Executive Summary: 35 Leaders across all five Academies (USMA, USAFA, USNA, USMMA, and USCGA) attended the All Academy Collaboration Session on 11 February 2021. All were welcomed by lead planners from many of the Academies in attendance and then all participants were broken down into small groups of 3 to 4. The groups were provided a variety of topics as starting points for their discussion with an overall focus on teaching challenges, solutions, and successes to carry into the future as we bounce forward. The discussions within the groups evolved into an organic exchange of ideas and best practices which were shared at the end of the session with the topics highlighted in Table 1. A summary of comments shared by each group during the session follows Table 1 with more detailed notes from a variety of sessions provided at the end of this document. A recording of the complete session is available here with the opening comments from 0:09 to 2:26 and the highlights shared from each group from 57:23 to 1:25:50. Survey results of those present indicated they liked the session’s format with small breakout rooms, the preferred number for breakout rooms is 4 to 5, and recommended topics for the two future session for the semester include a student perspective (what has gone well, what may be improved, what to sustain past COVID) and an All Academy panel (bouncing forward – opportunities and excellence beyond COVID). Overall, the breakout discussion sessions across the Service Academies strengthened the bonds between the institutions through the open dialogue and meaningful discourse which may very well transcend COVID-19 conditions and become a venue for continued collaboration as all Academies bounce forward.

“...the first part of last year we talked a lot about triage. I am excited about the three sessions we have coming up, because it’s about moving forward...and how we can...collaborate with each other to make the future of academia a good place to be and be a part of...” – CAPT Paul Acquaro, USMMA

Table 1. Topics of key discussion points shared during the all Academy collaboration breakout sessions.

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Group 1 – Flipped Classroom (Use of Pre-recorded Videos) (57:23 to 1:03:18)

Group comments provided by: Dr. Kurt Herzinger (USAFA) & Maj Matthew Johnson (USAFA)

The focus is where students will do reading, work, and/or watch videos about the day’s topic prior to class. This allows for the class time to be devoted almost entirely to discussions and working problems rather than there being an actual presentation of new material in class. The pandemic has enabled a significant advancement in skills to create meaningful videos. This skill and the ability to run a flipped classroom is one of the take aways from the pandemic. USAFA’s Math Department is currently conducting a study to determine if having a daily quiz (worth points in the course) associated with the material in the asynchronous video motivates students to engage with the recorded material prior to class. The goal is to have the students demonstrate active learning by viewing the material prior to class in order to spend the class time in a more meaningful manner than repeating the material with which they should have come prepared.
Group 2 – Challenges of Metacognition in a Hybrid Environment (1:03:28 to 1:04:37)

Group comments provided by: COL Ray Kimball (USMA)
The focus was on the challenges of metacognition in a hybrid environment. One must think about their own learning, what tools they are using, and how they are approaching learning in this environment. An asynchronous portion of a class doesn’t mean the student should be passive in learning. Student need to be actively engage with their course material to increase learning potential. When watching pre-recorded videos, students must engage with the material with one method being taking notes while watching the slides.

Group 3 – Assessment Integrity & Mitigating the Potential for Students to Cheat (1:05:39 to 1:08:35)

Group comments provided by: Dr. Calli Halaway (USFA)
The focus on mitigating the potential for students to cheat begins with students being clear that instructors are watching them. The goal isn’t trying to catch students cheating, the goal is have the students be clear that instructors are tracking and aware of what they are doing. We have the ability to know if students are accessing unauthorized resources (e.g., accessing homework information within the LMS during an exam period). We need to communicate that honor is not just something we are asking for students to have while at an Academy, honor is something they applies throughout their careers and lives. We need students to understand honor applies across the board and we need to talk about honor and how it applies across the board. Honor has to be important to our students. One recommendation from the group discussion was to have students found on honor required to share their stories with others. Potentially could have faculty share their stories (e.g., podcast) of a personal honor experiences they went through as a student.

Group 4 – Best Practices to Address Challenges of Participation in a Remote or Hybrid Environment (1:09:16 to 1:13:37)

Group comments provided by: MAJ Kimberly Brutsche (USMA)
The focus on best practices to leverage student engagement targeted challenges of participation in remote or hybrid environments.

