



After-Action Report of the 23rd Annual Emergency Management Higher Education Virtual Symposium

Untangling Unprecedented Uncertainty: What
Emergency Management Leaders and Educators
Need to Know

June 2021



FEMA

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Symposium Overview

Item	Description
Name and Date	23 rd Annual Emergency Management Higher Education (Virtual) Symposium, June 8–10, 2021
Scope	This Symposium is a three-day virtual engagement for the Emergency Management (EM) Higher Education (HiEd) Community of Interest. Sessions consisted of various topics to advance the development and sustainment of EM HiEd.
Logistics and Planning	Invitations were sent via email, the HiEd Program website and newsletter, as well as in the FEMA bulletin. The call for submissions used a similar outreach strategy. A double-blind peer review process was coordinated by members of the Information Exchange and Symposium Planning Special Interest Group (SIG).
Symposium Theme	Untangling Unprecedented Uncertainty: What Emergency Management Leaders and Educators Need to Know
Symposium Content	Two workshops were held in May leading up to the Symposium. 25 sessions provided opportunities to learn about critical topics, programs, and research relating to the theme. The virtual Symposium design worked to provide opportunities for networking and connection by using the Zoom chat and Q&A features. The Poster Contest encourages research and collaborative opportunities for both students and faculty to present their findings. Opportunities for additional networking were held at the end of each day for Regions, Educators, and SIGs.
Successes and Areas of Improvement	The successes and areas for improvement will be based on feedback and analysis from participant evaluation forms, the Information Exchange and Symposium Planning SIG, the HiEd team, and FEMA leadership.
Sponsor	FEMA National Training and Education Division (NTED) HiEd Program.
Participating Organizations	504 participants registered to attend the Symposium, representing private and public academic intuitions, international academic institutions, federal agencies, non-governmental agencies, EM scholars, FEMA personnel, and practitioners. Nearly 460 participants attended during the three-day period.
Point of Contact	HiEd Program: fema-hied@fema.dhs.gov

Executive Summary

The purpose of the annual Symposium is to engage academia to advance the EM profession and help practitioners solve the nation's toughest challenges. This AAR summarizes the logistics and planning process, Symposium content, scope of participants, evaluation feedback, and successes and improvements for future planning of the Symposium.

This was the second year the Symposium has been virtual, hosted via Zoom, but the first year that the double-blind peer review submissions process has been completed via EasyChair. Members of the academic community accepted 21 out of 32 submissions pertaining to four tracks to present over three days. With the help of moderators and tech checks, speakers presented successfully. Space was held at the end of each day for regions, educators, and SIGs respectively. Members of the academic community were also highlighted during awards and a poster contest. Daily attendance varied from 135 to 275 participants, which included participation from all 10 regions.

Online evaluations were completed by 174 participants. Overall, participants were happy with the Symposium, registration, pre-event communication, and Zoom operations. There were numerous comments on FEMA's organization and professionalism of the Symposium and the amazing work of the CHDS tech team.

Logistics and Planning

Virtual Symposium Planning

The HiEd Program hosted the 23rd Annual Emergency Management Higher Education Symposium, a three-day virtual event. Planning for the Symposium was impacted by COVID-19, which prompted a second year of virtual delivery using the Zoom platform hosted by the Naval Postgraduate School's Center of Homeland Defense and Security (CHDS).

Symposium materials, including the block agenda, program, [final slides](https://training.fema.gov/hiedu/21conf/2021_hied_symposium_block_agenda_with_links.pdf) (https://training.fema.gov/hiedu/21conf/2021_hied_symposium_block_agenda_with_links.pdf), and recordings [can be found on the HiEd website](https://training.fema.gov/hiedu/educonference21.aspx) (https://training.fema.gov/hiedu/educonference21.aspx).

Registration/Admissions/Invitations

The HiEd Program distributed more than 1,800 invitations via email for the Symposium, including more than 100 international and 1,700 domestic invitations. Invitees were contacts from institutions on the College List, professional organizations, regional training managers, state training officers, SIG Leads, past Symposium attendees, and members of regional engagements and focus groups. Other invitations were sent to federal, state, local, tribal, and territorial government agencies including all FEMA Regions, persons by request, speakers, and recommended presenters.

