AC 2007-3049: A DELPHI STUDY TO STRUCTURE A WORKING CONFERENCE ON WOMEN'S SUCCESS IN STEM

Maria Brunette, University of Massachusetts-Lowell

Dr. Brunette's work focuses in applying human factors and systems engineering to the design of work systems. Her interests includes methods for measuring the role of job, organizational, and cultural factors in the quality of work life. In all these areas her focus is on underrepresented ethnic groups and women, especially those from Hispanic origin. Her research initiatives also include investigating the work environment of women in Latin America.

paula rayman, University of Massachusetts-Lowell

meg bond, University of Massachusetts-Lowell

Lu Yuan, University of Massachusetts-Lowell

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Introduction

Although there is vast information regarding the difficulties that women face in the science, technology, engineering and mathematics (STEM) fields, still it is still not very clear how the critical work-related factors interact and have an impact on the attraction, retention, and advancement of women in STEM fields. Since there is little evidence regarding the magnitude and direction of established relationships between these work-related factors and women's success, it is critical to collectively attempt to define the scope of the research that scholars might consider focusing on.

In addition, as we embark on the 21st century, many of the scholars who have been working in the area of women in STEM are approaching retirement. At the same time, new themes and issues are emerging from the next generation of scholars. To date, no gathering has brought these two generations together with the express purpose of comparing research themes and evaluating findings.

In this paper the authors present results of a qualitative study that was conducted to provide structure for a working conference scheduled for late Spring 2007 intended to a) foster intergenerational and interdisciplinary dialogue on workplace factors associated with women's success in STEM, and b) develop a set of potential research questions to guide future work. This qualitative study implemented a process where principles of content analysis and the Delphi methodology were applied in structuring a working conference. Preliminary results of such process are presented here.

Using a Qualitative Approach: The Delphi Method

The Delphi method facilitates the process of gathering opinions from a group of experts who share a common interest but usually represent different points of view. The method is based on a structured and iterative process for extracting knowledge from a panel of experts via a series of questionnaires with controlled opinion feedback. The Delphi method improves the generation of critical ideas by structured collection of information and processing of the collective input from a panel of geographically dispersed experts[1]. By facilitating communication between and among a panel of experts the process is effective and the group as a whole can deal with a complex problem[2].

In general, this technique is more valuable for analyzing evolving trends than existing conditions. As noted by the Illinois Institute of Technology[3] (2002), "The results of the sequence are only as valid as the opinions of the experts who made up the panel." This method was first applied to assess long-range trends in science and technology by the RAND Corporation. In the last decades, the Delphi method has been extensively applied in industry, academia, government, and healthcare[4].

The advantages of the method are numerous and include[5]:

- The ability to conduct a study in geographically dispersed locations without physically bringing the respondents together;
- Time and cost-effectiveness;
- The ability to discuss broad and complex problems;
- The ability for a group of experts with no prior history of communication with one another to effectively discuss a problem as a group;
- The ability for participants to have sufficient time to synthesize their ideas;
- The ability for participants to respond at their convenience;
- The ability to record the group activity that can be further reviewed;
- The anonymity of participants provides them with the opportunity to freely express opinions and positions;

The Delphi method consists of a series of questionnaires sent to a pre-selected group of experts. The questionnaires are designed to generate individual responses to the problems posed and to enable the experts to refine their views as the group's work progresses in accordance with the assigned task[3]. These questionnaires have been traditionally sent out via mail. As pointed out by Ludwig[6](1997), due to the increasing growth of electronic communication, the use of electronic mail can be used to facilitate the process of gathering the requested information. In this study we used electronic mail as the main way to communicate with the Panel of Experts.

The first questionnaire of a Delphi study generally consists of one or two open-ended questions related to a broad problem or issue. The second questionnaire consists of a series of structured questions developed by the facilitator based on the information collected during the first round. Participants rank-order items or use a Likert-type rating scale to prioritize items, and are asked to comment on their rationale and add additional items. The process continues (additional questionnaires) until a predetermined level of consensus is reached or no new information is gained[4]. Altschuld[7] (1993) found that three iterations were usually sufficient because not enough new information was gained to warrant the cost of more iterations.