- Using chats enable real-time engagement, especially when we identify students losing focus. An important note is that our students are from a generation where many feel more comfortable digitally chatting comments versus speaking in class. Students seem to be more engaged with difficult/debate topics when responding in the chat window versus speaking out loud.
- Make sure that students can see their remote peers. Be sure to turn the camera to enable that personalized interaction.
- Leverage the technologies that students have, such as cell phones. When doing group work, have students dial in their lab partners and share the video over the phone to help those not able to be present feel as though they are part of the learning community. The remote students may watch the lab and help collect data in real time based on what they see.
- Use polling (e.g., available through Zoom, Google Classroom, Blackboard Collaborate, https://www.polleverywhere.com/) to create engagement, enable real-time feedback, and break up the class.
- Frequently and deliberately communicate the philosophical and aspirational aspect of assessment integrity. A quote from *The Armed Forces Officer* states, “What the civilian should be, military officers must be.” This type of message is discussed prior to every assessment to stress the stakes involved when a student fails in their character.
Group 5 – Practices to sustain from the remote environment after COVID (1:14:32 to 1:18:09)
Group comments provided by: Dr. Jennifer Albert (USMMA)
The focus on identifying what should remain after COVID led to a number of recommendations based on considerations of connectivity and engagement.

- Increase in connectivity is essential to keep students engaged, deliver quality curriculum, and get technology to work.
- Maintain increased skillset incorporated due to COVID regarding technology integration and use.
- Maintain meetings where location does not factor into participation and availability (e.g., All Academy Collaboration Sessions). This can translate into guest speakers brought in from anywhere.
- Continue to use methods to engage those that are remote (e.g., a few students) when most are physically present.
- Remote meetings help improve faculty efficiencies and convenience due to no travel time, the acknowledged ability to multi-task, and teach classes when not physically available (e.g., snow day impacts will be significantly mitigated).
- Continue to use chat features and additions to previous dialogues which sustains and improves connectivity and availability between staff, faculty, and students.
- Connectivity must be managed with clearly communicated for student expectation regarding appropriate times to engage with staff and faculty. There must be a balance to protect time with family and recharge time.
- “We expected a lot of negatives going into it [COVID], but I think we came out with a lot more positives than anticipated.”

Group 6 – Sharing curriculum across Academies (1:19:05 to 1:20:27)
Group comments provided by: Dr. Beth Schaubroeck (USAFA)
The focus of sharing curriculum across Academies has the potential for increased opportunities for students and enhanced collaboration across Academies. For example, typically low enrollment courses which are offered every other year could be offered every year if students from other Academies could remotely attend classes. The ability for students to have more ownership of their learning experience could be significantly enhanced with the possibility to remotely attend courses not offered at one’s Academy. The logistics would be significant. However, the challenges provide opportunities to work collaboratively across Academies to develop course content.

Thank you to the wonderful leaders who shared their group’s key points.
Group 2 – Comments Shared:

This group spent time at first discussing technological solutions to having students both online and in person.

- USMA spent $250k on 34 “avatars” which include a 82 inch screen on wheels that can show the cadets who are online to those in person. These are owned and managed by departments.
- USAFA – meeting owls are in common use that provide a view of the full class to the person online. They also allow for audio. USMA – similar to a Swivel (another tech in use)
- USMMA also used large screens.

The issue of testing in a hybrid or online environment was discussed. Student resources are not standardized.

In-Person Challenge: finding enough large spaces to fully distance students for in-person groups. Some have tried using two rooms, but required an “assistant” to ensure students in both rooms are fully engaged.

There is a general consensus that recorded lectures provide value for cadets that cannot attend. This is more difficult for on-ground classes.

Addressed the difficulty of engaging students in hybrid or hyflex environments.

- Hint - Stick reminders in slides – use simple methods to ensure you check-in with online folks.

Looking forward – online modules may be great for instructor TDY or other necessary absences. However, policy must be in line. Example – we used to require students to be in class regardless of whether that class might be asynchronous for that day.

Big idea – shared with the group. Flipped and asynchronous classes still need to ensure students are fully engaged with the material and metacognitively aware of their learning. We need them to reflect on the videos and engage rather than passively watching like a tv show.