504 participants were registered through the online admissions process. 461 participants were confirmed to attend during the three days. Some FEMA personnel did not complete the registration.

Peer Review Submission Process

This year, the call for submissions and peer review process was outsourced to members of the academic community, led by one of our Symposium Planning SIG members. The Call for Submissions was announced on February 5, 2021 via email, through the HiEd Program website, and newsletter. The submission deadline was set for March 15, 2021. 17 out of 23 submissions were accepted (plus 4 out of 9 posters) for a mix of 15 to 60-minute sessions over three days. Submissions had to fall into to one of four tracks: Scholarship of Teaching and Learning (SoTL), Research Methodology & Integration, Program & Policy Administration, and Innovative Curriculum & Pedagogy.

Submissions were submitted via EasyChair, a conference management software system, and reviewed by the appropriate track lead reviewer. The track lead reviewer was responsible for choosing at least three additional reviewers and managing the review process for all submissions applicable to that track. This enabled the SIG to leverage broader support from the HiEd community to rate the presentations using a double-blind peer review process.

Daily attendance varied anywhere from 135 to 275 participants throughout the three days. Days were organized by the four tracks mentioned previously.

Presenters

56 speakers presented over three days, with the help of 26 moderators. Speakers were selected by the Symposium Planning SIG for relevance to the theme. All speakers and moderators participated in tech checks the week prior to the Symposium and delivered their sessions without technical issues. Moderators were recruited by the HiEd team and provided support to participants by engaging through the chat and Q&A features. All sessions were recorded successfully. Most sessions included an end of session Zoom poll to gauge interest. A few sessions had polls come up late or not at all. This failure was due to the high demand on the technical support team. A list of all presenters [can be found in the Symposium agenda](#)

(https://training.fema.gov/hiedu/21conf/2021_fema_hied_program_virtual_symposium_block_agenda.pdf) [or in the Symposium program](#)

(https://training.fema.gov/hiedu/21conf/2021%20virtual%20symposium%20program_1.pdf).

Platform/Tech Checks

Tech checks were completed via the CHDS Zoom platform in the two weeks before the Symposium to ensure seamless transitions. Separate calendar invites were sent for tech checks, each day of the Symposium, and the four sessions with breakout rooms.

Symposium Content

The Symposium offers a platform for community resource sharing for participants. Many networking opportunities were held throughout the week including pre-conference workshops, regional, educator, and SIG meetings, and an academic community poster contest.

Symposium Theme

The theme this year was “Untangling Unprecedented Uncertainty: What Emergency Management Leaders and Educators Need to Know.” The goals were to share information across the academic community, foster learning, and create new network connections. The theme was chosen by the Symposium Planning SIG and the former HiEd program manager.

Pre-Symposium Workshops

Two four-hour pre-Symposium workshops were offered in May leading up to the Symposium.

1. Survey of Geographic Information Systems for Disaster Management Research, Teaching and Service: Kevin Mickey
2. What to Teach in Emergency Management: Thoughts for Those New to Teaching the Discipline: Dr. David McEntire

Breakout Sessions


The three-day Symposium hosted four breakout sessions:

1. Conversations that Matter: Service-Learning and Curriculum Design to Support Community Collaboration: Elizabeth Dunn and Rebecca Brenner
2. Regional Engagements: Regions 1, 2, 4, 6, 7, 8, and 9
3. Educators’ Network: Dr. Dianna Bryant, Dr. Howard Murphy, Randy Egsegian, Dr. Sepi Yalda, Dr. Stacy Willett, and Dr. Sandy Smith
4. SIGs: Ethics, International, New Program Resources, Race & Ethnicity, Science & Technology, Service Learning & Leadership, SoTL, and Unity of Effort

Academic Community Poster Contest

The annual poster contest offers the opportunity to share research programs, collaborative opportunities, and network among presenters and participants. Each poster combines a graphic display of the presented material in a required template with specified learning outcomes and an opportunity to informally discuss research with Symposium attendees. Each poster was considered for the “People’s Choice Award.” Four out of nine posters were accepted.

