



On April 18 ~175 people attended the 5th annual MD CS Education Summit. Over time the summit purpose has shifted from broad-based awareness building and strategy to a teacher-focused conference in which resources and information were shared. All sessions were well rated and attended. Participants appreciated the length and variety of breakouts.

Participants left feeling energized, connected to others invested in CS education in the state, and motivated to improve CS education.

PARTICIPANT PLAN

Participants plan to:

- **Communicate** with their community stakeholders
- **Advocate** for CS with administration and peers
- **Integrate** CS into other content areas

PARTICIPANT NEEDS

Growing CS will require:

- additional teachers, training & development
- curriculum & standards for K-8
- additional funding & other resources such as tech
- greater public advocacy for CS education

ABOUT THE SUMMIT

61% OF
attendees
were
Teachers
& **13%**
non-PROFIT
representatives

TOP RATED SESSIONS:

- CS Resources (K-8)
- CS student panel
- Diversity and Equity
- MCCE: Statewide CS support

TOP ATTENDED SESSIONS:

- CS Teacher Preparation
- CS Resources (K-8)

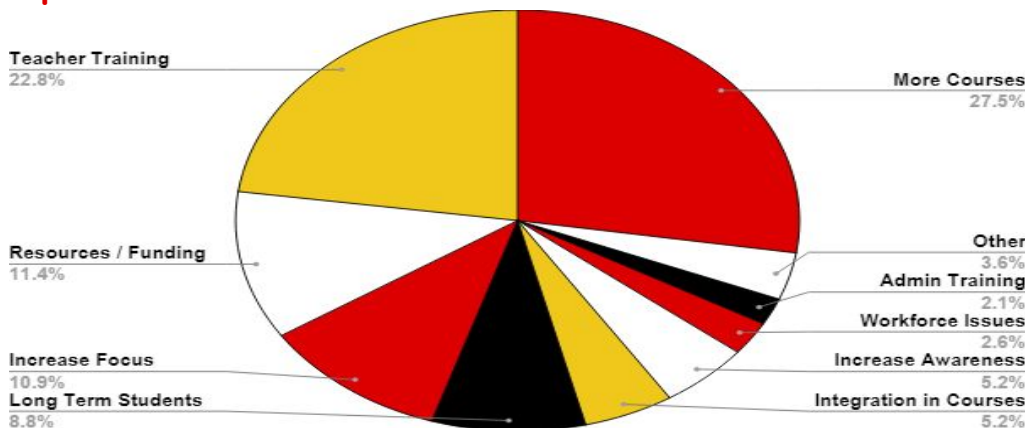
AS A RESULT:

% agree + strongly agree:

I have a better appreciation of the importance of computing in MD	88%
I have a better appreciation of what can be done to improve computing	88%
I networked with individuals who can influence computing	82%

MOVING FORWARD...

Proposed School-Level Priorities



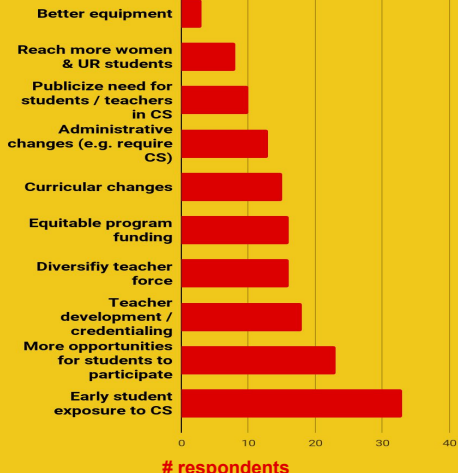
SUMMIT SUCCESSES:

- ★ Being new to CS, it was useful to interact with all the people and organizations influential in the field. Networking!
- ★ A comprehensive schedule engaging all stakeholder interests and sparking networking opportunities.
- ★ Being mindful, deliberate and successful in including a wide range of stakeholders from across the spectrum.

NEXT TIME:

- ★ Have sessions more than once, at least the popular sessions.
- ★ It would have been helpful to have different strands for elementary/middle and high school educators.
- ★ = direct quote from participant

STRATEGIES TO DEVELOP a more DIVERSE COMPUTING WORKFORCE



- ★ Additional CS teachers.
- ★ Support and organize a comprehensive elem to high school curriculum and help administrators, guidance counselors, and families.
- ★ Maryland should focus on providing equitable funding for schools across the state.
- ★ Initiatives to attract underrepresented groups to CS
- ★ Provide grant funds to local school systems
- ★ Shift from 'opt in' to CS for all.
- ★ Integration of computer science into curriculum for the youngest grades

★Vital for the MCCE to develop curriculum all school systems with access. **We can't keep up alone.**
Collaboration of sharing should be #1 priority.





MARYLAND COMPUTING EDUCATION SUMMIT

APRIL 18, 2018

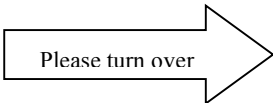
The primary goal of ECEP is to have a significant impact on improving and broadening participation in computing education state by state. We are interested in learning the extent to which this summit was effective in meeting this goal in Maryland.