Selecting the Panel of Experts

Criteria for being selected as a member of the Delphi Panel of Experts included: to belong to one of the two generations of scholars working in the Women in STEM field; to have participated in related research initiatives as principal investigator, co-investigator, or senior personnel; to have published in major related journals; and to belong to diverse racial/ethnic groups.

Our outreach efforts provided a total of 12 experts that agreed to participate in the study. It should be noted that the majority of Delphi studies have used between 15 and 20 respondents[6]. The gender distribution of the panel was 1 male and 11 female. Half the participants belonged to the first and the other half to the second generation. With the exception of one participant who reported being engaged on research for more than 6 but less than 10 years, all participants reported to have been engaged on such activities for more than 11 years. STEM disciplines represented by the panel included Physics,

Computer Sciences, Environmental Sciences, Engineering, Life/Biological Sciences, and Social Sciences. Current job positions reported by the panel included professor (assistant, associate and full), dean, director (academic program), director (non-profit organization), consultant and senior consultant.

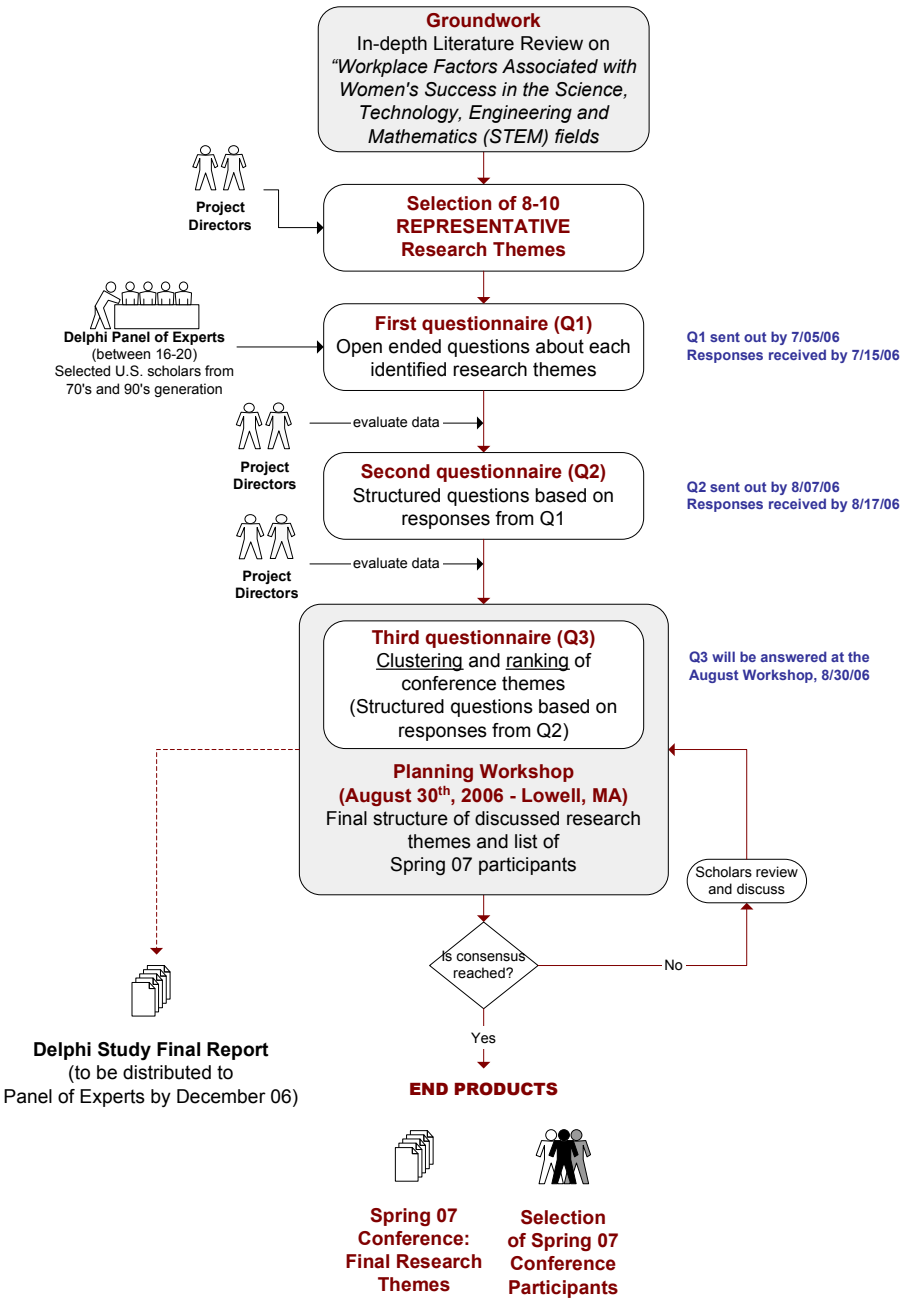
The Delphi Stages

Our study involved two rounds of questions and a group meeting. It was conducted over a period of approximately 2 months. Responses from the first questionnaire were summarized to form the basis of the second questionnaire. Responses from the second questionnaire of this Delphi study were discussed at a 1-day meeting where the experts of the panel were brought together. This meeting (August, 2006) served as a preparatory meeting for the Spring 2007 working conference, *"Intergenerational Voices on Women in Science and Engineering"*. The working conference aims to create an intergenerational response to issues of advancing women in STEM (Science, Technology, Engineering and Mathematics) fields and to create proposals for future research and policy on related themes. The format of the conference is expected to include small intergenerational and interdisciplinary teams, each focusing on one of the themes identified through the Delphi process presented here.