Participant	Affiliation
<ol style="list-style-type: none">1. Cyber Resilience Adaptive Virtual Reality Experiences (CRAVRE)<ul style="list-style-type: none">○ Mesut Akdere, Julie Abdinoor, Umit Karabiyik, Jin Kocsis, Milos Stankovic, Mututhanthrige Fernando, Jason Moats	Purdue University, Texas A&M Engineering Extension Service



Participant	Affiliation
2. Implementing Blockchain Technology to Improve COVID-19 Vaccinations Rollout <ul style="list-style-type: none">○ Christopher Dougherty, Brian Iveson, Tait Morrissey, Aaron Saenz	Alma College
3. Increased Use of Artificial Intelligence in the Mitigation Phase of Disaster <ul style="list-style-type: none">○ Kegan Miller, Brody Miller	Alma College
4. Basic and Complex Tornado Hazard Adjustment Intentions: An Expanded PMT Model Exploring College Students and the General Public <ul style="list-style-type: none">○ David Huntsman, Alex Greer, Nicholas Waugh, Tristan Wu	Oklahoma State University, University at Albany, SUNY, University of North Texas

Academic Community Awards

The “People’s Choice Award” was determined by Symposium attendees, using an anonymous virtual Zoom poll. The poster on “Cyber Resilience Adaptive Virtual Reality Experiences (CRAVRE)” won the People’s Choice Award. Winners were recognized and congratulated for their achievement on the following day during the Opening Comments.

Regional Engagements

Regional hosts facilitated informal introductions and discussion on areas of interest for collaboration. Participants were welcome to drop by regional breakouts as appropriate. Regions 1, 2, 4, 6, 7, 8, and 9 held a breakout room discussion. Not all Regions were available to host.

Educators’ Network

The Emergency Management Higher Education Network (EMHEN) was a closed session for program coordinators and department heads of academic EM programs. This session provided a space for leaders of academic EM programs to discuss common programmatic concerns. Additionally, an overview of the 1st EMHEN Conference and plans for the future were shared with participants.

Special Interest Group Meetings

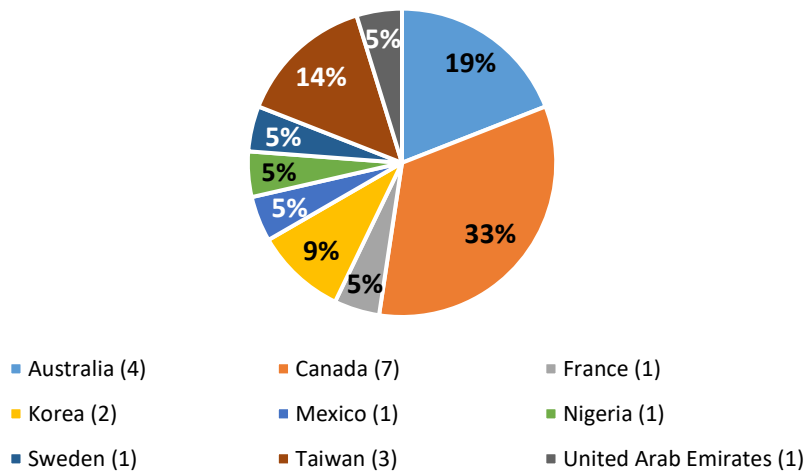
Several SIGs (<https://training.fema.gov/hiedu/specialinterest/sig.aspx>) requested time to meet. Other participants were encouraged to stop by the SIG breakout rooms to meet the SIG members and learn how they can benefit from participation. The Ethics, International, New Programs, Race and Ethnicity, Science and Technology, Service Learning, SoTL, and Unity of Effort SIGs hosted breakout rooms. Not all SIGs were available to host.