1. FEEDBACK ON INDIVIDUAL SESSIONS ATTENDED			
Session 1 (9:25-10:15) – Which session did you attend?			
<input type="checkbox"/> CS Student Panel	<input type="checkbox"/> CS Teacher Preparation (Pre-Service and In-Service Pathways and Certification)	<input type="checkbox"/> IT CTE Programs of Study (Cisco, Oracle, and PLTW)	<input type="checkbox"/> National CS Framework and Standards
Session 1 – Please rate the overall value: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Very Good <input type="checkbox"/> Excellent			
Session 2 (10:20-11:10) – Which session did you attend?			
<input type="checkbox"/> MCCE: Statewide CS Support Pre-K-20	<input type="checkbox"/> CS Resources (K-8)	<input type="checkbox"/> AP CS Curriculum	<input type="checkbox"/> Diversity and Equity: Why is CS Education Access So Important?
Session 2 – Please rate the overall value: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Very Good <input type="checkbox"/> Excellent			

2. TO WHAT EXTENT DO YOU AGREE WITH THE FOLLOWING STATEMENTS ABOUT THE SUMMIT?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
2a. The content of the summit was relevant to my professional responsibilities related to computing education in Maryland	①	②	③	④	⑤	(N)
2b. The summit goals and objectives were clearly specified.	①	②	③	④	⑤	(N)
2c. The summit agenda was well organized.	①	②	③	④	⑤	(N)
2d. Time was used effectively.	①	②	③	④	⑤	(N)
2e. There was sufficient time to identify the needs and concerns of all participants.	①	②	③	④	⑤	(N)
2f. The structure of the summit allowed me to share my ideas about computing education with others.	①	②	③	④	⑤	(N)

3. Please share what you believe is the level of importance in Maryland for the following statements:	Not Important			Important		Not Applicable
3a. There is a lack of qualified teachers prepared to teach computing.	①	②	③	④	⑤	(N)
3b. Teachers have access to quality professional development.	①	②	③	④	⑤	(N)
3c. Teachers have access to sufficient curricular resources at all levels (Pre-K-12).	①	②	③	④	⑤	(N)
3d. Administrators support computing integration.	①	②	③	④	⑤	(N)
3e. Professional school counselors have professional development for computing and equity in computing.	①	②	③	④	⑤	(N)
3f. The technology (computers, Internet connectivity, etc.) is adequate for students' computing needs.	①	②	③	④	⑤	(N)

Please complete this survey and hand it in at lunch.



4. WHAT DO YOU BELIEVE IS THE FIRST COMPUTING EDUCATION INITIATIVE THAT YOUR LOCAL SCHOOL SHOULD ADDRESS?**5. WHAT IS YOUR PRIMARY ROLE**

- | | | |
|---|--|---|
| <input type="checkbox"/> Local school system Supervisor | <input type="checkbox"/> Higher Education Representative | <input type="checkbox"/> Governmental Agency Representative |
| <input type="checkbox"/> School Based Administrator | <input type="checkbox"/> Industry Representative | <input type="checkbox"/> Legislative staff |
| <input type="checkbox"/> PreK -12 Teacher | <input type="checkbox"/> Non-Profit Representative | <input type="checkbox"/> Other: _____ |

6. WHAT STRATEGIES SHOULD THE STATE USE TO INCREASE A MORE DIVERSE COMPUTING WORKFORCE?**7. PLEASE PROVIDE ANY ADDITIONAL COMMENTS OR QUESTIONS.**

Thank
You!



MARYLAND COMPUTING EDUCATION SUMMIT APRIL 18, 2018

The primary goal of ECEP is to have a significant impact on improving and broadening participation in computing education state by state. We are interested in learning the extent to which the event was effective in meeting this goal in Maryland.

1. FEEDBACK ON INDIVIDUAL SESSIONS ATTENDED

Session 3 (1:00-1:55) – Which session did you attend?

Employer Industry Panel Out of School CS Providers Cybersecurity CS Educator Networking

Session 3 – Please rate the overall value: Poor Fair Good Very Good Excellent

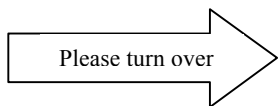
2. AS A RESULT OF THIS SUMMIT...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
3a. I have a better appreciation of the importance of computing education in MD.	①	②	③	④	⑤	Ⓝ
3b. I have a better appreciation of what can be done to improve computing education in MD.	①	②	③	④	⑤	Ⓝ
3c. I networked with individuals who can influence computing education in MD.	①	②	③	④	⑤	Ⓝ
3d. I made new connections that will <u>help me</u> improve computing education in MD.	①	②	③	④	⑤	Ⓝ
3e. I am more prepared to teach computing education lessons or courses because of what I learned at this summit.	①	②	③	④	⑤	Ⓝ
3f. I am better prepared to help my school or school system implement computing education.	①	②	③	④	⑤	Ⓝ

3. WHAT WORKED BEST ABOUT THE MARYLAND COMPUTING EDUCATION SUMMIT?

4. WHAT CHANGES WOULD YOU MAKE TO IMPROVE THE MARYLAND COMPUTING EDUCATION SUMMIT?

5. IF APPLICABLE, PLEASE DESCRIBE THE ACTIONS YOU SEE YOURSELF TAKING PART IN TO IMPROVE COMPUTING EDUCATION IN MD.

Please complete this survey and hand it in at Wrap-Up.



6. WHAT IS YOUR PRIMARY ROLE

- | | | |
|---|--|---|
| <input type="checkbox"/> Local school system Supervisor | <input type="checkbox"/> Higher Education Representative | <input type="checkbox"/> Governmental Agency Representative |
| <input type="checkbox"/> School Based Administrator | <input type="checkbox"/> Industry Representative | <input type="checkbox"/> Legislative staff |
| <input type="checkbox"/> PreK -12 Teacher | <input type="checkbox"/> Non-Profit Representative | <input type="checkbox"/> Other: _____ |

7. WHAT ADDITIONAL RESOURCES DO YOU NEED TO IMPLEMENT/GROW CS IN YOUR SCHOOL OR SCHOOL SYSTEM?**8. PLEASE PROVIDE ANY ADDITIONAL COMMENTS OR QUESTIONS.**

