workforce of the United States, and presumably other countries as well. The report states that “. . . more than half our young people leave school without the knowledge or foundation required to find and hold a good job” (United States Department of Labor, 1991: xv). The report recognizes a three-part foundation of skills and personal qualities and five competencies that are critical to job performance. “These eight requirements are essential preparation for all students, both those going directly to work and those planning further education. Thus the competencies and the foundation should be taught and understood in an integrated fashion that reflects the workplace contexts in which they are applied” (United States Department of Labor 1991: xv). For this reason, this study incorporated the SCANS report (United States Department of Labor 1991, 1992, 1993) as a source of relevant direction for museum studies programs.

The foundation skills listed in the SCANS report include basic skills, thinking skills, and personal qualities. Each of these is subdivided into five or six generic topics. The five areas of competency include resources, interpersonal, information, systems, and technology. Each competency is subdivided into three to six generic topics (Appendix D). Similar to the strategy previously discussed for CMA, levels of proficiency are developed with each of the competencies.

While the topics of the SCANS report are not specific to the museum field, most are applicable. The SCANS report is important to the entire workforce, regardless of the discipline in question. For this reason it is relevant to museum education and training.

FUNCTIONAL AND DISCIPLINARY STRATEGIES

Most of the functional views of museum training involve the management and care of museum collections; most of the disciplinary views originate with the conservation community and their association with other disciplines, such as anthropology or natural history.

The National Institute for Conservation (now Heritage Preservation) has been a significant player in this approach to curriculum development. The first suggested curriculum was for training in ethnographic and archaeological conservation (National Institute for Conservation 1984). The recommended courses included prerequisites in chemistry, anthropology, art history, and studio arts, followed with courses in materials science, non-industrial technology, conservation science, conservation theory and practice, documentation techniques, administrative management, collections management and archaeological field work, synthetic adhesives and plastics, and three elective courses. Each structured course was further detailed with an outline. In 1993, the National Institute for Conservation was involved with the curriculum planning for a proposed natural science conservation training program (Duckworth et al. 1993). The suggested course topics included introduction to conservation theory, introduction to museum studies and administration, systematics, documentation in conservation, management of scientific collections, material science, conservation practice, preservation of library and archival materials, research methods in conservation, preservation of photographic materials and magnetic media, and selected disciplinary survey courses and “block courses.” Each of these courses was further detailed with listed topics. The problem with both the anthropology and the natural science curricula was

giving appropriate academic credit for the time, expense, and number of credit hours required; both curricula far exceeded the academic expectations for a typical master's degree in the United States.

The Bay Foundation supported a pilot project that accommodated a series of condensed specialty courses to alleviate some of the problems of excessive credit hours, time, and cost. This effort resulted in a set of published curricular suggestions that focused on “training for collections care and maintenance” for archaeology and ethnography, history, natural sciences, fine arts, and libraries and archives (National Institute for Conservation 1990, 1991a, 1991b, 1991c, 1996). While each of these projects was regarded to be successful by the instructors and most participants, courses covered 22 to 44 topics, some of which were duplicated between courses (for example, handling, storage, environments, documentation, and emergency management).

Other concepts for curricular development have been proposed in recent years. Perhaps the best known are the independent museum training programs, such as those offered by the Campbell Center and the Museum Management Institute. The Museum Training Institute (1998) made recommendations for management training and development, and Cato et al. (1996) reviewed the knowledge and skills needed for collection support positions.

Concepts of curricular needs developed by the functional and disciplinary groups varied somewhat from organizational strategies. Although there was support for courses such as an introduction to the museum field, museum administration, museum collections, and museum programming and service, the emphasis of such courses might be secondary to topics of greater functional or disciplinary interest.

ACADEMIC STRATEGIES

Attempts to define curricular standards for education and training in museum studies are meaningless if they are not applied in an academic setting. Several factors have contributed to a disparity between the previously discussed strategies and actual academic practices. These factors include, but are not restricted to: (1) failure to develop programs within academic curricular guidelines; (2) organization and structure of the courses; and (3) the balance of academic standards with the expectations of the museum community. For this reason it is appropriate to review practices of successful museum studies programs.