Symposium Participants

International Participants

There were 21 international participants representing nine different countries who registered. The breakdown is as follows:

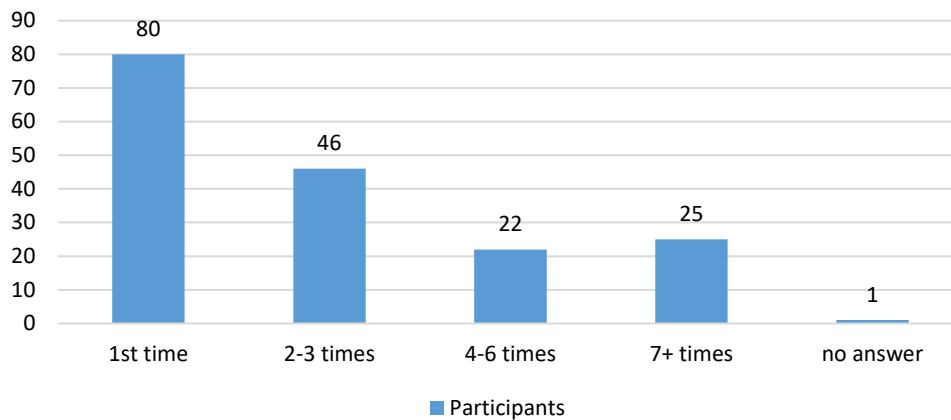
International Registered Participants



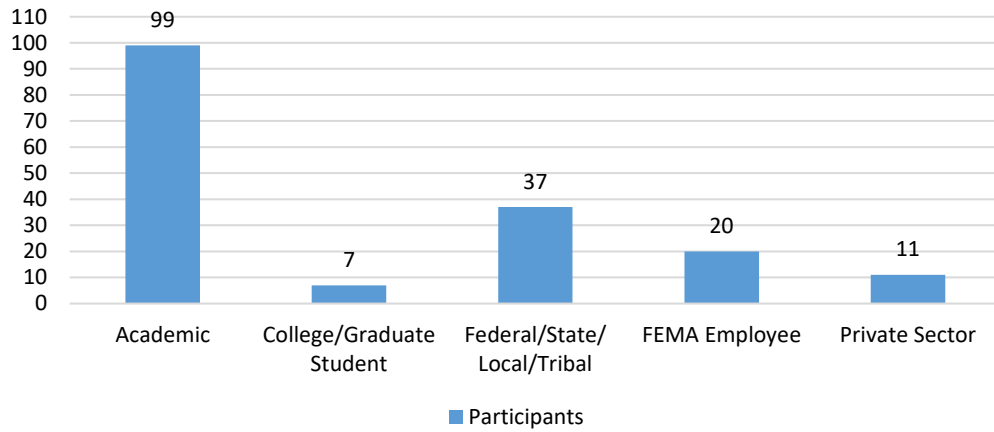
Demographics

The following graphs are based on the total number of 2021 Symposium participants' evaluation responses, where n=174.

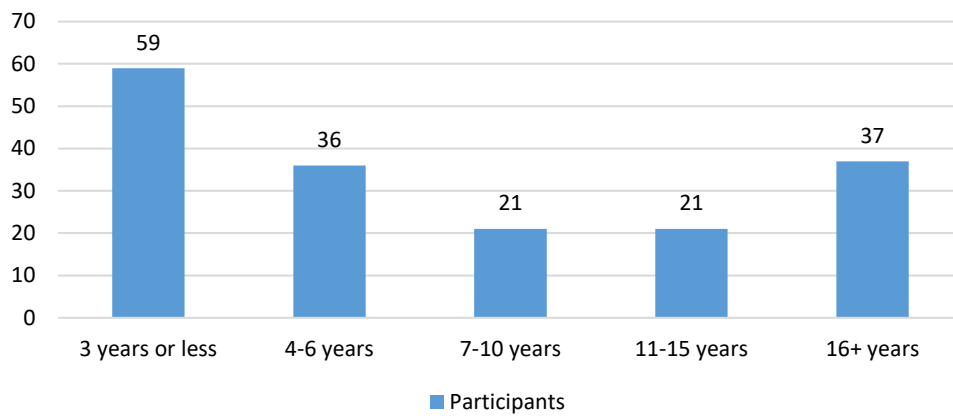
Total Evaluation Responses by Attendance History



