INTRODUCTION

During the fall of 2023, Utah Women & Leadership Project (UWLP) researchers conducted a statewide study to establish a baseline for public perceptions related to the awareness, understanding, and attitudes about challenges that Utah women and girls face (see Background & Methods for details). The study was created to support the work of 18 areas of focus (spokes) within the movement called A Bolder Way Forward, which is dedicated to helping more Utah girls and women thrive. One of the 18 areas of focus includes STEM (science, technology, engineering, and math) fields, and this summary shares findings that illuminate present circumstances and establishes a baseline to track progress in a few areas.

BACKGROUND

Nationally, women make up approximately 27.0% of STEM workers, compared to 21.0% in Utah. In 2019, the UWLP published a research and policy brief titled, "Utah Women in STEM Education: A 2019 Update," which noted that the STEM gender gap begins well before people reach the labor force. Then in 2022, the UWLP published a research snapshot titled, "Utah Women and STEM: A 2022 Update," which focused on interpreting employment data and exploring opportunities for the STEM gender gap. Data that measure progress are critical on many fronts, and the four related survey items in this study provide insight that can improve STEM opportunities for Utah women and girls.

RESEARCH FINDINGS

Participants responded to each survey item using a 7-point Likert scale (1= strongly disagree, 2=disagree, 3=somewhat disagree, 4=neither disagree nor agree, 5=somewhat agree, 6=agree, 7=strongly agree). For Sample 1 (non-probability), 2,452 Utahns responded to these four questions, and for Sample 2 (representative), there were 650 participants (Total=3,102).

1. STEM Jobs: The first survey item was "Women can be successful in STEM jobs in Utah." The statistical mean was 6.58 (SD 0.80) for the non-probability sample and 6.07 (SD 1.18) for the representative sample. There was strong agreement for both samples. In fact, 2,067 (66.7%) of Utahns strongly agreed with the statement, and another 675 (21.8%) selected agree, while only 1.7% disagreed at any level. See demographic findings below.

DEMOGRAPHIC FINDINGS

Gender: Women's agreement levels were significantly stronger than men's (6.46 and 6.27, resp.).

Age: There were no significant differences among age categories.

Education: The higher the educational attainment, the stronger the agreement.

Marital Status: Respondents who were married had significantly stronger agreement than all other categories.

Income: Generally, respondents with higher annual household incomes had stronger agreement.

Children: There were no significant differences between parents and non-parents, nor were there differences among parents with different ages and numbers of children.

Race & Ethnicity: Respondents who selected White, Hispanic, and Pacific Islander had the strongest agreement, while Black and American Indian had the lowest.

Religion: There were no differences among religious affiliations, but respondents who were more religiously active had stronger levels of agreement.

Employment: Full-time students had the strongest agreement.

Residency: Respondents who had lived in Utah fewer than two years had the lowest agreement.

Counties: There were no significant differences among counties, but the means ranged from 6.14 (the Tooele, Morgan, and Rich grouping) to 6.77 (Iron).

2. Don't Need Women: The second survey item was "We don't need more women in STEM fields in Utah." The statistical mean was 1.54 (SD 1.07) for the non-probability sample and 2.39 (SD 1.58) for the representative sample. With both samples combined, 63.9% strongly disagreed, 20.0% disagreed, and 4.5% somewhat agreed (a total of 96.5%). Only 3.5% agreed at any level. See the combined demographic findings below.

DEMOGRAPHIC FINDINGS

Gender: Women's disagreement levels were significantly stronger than men's (1.68 and 2.38, resp.).

Age: There were no significant differences among categories.

Education: The higher the educational attainment, the lower the agreement.

Marital Status: There were no significant differences among categories.

Income: The higher the income, the stronger the disagreement.

Children: There were no significant differences between parents and non-parents. There were also no significant differences among parents who had different numbers and ages of children.

Race & Ethnicity: Those who identified as White, Asian, and Hispanic had the strongest disagreement, while Black and Native Americans had less.

Religion: Catholics had the strongest agreement, but there were no differences among activity levels.

Employment: Full-time homemakers disagreed the least.

Denotes statistically significant differences within the demographic categories.

Residency: There were no significant differences among categories.