Museum studies programs differ significantly depending on “degrees offered, disciplinary association, relationship between museology and discipline, and specific requirements” (American Association of Museums, Professional Practices Committee 1983). These and other differences are major factors in preventing agreement about standards for museum studies programs. To reduce the influence of such differences, the most recent *Guide to Museum Studies and Training in the United States* (Adams and Ritzenthaler 1999) was consulted to identify programs that were similar in offering a graduate degree in the multidisciplinary fields of museum studies. The expectation of the graduate degree is well established in the early literature (American Association of Museums, Museum Studies Committee 1978, 1980; American Association of Museums, Museum Studies Curriculum Committee 1973). The current study focused on general graduate programs because of an existing focus on museum-oriented issues, instead of discipline-specific programs that might include discipline-oriented agendas. Nine museum studies programs were identified as having common academic strategies: John F. Kennedy University, San Francisco State University, University of Colorado – Boulder, George Washington University, Southern Illinois University, University of Kansas, New York University, Baylor University, and Texas Tech University. The web site for each university was examined for curricular offerings in museum studies. Course offerings were categorized as introductory or oriented toward administration, collections, programming, or other. Table 1 summarizes the curricula of the nine programs.

Most of the graduate museum studies programs provide a course that is an introduction to the field. Two

TABLE 1. Listing of museum studies courses at nine universities that offer a master's degree in museum studies.

INSTITUTION	INTRODUCTION	ADMINISTRATION	COLLECTIONS	PROGRAMMING	OTHER
John F. Kennedy University	History & Theory	Finance and Administration Planning and Development Nonprofit Finance & Accounting Visionary Leadership	Museums & Information Technology Documentation of Collections Preventive Conservation	Exhibition Development Museums and Communities Principles of Museum Programming Theories of Learning	Internship Master's Project
San Francisco State University	History & Organization of Museums	Management, laws, & Ethics Administration of Non-profit Organizations Museum & Gallery Management	Museum Collections Management & Registration Museum Conservation & Restoration Museum Materials Analysis & Technology Curation	Museum Education & Public Programming Exhibit Design Museum Exhibit Design & Curation	Internship Master's Thesis Creative Work Project
University of Colorado-Boulder	Introduction to Museum Studies	Museum Administration	Collection Management	Museums and the Public Museum Education	Seminar in Museum Issues Museum Topics Advanced Topics & Trends Internship Master's Thesis Master's Project/Paper
George Washington University	History & Philosophy of Museums	Administration Fiscal Management of Non-profit Organizations	Collection Management: Practical Applications Collection Management: Legal & Ethical Issues Introduction to Conservation Advanced Conservation Techniques Preventive Conservation Techniques	Exhibition Development Museum Exhibition: Design & Process Museum Exhibition: Curatorial Research & Planning	Special Topics Internship Directed Research

Table 1. (cont'd)

INSTITUTION	INTRODUCTION	ADMINISTRATION	COLLECTIONS	PROGRAMMING	OTHER
Southern Illinois University	Introduction to Museology	Museum Administration	Curation of Biological Collections	Learning in Museums	Introduction to Art History
	Museum Studies in Geology	Historical Museums, Sites, Development of Museums	Computer Techniques in Systematic Biology Zoology Field Studies	Methodology & Display	
University of Kansas	The Nature of Museums	Museum Management	Principles and Practices of Museum Collection Management	Introduction to Museum Public Education	Internship
		Conservation Principles &	Introduction to Museum Practices	Exhibits	
New York University	History and Theory of Museums	Museum Management	Museum Collections and Exhibitions	Museum Education	Internship
	History, Theory, & Practice in American Museums	Development, Fundraising, and grantsmanship	Care, Handling, and Examination of Artifacts	Exhibition Planning & Design	Research in Museum Studies
	Local Museums, Historic Houses, and Sites	Museums, Art, and the Law	Museums and Interactive Technologies	Museums and Interactive Technologies	Topics in Museum Studies
Baylor University	Principles of Museology	Museum Administration	Modern Management of Museum Collections	Museum Education	Museum Special Topics Seminar
	Professional Development	Museum Law	Material Cultural	Design & Management of Museum Exhibits	Independent Studies in Museums
		Museum Marketing & Development	Preventive Conservation	American Decorative Arts & Furnishings in Museum Settings	Internship
		Design & Management of Museum Facilities			Master's Project/Thesis
		Historic Preservation & Site Management			
Texas Tech University	Museology	Museum Administration	Museum Collection Management	Museum Education	Museum Practicum
		Museum Law, Ethics, & Standards	Museum Preventive Conservation	Museum Interpretation & Communication	Thesis
			Museum Data Management Material Culture Museum Field Methods		Internship

exceptions, New York University and Baylor University, offered additional courses that might be considered introductory. While there is variation in course offerings among the programs – administration, collections, and programming – each program dedicates at least one entire course to each topic. The number of related courses for these topics varies among programs, reflecting program strength.

