**“Rose, Bud, and Thorn” Analysis**

Prepared by Karen Peterman Consulting, Co.

Keshia Matin, MA & Karen Peterman, Ph.D.

In spring 2020, the ACRES team introduced a module called Virtualizing your Programs & Activities that trained out-of-school educators to use a range of technologies and pedagogies to keep youth socially and cognitively engaged in virtual STEM programs. The module was introduced to help respond to the COVID-19 pandemic and the rapid pivot that educators were making to online offerings.

During ACRES Virtualizing STEM sessions, attendees participated in an activity entitled “Rose, Bud, Thorn.” They were asked to reflect on that day’s activities and identify something that they learned that excited them (rose), something they wanted to try (bud), and something that would be a barrier or worried them (thorn). KPC evaluators analyzed participant responses from six “Rose, Bud, Thorn” sessions. Responses from a seventh session that included a similar activity entitled “Wow, Wish, Wonder, What’s Next” were also included in the analysis.

This report highlights the areas most mentioned by participants. The data were collected using automated transcription technology. This report cites the number of times a topic was mentioned as a “rose,” a “bud,” or a “thorn.” Percentages were calculated by dividing the number of times a topic was mentioned by the total number of responses captured from each category (rose: 78 references; bud: 78 references; thorn: 79 references). Also, some of the quotes have been edited for clarity to reflect evaluators’ understanding of the statement or to note words or phrases that were unintelligible in the recording.

**Results**

**Rose**

Having the opportunity to share and learn with others was the most mentioned “rose,” accounting for 49% of references. Participants appreciated having the opportunity to learn from and with other professionals who were experiencing similar challenges. Participants felt that they weren’t alone in their struggle to adjust to their new reality of virtual and remote program implementation. They also enjoyed practicing teamwork skills in a virtual environment while using some of the same tools they could implement in their programs.

*I also very much enjoyed the conversation. It's nice to be able to bounce ideas off people because I am such a verbal [person], so it was very nice to have that today.*

*For my rose, it's always fun to share and interact with other people. This cohort’s been really awesome…They understand what we're going through and what's happening with all the different school changes and things, so it's just nice to be able to talk to other people with similar experiences and get it all out and then learn from what they are doing and how they're handling things. So that is always a good thing.*

*My rose for today was our activity where we all contributed the different areas of STEM to the picture of the tree being cut down in the forest. I thought that was really neat. The way we were able to come together with our different backgrounds and experiences and strengths and weaknesses to really open up a discussion about a simple photograph.*

*So today was our final session in ACRES and my rose would be that I definitely love learning about all the virtual stuff that's out there and what different people are using and how they're using it.*

*Rose I guess is talking with other professionals and seeing that they feel the same way that I do about some of this and that they know as little as I know about it.*

Related to the opportunity to learn and share with colleagues, in 14% of their references, ACRES attendees also mentioned enjoying the breakout rooms hosted in Zoom. Participants reported that the breakout rooms provided an opportunity for them to dive deeper into topics and to get feedback from cohort members. Some stated that conversations in the breakout rooms inspired them to think about activities to implement.

*I really like the breakout sessions. Learned that a lot of people are in the same boat that I am. That would be part of my rose.*

*I've enjoyed the conversations and those breakout rooms and getting ideas and kind of floating ideas from other people. That's always been helpful.*

*I really enjoyed having the breakout rooms where we brainstormed some activities that we could use virtually to teach a certain goal to students. That really helps me to brainstorm some ideas for what we could use in our programs.*

*So, I really enjoyed the second session of the ACRES training. Probably my rose for this session is that I really had a good breakout group; we were all pretty diverse in the way that we think in the things that we like to do.*

*So, I thought Section 2 of this training was a rose all the way through. I learned so much being in the breakout groups with coworkers and we were having a discussion about topics of science and working through how it would look virtually and how we could present it to 4H kids and different programs that we do as well as how could we transfer them to virtual programming or practices.*

Twenty-three percent of the “rose” statements described how participants enjoyed the opportunity to both learn about available technology, and practice using it.

*So my rose for this week is that I learned more things about more new technology that I think will be able to use…Being forced to use them and practice them is going to be the best way to learn how to use them.*

*My rose is learning new technology. I’m definitely going to be using Desmos in the future.*

*Rose is that we learned new materials to add to teaching virtually. So we are going to club meetings. Virtually we’re not allowed in schools, so this class and training was very helpful to us on how to engage our students more and just trying to figure out different programs to use.*

*My rose was just the whole. Everything that we've kind of talked about today has been really good information and things that I have never thought about, or some of it never even seen before. So, it's good to have that information and resources to use with our program.*

Fifteen percent of “rose” statements were about facilitators’ use of modeling techniques and activities for teaching in a virtual format.