Counties: Respondents who had the strongest disagreement included Cache; Iron; the 10 rural eastern counties; the Millard, Sevier, Juab, Beaver, and Piute grouping; and Summit/Wasatch.

3. Job Difficulty: The third survey item was "STEM jobs are more difficult than jobs in other industries in Utah." The statistical mean was 3.63 (SD 1.54) for Sample 1 and 4.35 (SD 1.32) for Sample 2. With both samples combined, 72.9% disagreed at some level or selected neither agree nor disagree, while 14.0% somewhat agreed, 9.2% agreed, and 4.0% strongly agreed. In the representative sample, 64.0% either disagreed at some level or selected neither agreed nor disagree. See the combined demographic findings below.

DEMOGRAPHIC FINDINGS

Gender: Women's agreement was significantly lower than men's (3.75 and 4.23, resp.).

Age: College-age adults (18–24) had significantly higher agreement than respondents in any other category.

Education: The higher the educational level, the lower the agreement.

Marital Status: Married and married but separated had the least agreement.

Income: The higher the income, the lower the agreement.

Children: Parents had lower agreement than nonparents, and parents with more teens at home had lower agreement than parents with fewer teens.

Race & Ethnicity: Pacific Islanders and Asians had significantly less agreement than others. Native Americans had the strongest levels of agreement.

Religion: There were no significant differences among religious affiliation categories, but those who selected "not at all" active had the highest agreement.

Employment: There were no significant differences among employment categories.

Residency: Respondents who had lived in Utah fewer than six years had stronger agreement than those who had lived in Utah longer.

Counties: There were no significant differences among counties, but the statistical means ranged from 3.55 (10 rural eastern counties) to 4.01 (Cache County).

4. Career Advancement: The final survey item was "Women can successfully advance their careers in STEM industries in Utah." The statistical mean was 5.18 (SD 1.41) for Sample 1 (non-probability) and 5.36 (SD 1.33) for Sample 2 (representative). With both samples combined, 68.7% agreed at some level, 20.0% neither agreed nor disagreed, and 11.3% disagreed at some level. Most Utahns at least somewhat agreed that women can successfully advance their STEM careers in Utah. See the combined demographic findings below.

DEMOGRAPHIC FINDINGS

Gender: Women's agreement levels were statistically lower than men's (5.24 and 5.43, resp.).

Age: There were no significant differences among age categories.

Education: There were no significant differences among educational attainment levels.

Marital Status: Respondents who selected widowed or divorced had significantly lower agreement.

Income: There were no significant differences among income categories.

Children: Parents and nonparents had similar agreement, and there were no significant differences among parents who had different numbers and ages of children.

Race & Ethnicity: There were no significant differences among race and ethnicity categories.

Religion: There were no significant differences among religious affiliations, but those who reported being very active in their religion had the strongest agreement.

Employment: There were no significant differences among categories.

Residency: There was a significant difference between those who had lived in Utah for 11–20 years and those who had lived in Utah more than 21 years, with the latter being more agreeable.

Counties: There were no significant differences among counties, but the statistical means ranged from 4.80 (the Tooele, Morgan, and Rich grouping) to 5.48 (Cache County).

CONCLUSION

This summary highlights key findings related to four STEM field questions. Respondents from across the state participated in the study (see Background & Methods for the demographic details of both samples). Each sample is useful in understanding the perceptions and attitudes of Utahns on this topic; however, Sample 2 (representative sample) may provide a better understanding of the perspectives of Utahns more generally.

In sum, most Utahns strongly agreed that women can succeed in STEM jobs within the state, and they also strongly agreed that we need more women in STEM fields. Most did not believe that STEM jobs are more difficult than jobs in other industries in Utah, but many agreed that STEM jobs are at least somewhat more difficult. And finally, there is some optimism among more Utahns that women can be successful in advancing their careers in STEM industries in Utah.

A Bolder Way Forward aims to make Utah a place where more women and girls can thrive in any setting, and, since Utah has a plethora of STEM-focused companies, everything from raising women's STEM career aspirations to having women fill top leadership roles will strengthen the Utah economy. And, more importantly, such increases will provide Utah women with more career opportunities to be involved in rewarding and high-paying employment that will help women support themselves and their families.

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