An existing deviation between academic strategies and previously discussed strategies is that some courses do not fit any of the four common topics (i.e. introduction, administration, collections, and public programming). Often such courses are self-directed studies, internships, or thesis work. However, even some structured courses did not follow common topics because of a closer functional or disciplinary affiliation. One of the strongest arguments against uniformity of museum studies programs is that flexibility and innovativeness can lead to really great programs. At the same time, the lack of uniformity permits substandard education and training. While there is no intent of being judgmental about specific programs, it is recognized that considerable variation exists. Examples of such variation, beyond those represented in Table 1, include required courses, number of academic hours for the degree, internship expectations, thesis requirements, and the nature of comprehensive exams. Because these programs do not provide consistent education and training, it is difficult for the museum community and the public to distinguish programs and individuals with good academic backgrounds. As a result the entire field suffers because of a lack of identity and direction.

DISCUSSION

After 30 years of deliberation standards for museum studies programs should be within reach. According to the American Association of Museums, standards “. . . contribute to the museum as a whole reaching its fullest potential; are achieved through generally accepted practices, values, or consensus; provide a common language; are widely available and not secret; are written down; serve as a basis for evaluation of institutional performance” (Adams 1998: 3). Standards for museum studies programs would be beneficial to prospective students, academic programs, and the museum community as a whole.

Based on previous discussions, it is apparent that organizations, functional and disciplinary groups, and academic programs, collectively have provided direction toward reaching curriculum standards for museum education and training. The strength of the organizational strategies is the development of a consistent foundation, hierarchical prioritization of topics, and a working scope for the field. Another important contribution is the use of competencies, in terms of knowledge, skills, and attributes, for developing education and training strategies. The strength of the functional and disciplinary strategies is the integration of more diversified topics into organized and structured formats. These concepts are important as examples demonstrating the actual use of the acquired knowledge and skills for specific career tracks. Finally, the strength of the academic strategies is the actual implementation, evaluation, and modification of education and training systems for museum studies. Equally important is the time and opportunity to observe the products of the process, specifically the graduates entering the museum field. Collectively, the organizations, functional and disciplinary groups, and academic programs, are valuable resources providing a tremendous amount of information that can be applied to development of standards for museum studies programs. However, the recognition of standards should be based upon rational approaches to needs, and not on other agendas or uninformed decisions.

Based on the three strategies presented, several trends are apparent that are useful for standardizing curricula of museum studies programs. These trends include:

- an introductory course on the philosophy, history, functions, purpose, structure, operations, diversity, and vocabulary of the museum field;

- incorporation of individual secondary courses addressing broad functions of museums, specifically museum administration, museum collection operations (management, care, and use), and public programming and service;
- recognition of competencies in terms of knowledge, skills, and attributes;
- recognition of shared and functional competencies;
- application of a hierarchical system of topics for communicating organization and structure of curricula.

Applying previously discussed strategies, the initial step toward standards is to define and prioritize the courses required for the museum field. Based on expectations of the museum field, intended audience, purpose of the course, and possible prerequisites, a model, with four distinct levels of courses is presented in Table 2.

Level 1 coursework typically involves only one course, an introduction to the museum field. This course should be appropriate for any individual, from the lay-person to the career-oriented museum worker. It introduces the philosophy, history, functions, purpose, structure, operations, diversity, and vocabulary of museums, and prepares the student for the courses offered at the second level of coursework. Course content is critical for developing shared competencies, thus it should be required for all individuals desiring a museum career. Course content should be broad enough to provide an adequate education about museums regardless of the career direction of the individual. Functionally, this course is already a common standard for museum studies programs.

Level 2 coursework is an extension of the instruction provided by Level 1 coursework, thus the latter is a prerequisite. Because the Level 2 courses are a continuation of foundation building, they are structured as three individual courses involving shared competencies. As a result, they are required for career-oriented individuals. Although course titles may vary, the concepts of the Level 2 courses should include museum administration, museum collection operations, and public programming and service. These courses individually address the broadest functions of museums, and collectively provide a more in-depth understanding and appreciation for the museum field than provided by Level 1 instruction. At the same time these courses are general, not specialized. Each of these courses prepares the student for the more specialized courses in Level 3.