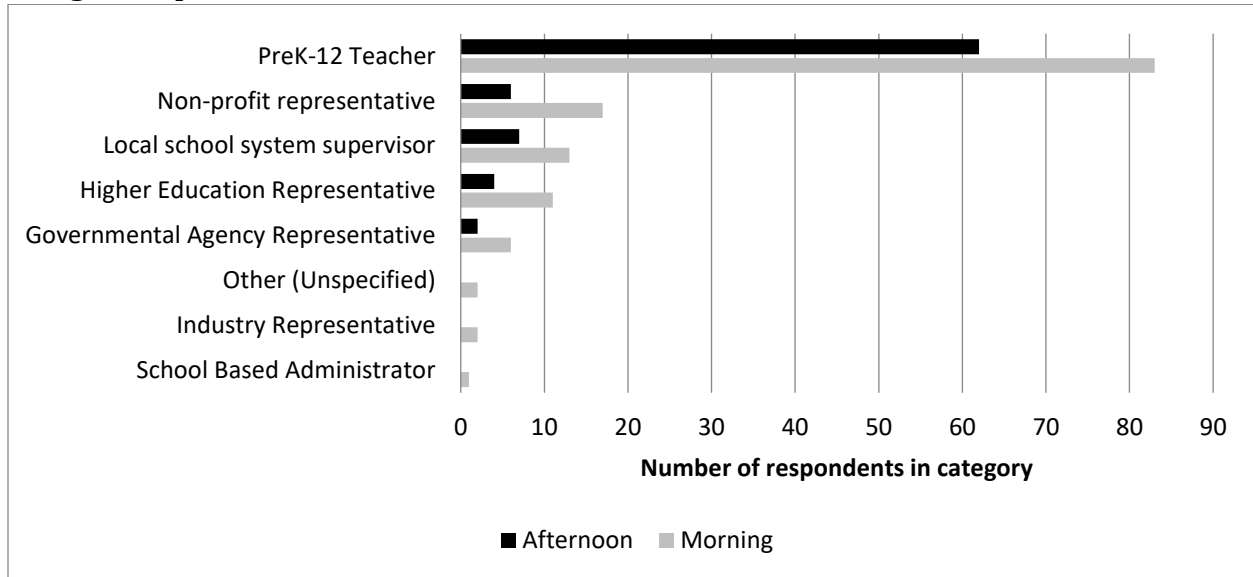
9. IF YOU ARE INTERESTED IN RECEIVING FOLLOW-UP SUPPORT AND RESOURCES FROM ECEP, PLEASE PROVIDE YOUR EMAIL ADDRESS. YOUR EMAIL ADDRESS WILL NOT BE SHARED FOR ANY OTHER PURPOSES.

Your email address:

Thank You!

Results Readout

Background positions of summit attendees



SURVEY A (N=170)

	Attended Session (N)	Rated Session (N)	Fair	Good	Very Good	Excellent	Average
Session 1							
CS Student Panel	34	31	10%	6%	48%	35%	4.1
CS Teacher Preparation (Pre-Service and In-Service Pathways and Certification)	60	54	9%	15%	50%	26%	3.9
IT CTE Programs of Study (Cisco, Oracle, PLTW)	20	20	15%	20%	35%	30%	3.8
National CS Framework and Standards	54	48	8%	35%	33%	23%	3.7
Session 2							
CS Resources (K-8)	60	44	0%	5%	34%	61%	4.6
MCCE: Statewide CS Support Pre-K-12	34	32	0%	19%	31%	50%	4.3
Diversity and Equity: Why is CS Education Access so Important?	38	34	6%	12%	44%	38%	4.2
AP CS Curriculum	33	27	7%	22%	33%	37%	4.0

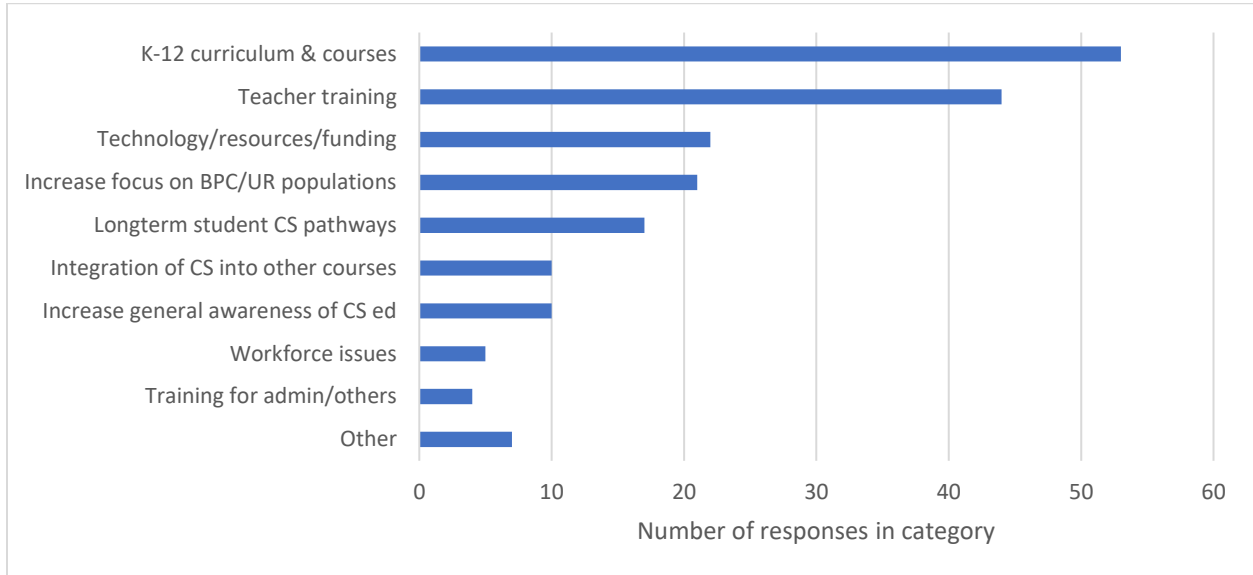
To what extent do you agree with the following statements about the summit?