The different stages of the applied Delphi method are shown in Figure 1. A first questionnaire with a few open ended questions was distributed to a list of scholars identified using the criteria explained above. The first questionnaire focused on general issues related to the attraction, retention and advancement of working women in STEM fields. Specific themes included job design and organizational factors; work family balance; work climate; diversity and equality; discrimination; quality of working life; and external factors to the work environment including national policy issues.

The first questionnaire received very thoughtful and detailed answers. All the responses obtained were analyzed, and, based on the outcome of the analyses, various clusters of information were identified. A second questionnaire that integrated the panel members' responses was designed. The questionnaire mainly asked for a level of agreement on each of the selected questions/themes. Both questionnaires are available upon request. After distributing the second questionnaire, instead of requesting the answers via email, the group of scholars was gather in a 1-day preparatory meeting to discuss the group responses. This meeting took place in August 30th 2006. The proposed face-to-face meeting was essential in order to provoke dialogue among and between the two generations of scholars from the panel of experts and to provide participants with a deeper understanding of each other's opinions. At the end of the meeting, two open-ended questions (third questionnaire) were asked to all participants. These included *What is the most critical thing learned on the Delphi process and preparatory meeting?*, and *What is the most relevant issue that we would not want to miss at the Spring 2007 Conference?*. All the responses were collected and gathered in a document labeled 'summary'. The entire meeting was audio-recorded and its 48-page transcript together with the 'summary' were part of the materials later analyzed using Nvivo.

Figure 1. Flowchart of Delphi Study.



Qualitative (Content) Analysis using Nvivo

Content analysis is a standard research method in the social sciences that uses a set of procedures to make replicable and valid inferences from text based on explicit rules of coding[8,9,10,11]. Content analysis enables the researchers to include large volumes of textual information and systematically identify its properties by detecting the more important content structures. The creation of a coding structure helps to categorize the textual data into a certain theoretical framework and drive a meaningful reading of content under scrutiny. With the intervention of computer-aided programs such as NUD*IST, Nvivo, and Ethnograph[12], content analysis can be conducted on larger volumes of data at higher speeds, yielding more reliable and consistent results.