Level 3 coursework is an extension of the instruction provided by Level 2 courses, thus the latter courses are prerequisites. Level 3 coursework includes a number of courses that are important to standard functions of the museum field, thus not all courses are appropriate for all students. Instead, courses are specialized for specific areas, such as administration, collections, or public programming and service. For example, facilities management, marketing and development, and museum law are logical extensions of museum administration, making the latter a prerequisite of these courses. Similarly, museum education, museum exhibit design and management, and museum public outreach are logical extensions of the Level 2 public programming and service course, and preventive conservation and museum information management are logical extensions of the Level 2 collection operations course. Level 3 courses are distinguished from those of other levels because they apply only to the career-oriented museum workers specializing in administration, collections, or public programming and service. Level 3 courses do not necessarily serve as prerequisites to Level 4 courses.

Level 4 coursework includes a number of non-museum courses that are important to specialized functions or disciplines in the museum field. While they are not expected of all career-oriented individuals, the courses are applicable in many museum or non-museum situations. Examples of such coursework for specialized functions include personnel management, health and safety, security management, imaging, and applied technology. In some cases, the coursework may have to be completed through continuing education

TABLE 2. Qualities of four levels of coursework found useful for standardizing curricula used by museum studies programs. Asterisks following possible course titles of Level 3 correspond to specific prerequisite courses similarly indicated in Level 2.

	CONCEPT	CONTENT	APPLICATION	PREREQUISITES	EXAMPLE TITLES
LEVEL 1	Single course providing holistic understanding and appreciation for the museum field; provides an introduction to Level 2 courses.	Introduction to major aspects of the museum field (for example, philosophy, history, functions, purpose, structure, operations, diversity, and vocabulary).	Appropriate for the layman and academic non-majors; considered necessary for developing shared competencies, thus expected of all museum workers and academic majors/minors.	None.	Introduction to the Museum Field
LEVEL 2	Courses that comprehensively address the broadest functions of the museum field; individually provide introduction to appropriate Level 3 courses.	Three courses that cover most topics related to administration, collection operations, and public programming and service.	Considered necessary for developing shared competencies, thus expected of all museum workers and academic majors/minors.	Level 1 course.	Museum Administration*, Museum Collection Operations**, and Public Programming and Service***
LEVEL 3	Courses that comprehensively address <i>specific functions</i> of the museum field, especially administration, collection operations, and programming and public service.	Courses directly relevant for career specialization in administration, collection operations, and public programming and service.	Considered necessary for developing functional competencies, thus expected only of museum workers and academic major/minors specializing in certain museum-specific functions.	Level 1 and related Level 2 courses.	Museum Law, Ethics, & Standards *, Museum Facilities Management*, Museum Marketing & Development*, Museum Information Management**, Preventive Conservation**, Collection Research**, Museum Education***, Museum Exhibit Design & Mgmt.***, Museum Community Outreach****.
LEVEL 4	Interdisciplinary courses that comprehensively address very specialized functions or disciplines that have application to specific aspects of museums settings as well as non-museum settings.	Courses indirectly relevant to museum functions or disciplines.	Considered optional for developing functional competencies, thus expected of only museum professionals specializing in functional or disciplinary roles of the museum field.	Supporting functional or disciplinary coursework may be required.	Personnel Management, Non-profit Financial Management, Physical Security, Learning Theory; Applied Technology; Art History; Photography; Studio Techniques; American Studies; Historic Preservation; Material Culture; Systematics; Natural History; Petrology.

opportunities simply because it may not be available as a graduate course. From a disciplinary perspective, Level 4 coursework might include art history, historic preservation, material culture, systematics, or petrology.

There is nothing particularly new or radical about the concept of recognizing four levels of courses for museum studies programs (Table 2). The various strategies previously discussed have in one way or another applied the same concepts, which is a useful model for providing curriculum direction, priority, and structure. Also, it helps to rationalize the interrelationship and balance of courses within a museum studies program, particularly as new courses are developed. Ideally, this approach could lead to standards for museum studies, or at least initiate a dialog among museum studies programs to encourage a critical review of what is collectively being accomplished and what can be done to make it better.