Group 4 – Comments Shared:

Attendees.

a. United States Merchant Marine Academy (USMMA). Dr. Jennifer Albert and Dr. Pamela Bryant
b. United States Naval Academy (USNA). Dr. Caroline Melles
c. United States Naval Academy Prep School. Dr. Theo Greenblatt
d. United States Military Academy. MAJ Kimberly Brutsche

Participation and Engagement in a remote environment.

a. Challenges. All group members agreed that a prevalent challenge in the remote or hybrid learning environment is student engagement and participation. Until recently, USNA lacked sophisticated technology in some classrooms, such as wi-fi. An instructor cannot see emotions or denote tone from emojis or chat text. Also, with COVID protocols in place that could require face masks, it is difficult to assess feedback from the students to ensure comprehension or attentiveness to the course material.
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Students can also feel “burned out” from the remote environment, thus further inhibiting their intrinsic motivation to remain engaged in class. Students are “glued” to the screen all day for synchronous remote classes, and then must complete homework online. Audio/video issues, connectivity, and other technical issues further complicate these matters, and the burden falls upon the instructor to ensure they re-write their lesson plans and adapt their teaching methodologies to not prioritize physical students over remote students.

b. Best Practices. It is important that educators seek to replicate the in-person experience as best as possible. This means extracting what exactly is being lost in the remote environment, which in this case was captured in the above stated challenges. From there, finding creative ways to either overcome or mitigate them.

(1) If an issue is remote students feel “burned out” and/or excluded from real-time communication, then an instructor can mitigate this by placing them on a larger projector screen, while the instructor’s camera is facing the front of the class. By doing this the instructor can physically look at the remote students, reading their feedback or watching them use the “hand raise” feature. At the same time, the remote students feel included in the classroom, best replicating what they would be seeing if they were there physically. One instructor employs the class section marcher to be the one who ensure their remote counterparts are involved. Specifically, they will leave the Teams chat idle and minimized on their screen, and let the instructor know if they receive a pop up that a remote student said something in the chat. It serves as an additional check for the instructor to not forget about the remote students. The section marcher will also be responsible for hosting all the remote students during group exercises, using Teams whiteboards that the instructor can pull up on the main screen for discussion. As such, section marchers come to each class with their headphones.

(2) There was a shared practice in which the instructor leveraged the technology already at their students’ fingertips, empowering students to take control of their learning experience and overcoming technological constraints. In this case, in the chemistry lab the instructor asked students to use their cell phone to video call their remote lab partners. They would position their phones so the remote partners could still observe and assist with experiments and collect data. When it was time to share results, physical students would hold their phones up so their remote partners could both hear and participate, as if they were there in person.

(3) Instructors who found it difficult to assess their students and receive real-time feedback mitigate it by creating other methods of engagement that prior to COVID may have been non-traditional. An example is the use of the chat feature via Zoom, Teams, Blackboard, etc. Students can create dialogue via the chat in immediate response to what the instructors are saying, and it helps mitigate moments where the instructor is too distracted to notice the “hand raise” feature pop up. These students grew up within the “iGeneration,” and are comfortable communicating in this space. It also allows students who are more introverted to have an opportunity to provide input in a way that is more appealing to them. One instructor allows physical students to also have Teams chat up during class to dialogue with their teammates. Because the instructors are monitoring the chat there are few issues with distractions, personal messaging, and other unprofessional behavior.

(4) Polling was a best practice that several instructors used to maintain small engagements throughout the class and assess real-time feedback of knowledge comprehension or teaching effectiveness. Zoom, Teams, and Blackboard have polling features, and Poll Everywhere was an additional resource provided. The average time for in-class polls ranged from every 7-10 minutes.
Group 5 – Comments Shared:

Attendees.
a. United States Naval Academy (USNA). CDR Kevin Flood
b. United States Air Force Academy (USAFA). Dr. Claudia Ferrante
c. United States Merchant Marine Academy (USMMA). Dr. Jennifer Albert
d. United States Naval Academy (USNA). Dr. Karyn Sproles.