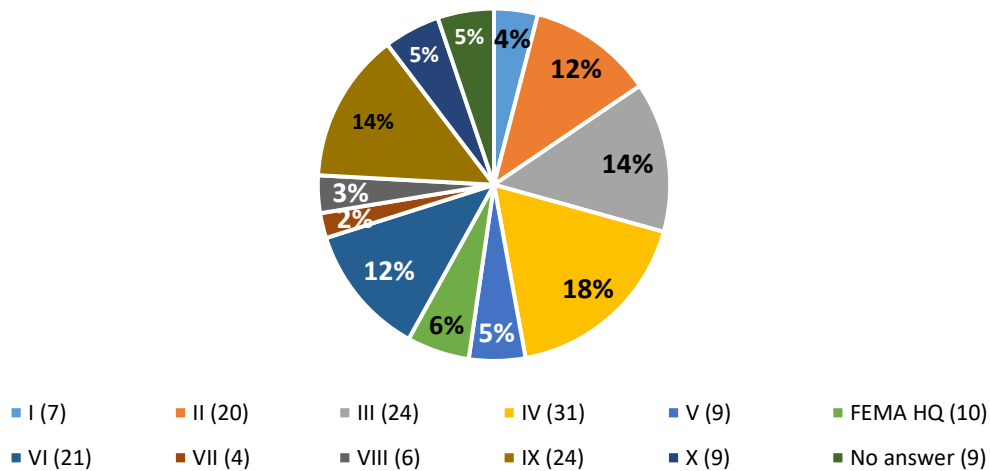
Total Evaluation Responses by Affiliation



Total Evaluation Responses by Current Position



Total Evaluation Responses by FEMA Region



Participant Evaluation and Feedback Summary

[CHDS conducted an evaluation analysis of the responses](https://training.fema.gov/hiedu/21conf/2021_hied_symposium_participant_evaluation_summary_final.pdf)

(https://training.fema.gov/hiedu/21conf/2021_hied_symposium_participant_evaluation_summary_final.pdf), along with the evaluation questions, averages, and written feedback.

Successes, areas for improvement, and additional comments are presented in this AAR. The free response comments were overwhelmingly positive, but there were a handful of comments that were negative, focusing on issues related to Zoom, variety of presenters, and lack of networking.

Overview

At the end of day three of the Symposium, participants were asked to evaluate their overall impressions of the three-day event via a SurveyMonkey link. Additionally, Zoom polls were launched at the conclusion of most sessions to capture condensed session feedback.

Analysis

EVALUATION HIGHLIGHTS

- Overall impression of the Symposium: 4.3 out of 5 (Good)
- Event registration: 4.5 out of 5 (Excellent)
- Pre-event information and communications: 4.3 out of 5 (Good)
- Zoom operations throughout the Symposium: 4.5 out of 5 (Excellent)

MOST BENEFICIAL SESSIONS

1. The Future of HiEd (Day 1): 34%
2. Understanding the Reality of Terrorist Attacks (Day 2): 30%
3. FEMA NPD Training and Education Update (Day 1): 29%
4. HiEd Program Update (Day 1): 28%
5. READ is a Four-Letter Word (Day 3): 23%
6. 2021 State of the Community (Day 2): 23%