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average
The summit agenda was well organized	168	3%	0%	4%	30%	63%	4.5
The content of the summit was relevant to my professional responsibilities related to computing education in Maryland	163	2%	0%	8%	38%	51%	4.5
Time was used effectively.	168	2%	0%	3%	32%	63%	4.4
The summit goals and objectives were clearly specified	169	2%	1%	6%	36%	55%	4.4
The structure of the summit allowed me to share my ideas about computing education with others	165	3%	5%	12%	37%	44%	4.2
There was sufficient time to identify the needs and concerns of all participants	167	2%	2%	12%	36%	47%	4.1

Please share what you believe is the level of importance in Maryland for the following statements:

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average
There is a lack of qualified teachers prepared to teach computing.	165	1%	0%	7%	18%	75%	4.7
Teachers have access to quality professional development	167	1%	1%	10%	17%	72%	4.6
Teachers have access to sufficient curricular resources at all levels (Pre-K-12)	165	1%	3%	7%	19%	70%	4.5
The technology (computers, Internet connectivity, etc.) is adequate for the students' computing needs.	166	1%	4%	7%	22%	67%	4.5
Administrators support computing integration.	167	0%	4%	12%	23%	61%	4.4
Professional school counselors have professional development for computing and equity in computing.	162	4%	6%	17%	28%	45%	4.1

What do you believe is the first computing education initiative that your local school should address?¹



¹ Individual responses may fall into multiple categories. This applies to all graphs of open ended responses.

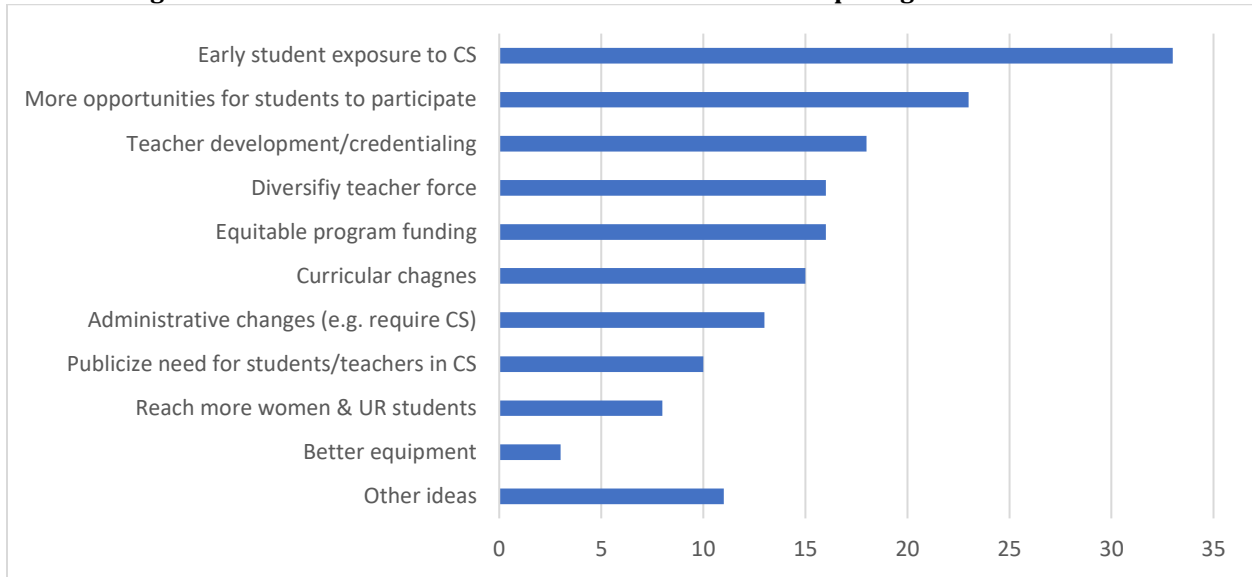
What do you believe is the first Computing Education Initiative that your local school should address?	K-12 curriculum & courses	Teacher PD	Technology / resources / funding	Focus on BPC / UR populations	Pathways	Integration of CS	Publicity / exposure for CS ed.	Workforce issues	Training for admin / others	Other
Qualified teachers and access to tech. Staffing in general. Scheduling when to integrate? Take away other "gen ed" take to implement.	X	X	X							
Access to high-quality curricula - vet curricula and support PD for teacher. Don't ask them to write curricula when standards-aligned curricula can be identified and used. Tru K-12 implementation - not episodic engagement once in a while. Implement CTE programs of study - address workforce needs in MD (especially cyber).	X	X						X		
Branch away from "coding: focused classes to include other topics such as cyber security. Provide better training programs for teachers.	X	X								
Hiring additional CS teachers and running courses	X	X								
Integration into even-development/hot it is inclusive of the ISTE standards. I think there should be a list of several first, and leveraged by school/district needs. It would be great if we start with the "same" playing field prior to the start of school, and prof. development training.	X	X								
PD for implementing and teaching computer coding/technology to meet the new standards.	X	X								
Quality teachers and curricula for them.	X	X								
Use a standard in teaching computer science for K-8 across the district. Train teachers to teach the standards. Follow through.	X	X								
Students should have more access to the different mediums/platform/etc. to learn and practice.	X		X							
CS in elementary schools. CS on or as IEP objectives.	X			X						
Increase the number of female participants and implement more robotics courses.	X			X						
Make the classes more intuitive and available. Find more ways to attract students - increase entry level CS classes.	X			X						
I'm in a PK-12 private school and our main goal now is to develop computer literacy goals for each grade level	X				X	X				
A K-12 CS curriculum and strategic plan	X				X					