Hsiah and Shannon[13] (2005) identified three approaches to qualitative content analysis: conventional, directed, and summative. They explained that "In conventional content analysis, coding categories are derived directly from the text data. With a directed approach, analysis starts with a theory or relevant research findings as guidance for initial codes. A *summative content analysis* involves counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context". Using the themes of relevant research on women in STEM as references for the initial node structure, the data analysts in this study followed the process of a summative content analysis. Data gathered from the Delphi questionnaires were transcribed and formatted into separate rtf (Rich Text Format) files. These documents, along with the 48-page transcript of the planning meeting (the 3rd round of Delphi study) and the 'summary' document were regarded as the input for qualitative content analyses (source documents).

Nvivo, a software package designed for analysis of complex and non-structured qualitative data, was applied to analyze *emerging themes* from both the questionnaire responses and planning meeting transcripts and summaries. Two analysts were involved in the data analysis procedure. The less-experienced analyst first familiarized himself with the coding mechanism by developing and modifying the initial node structure. Subjective understandings about the answers to the questionnaire were also recorded. Consensus was later reached between the less-experienced and experienced analysts and a final node structure was formed. All the data was coded according to that structure.

Coding Process

The coding procedure involved several steps, including creating major nodes and sub-nodes, coding the documents, modifying the nodes, shaping and merging the nodes, and summarizing the coding.

Step 1: Node Structure Design: First, a tree node structure was developed based on the 10-item questionnaire (Delphi round 1). Twelve major nodes were created and included:

a. Major changes for women in STEM, which addresses the changes for women in the STEM fields over the last three decades;

b. Competitive future work environment, which describes the status and characteristics of the work environment for women in the STEM fields in the next 15-20 years;
c. Social and cultural expectations, which limit women's scientific careers;
d. Discrimination, which has compromised the opportunities and needs for scientist women due to the issues related gender, race, ethnicity, etc.;
e. Work family balance, which has forced scientist women to balance between work and family;
f. Practices and policies, which drive the changes for women in the STEM fields;
g. Job design, detailing the job content, supervisor and co-worker support, and women's roles, etc.;
h. Organizational factors, which include different kinds of organizational issues surrounding scientist women's development;
i. Quality of working life, describing job satisfaction;
j. Evaluation methodologies, which are required to better understand the challenges and barriers that women face in the workplace;
k. Conference structures, delineating the themes and administrative issues about the main conference; and
l. Miscellaneous issues.

The sub nodes (specific themes) under each major category were created as well. Table 1 illustrates the node structure at both its first and second level and also the number of passages coded for each main node (P).

Step 2: Document Coding: The next step was to code the document using the defined node structure. The less-experienced data analyst started reading a source document and proceeded to identify the emergent theme and relate it to one or more sub node categories. He then followed the same coding technique to the end of each of the source documents. The descriptions of the major nodes were later modified to reflect the participants' ideas more accurately and comprehensively when coding the rest of the source documents. Additionally, new sub nodes were added whenever the analyst felt that the contents of the document did not match the existing sub nodes.

Step 3: Node Structure Modification: After finishing coding all of the documents, the analyst browsed the node and subnode categories and paid more attention to those subnodes that had few passages (In other words, the subnodes that were very infrequently coded.) The analyst reread the contents more carefully and tried to recategorize them by shaping and merging the subnodes. He then discussed the coding structures with the more-experienced analyst. The unnecessary or duplicated subnodes were deleted to maintain a consistent 2-level node structure. Different versions of the tree node structures were saved whenever the researchers made modifications. Particularly, the major changes on the node structures were:

a. The node levels were shrunken from three to two which include the major and sub nodes and thus all of the subnodes that used to have subcategories were redefined correspondingly;

b. The subnode of *organizational practices & policies* which was originally grouped into the major node of *organizational factors*, was recategorized under the major node of *practices and policies*;
c. The major node of *quality of working life* (N11) was deleted since the only piece of data that was originally coded did not provide enough information based on the review; and
d. Those subnodes that had two or fewer passages were either deleted or merged with other relevant subnodes.