An extension of this model is now presented to test how it may be integrated with the *SCANS Report for America 2000*, and to give further insights into the museum field. However, before proceeding it is appropriate to elaborate on the significance of competencies in the development of curriculum standards for museum studies programs. The Canadian Museums Human Resource Planning Committee (1997) recognized the usefulness of this paradigm for museum careers. Competence is defined as “. . . a roughly specialized system of abilities, proficiencies, or skills that are necessary or sufficient to reach a specific goal” (Weinert 2001: 45). The development of “competencies begins at school and [is] pursued further in vocational training and through lifelong learning” (Farrugia 2001: 235). Because academic programs are fundamental to developing competencies (Golomen et al. 2001), the museum community should consider competencies in planning curricula. This means that the pursuit of competencies in an academic setting “. . . involves much more than altering or expanding a syllabus or program” (Perrenoud 2001: 147). Instead there is a strong emphasis on innovative teaching methods, quality of the total educational experience, and a greater interest in how students, by their total competencies, serve society (Farrugia 2001; Perrenoud 2001). This is a responsibility of all museum studies programs that serve the long-term interests of their students. The SCANS report is an objective, museum-independent assessment of the knowledge and skills needed by the future work force. It is appropriate to ask how curricular strategies for museum studies programs correlate with strategies defined by this national agenda.

In the SCANS report, competencies are discussed prior to foundations skills. Furthermore, the competencies themselves are discussed independently without an understanding of their interrelationships; thus, the value of the report is obscured. However, a reorganization of the information yields results that are significant and relevant to museum studies programs.

A reorganization of the SCANS report findings logically places the foundation skills prior to the competencies (Table 3). The “basic skills” (reading, writing, mathematics, listening, speaking) are primarily gained before entering college. The “thinking skills” (creative thinking, decision making, problem solving, seeing things in the mind’s eye [= imaging or conceptualizing], knowing how to learn, reasoning) and “personal qualities” (responsibility, self-esteem, sociability, self-management, and integrity/honesty) are developed as students complete their undergraduate degrees (Table 3A). This relationship supports the conclusion of the American Association of Museums, Museum Studies Curriculum Committee (1973: 10) concerning the inappropriateness of undergraduate museum studies programs. Furthermore, it is possible to develop a logical progression of academic activities that corresponds to the primary competency categories of “information,” “systems,” “resources,” “technology,” and “interpersonal” (Table 3). In this progression, “technology” in the strictest sense is applied at all levels simply because it has become so incorporated within society; the focus of technology in curriculum development refers to new technological applications relevant to the museum field.

Assuming that there is a similar progression of courses in a museum studies program (Table 2), it is possible to use the competencies of the SCANS report to test curricula as well as to conceptualize and develop the

TABLE 3. Relationship of the proposed museum studies curricular strategy and the SCANS Report for America 2000 as explained in the text. Bolded markers (X) show the scope of shared competencies considered essential for all positions in the museum community.

SCANS REPORT PROPOSED MUSEUM CURRICULUM		FOUNDATION SKILLS		COMPETENCIES												
		BASIC SKILLS	THINKING SKILLS	PERSONAL QUALITIES	INFORMATION	SYSTEMS	RESOURCES	TECHNOLOGY	INTERPERSONAL							
					Acquires and evaluates information Organizes and maintains information Interprets and communicates information Uses computers to process information	Understands systems Monitors and corrects performance Improves or designs systems	Time Money Material and facilities Human resources	Selects technology Applies technology to task Maintains and troubleshoots equipment	Participates as member of a team Teaches others new skills Serves clients / customers Exercises leadership Negotiates Works with dignity							
PRE-COLLEGE DEVELOPMENT		X														
COLLEGE DEVELOPMENT		X	X													
MUSEUM STUDIES	SHARED COMPETENCIES	LEVEL 1 COURSES														
		Introduction to the Museum Field		X	X	X	X									
		LEVEL 2 COURSES														
		Museum Administration		X	X	X	X	X	X	X	X					
		Public Programming & Service		X	X	X	X	X	X	X	X					
	Museum Collection Operations		X	X	X	X	X	X	X	X						
	MUSEOLOGY	FUNCTIONAL COMPETENCIES	LEVEL 3 COURSES													
			(Administration prerequisite)													
			Museum Law, Ethics, & Standards		X	X	X	X	X	X	X	X	X			
			Museum Marketing & Development		X	X	X	X	X	X	X	X	X			
			Museum Facilities Mgmt.		X	X	X	X	X	X	X	X	X			
			(Other)		X	X	X	X	X	X	X	X	X			
			(Collection Operations prerequisite)													
			Information Mgmt.		X	X	X	X	X	X	X	X	X			
			Preventative Conservation		X	X	X	X	X	X	X	X	X			
Collection Research			X	X	X	X	X	X	X	X	X					
(Other)			X	X	X	X	X	X	X	X	X					
(Programming & Service prerequisite)																
Museum Education			X	X	X	X	X	X	X	X	X					
Museum Exhibit Design & Mgmt.			X	X	X	X	X	X	X	X	X					
Museum Community Outreach			X	X	X	X	X	X	X	X	X					
(Other)		X	X	X	X	X	X	X	X	X						
MUSEUM RELATED FIELDS	OTHER	(Level 1 and Level 2 prerequisite)								X	X	X	X	X	X	
		Independent Studies										X	X	X	X	X
		Internships										X	X	X	X	X
		Thesis / Project										X	X	X	X	X
		(Other)										X	X	X	X	X
		LEVEL 4 COURSES														
		(Functional courses)								X	X	X	X	X	X	X
		(Disciplinary courses)								X	X	X	X	X	X	X
		ART FIELDS					X	X	X	X	X					
		CULTURAL FIELDS					X	X	X	X	X					
SCIENCE FIELDS					X	X	X	X	X							
OTHER					X	X	X	X	X							