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Professional development		X								
Professional development for teachers		X								
Professional development in K-8		X								
Properly compensating instructors to make teaching an attractive prospect for qualified individuals to teach CTE computing courses.		X								
Provide professional development in IT, CS, and Digital Assessment for all teachers so that the necessary skills could be covered and gained by students in each discipline subject area (knowledge gain as well).		X								
Qualified teachers		X								
Quality professional development!		X								
Recruiting teachers. Offering classes despite lower enrollment levels.		X								
Teacher issues - teachers that lack quality resources like NetAcad, or seem unqualified to give a quality lesson		X								
Teacher PD		X								
Teacher PD to ensure quality course delivery		X								
Teacher PD.		X								
Teacher professional development		X								
Teacher training - PK-8		X								
Teaching training		X								
The need for qualified CS teachers in high school, and soon middle school.		X								
Training for teachers and how it should be implemented in an already packed schedule.		X								
Training teachers in computer sciences		X								
We now have a full pathway of CS courses so our school/district is progressing, however, we need additional CS teachers. So I would say hiring qualified teachers.		X								

What do you believe is the first Computing Education Initiative that your local school should address?	K-12 curriculum & courses	Teacher PD	Technology / resources / funding	Focus on BPC / UR populations	Pathways	Integration of CS	Publicity / exposure for CS ed.	Workforce issues	Training for admin / others	Other
Access to computing education is key; schools should have resources (both human and material/funds) to afford all students some point in their K-12 education, some experience in computing education.			X	X	X					
Funding of hardware, computer science is not just coding. Why CS education is important standards. Need for CS professionals in MD - jobs. Need for CS education includes equity.			X	X			X	X		
Diversity and access to courses			X	X						
Access to resources on a regular basis with meaningful application.			X		X					
Should address in all schools the importance of computing education. Having all schools have up to date technology in classrooms and computer labs.			X				X			
Access to students (Tech) internet.			X							
Access to technology (iPads or computers) in order to instruct/teach about technology students the materials/equipment to relate to.			X							
Access to technology for every child all day.			X							
Computer availability			X							
Funding			X							
Having global resources for everyone			X							
No additional idea, but CS resources or more other resources will be helpful.			X							
Provide equipment that students could use as well as a qualified teacher			X							
Providing teachers with the resources to teach computer science at the K-8 level.			X							
Resources (lack of)			X							
Software deployment on devices; hardware!			X							
The upgrade of the schools technology, and a better use of funds.			X							
Access to opportunities for computer science education are insufficient. How do we go beyond our "hour" of code.				X	X					

What do you believe is the first Computing Education Initiative that your local school should address?	K-12 curriculum & courses	Teacher PD	Technology / resources / funding	Focus on BPC / UR populations	Pathways	Integration of CS	Publicity / exposure for CS ed.	Workforce issues	Training for admin / others	Other
I believe all students at the local school should learn about computational thinking. Student should be able to select other CS courses at the school after completing computational thinking course.				X	X					
Encourage everyone to explore computer science - and know that everyone is capable, not just the highest academic achievers.				X			X			
Finding students interested in taking CS IT courses and supporting them.				X			X			
Encourage female students to learn sciences and have science careers				X				X		
Allow less restrictions/requirements. For girls to register for AP CSP (currently they need a 93 in math) and have a better CS (more time) for middle level - girls who are seniors don't know HTML/Internet basics.				X						
Enroll more students in AP CSP and CSA courses				X						
Equitable access to computer science at all grade levels				X						
Equity of funding at the state level.				X						
Find people with interest and let them get into it.				X						
In order to expect to see gains in 9-12, we must make a concerted, strategic effort to address advocacy, access, and equity in PK-8.				X						
More women in the IT field.				X						
Recruiting more students - CS for all				X						
Starting a Girls who Code Club.				X						
I think our district should look to moving beyond code.org and developing higher level blended curriculum.					X	X				
The first computing education initiative my local school should address is presenting the need and establishing cohorts with local universities.					X		X			
Better middle school exposure/career counseling.					X				X	

What strategies should the state use to increase a more diverse computing workforce?



What strategies should the state use to increase a more diverse computing workforce?	Early exposure	Create more opportunities (for all)	Teacher development	Equitable funding	Diversify teacher force	Curricular changes	Administrative changes	Publicize need	Reach women / Other UR students	Equipment / resources	Other ideas
Provide coding programs for title one schools and target diverse children PH-12! When they have the experiences, and mentors, and success, the workforce will naturally diversify.	X	X									
Push it through all levels - must have the mantra "anyone can code"	X	X									
Require CS content at elementary levels. Include CS requirements in teacher prep programs by levels (ES, MS, HS,...).	X		X				X				
Engagement at primary levels - hands-on, what is computer science? Also more teacher PD (middle school, high school - too late).	X		X								
Professional development programs/coursework offered to K-8 to get teachers prepared at the early levels. With any language the earlier you are exposed and more opportunity to use, you will see more success.	X		X								
Funding programs and PD beginning in PreK/K funding for teacher prof. dev.	X			X	X						
Grants for teachers to have after school clubs in middle school	X			X	X						
Properly distributing funds for programs and educating councilors in comprehending most school on the value of these programs for students.	X			X							
Begin developing skills, embedded in existing curriculum, prior to HS. Develop an approach to computational thinking using real world tasks in PK-8 plus. Create an integration plan for framework and standards PK-12.	X					X					
Better pay, more open resources, more exposure to CS early on, promotion with CS careers	X					X					
Implement a pre-K thru 12 curriculum. Involve parents and guardians in math teaching strategies primarily in pre-K thru 6.	X					X					
Integration of computer science into curriculum from the youngest grades (or at least by grade 2) - however, this must be done with curricular experts and teachers followed by effective PD.	X					X					
They should work to promote technical fields in younger grade levels and work to introduce technical clubs like cyber patriot and robotics clubs	X					X					