Step 4: Coding Summary: Finally, the updated final node structure and representative contents from the documents were transferred and summarized using Excel. The number of passages (coded text) for each major node and sub node was calculated. A 'passage' reflected an opinion, idea, theory or belief from one or more members from the panel. A simplified node structure was also finalized to represent the ideas that were initialized by the expert panel and the topics that should be prioritized in Spring 2007 conference. As noted above, Table 1 shows the finalized 2-level node structure.

Table 1. Node Structure: Level 1 and 2.

Major Nodes (Level 1)	**Subnodes (Level 2)**
N1 - Major changes for women in STEM (P = 123)	Leadership in organizations
	Under-representation
	Increasing growth in numbers
	Opportunities
	Work climate
	Policy and intervention effect
	Career expectations
	Career development and advancement
	Intergenerational issues
	Opinions on women's roles
	Diversity
	General
N2 - Competitive future work environment (P = 56)	Gender equality
	Leadership involvement
	Organizational overall structure
	Diverse and multi-cultural
	General
	Technology's roles
	Women's ability
	Globalization
	Career development and advancement
N3 - Social and cultural expectations (P = 47)	Diversity & equality
	Culture & climate
	STEM career values
	Parents' expectations

N4 - Discrimination (P = 33)	Gender based & sexual harassment
	Ethnicity and race based
	General
N5 - Work family balance (P = 75)	Motherhood issues
	Family-sensitive policies
	Conflict with tenure-clock
	Choices and compromises
N6 - Practices and policies (P = 82)	Globalization effect
	Government policies
	Organizational practices & policies
	Current practices
	Desired practices and outcomes
N7 - Job design factors (P = 12)	Co-worker support
	Women's role
	Job content
N8 - Organizational factors (P = 76)	Training and education
	Performance & productivity measures
	Rewards and incentives
	Mentoring
	Flexible work schedule & practices
	Salary and benefits
N9 - Evaluation methodologies (P = 29)	Quantitative analyses
	Integrated methods
	Specific programs
	Suggestions and recommendations
	Main comments
N10 - Conference structure (P = 24)	Themes
	Administrative and logistics
N11 - Miscellaneous (P = 50)	Inclusive organization
	Individual specific comments
	Issues about themes in Q1 and Q2
	Important issues learned from Q3
	Unfamiliar or cannot answer

Results

Table 2 displays the main node structure (level 1) with the information of passages coded for each major node. Overall, there were 11 major nodes and 58 sub nodes. The 11 node-structure (level 1) had a total of 607 coded passages which included 703 coded paragraphs with a total of 151141 coded characters. The nodes with the largest amount of coded passages were N1, N6, N8 and N5 respectively. The complete coding report which includes the 607 passages coded arranged based on the node structure is also available upon request.

Table 2. Main Node Structure: Passages Coded.

Nodes (level 1)	**Passages**	**%**
N1 - Major changes for women in STEM	123	20.3%
N2 - Competitive future work environment	56	9.2%
N3 - Social and cultural expectations	47	7.7%
N4 - Discrimination	33	5.4%
N5 - Work family balance	75	12.4%
N6 - Practices and policies	82	13.5%
N7 - Job design	12	2.0%
N8 - Organizational factors	76	12.5%
N9 - Evaluation methodologies	29	4.8%
N10 - Conference structures	24	4.0%
N11 - Miscellaneous	50	8.2%
Total coded paragraphs	607	-

