

Outcomes survey from Carmen Loughner

I. Phase 1: Teachers' survey results

The following are questions from a survey to the teachers. 89% of the surveys were returned. The following questions were posed on a paper survey.

1. Program goals and objectives were clearly stated and helped with course development.
2. Time allotted to teach course
3. Number of students in your course
4. Mixture of ages in your course
5. Ease of mixed age groups
6. Classroom size for the course
7. Access to supplies and materials as needed
8. Storage of supplies and/or projects

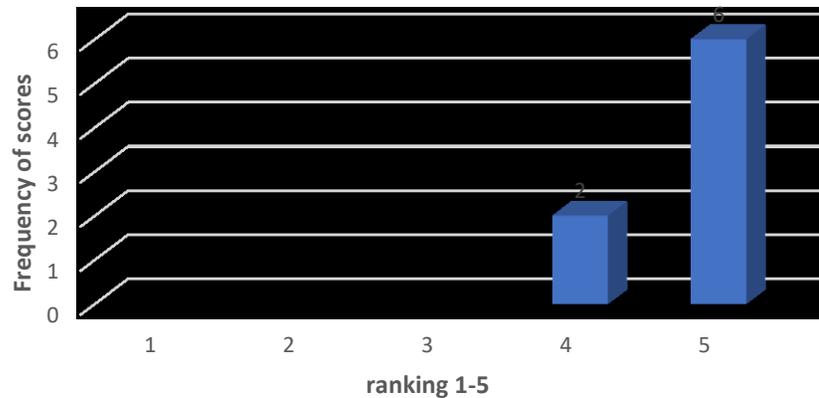
Rate the following areas for the STREAM course you instructed using a scale of 1-5. The five-point scale is as follows.

- 1- Needs improvement**
- 2- Fair**
- 3- Good**
- 4- Very good**
- 5- Excellent**

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The results were as follows.

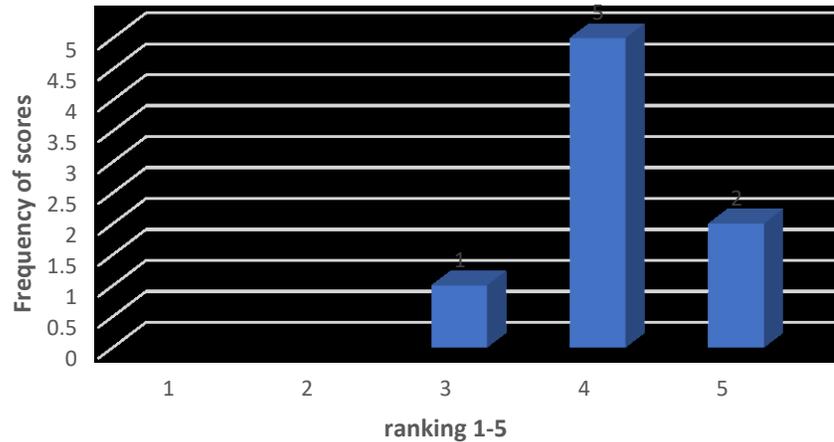
Program goals and objectives were clearly stated and helped with course development



From the following question asked, you can see the majority of the teachers felt that there was an excellent rating of the program goals and objectives that were clearly stated and helped with the course development. I feel the reasoning for this rating was because we were very clear and precise in the multiple meetings that we had with the teachers regarding what is expected in the course offerings. The grant writers had multiple professional development sessions with the teachers on various courses and resources that could be used, along with where they could look to gain a better insight on STEM resources (Lego Education, Hummingbird robotics, Edison robots, etc.)

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Time allotted to teach course