What strategies should the state use to increase a more diverse computing workforce?	Early exposure	Create more opportunities (for all)	Teacher development	Equitable funding	Diversify teacher force	Curricular changes	Administrative changes	Publicize need	Reach women / Other UR students	Equipment / resources	Other ideas
Start in elementary.	X										
Tech programming and coding to young students K-5.	X										
To increase a more diverse computing workforce, the state should continue to support afterschool clubs and advertising/providing conferences for students to attend as early as 5th grade.	X										
Implement initiatives to attract underrepresented groups to computer science K-12 (female, people of color, individuals with disabilities). Provide grant funds to local school systems to implement proven programs and CTE programs to address workforce needs (Information tech cluster).		X		X							
More training for greater exposure in schools. TEALS like meeting w/ women and diverse people coming to assist teachers be a role model.		X						X	X		
Encourage more students, give more students opportunities to work with equipment		X								X	
Access (even our venue had Wi-Fi connection difficulty).		X									
Consider reaching outside the school. Public libraries, boys and girls clubs, scouts, summer camp - outreach to these organizations to offer something. Students learn in a relaxed, social, team building environment.		X									
Education for all. All students take CS courses.		X									
Encourage student participation in general - don't encourage only specific people, but give opportunities to more people.		X									
Ensure that the students are prepared or have access to resources that inspire.		X									
I came from a very small school and I was given an opportunity to attend. I hope this will continue to reach out from small through a large community.		X									
Include representatives from private, public, and maybe even home schooling.		X									
Increase competitions involving coding/robotics among students/schools. Celebrate student achievement in computing education.		X									
Increase educational opportunity for students of all ages.		X									

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More choice in classes for students. Not all kids need higher math, deep English classes - more practical things they are interested in.		X									
Opportunities to increase minority population in CS participation		X									
Providing all students with access to a computer science course. Venue is not great - projector screens are small and hard to see - parking was terrible.		X									
Reaching out to lower income students. I've noticed an increase in these students in CS classes over the past year.		X									
Shift from 'opt in' to CS for all.		X									
Statewide competitions schools can participate in coding, web design, robotics, computational thinking.		X									
To have a task force to ascertain the needs in ES work with special education department as to meet the needs of these students.		X									
Training in underrepresented area		X									
We need solid, basic interesting "Gateway" courses to appeal to as broad a student base as possible, so we can find and develop as many students from the widest cross-section possible.		X									
Advertise the need for more teachers and students in the computing field. Advertise the rewards of learning the subject matter and the opportunities that are open to those in this field.			X		X			X			
Get schools directly in contact with business to collaborate with teachers, recruit students and develop curriculum.			X			X			X		
Ensure that dept. missions include their trainers' viability to actively participate in Professional Development trainings w/out employment damage/fears or retaliation. Workforce must keep up. Ensure access matches necessary workforce demands/needs for employee training. Allow employers to give employees ample time to update tech skills with their real sample projects to train with. Thus, W.F. trainers will need to get			X				X				

What strategies should the state use to increase a more diverse computing workforce?	Early exposure	Create more opportunities (for all)	Teacher development	Equitable funding	Diversify teacher force	Curricular changes	Administrative changes	Publicize need	Reach women / Other UR students	Equipment / resources	Other ideas
more quality experience that MSDE, CSTA should offer or Have a resource for us to access.											
Hire based just off merit. Diversity should not play a role in the hiring process.			X				X				
Leadership roles in the education sector (state, district) level that have both industry and teaching experience in the public school systems. In addition each school system has its unique challenges, so someone from each school system should provide leadership for the computer science programs that are implemented in the program.			X				X				
Provide more job related training in cybersecurity and networking to accommodate students who do not wish to attend college.			X					X			
Alternative methods to certification. Drop the requirement for the regular praxis.			X								
Ease of certification. Advertisement of pathways to certification			X								
Emphasis on opportunities for jobs in the future. States should use in-house training. Each state has unfilled position because of a lack of knowledge.			X								
Get more trained staff.			X								
Have to make to certification requirements realistic.			X								
Help the teachers who are older or less tech savvy with the vital skills that they can pass down to students.			X								
Increase number of university programs for pre-service teachers			X								
Offer alternate certifications I don't need a full-fledged CS degree to teach Middle School 6 - 8.			X								
Professional incentive tied to professional ROI in workforce.			X								
Allocate grants and opportunities to gain more diverse educators in the field				X	X						
Free or subsidized training or scholarships				X	X						
Grant funding and statewide PI				X	X						
Additional funds to schools and systems				X							

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Assist schools in lower income, higher minority areas with providing/supporting a CS program in K-12 arena.				X							
Focus on providing resources to educators, provide more funding for out of school time education				X							
Make available resources and supports for teaching professionals.				X							
More affordable training programs				X							
More educational free resources to help prepare				X							
More free curriculums and more free training.				X							
Pour more money into the budget. Use that money to offer grants to hire/train a diverse workforce of CS teachers.				X							
Provide resources/great opportunities to districts who came up with their own innovative ideas to increase diversity				X							
Standardizing CS Curriculum with assignments. Funding for in house and summer training. Ongoing technical and curricula supports.					X	X					
Continue to fund teacher training and grants. Equipment in underrepresented district.					X					X	
Cohorts and opportunities to have already "highly qualified" teachers get certification.					X						
Create a more diversified teacher computing education workforce as an example for students to be encouraged to join computing.					X						
Diverse teachers of CS and more teaching of CS in earlier grades					X						
Increase funding and pay for educators for CS.					X						
Pay boards that pay hard to recruit CS teachers more money!					X						
PD at all faculty and staff levels beyond "legally required professional training".					X						
Recruit diverse teachers! Offer support to minorities with encouragement/other pathways. Give diverse examples.					X						