Pareto Analysis: As mentioned earlier, a coded passage reflected an opinion, idea, theory or belief that a member (or more) from the panel has regarding the issue of Women in STEM. The main node structure as shown in Table 1 provided a framework of the different topics that were brought up by the panel. Each of the nodes in level 1 represents the attempt to categorize the vast amount of information that was gathered from the panel. A Pareto Analysis (80%/20%) was conducted to help arrange the vast amount of information gathered from the qualitative analysis. The sorting of each of the subnodes (level 2) was done calculating the percentage and cumulative percentage of the number of passages coded. Table 3 illustrates the sorting and ranking for the subnodes. It was decided to take an 80% cut off point to concentrate on the issues with significant amount of coded passages (a node with larger number of coded passages represents one or more scholars expressing various opinions on the emerging theme, although the opinions are not necessarily the same).

By arranging the information obtained from the Pareto analysis based on the main node structure (level 1), it was found that the structure of the conference should concentrate in 31 specific themes (sub-nodes) as shown in Table 4. These 31 themes belong to a 11-main theme (node) structure as presented in the second column of Table 4. It also should be noted that while Nodes 1 (major changes for women in STEM) and 2 (competitive future work environment) provide contextual information; Nodes 5 (w**ork family balance**), 6 (**practices and policies**) and 8 (**organizational factors**) represent the themes that need further discussion and are the potential areas that will shape the main structure of the dialogue in the intergenerational meeting in the Spring of 2007. Although quantitatively, Node 4 (Discrimination) did not have a large number of coded passages, the issue of discrimination was intrinsically part of the information gathered from this study.

Table 3. Pareto Analysis(a): Coded Passages and their Cumulative Percentage (80%).