FREE RESPONSE FEEDBACK

Call Outs from Evaluations			
The pre-conference workshop by Dr. McEntire was exceptional.	Really appreciate the efforts of everyone; great team at FEMA.	The State of the Community discussion was valuable.	Having Edward Snowden speak on terrorism response was exciting.
Jim Ramsay and Nick LaLone! Bold, transformational, mind-expanding concepts and great presentations.	Excellent job by the ZOOM technician! Great CDHS support! Thanks to NPS for supporting!	The effort that FEMA personnel put in to make the conference relevant, interesting, and an overall unique learning experience.	The breakout groups were the most interesting since they allowed for more participation and interaction.
Emphasis on ethics, marginalized people, and civil rights.	The future of HiEd and Internships sessions were valuable.	Interactive Regional discussion was the most interesting.	The star was Barbara Johnson!
The Minority Report was the most fascinating topic, but the speakers had so little time it greatly diminished the effectiveness and impact of the session.	The enthusiasm, clarity, and depth of Dr. Wendy Walsh's presentation.	The short talks were great and provided the right amount of information and insight.	Dr. James Ramsey's presentation "The implication of Covid-19, public health." The COVID-19 conversations and discussions were the most valuable.

CULTIVATED FEEDBACK

Participants	Planning SIG	HiEd Team	NTES and Leadership
Great improvement on the virtual platform and presentation transitions from last year but needs a mid-day break. Presenters were very professional and showed great enthusiasm for their topics.	Strong response from several academic partners that the Future of HiEd presentation did not include academics, and in general the Symposium was very "FEMA-centric". Consider breaking up FEMA presentations over the couple days rather than all in the first day.	Get the Symposium planning SIG members involved earlier and assign specific tasks. Marketing is key, make sure to spread the word early with a Save the Date.	Virtual platform makes interpersonal engagement tough, but also allowed for more geographically isolated people to join. Technology was much smoother this year.

Participants	Planning SIG	HiEd Team	NTES and Leadership
<p>Increase international component of Symposium.</p> <p>More diversity in presenters and moderators.</p>	<p>Bring in more diverse FEMA representatives and moderators.</p> <p>First time using EasyChair. 2 paper submissions were a lot to process.</p> <p>Balance the Symposium between academics and practitioners.</p> <p>Consider using prerecorded presentations for the hybrid format in 2022.</p>	<p>Some sessions need more time for Q&A (specifically the poster session).</p> <p>Schedule tech checks further in advance.</p>	<p>Consider getting a keynote speaker for next year.</p>

POTENTIAL FUTURE TOPICS

The HiEd team analyzed participant feedback from the evaluations report and paired it down into major themes that came up repeatedly.

Education/Training	HiEd at FEMA	Technology	Equity in EM
<p>Scholarship of Teaching and Learning</p> <p>Assessment and evaluation</p> <p>Experiential learning, internships, and service learning</p> <p>Credentialing and accreditation (micro-credentials,)</p> <p>Academic research (research priorities, research collaborations, research projects)</p> <p>Future of EM HiEd</p>	<p>FEMA program updates</p> <p>Funding HiEd (research funding, expanding HiEd programs, student education)</p> <p>Regional collaboration and workgroups</p> <p>Networking opportunities at the Symposium</p> <p>How FEMA course certifications may be used for EM degrees</p> <p>Educational resources</p>	<p>Utilization of drones in EM</p> <p>Cyber-security</p> <p>Emerging technology in EM</p> <p>Crisis communications</p>	<p>Impacts of COVID-19</p> <p>Diversity, equity, and inclusion in the EM profession</p> <p>Community awareness (community outreach, community needs, vulnerable communities)</p> <p>International EM</p> <p>Disparities in Disaster (disaster equity, disaster justice, health disparities)</p> <p>Ethics in EM</p> <p>Current and emerging trends</p> <p>Public health</p>

<i>Education/Training</i>	<i>HiEd at FEMA</i>	<i>Technology</i>	<i>Equity in EM</i>
Instruction methods (case studies, pedagogy, innovative teaching methodology, teaching virtually, capstone projects) Collaboration between academia and practitioners			

Successes and Areas for Improvement

Logistics and Planning

Strengths: The Symposium Planning SIG met monthly until May and weekly in May to ensure a successful virtual delivery. Two SIG members led the peer review process along with multiple members of the academic community who were chosen as reviewers for each of the four tracks. The content and time allotments for the Symposium submissions reflect their work. CHDS provided the Zoom platform and technical support to deliver and record the materials; as well as taking the lead on this year's evaluations.