What strategies should the state use to increase a more diverse computing workforce?	Early exposure	Create more opportunities (for all)	Teacher development	Equitable funding	Diversify teacher force	Curricular changes	Administrative changes	Publicize need	Reach women / Other UR students	Equipment / resources	Other ideas
The pay level, paying for higher education for teachers.					X						
Incorporating computer use across the curriculum - one to one device could be a useful step.						X				X	
Create partnerships with business to drive community support and education.						X					X
Adding computing standards with current core standards						X					
Better comp sci classes						X					
Create a curriculum and course requirement						X					
Curriculum guidelines and links/suggestions						X					
have a curriculum that effectively address CS						X					
Make a state curr. Instead of pushing local counties to adopt their own. That's how we address equity.						X					
Provide incentives to industry for partnering with K-12 schools to provide employees as speakers or teachers in classrooms. Provide districts with a mandate to create time in the school day schedule to teach CS.							X				X
Adjust graduation requirement to include computer science.							X				
In addition to the current work (students, etc.) is to give credit for CS classes (beyond the Tech credit).							X				
Look into making computing classes required to graduate.							X				
Make intro to logic/programming a requirement							X				
Regional events for principals, district folks, and teachers							X				
The state should make computer science a graduation requirement.							X				
Work close with local school system administrator with educating about the lack of diverse in the computing workforce							X				
Involve local tech businesses.								X			X

Please provide any additional comments or questions.

Please provide any additional comments or questions.	Question / other	Content issue / suggestion	Tech issue	Environmental issue	Logistical	Curriculum	Teacher Development	Implementation	Funding / resources	BPC	N/A
Does MCCE include K-8 representation? How does someone get introduced? Freezing cold space!	X			X							
We cannot rely on enthusiasm alone when we consider what is best for educating our students. There must be clear expectations across grade levels like with other content.	X					X					
CS changes so rapidly - how can we keep up - funding - curriculum at all levels? What is being funded federally? State?	X										
Excellent conference	X										
Good info about the funding that's coming.	X										
Great job!	X										
Loved the NASA prez in K-8. Code.org table from Cecil County. D Weintrop prez. Also found the teacher prep and pre-science informative and useful.	X										
My head is spinning!	X										
One is a very happy the state of Maryland is doing to ensure the young people of the state computing education, which will allow them to be 21st century ready for the workforce.	X										
Students can't get excited about content, skills, or topics that they don't know exist.	X										
Thank you for this opportunity!	X										
Thanks for all the hard work organizing today. This team rocks!	X										
Thanks for offering this summit.	X										
Thanks! I am seeking employment opportunities to advocate STEM and Art (STEAM ED) beyond the classroom (Pre K -12). [contact info]	X										
This is a necessary start!	X										

Please provide any additional comments or questions.	Question / other	Content issue / suggestion	Tech issue	Environmental issue	Logistical	Curriculum	Teacher Development	Implementation	Funding / resources	BPC	N/A
Was a great experience	X										
Wi-Fi not accessible. No pre-service programs in major MD universities in CS for teachers. The CS Resource Share-a-thon format was very informative.		X	X								
Awesome summit, loved the station-rotation session. Kept us warm! Please create a MCEE crosswalk. Need more diversity for the student panel.		X		X							
Have sessions more than once, at least the popular sessions. If I wanted to go to 2 sessions at the same time, it would have been easier to offer them again so I could attend both.		X			X						
In session 2, I had 2 parts I wanted to attend, but in session 1 I had a hard time finding 1 I wanted to attend, I wish we had tracks set up for people to follow.		X			X						
Written copies to follow along with during presentations would improve the presentations. Would be better if incorporate more technology in presentations such as examples of programs and how they work or hands on opportunities to test out dif comp programs or lessons in each. Too much lecture and not enough application and experiences in most presentations.		X			X						
As an elementary tech teacher facilitator there was not much to apply to elementary school (in regards to the framework and teacher preparation). The CS resources was very helpful and reliable to elementary (well all ages).		X									
I would have been helpful to have different strands for elementary/middle and high school educators. There were several concurrent sessions that would be relevant to me as a new MS teacher charged with developing curriculum. K-8 resources great but v. crowded and loud venue.		X									
Include technology trainers/teacher of DLLR, workforce BWIB, like the correctional computer teachers or teachers who teach technology. The job corps business occupations/office administration teachers. The teacher collaboration in MD would help incorporate all levels of CS in their workforce area and promote college students		X									

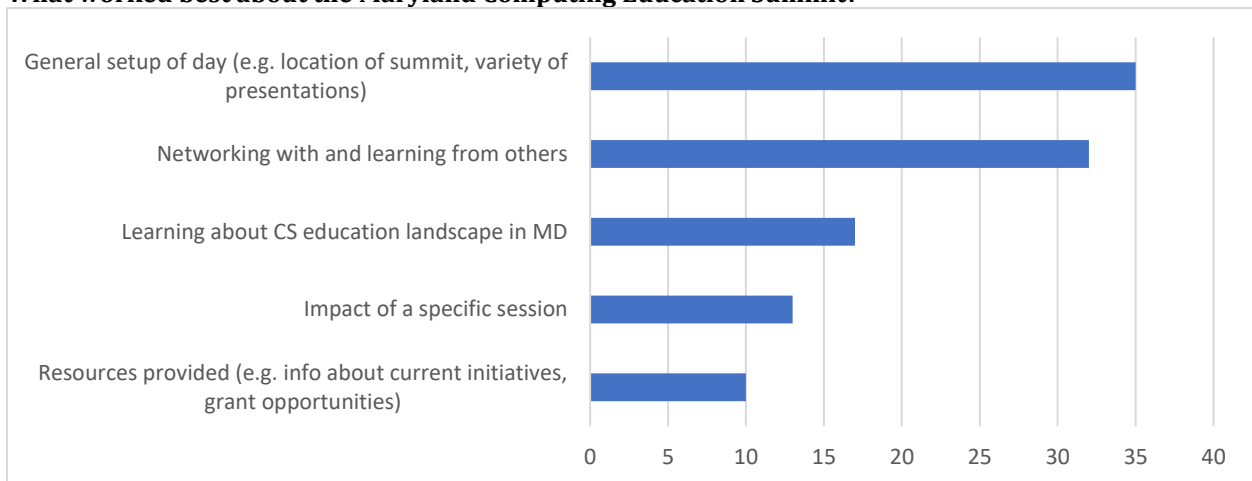
Please provide any additional comments or questions.	Question / other	Content issue / suggestion	Tech issue	Environmental issue	Logistical	Curriculum	Teacher Development	Implementation	Funding / resources	BPC	N/A
and advance CS training and certifications. Auto teachers, landscape, all trades, and all technology teachers should adhere.											
More information becoming part of the planning and input committees.		X									
More interactive sessions!		X									
Resource website of materials		X									
Should reach out to more government and company-based supporters to also present at this event. Thank you.		X									
Would have been nice to see more diversity (more girls, diverse areas of study) represented on the student panel.		X									
No internet at all - connected to wireless but didn't work. Power limited to plug in devices to change. Very cold in ballrooms.			X	X							
Very cold in this place. No Wi-Fi. Screen in main room not in center - hard to see, poor layout felt uninvited on far side of the room.			X	X							
First session wasn't super informative. Wi-Fi is unreliable. Since size is growing, maybe host 2 summits in diff areas; i.e., share/across bridge.			X		X						
Microphones for first panel would have been helpful.			X								
Poor Wi-Fi connection. Difficult to participate without a quality internet connection.			X								
Provide mics for student presenters/panels.			X								
Wi-Fi did not work for me. Otherwise, all is great!			X								
Parking was difficult. It was difficult to see.				X	X						
Only downside was the dahlia ballroom was not set up well for the group - a second screen would have been helpful. Not a great location (too big) for a break out session - but in saying this I know how hard it is to find a good affordable conference space.				X							
Set up was hard to see presenters and PowerPoint				X							