#	*Major Nodes (Level 1)*	*Subnodes (Level 2)*	*Passages*	*% of total passages*	*Cum. %*
1	*N8 - Organizational factors*	*Performance & productivity measures*	*37*	*6.1%*	*6.1%*
2	*N5 - Work family balance*	*Motherhood issues*	*31*	*5.1%*	*11.2%*
3	*N1 - Major changes for women in STEM*	*Policy and intervention effect*	*29*	*4.8%*	*16.0%*
4	*N5 - Work family balance*	*Family-sensitive policies*	*28*	*4.6%*	*20.6%*
5	*N6 - Practices and policies*	*Organizational practices & policies*	*26*	*4.3%*	*24.9%*
6	*N6 - Practices and policies*	*Government policies*	*22*	*3.6%*	*28.5%*
7	*N10 - Conference structures*	*Themes*	*20*	*3.3%*	*31.8%*
8	*N4 - Discrimination*	*Gender based & sexual harassment*	*18*	*3.0%*	*34.8%*
9	*N1 - Major changes for women in STEM*	*Under-representation*	*16*	*2.6%*	*37.4%*
10	*N6 - Practices and policies*	*Desired practices and outcomes*	*16*	*2.6%*	*40.0%*
11	*N3 - Social and cultural expectations*	*Diversity & equality*	*15*	*2.5%*	*42.5%*
12	*N3 - Social and cultural expectations*	*Culture & climate*	*15*	*2.5%*	*45.0%*
13	*N8 - Organizational factors*	*Training and education*	*15*	*2.5%*	*47.4%*
14	*N1 - Major changes for women in STEM*	*Leadership in organizations*	*14*	*2.3%*	*49.8%*
15	*N2 - Competitive future work environment*	*Globalization*	*13*	*2.1%*	*51.9%*
16	*N1 - Major changes for women in STEM*	*Work climate*	*12*	*2.0%*	*53.9%*
17	*N3 - Social and cultural expectations*	*STEM career values*	*12*	*2.0%*	*55.8%*
18	*N6 - Practices and policies*	*Current practices*	*12*	*2.0%*	*57.8%*
19	*N11 - Miscellaneous*	*Inclusive organization*	*12*	*2.0%*	*59.8%*
20	*N1 - Major changes for women in STEM*	*Increasing growth in numbers*	*11*	*1.8%*	*61.6%*
21	*N9 - Evaluation methodologies*	*Suggestions and recommendations*	*11*	*1.8%*	*63.4%*
22	*N11 - Miscellaneous*	*Individual specific comments*	*11*	*1.8%*	*65.2%*
23	*N1 - Major changes for women in STEM*	*Intergenerational issues*	*10*	*1.6%*	*66.9%*
24	*N2 - Competitive future work environment*	*Diverse and multi-cultural*	*10*	*1.6%*	*68.5%*
25	*N4 - Discrimination*	*General*	*10*	*1.6%*	*70.2%*
26	*N5 - Work family balance*	*Choices and compromises*	*10*	*1.6%*	*71.8%*
27	*N11 - Miscellaneous*	*Important issues learned from Q3*	*10*	*1.6%*	*73.5%*
28	*N2 - Competitive future work environment*	*Technology's roles*	*9*	*1.5%*	*75.0%*
29	*N8 - Organizational factors*	*Rewards and incentives*	*9*	*1.5%*	*76.4%*
30	*N8 - Organizational factors*	*Flexible work schedule & practices*	*9*	*1.5%*	*77.9%*
31	*N11 - Miscellaneous*	*Unfamiliar or cannot answer*	*9*	*1.5%*	*79.4%*
32	N11 - Miscellaneous	Issues about themes in Q1 and Q2	8	1.3%	80.7%
33	N1 - Major changes for women in STEM	Career expectations	7	1.2%	81.9%
34	N1 - Major changes for women in STEM	General	7	1.2%	83.0%
35	N9 - Evaluation methodologies	Specific programs	7	1.2%	84.2%
36	N5 - Work family balance	Conflict with tenure-clock	6	1.0%	85.2%
37	N6 - Practices and policies	Globalization effect	6	1.0%	86.2%
38	N1 - Major changes for women in STEM	Career development and advancement	5	0.8%	87.0%
39	N1 - Major changes for women in STEM	Diversity	5	0.8%	87.8%
40	N2 - Competitive future work environment	Gender equality	5	0.8%	88.6%
41	N2 - Competitive future work environment	General	5	0.8%	89.5%
42	N3 - Social and cultural expectations	Parents' expectations	5	0.8%	90.3%
43	N4 - Discrimination	Ethnicity and race based	5	0.8%	91.1%
44	N7 - Job design	Job content	5	0.8%	91.9%
45	N9 - Evaluation methodologies	Integrated methods	5	0.8%	92.8%
46	N1 - Major changes for women in STEM	Opinions on women's roles	4	0.7%	93.4%
47	N2 - Competitive future work environment	Leadership involvement	4	0.7%	94.1%
48	N2 - Competitive future work environment	Women's ability	4	0.7%	94.7%
49	N7 - Job design	Women's role	4	0.7%	95.4%
50	N9 - Evaluation methodologies	Main comments	4	0.7%	96.0%
51	N10 - Conference structures	Administrative and logistics	4	0.7%	96.7%
52	N1 - Major changes for women in STEM	Opportunities	3	0.5%	97.2%
53	N2 - Competitive future work environment	Organizational overall structure	3	0.5%	97.7%
54	N2 - Competitive future work environment	Career development and advancement	3	0.5%	98.2%
55	N7 - Job design	Co-worker support	3	0.5%	98.7%
56	N8 - Organizational factors	Mentoring	3	0.5%	99.2%
57	N8 - Organizational factors	Salary and benefits	3	0.5%	99.7%
58	N9 - Evaluation methodologies	Quantitative analyses	2	0.3%	100.0%
		Total Passages	**607**	**100%**	

Table 4. Pareto Analysis(b): Sub-nodes within 80% group.