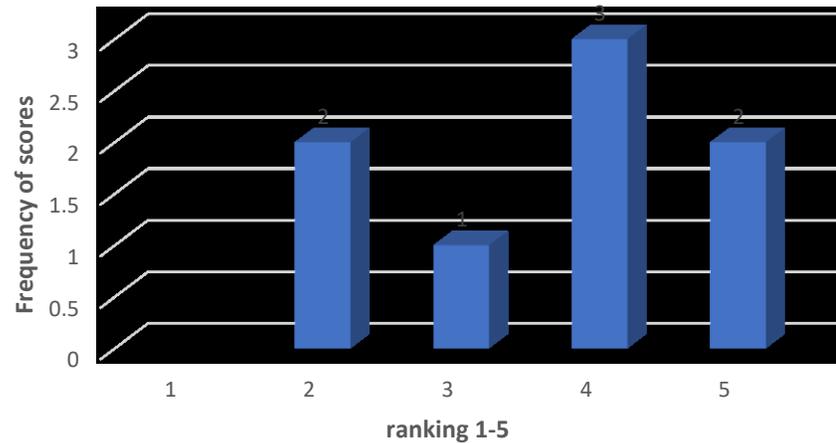


As the majority of the teachers chose the ranking of “4” very good, I would reflect on this answer on what the course entailed. Some courses like the EV3 robotics and Hummingbird robotics were courses that really led themselves to be able to expanded while the courses such as detective and fidget spinner had clear beginning and ending points.

- Some reasonings written in by teachers were “Would have liked more time for students to explore”;
- “We were able to finish in the time allowed.”;
- “An extra day or two would be ideal. Rushed to get done in 5 days.”; and “an extra day or two would help.”

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Number of students in your course



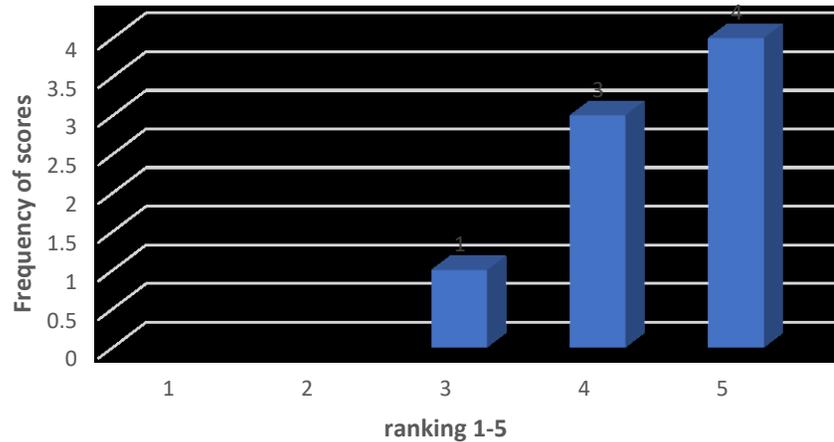
On the question pertaining to the number of students in your course, the majority of the teachers chose “4” very good. When the students voted on their course of choice, they ranked them 1 -3 (one being first, two being second, and so on). We really tried to give the students one of their first three choices while keeping in check with the restraints of the course and materials purchased.

Some comments were,

- “We had 24, but I would suggest 20-21 at the most. It was difficult to attend to so many at one time.”
- The other teacher who co-taught the course chose a “5” for this specific course stating, “24- worked with 2 teachers.”

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Mixture of ages in your course

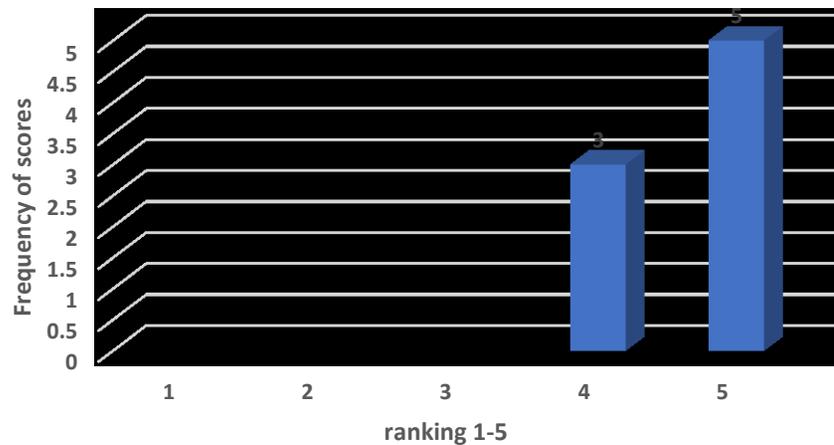


When looking at the ages in the course, the teachers ranked this question with a majority of them saying “5”, excellent. I can speak to this first hand being one of the instructors of the course. I had third graders helping fifth graders and fifth graders helping third graders. When working with STEM and programming/coding, ages isn’t a factor as much as experience. So, having these mixed groups worked out so well. It gave children with little to no voice in the regular education classroom, a major role and a feeling of self-pride to help.

Teacher specific feedback on this question was,

- “They all worked well together.”