*And then my rose for today is actually something super simple, but as we've continued to do Zoom meetings and try to figure out how to not talk over everybody, I think the best thing was I really like [Facilitator’s] method of when you finish that you call on the person that you see below. You know it's not a perfect system, but I think, especially in smaller Zoom sessions, that that really works, and so that's like a good rose for me to continue and carry on with me so that I can help kind of facilitate smooth transitions and everybody speaking without speaking over each other in a Zoom meeting.*

*I think my rose today would be that I love seeing the different ideas of how to facilitate a virtual meeting, which will engage and excite students.*

*I think the rose for me is your modeling how to make the Zoom interactions more lively. So that's great.*

*I would say my rose is probably the speaking order. That's something that seems so simple, but really makes a lot of sense when you especially if you have a bigger group…I know when I'm coming. That makes me feel more comfortable knowing when I'm going to be called on.*

Other roses included learning new tools to help implement ideas (10%), learning how to use Zoom tools more effectively (6%) and learning about Desmos (4%).

*My rose would be that I had some dominos fall in place. I was juggling a couple of different ideas and not sure how to do those going forward and so I was reminded of some of the tools you gave us. Hopefully that's going to be able to help with some other things that I've got planned in the future where I'd had some general ideas but no concrete way to make them happen. So I'm really excited about that…*

*Something that went well, I would say, is that I got a lot of good ideas. I've been using Zoom, but I'd never really heard of annotating or using some tools like that, and I think that I can really implement those into my teaching programs.*

*The rose for me was learning about the Desmos cards, virtually I've never seen that before. That's really neat. I've got some ideas there.*

**Bud**

When thinking about their next steps or what they planned to do in the future (i.e., their “bud”), most Virtualizing STEM participants mentioned reviewing the resources gained from the training to create activities (33%). Some had ideas that they wanted to initiate right away, while others felt the need to repackage the material shared in order to have a better grasp on each technology’s capabilities.

*I am planning to utilize Quizlet and just most to create cards for the forestry judging practices and have kids work on items that they can work on without that face-to-face contact. Until we wait a little later in the practices and hopefully we can get that done in the next couple of weeks. Looking forward to the next session.*

*My bud would be I do want to work a little bit more in Flipgrid, and also I want to try and create some kind of virtual escape room. I think the kids would enjoy that.*

*The bud is planning to use these mediums with pacing myself and trying to determine what mediums are best for the lessons that I will teach, the judging teams that I will conduct and the different activities that we used to engage and interact with for ACRES.*

*And what I would like to do with the material from today is filter my lessons that I've written out already through the outline that was provided, and just at least make sure that those major areas have been considered for this new virtual platform.*

Most participants mentioned a specific tool or program they hoped to explore. The most referenced were Flipgrid (22%), Desmos card sort (15%) and virtual tours or field trips (15%). Eight percent of “bud” references were about Bit Moji and Jamboard, whereas 4% were about Google classroom and Zoom tools and 3% mentioned Choice Boards.

*And my bud was Flipgrid and Google Jamboard, I want to learn more about those and be able to do more interactive things with our kids at the club. Because like, I was telling one of my groups earlier that we enjoy doing things as a whole. And right now they are not allowed to interact with each other, they have to stay in their classroom. And that's it, they can't go to the gym together, they can't have big assemblies together, things like that. So that'll be nice to be able to interact with each other.*

*My bud. I don't know where to start, but if I had to choose, I'd probably do a card sort based on the judging contest that we have coming up or a virtual tour that I can do with my kids. Something I could definitely use in program. Anyway, thank you. I am enjoying the cohort and looking forward to the last session.*

*I do feel like the Bitmoji and maybe the choice boards are going to be two main things that we can use in our virtual learning. Teaching the kids virtually, but also I could probably use that choice boards to help with maybe Cotton Bowl. Um, just some ideas that I have in mind.*

**Thorn**

Although 10% of the references could not identify a thorn, most cohort members did mention concerns and potential barriers to implementing what they learned. The most cited concern was obstacles related to students and staff have reliable technology (30%). Many were concerned about access to the Internet, especially in rural areas. Some were unhappy with the quality of their own technology. Others mentioned access to appropriate technology to accommodate students with special needs.