#	Major Nodes (Level 1)	Subnodes (Level 2)	Passages	% of total passages	Cum. %
1	N1 - Major changes for women in STEM	Policy and intervention effect	29	4.8%	16.0%
2	N1 - Major changes for women in STEM	Under-representation	16	2.6%	37.4%
3	N1 - Major changes for women in STEM	Leadership in organizations	14	2.3%	49.8%
4	N1 - Major changes for women in STEM	Work climate	12	2.0%	53.9%
5	N1 - Major changes for women in STEM	Increasing growth in numbers	11	1.8%	61.6%
6	N1 - Major changes for women in STEM	Intergenerational issues	10	1.6%	66.9%
7	N2 - Competitive future work environment	Globalization	13	2.1%	51.9%
8	N2 - Competitive future work environment	Diverse and multi-cultural	10	1.6%	68.5%
9	N2 - Competitive future work environment	Technology's roles	9	1.5%	75.0%
10	N3 - Social and cultural expectations	Diversity & equality	15	2.5%	42.5%
11	N3 - Social and cultural expectations	Culture & climate	15	2.5%	45.0%
12	N3 - Social and cultural expectations	STEM career values	12	2.0%	55.8%
13	N4 - Discrimination	Gender based & sexual harassment	18	3.0%	34.8%
14	N4 - Discrimination	General	10	1.6%	70.2%
15	N5 - Work family balance	Motherhood issues	31	5.1%	11.2%
16	N5 - Work family balance	Family-sensitive policies	28	4.6%	20.6%
17	N5 - Work family balance	Choices and compromises	10	1.6%	71.8%
18	N6 - Practices and policies	Organizational practices & policies	26	4.3%	24.9%
19	N6 - Practices and policies	Government policies	22	3.6%	28.5%
20	N6 - Practices and policies	Desired practices and outcomes	16	2.6%	40.0%
21	N6 - Practices and policies	Current practices	12	2.0%	57.8%
22	N8 - Organizational factors	Performance & productivity measures	37	6.1%	6.1%
23	N8 - Organizational factors	Training and education	15	2.5%	47.4%
24	N8 - Organizational factors	Rewards and incentives	9	1.5%	76.4%
25	N8 - Organizational factors	Flexible work schedule & practices	9	1.5%	77.9%
26	N9 - Evaluation methodologies	Suggestions and recommendations	11	1.8%	63.4%
27	N10 - Conference structures	Themes	20	3.3%	31.8%
28	N11 - Miscellaneous	Inclusive organization	12	2.0%	59.8%
29	N11 - Miscellaneous	Individual specific comments	11	1.8%	65.2%
30	N11 - Miscellaneous	Important issues learned from Q3	10	1.6%	73.5%
31	N11 - Miscellaneous	Unfamiliar or cannot answer	9	1.5%	79.4%

Next Steps: Designing the Conference Structure

The structure of the content for the working conference will include specific issues highly cited by the panel of experts (31 sub-nodes from Table 4). Further steps in the preparation of the final agenda for the conference should include a synthesis of what was reported under each of the main nodes (themes). As of March 2007, the tentative structure for the working conference includes the main themes of work life balance, discrimination, job and organizational factors and a contextual topic related to educational pathways for women in STEM careers. The working conference seeks to create an intergenerational dialogue about issues of advancing women in STEM fields by generating proposals (prepared by the participants) that address the issues identified through the Delphi process presented here. The outcomes of the conference include an edited volume of such proposals (concept papers) co-edited by scholars from both generations.

Summary
In this paper the authors present results of a Delphi study that was conducted to provide structure for a working conference scheduled for late Spring 2007 intended to foster intergenerational, interdisciplinary dialogue, comparing research themes, evaluating findings and developing a set of potential research questions to guide future work on workplace factors that are associated with women's success in STEM fields. The main stages from the Delphi study included the establishment of a panel of experts, the development and implementation of 3 semi-structured questionnaires, and a face-to-face meeting among the panel of experts. The qualitative analyses of the data were conducted using Nvivo©. Further descriptive results related to the frequency of the coded information were also included in the article. Based on the results obtained, it is expected that the structure of the conference focuses on main themes that include work family balance, job and organizational factors, discrimination, and practices and policies.

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