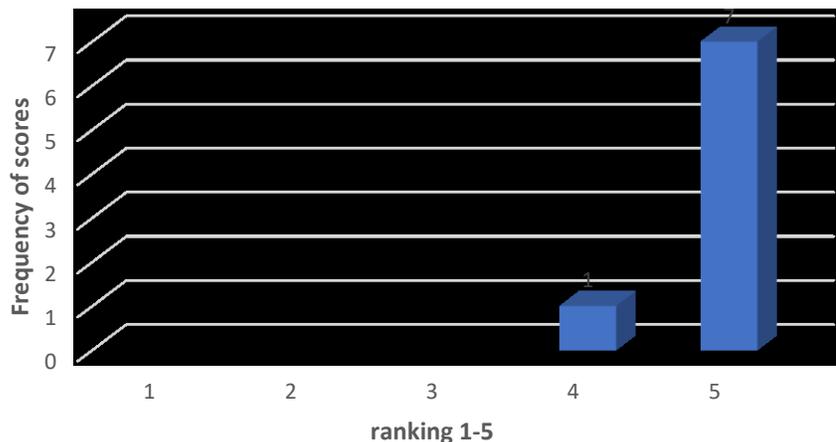
Ease of mixed aged groups



I feel as if this question and the question before are similar in nature. However, this specific question, I feel pertains more to the ease of the mixed groups. We heard from multiple teachers how the ease of the groups flew nicely. I would assume it was a new learning environment where there were upper and lower classmen in the class, and it was a novelty.

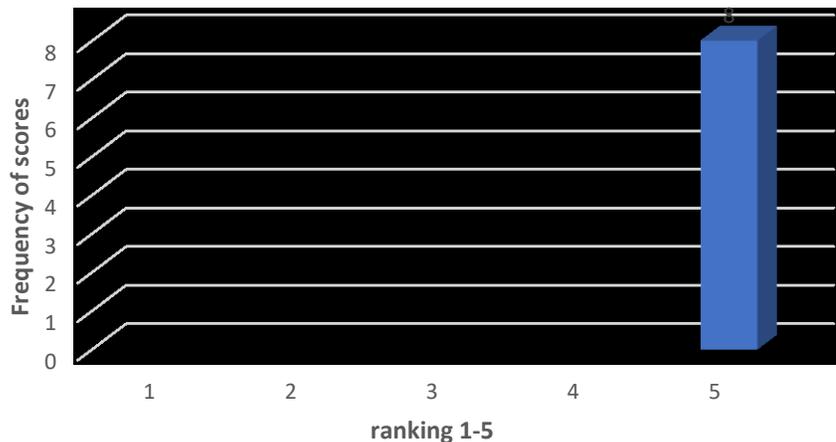
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Classroom size of the course



When I look at the answer to this question, I am surprised to see such high numbers. We only had a certain amount of rooms to work with and the rooms that were larger in scope (gymnasium, science lab, etc.) were in high demand. We really needed to see what the course entailed and the projects being created to dictate the room size. However, this is an ongoing topic of concern in our district: class size. So, I am happy that the teachers saw the room size as excellent.

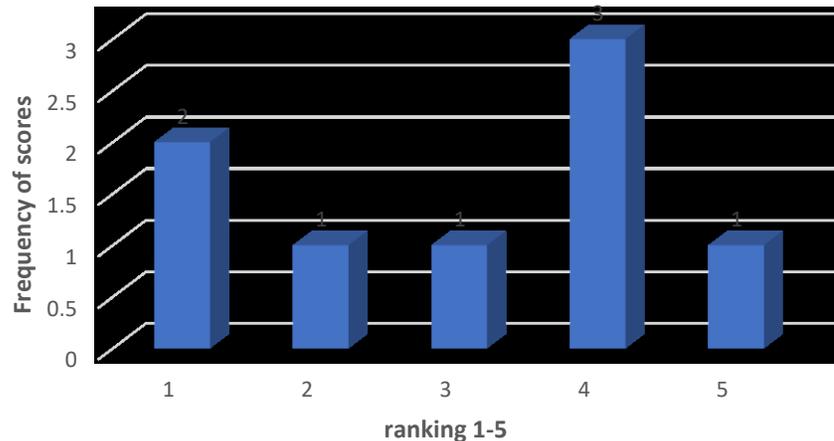
Access to supplies and materials as needed



When I see the access to supplies and materials was ranked with a “5”, excellent, I feel a sense of confidence. We allocated the right amount of money for the grant and were able to get the right amount of desired resources for the teachers. We really took a great amount of time researching and comparing prices when we wrote the grant and then when the bid sheets came in from the teachers.