nature of courses. For instance, because the introduction to the museum field course addresses basic issues of philosophy, history, functions, purpose, structure, operations, diversity, and vocabulary of museums, it appropriately applies to the "information" competency. The content of this Level 1 course directly relates to (1) acquiring and evaluating information, (2) organizing and maintaining information, (3) interpreting and communicating information, and (4) using computers to process information (Table 3, B). The secondary courses, specifically museum administration, museum collection operations, and public programming and service, build upon the same features of information competency, but go one step further and include the "systems" competency as well. Because these Level 2 courses address the broadest functions of the museum field, there is a direct relationship between (1) understanding systems, (2) monitoring and correcting performance, and (3) improving and designing systems (Table 3, C). Because the Level 1 and Level 2 courses reflect shared competencies, it can be inferred that both the information competency and systems competency for these courses are expected of all museum workers, thus the nature and parameters of the core courses are apparent (Table 3, see bolded tabulations).

Because Level 3 courses apply to functional competencies in the museum field (career specializations) there are similar progressive relationships between the "resources" competency and the "technology" competency. While continuing to build upon the information and systems competencies, the knowledge and skills are incorporated into the broader context that recognizes resources (Table 3, D). Similarly, it would be expected to continue and incorporate technology as well, but as a whole the museum community has been slow to bring technology to the museum setting. While it is becoming integrated in museum collection operations (for example, information management courses), administration and public programming and service still have plenty of opportunities to integrate technology. The recognition of this oversight, combined with the SCANS report, provides possible direction for future curricular development (Table 3, E).

For the most part the concepts presented for Level 3 courses apply to the Level 4 non-museum courses considered important to specialized functions and disciplines of the museum field. While these courses incorporate the competencies for resources and technology, an important difference is that the more basic supporting competencies of information and systems are more likely to be derived from non-museum fields (Table 3, F).

Continuing the application and comparison of the SCANS report to the proposed curriculum for museum studies, it is evident that the "interpersonal" competencies (participates as a team member, teaches others new skills, serves clients/customers, exercises leadership, negotiates, works with diversity) may be lacking in museum studies education and training. Some of these objectives may be incorporated in previous coursework, but unstructured courses (for example, independent studies, internships, projects, and thesis) may provide the best opportunities because of the potential for direct interaction with others. Equally important, the SCANS report provides direction for developing these unstructured opportunities (Table 3, G).

While the SCANS report provides useful direction for academic programs, it is important to realize that no program (conceptually or logistically) can systematically cover all aspects proposed in the report. Coursework should serve as the foundation for gaining essential knowledge and skills, with some competencies developed or refined by work experiences and other opportunities.

Much of the difficulty in reaching curricular standards for museum studies programs has been the inability to reach a consensus on the scope of "museum studies" itself. There is some controversy in the literature concerning the proper name for museum studies (Malt 1987). The terms "museology," "museography," "museum science," and "museum studies" are sometimes used as synonyms, and sometimes assigned distinct meanings. Kaplan (1992: 49) defined museography as "the methods and techniques employed in museums;" museology as "the theory, history and role of museums;" and considered museum studies to be "a social science

or . . . part of an existing discipline.” The meaning of these terms may vary considerably among museum professionals, museum-related professionals, non-museum professionals, and instructors. The meaning of "museum studies" may become broader as competencies and academic education are integrated. However, this analysis demonstrates that "museum studies" as a whole is derived from both internal influences in the museum field and external influences from museum-related fields. The proposed museum studies curriculum makes a distinction between museum studies and traditional museology (*sensu* Kaplan 1992) (Table 3, H). In doing so, this becomes an important step towards defining the museum field itself.