*I was just reminded of all of the obstacles we have to overcome with our kids. Not having technology and how some of these resources are awesome but they can't be implemented. I've been real hesitant offering some of these programs just because of the limitation not having technology offers for some of these kids.*

*Make sure that kids that experience some technology issues - whether that be lack of broadband access or even perhaps not having a device - how can we help to bridge that digital divide gap? It was just always in the back of my mind when we talk about this kind of stuff.*

*My thorn would have to be my Internet connection and lack of virtual experience.*

*My thorn again is my camera. We're working on getting ring light so we can have better lighting, but I don't feel that I can effectively do what I have to do here in this office with the lighting being as it is.*

*A thorn was definitely technical problems at our office. We have slow Internet, so on some of the stuff like going to the field trip virtually, the Internet was a little bit slow and delayed. And just the aggravation of dealing with technology in general and trying to figure out what is best or anything like that, so that's definitely a thorn. Just technology in general.*

*I still just have a lot of questions on how to engage students with special needs and accommodations that we can make through technology if that's what we have to do.*

Another common thorn was participants’ lack of confidence working in a virtual format (15%). Several participants mentioned being uncomfortable on camera. Others were uncertain of their ability to manage a virtual classroom.

*My thorn in general is that I am just so uncomfortable talking to a camera to record myself. In fact I used to tell my kids that I was in the witness protection program so I didn't have to be in pictures…It is time to move outside my comfort zone.*

*My thorn would be that I have a little bit of anxiety when it comes to technology, in my comfort level.*

*And then my thorn in general with all of this is just that I am really camera shy and I hate being recorded and seeing myself teach and hearing my voice and making videos of myself is not something I enjoy.*

*I'm really just trying to think of how you can get people to participate virtually…especially if there's differences in accessibility, how can we still get everyone to feel like they're a part of the group and participate?*

Eleven percent of the thorn references were about the challenges of learning to do things differently. Some talked about the challenge of learning how to work and learn in new formats and use new tools. Others mentioned the processes and legal measures that need to be considered with moving to a virtual format.

*Just the challenge overall of virtual learning. I think it's new to everybody, definitely new to me and new to my community and students some. So that's just a challenge in itself and I think it will always be a challenge, but this training has definitely shown me new ways that I can offer virtual learning to my kids.*

*The thorn is kind of, I guess legality things that we have to do in order to provide the virtual programming to our youth. So just trying to figure out and navigate that.*

*We do have a lot of legality, things that we have to do when it comes to working with our youth. And so I'm just trying to make sure that when we are using these resources, that we're following all of our guidelines that we have to use, so that we're not, you know, getting in any trouble.*

*I think it's really important to try to think outside the box, and I am more of an inside the box person. And so I think it's with all the changes that are occurring, I think it's just really important to try to get myself and my brain just kind of used to different things and more comfortable just trying different applications for myself and for the students.*

Nine percent of the statements referenced feeling overwhelmed by the amount of resources available.

*My thorn is that I'm still feeling really overwhelmed with the amount of virtual tools and which ones to use.*

*Trying to remember all of these sites and taking the time to sit down and learn what each one does.*

Other thorns included having to miss a session and being behind on information (5%), the amount of time available to share during the sessions (5%), and concerns about virtual burn out (3%).

*My thorn for today was that I had another meeting [I ended] up having to go to and I missed the most of our session today but I got a few bits and pieces but so that was definitely my thorn that I didn't get to spend as much time with you all as I was hoping to in planning on. But you know sometimes work calls.*

*I would say a little teeny bit of a thorn might have been that we didn't have a lot of time to interact and talk with some of the new colleagues and classmates that we met.*

*And then I would say I guess my thorn is just keeping kids engaged… I feel like the [students] that have been participating with us virtually, they're just tired of virtual they're so ready for in person contact of any sort. That it's just a hard thing to sell them if they say virtual… doesn't matter what comes after that. If you say virtual plan times are just like shut down.*

**Conclusion**

The results shared here were gathered during the early months of the pandemic when many people were still in lockdown, and the stress and anxiety of that time are apparent in many educators’ comments. Even so, the results of the “Rose, Bud, Thorn” analysis reinforced some of the insights learned in the Virtualizing STEM post-survey including a range of benefits for those who were able to participate and their work with youth moving forward.

Participants valued the opportunity to learn with and from colleagues. They felt that both small and large group discussions were very useful, with some desiring more opportunities for sharing. They appreciated the fact that they are using the tools they are learning about, and that the facilitators modeled creative and innovative ways to manage a virtual classroom. Flipgrid and Desmos continued to be the most popular tools that participants plan to use after the training. Some attendees did feel a bit overwhelmed by the number of resources available and needed some time to understand the best use for each tool.