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Storage of supplies and/or projects



I am not surprised to see these results. Like I mentioned before, the space we had to work with is limited. I did the hummingbird robotics and received one of the largest rooms available and still it was small for the scope of the course. So, I agree storage of projects were an issue.

- Some comments received were,
- “We had to find our own storage materials and room.”;
- “Because our work was so large, it became a challenge to store it.”; and
- “Would have been nice to have a room where I could have left their projects.”

Teacher-Survey Reflection: Based on the completed teacher surveys, I feel we were able to accomplish a lot of good with the implementation of this grant and the PD supplied to the teachers. We were able to not only have buy in from the teachers, but they were able to become an active participant in this grant. It wasn't about the grant, the grant writers, or the amount of money received, but it became about the children and the implementation of STREAM into the Franklin Regional School District along with showcasing the great things that are happening at Franklin Regional, not only to the community but to the Pittsburgh region.

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II. Building principal interview

The following are questions from an interview with the building principal. The following questions were posed on a paper survey for review and then we met in person for open dialogue.

Principal's questions

1. **Rate on a scale of 1-5** and **explain** your reasoning.

The five-point scale is as follows:

1 - Needs *improvement* 2 - Fair 3 - *Good* 4 - *Very good* 5 - *Excellent*

Question
<p>Question: <i>How well did the program implement Franklin Regional's Foundational Plank One: A safe and healthy educational environment by serving as effective stewards of all district resources and capital assets?</i></p> <p>Rating: 5</p> <p>Answer: The implementation of this grant was able to supplement district resources to gain \$11,000 worth of funding from the Panther Foundation. We were able to gain access and resources to students and teachers that they wouldn't necessarily have had. The longevity of the materials (hummingbirds, EV3, Spheros, etc.) started to construct a framework for a lending library for the Franklin Regional Elementary schools. In addition to acquiring the funding, we managed the order and fulfillment process which is part of a leadership process needed in order to distribute resources.</p>
<p>Question: <i>How well did the program implement Franklin Regional's Foundational Plank Two: A world-class educational system that develops college and career-ready students?</i></p> <p>Rating: 5</p> <p>Answer: The course offerings were aligned to the district's 339 plan: Career, Education, and Work. Student investigations were geared more towards the non-traditional, normed careers (e.g. STEM, robotics, etc.). There were also guest speakers from the</p>

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community who spoke as a way to engage community partnerships in the school and having community resources to discuss STREAM.

Question: How well did the program implement Franklin Regional's Foundational Plank Three: Improved performance and growth levels in all areas - academic, artistic, and athletic?

Rating: 4

Answer: Academics and arts were represented. The grant writers worked with the teachers who would be creating the courses by providing professional development, and working with the teachers from A-Z as they were designing the courses in the primary phases to the fruition of their course. They were making teachers aware of the incorporation of academics and the arts into their STREAM Forward courses. An example of this was the partnership with a co-taught STREAM Forward course. A regular education teacher and the art teacher paired together with Spheros and paint to create a masterpiece of art with the robots painting.

Question: How well did the program implement Franklin Regional's Foundational Plank Four: Outstanding customer service, family partnerships, stakeholder relationships, and community engagement through communication that is professional, responsive, clear, and timely?

Rating: 5

Answer: Through the STREAM courses offered at the school, we were able to have our middle school students who were identified as being science and tech savvy, and who worked well with others walk supervised across the parking lot to Newlonsburg Elementary School (four of our five schools are on campus). The middle school students engaged in the course execution by working with the teachers' guidance and creating excitement for the elementary students as mentors. When the STREAM courses were being implemented, the Panther Foundation Board, the Franklin Regional School Board, and Annie Martinez (field director for Remake Learning Days) paid a site visit to Newlonsburg Elementary School to see the courses and because it was Franklin Regional's inauguration into Remake Learning Days. With the expansion of STREAM Forward, we engaged in Remake Learning Days (please click on the link to watch a video on Remake Learning <https://www.youtube.com/watch?v=lkMD-CcvMWO>). By expanding STREAM Forward and participating in Remake Learning Days, Franklin Regional was able to showcase STREAM Forward not only to the community but the entire Pittsburgh, PA region.

Question: How well did the program implement Franklin Regional's Foundational Plank Five: Fiscal integrity, efficiency, and governance effectiveness in all operational areas?