CONCLUSIONS

During the past 30 years, the museum community has taken an interest in museum studies programs, as evidenced by the multiple strategies developed by museum organizations, groups representing museum functions and disciplines, and academic programs. Collectively, these groups have recognized the importance of an introductory course to the museum field, followed by in-depth study of administration, collection operations, and public programming and service. At the same time some of the more interesting concepts have included the recognition of shared and functional competencies, as well as a hierarchical tier system to communicate the organization and structure of curricular topics.

This study has identified four levels of courses that are relevant to museum studies programs. Level 1 includes the introductory course and associates it with the shared competencies of the museum field and the information competency of the *SCANS Report for America 2000* (United States Department of Labor 1991, 1992, 1993). Level 2 includes the remainder of the shared competencies of the museum field, but also associates these competencies with the information and systems competencies of the SCANS report. Level 3 museum courses are relevant to the functional competencies of the museum field because they address the education and training needs of individuals specializing in specific museum functions, such as administration, collections, or programming and service. These courses encourage the incorporation of the information, systems, resources, and technology competencies of the SCANS report. Level 4 consists of specialized functional and disciplinary courses (non-museum courses) relevant to the museum field. While these functional competency courses may directly apply the resources and technology issues within the museum field, their foundation in terms of information and systems originates outside of the museum field, or in fields considered peripheral to museums.

While a strict application of standards can be debilitating in academic and professional situations, a flexible application of standards can be invaluable in providing direction and expectations. Currently, there is a need for the museum community to formally clarify the basic knowledge and skills (i.e., shared competencies) expected of museum workers, and to recognize what academic programs should provide in achieving such knowledge and skills. Because the core courses (i.e., introduction to the museum field, museum administration, museum collection operations, and museum public programming and service) are so important in creating the basic expertise of a museum professional, it is proposed that the same courses (Level 1 and Level 2) serve as the curriculum standards of the field. Any additional courses (Level 3 and Level 4) beyond the core courses become the flexible part of the curriculum to develop the strengths of academic programs and specific functional competencies of the individual.

The implication of accepting simple curriculum standards is significant. Based on the work of museum organizations and academic programs, there are already expectations of basic subject material associated with the core courses. For example, an introductory course should include the philosophy, history, functions, purpose, structure, operations, diversity, and vocabulary of museums. As a result, further standardization of at least the core courses is warranted. However, individual competencies would not be guaranteed unless other

parameters also are set, such as a system of accrediting academic programs and testing individuals. While both of these are critical to the professional development of the field, each is a topic deserving lengthy discussion that exceeds the focus of the current contribution.

The proposed curriculum standards for museum studies programs build upon the efforts of others and integrate academic and non-academic strategies. By distinguishing levels of coursework, the proposed curriculum standards demonstrate the position of current courses and future courses within a museum studies program. By testing derived concepts with the SCANS report, a progressive relationship of instruction is developed, so that the scope and detail of individual courses becomes clearer. This is particularly important for understanding the broader picture within individual programs, and ultimately the museum community. This is an important step in proceeding with other relevant issues involving museums studies programs, such as communicating with university administrators, recruiting faculty, evaluating programs, developing standards for programs, and planning museum careers (American Association of Museums, Museum Studies Committee 1978, 1980, 1987; American Association of Museums, Professional Practices Committee 1983).

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APPENDICES

APPENDIX A. List of curriculum topics recommended by the American Association of Museums through the Museum Studies Curriculum Committee, Museum Studies Committee, Professional Practices Committee, and the Committee on Museum Professional Training (COMPT).