How are we going to get back to face to face? Any solution to hybrid or having students 6 feet apart? Still difficult to get the technology we need to teach, but we will use it after COVID is over. Students being able to join class remotely is something we could continue to allow (for students who are traveling or ill). We have a vacuum in technology for the support of hybrid classrooms for the situations where classes are meant to be face to face.

It can be more difficult to work at home and maintain work/life balance.

Some things we’d like to keep doing once this is over:
- MicroSoft Teams (for example) makes it easier to stay connected to the students.
- Attendance and participation in faculty and staff events has increased with online meetings, workshops, town halls, etc. Department meetings are more efficient online. We can connect beyond our institutions—at the All Academy Collaborations, for example.
- It’s good to see students and colleagues again, but there are things we miss (not having a commute, finding time for self-care). Now that we have had such a different experience, we appreciate what we have had and what we have now. It would be nice to find a balance between what we found during COVID and what we had before.

Group 6 – Comments Shared:

- How to incorporate remote students in a largely in-person class
  - All remote
    - How to keep them engaged.
    - Not watching a video
    - Desmos teacher tools for math
  - Do not allow students to join remotely or all remote
    - If student is in isolation and misses a class, then they get one-on-one online session
    - This method is from USNA Academic Center who believes strongly in in-person instruction.
  - Remote and in person
    - Provide a question directly to remote audience
    - Sound systems
      - Repeat all questions asked in class and online
      - Technology set-up differences in classrooms cause challenges
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- Improve the technology to facilitate microphone and speakers that allows all students to hear and be heard; see and be seen.
  - Large lecture hall
  - Two instructors per period
    - 1 - teaching the class
    - 1 - managing the chat

- What increase engagement methods (asynchronous and synchronous) should be maintained beyond COVID
  - Start
    - Faculty development
      - Watching other faculty members teach
    - More formal skills development courses
  - Continue
    - Academic Center
      - Offer an additional set of higher level skills required in 1/C and 2/C courses
    - Online review
      - Large group allows distraction; Less physical engagement; How much learning is taking place when online
      - Access; Force mids to use their study hours
    - USAFA Google Teams chat
      - Great way to get quick questions answered.
      - Maintains connections.
      - Synergies with flipped classroom and hybrid.
    - Small lecturettes, additional examples
    - Quiz
      - More conceptual
      - Less computational
      - No time constraint
      - Open book, open notes, closed internet, individual effort, but no checking up.

- What is the potential for shared curriculum (remote attendance from other Academies, increase in course offerings, potential for additional minors)
  - Faculty collaboration in development of course material for own institution (not a shared course, but similar curriculum)
    - Real potential of happening
    - Easy managed
    - Low risk
    - Support with Dean recognition and concurrence
Shared enrollment courses
  - Target low enrollment courses
  - Leverage existing processes
    - Course which have students enrolled due to semester exchange
  - Organizational and logistical challenges

Additional Notes Shared for the All Academy Collaboration Session Community:

Notes from Dr. Kerry McCaig, Deputy Head for Student Academic Services and Academy Registrar, Director of Academic Success Center, USAFA:

Notes from an Academic Support Agency:

- The Academic Success Center faculty are working at maximum capacity for our instructional support activities (day and evening classes and EI with our faculty in STEM as well as our Writing Center consultants). We are using WCOnline and TEAMS for our formats for evening assistance for the Quantitative Reasoning Center/Writing Center. Some additional alternate platforms depending on what the class platform uses. We have added a Public Speaking Lab and specialist to assist cadets with public presentations for all kinds of presentations and it has been a very popular initiative (e.g., class presentations, CW class officer presentations, graduate student mock interviews). We are hoping to expand this with Endowment/Foundation funding.

- We are doing a lot of academic advising and counseling.

- Most cadets have at least one face-to-face class this semester and COVID precautions are in place.

- We are also proposing an official “pilot” for an orientation period after BCT and before classes start to help cadets transition into the academic rhythm of the “semester” day. This will be a cross-mission initiative that will emulate the “proof of concept” transition that we offered last year given the COVID scenario. We will utilize the results and feedback from that five-day trial run into our “pilot.” If this goes well, the curriculum committee will receive a proposal for a permanent adoption of this activity.

- Many faculty have gotten one or both shots of the vaccine. More administrations to follow.