Rating: 5

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Answer: When you are working on a project so large in scope, you need to fiscal integrity. Fiscal integrity in the process of ordering items and coding the items according to specific budget codes. The STREAM Forward courses held at Newlonsburg and then the showcase on Remake Learning Days there was efficiency and governance in all operational areas from public relations, security, health and safety of all students, education and training of the teachers on STREAM Forward and Remake Learning Days. Public relations occurred with recognizing the grant, implementing the grant, and showcasing the grant as well as, getting the word out regarding Remake Learning Days (Franklin Regional Senior High School students did all of the tweets for Twitter for Remake Learning Days- They were interns for Remake Learning), and taking photographs and doing write-ups for Franklin Regional's inauguration into Remake Learning Days. We had security on site during Remake Learning Days to help direct traffic and to continue their daily operations at Franklin Regional School District. Fiscal responsibility was implemented with the education and training of the teachers. There was professional development given to the teachers regarding the grant, possible STREAM Forward course offerings (teacher chose and created their own course based on their interests), the robotics/programming that went with it, along with professional development on Remake Learning Days and hosting a Remake Learning Day.

Question: *How well did the program support the district's philosophy with regards to Professional Learning Communities, commitment to integrating STREAM into the curriculum and standards-driven rigor?*

Rating: 5

Answer: It was the PLC process that was allotted as part of the day to day operations of Franklin Regional School District which allowed us to have conversations for the grant, experiment with the course materials, talk with teachers across the district regarding STREAM resources, best practices, curriculum and rigor. PLCs were the pathway for success.

Question: *How well did the program incorporates the district's 339 plan into the course selections?*

Rating: 5

Answer: As mentioned in previous answers, the program incorporated the district's 339 plan into the course selections as the courses were geared towards emerging fields. The students were brought together as a whole for STREAM Forward kick-off to learn about the STREAM Forward courses, see what the courses entailed and what STREAM jobs the courses were tied to. In addition, there were guest speakers in the STREAM field that were from the community who spoke to the students about STREAM careers

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2. What were STREAM Forward's strengths?

- Experimentation of mixed-grade levels
 - 3rd graders were able to articulate directions to older classmates
 - Gave teachers the experience with students other than their own
 - Students were able to self-select a course
 - High level of professional collaboration
 - High level of administration support
 - High level of community support – awarded the full amount of the grant
 - Expanded the district's resources for the grant to continue
 - Teachers could design something open-ended and create a course on their excitement.
 - Some teachers chose partners for their courses and some did independently
 - Teachers were able to use their previous degrees to design their program
 - Financial support, high level of excitement with the area of expertise, and have it funded---Not too many teachers are asked, 'What STREAM course would you like to create? Here you go, here's the money for it.'
 - PTO support, building advisory council support, and hundred of families that attended
 - There was a high-turn out rate by teachers, students, and parents for Remake Learning Days. Teachers even volunteered!
- Which says a lot with the demands of the job, after school life, and their own family obligations. Teachers volunteered saying they "just wanted to be a part of it."

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- Allowed for opportunities for families to participate in the event by supporting local businesses through food trucks, catering and t-shirts
3. How can STREAM Forward be improved?
- Continuity- A one-year project versus a product
 - Challenge to keep it going. You have teachers who have done it/willing to do it, teachers who are hesitant, and new teachers
 - Budgeting and the upkeep of the technology and equipment
 - It can't always be what a teacher wants but more about the standards that need to be taught
 - Expand and tap into our teachers- very high level of professional development for teachers are needed, a MUST KNOW but not a NICE TO KNOW
4. What suggestions do you have for sharing this experience and finished products with parents and community members at the commencement of STREAM Forward?
- Continuing our partnership with Remake Learning
 - Continue with student and teacher presentations to the school board that are recorded live and locally televised
 - Continue to partner with InMurrsville Magazine, Penn Franklin and Tribune Review newspaper, Panther Paws (school newsletter), and PTO and Advisory counsel

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Principal-Survey Reflection: To be able to hear this amount of feedback from my building principal who I admire and have great respect for, gives me such pride in the hard work and endless nights when writing, implementing and carrying out this grant. To receive praise and recognition from an authoritative figure makes me realize, my time and effort was very much appreciated and recognized. I was not able to carry this out on my own. A project like this that went from paper to fruition to something larger than life was accomplished through the hard work and shared vision of my colleagues. They really stepped up to the plate and knocked it out of the park!