AAM Museum Studies Curriculum Committee (1973)

- Introduction to museum studies
- Organization, operation, and management of museums
- Architecture, layout, and equipment
- Collections: origin and acquisition
- Data and documents related to collection items
- Scientific and research activities
- Preservation and care of collections
- Presentation: exhibitions
- The public
- Cultural and educational activities of museums
- Internship

AAM Museum Studies Committee (1978)

- History, philosophy, and purposes of museums
- Professional ethics and public accountability
- Management of collections including acquisition, conservation, and documentation
- Utilization of museum objects in scholarly research, in education and interpretation, and as sources of esthetic experience
- Exhibition planning, design, and installation
- Evaluation of the visitor experience in the museum environment
- Administration of finances, personnel, public relations and physical facilities;
- Trustee-staff relations, legal aspects and development
- Internship

AAM Professional Practices Committee (1983)

- Museum-focused courses
- Historical, contemporary, and future nature and role of museums in society
- Governance and management of museums
- Ethical and legal aspects of museum operations
- Planned growth and management of museum collections
- Preservation, presentation, and interpretation of collections
- Maintenance of physical facilities
- Conduct of education and outreach programs
- Evaluation of museum programs
- Internship

AAM Committee on Museum Professional Training (Reynolds, 2000)

- Museum-focused courses
- Museum department and professions
- Museum ethics
- Law and regulations
- Museum as educational institutions
- Museum collection care and conservation
- Museum history

APPENDIX A. (cont'd)

- Museum finances
- Museum governance and organization
- Museum technology
- Related Courses*
- Computers
- Communication
- Visitor or customer centered organizations
- Interpersonal relations
- Teamwork
- Grant writing
- Fund raising
- Research
- Diversity in American society
- Courses from Academic Disciplines*
- History
- American studies
- Art history
- Anthropology
- Biology

APPENDIX B. List of competencies relevant to museum training recommended by the Canadian Museum Association (Canadian Museum Human Resource Planning Committee 1997).

PRIMARY TOPICS	SECONDARY TOPICS
<i>Shared Competencies</i>	
Philosophical and Ethical	<ul style="list-style-type: none"> Ethics and values Vision and purpose Museum sense Balancing new visions and best traditions Valuing diversity
Public Value	<ul style="list-style-type: none"> Public focus Public promotion
Organizational	<ul style="list-style-type: none"> Organizational awareness Planning and organization Managing change Process management Enterprise Evaluation Priority setting Problem solving Information gathering / research Sharing knowledge and experience

APPENDIX B. (cont'd)

PRIMARY TOPICS	SECONDARY TOPICS
Individual / Interpersonal	Self-management Personal initiative and leadership Innovation Life-long learning Technological literacy Communication Team work
<i>Functional Competencies</i>	
Administration	Governance Management Financial management Strategic planning Business and operational planning Policy development Sound business practices Facility management Security Risk management Legal literacy Project management Contract management Human resource management Supervision Labor relations Human resource development Volunteer management Public relations Marketing Advocacy Membership services Grants development Fund raising and development Revenue generation Museum external services Museum retail management
Knowledge Creation & Preservation	Collection management Registration Collection development Collection use Curatorial research Conservation Archival services Library services Information services

APPENDIX B. (cont'd)

PRIMARY TOPICS	SECONDARY TOPICS
Knowledge Sharing	Educational programming Public programming Interpretation Publications and products Design Production Exhibits

APPENDIX C. List of competencies and topics relevant to museum training as suggested by the ICOM International Committee for the Training of Personnel (2000). Tertiary and quaternary levels are not included.

PRIMARY TOPICS	SECONDARY TOPICS
General	Communications Environmentalism and its impact Evaluation methods Financial management Information technology Interpersonal relationships Museum and society Nature of work Professionalism Project management Research Resources in the field
Museology	Community museology Development of the museum profession Roles and functions of museums Vision Governance Issues of museum practice Legal context for practice Research activities
Management	Accreditation Advisory bodies

APPENDIX D. List of competencies regarded as critical to the future workforce of the United States by the Secretary's Commission on Achieving Necessary Skills of the U. S. Department of Labor (1991, 1992, 1993).

PRIMARY TOPICS	SECONDARY TOPICS
<i>Competencies</i>	
Resources	Time Money Material and facilities Human resources
Interpersonal	Participates as member of a team Teaches others new skills Serves clients / customers Exercises leadership Negotiates Works with diversity
Information	Acquires and evaluates information Organizes and maintains information Interprets and communicates information Uses computers to process information
Systems	Understands systems Monitors and corrects performance Improves or designs systems
Technology	Selects technology Applies technology to task Maintains and troubleshoots equipment
<i>Foundation</i>	
Basic Skills	Reading Writing Arithmetic / mathematics Listening Speaking
Thinking Skills	Creative thinking Decision making Problem solving Seeing things in the mind's eye (i.e., conceptualizing) Knowing how to learn Reasoning
Personal Qualities	Responsibility Self-esteem Sociability Self-management Integrity / honesty

