



# ASAP Impact on Confidence Levels in Teaching K-12 STEM in Arizona

Through the analysis of year one, post-program interview (n = 55) and survey data (n = 405), this data brief aims to address the following evaluation question, with a particular focus on confidence: **How has participating in ASAP impacted fellows' STEM teaching efficacy and confidence?**

The present analysis finds that fellows' interview responses regarding their post-program confidence levels primarily fell into the following two categories: (1) experienced increased confidence (n = 44, 80.0%) and (2) needs further confidence development or identified other contributors to further confidence development (n = 6, 10.0%). However, five out of the six fellows that noted needing further confidence development in a specific STEM subject still noted **experiencing increased confidence in other areas** related to K-12 STEM instruction.

These findings were later **supported by post-program survey data** where fellows were asked to notate the extent to which participating in ASAP had increased their confidence in effectively teaching STEM concepts and/or incorporating STEM concepts into a lesson plan. Over 80% of survey respondents (**n = 327, 81.3%**) provided a ranking of six or higher (on a seven-point scale illustrating the extent of ASAP's impact).

## Increased Confidence

During the interview process, fellows were asked, "Do you feel more confident in teaching STEM as a result of your participation in ASAP?" If interviewees responded affirmatively, they were then asked to provide further explanation. For fellows that did experience increased confidence levels, many of them described the following as **significant contributors** to their increased confidence levels:

- ASAP and non-ASAP professional development workshops (20.0%)
- Expansion and/or simplification of STEM (9.1%)
- The acquisition of STEM-related materials and/or resources (9.1%)
- Professional networking and collaboration (7.3%)
- The evaluation of their ASAP submissions and their ideas being shared (1.8%)

Most interviewed fellows (n = 44, 80%) responded affirmatively to the aforementioned interview question and reported experiencing increased confidence as a result of their engagement in ASAP.

Additionally, 12 fellows (21.8%) noted specific STEM subjects in which they experienced increased confidence (with technology being the most frequently referenced, n = 4, 7.3%). Other areas where Fellows reported increased confidence as a result of ASAP included...

- Increased confidence in a multitude of STEM subject areas
- Decreased fear of making mistakes and/or trying new things
- Increased confidence in assisting other teachers

## Post-Program Survey Confidence Increase

As briefly mentioned previously, these findings were **further supported** by results from post-program survey items related to fellows' confidence levels. More specifically, data indicated that over 80% of survey respondents (n = 327) provided a ranking of six or higher (on a seven-point scale), suggesting that the vast majority of fellows found their participation in ASAP to be particularly helpful when it came to developing their confidence related to effectively teaching STEM concepts and/or incorporating STEM concepts into a lesson plan.

In addition, statistically significant results were found when comparing applicable retrospective pre- and post-program survey items related to fellows' knowledge and ability to teach STEM effectively; illustrating a statistically significant increase of confidence from retrospective-pre to post.

## Key Takeaway

Thus, as demonstrated through both post-program survey and interview data, the majority of fellows found their participation in ASAP to be **significantly impactful** in regard to **developing their confidence** related to effectively teaching K-12 STEM curriculum in Arizona classrooms.