Engaging the FEMA Regions, educators, and SIGs seemed to be successful, both with connecting academics and practitioners to the Region and in getting a sense of who is coming to the Symposium. All FEMA Regions participated at some point during the three days.

Symposium Content

Strengths: The theme seemed very well received by speakers and participants. There were numerous comments commending FEMA's organization of the Symposium and the amazing work by the CHDS tech team. Other frequent comments are as followed: easy to follow; very organized; kept on schedule; presenters were exciting/passionate/experienced; level of professionalism; variety of interesting topics; topics were relevant to today's world.

Improvement Plan

Logistics and Planning

<i>Area for Improvement</i>	<i>Action</i>	<i>Lead</i>
1. Tech support	Will need additional tech support to facilitate end of session polls, transitions, timers, promote/demote presenters, etc.	CHDS

Area for Improvement	Action	Lead
2. Theme vs tracks	Reevaluate tracks for future Symposium.	Symposium Planning SIG
3. Refine submissions template	Time section should have only defined options: (ex: 60, 30, or 15-minutes; the SIG will decide). Presenters will tailor their presentations to one of these slots. Include checkboxes for breakout rooms and polling to avoid any last-minute requests.	Submissions lead
4. Finding reviewers	Better advertise this opportunity. How can this get more visibility? Newsletter, HiEd website, gov. delivery, etc.	Submissions lead
5. Pre-Symposium emails	Avoid sending conflicting emails from EMI about the on-campus format when virtual.	Admissions
6. Tech checks	Need to be scheduled further in advance, this way everyone can attend. Is it necessary to have the same people attend multiple tech checks?	HiEd Team and CHDS
7. Calendar invites	Better organize and distinguish the calendar invites with the separate links. (Presenters and moderators vs participants links, and different breakout session links.)	HiEd Team

Symposium Content

Area for Improvement	Action	Lead
1. Pre-Symposium workshops	Is it necessary to fund pre-Symposium workshops every year? Could we switch to webinars throughout the year? When in-person, the Monday workshops could be replaced with a campus tour and a networking event in the Pub (like the Share Fair).	HiEd Team and Symposium Planning SIG
2. Presenter PPT template	Presenters must format their slides to the template. All PPTs will need to be readable and will go through 508 after the Symposium to be placed on the HiEd website. Presenters must submit their final slides by the deadline given, or they won't present; this will avoid any last-minute changes. CHDS will advance everyone's slides for quality control.	HiEd Team
3. More variety in presenters and moderators	Set a 2-time limit: you can't be a presenter and/or moderator more than twice.	Symposium Planning SIG
4. Sessions with different Zoom links	Put a QR code (instead of a URL) on the transition slide for the sessions with a separate Zoom link as well as a QR code for the eval link for ease of access. Drop the different link/Zoom info in the chat box.	HiEd Team

Area for Improvement	Action	Lead
5. FEMA sessions	Break up the FEMA speakers among the different days, rather than having them all speak on one day. Have more diversity among speakers. Look to the SIG leaders and the national rankings for academic speakers because these are the respected people in their communities that have ties to the institutions. Include more panel sessions with 2 academics vs 2 practitioners to discuss the bigger issues in the community. Better connect the FEMA and academic sessions.	Symposium Planning SIG
6. Chat vs Q&A feature	Participants need to ensure they put questions in the Q&A and select “all participants and presenters” from the dropdown menu for the chat, this way everyone can follow the dialogue.	CHDS/Tech support
7. Agenda breaks	Incorporate a longer, mid-day break (20-30-minutes) for attendees, rather than having all 5 and 10-minute transitions.	Symposium Planning SIG
8. Awards	Better advertise the awards. How can they get more visibility? Newsletter, HiEd website, gov. delivery, etc.	Schools with awards and HiEd Team
9. Poster contest	Allow more time for presenting each poster and a Q&A/discussion. In the future we could pre-record the posters on YouTube.	Symposium Planning SIG

GOALS FOR THE 2022 SYMPOSIUM

- Host a successful hybrid event (with limited virtual interaction) and increased participation.
- Increased diversity among presenters and moderators.