Please provide any additional comments or questions.	Question / other	Content issue / suggestion	Tech issue	Environmental issue	Logistical	Curriculum	Teacher Development	Implementation	Funding / resources	BPC	N/A
Venue is too dark, hard to see presentations				X							
It would have been nice to receive copies of draft standards.					X						
Parking out front is challenging					X						
We should set up cluster teams elem, middle, HS, CC, and Uni members to present at all levels on their role in CS to students.					X						
Classwork be created by MCCE? (for curriculums already in place)						X					
Logic should be taught in high school						X					
More computer classes. More use of tech.						X					
Need to have CS become its own department with clear definition of what it is separately from math or experts at distinct level needed to oversee curriculum and new department or math or CTE science "step son" needs of CS.						X					
The need to address the transition to 2 year colleges and then the move from 2 year to 4 year colleges.						X					
Vital for the MCCE to develop curriculum all school systems to access. We can't keep up alone. Collaboration of sharing should be number 1 priority.						X					
Consult with district school boards to mandate schools to send "teachers" to computing education trainings; these trainings should be widely publicized.							X				
Create recommended benchmarks for computer science PK-12. Include private school voice in committees to ensure a greater sense of equity.							X				
Grants for K-8 teachers to use towards coursework.							X				
One of the big problems I've seen with finding and keeping CS/IT teachers is that in most places we don't get academic credit for professional certifications, so we end up paying out of pocket and getting no return for certs we are required to have to teach the classes!							X				

SURVEY B (N = 114)

As a result of this summit...							
	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average
I have a better appreciation of the importance of computing education in MD	109	1%	3%	8%	34%	54%	4.4
I networked with individuals who can influence computing education in MD	110	2%	4%	13%	34%	48%	4.2
I have a better appreciation of what can be done to improve computing education in MD.	110	1%	1%	10%	50%	38%	4.2
I am better prepared to help my school or school system implement computing education	106	2%	1%	16%	43%	38%	4.1
I made new connections that will help me improve computing education in MD	111	2%	5%	14%	40%	41%	4.1
I am more prepared to teach computing education lessons or courses because of what I learned at this summit	100	2%	13%	18%	36%	31%	3.8

What worked best about the Maryland Computing Education Summit?



What worked best about the Maryland Computing Education Summit?	General setup of day	Networking / learn from others	Learning about landscape	Specific session	Resources provided
Good topics, learning from other participants	X	X	X		
A comprehensive schedule engaging all stakeholder interests and sparking networking opportunities.	X	X			
Being mindful, deliberate and successful in including a wide range of stakeholders from across the spectrum.	X	X			
Networking, structure	X	X			
Location, presentations	X			X	
Very organized and well done. I found each part to be informative. Resources were provided.	X				X
Appropriate length sessions	X				
Choices in breakout sessions.	X				
Different sessions	X				
Good pace of session	X				
Having choices for sessions.	X				
Having different breakout sessions	X				
I enjoyed the variety of session topics.	X				
I loved the broad approach to the topics!	X				
Informal setting and kept to time frames! Variety of sessions.	X				
Length of sessions was good	X				
Located close to Baltimore	X				
Location and space was perfect but technology wasn't. Advertisement of free training was great!	X				
location, content	X				
Nice diversity of areas	X				
Picking the sessions that best suited my needs.	X				
Schedule was good	X				

What worked best about the Maryland Computing Education Summit?	General setup of day	Networking / learn from others	Learning about landscape	Specific session	Resources provided
Session length - long enough to get deep into a topic but short enough to maintain attn.	X				
Small sessions were great	X				
Thank you for the choice sessions	X				
The ability to choose which session you attend.	X				
The organization of sessions and timing was good.	X				
The organization of the sessions and presentations	X				
The sessions were relevant	X				
The time (duration) of the sessions was very appropriate and not too lengthy or short! The content was also to the point.	X				
The variety of topics	X				
Variety and detailed information and resources	X				
Variety of seminars	X				
variety of sessions	X				
Variety of sessions and people, convenient location	X				
Networking and education on resources and programs available. Summaries of each session. Experience shared.		X	X		X
Getting to speak to the code.org representative was very helpful. I really learned from other teachers as well.		X	X		
Meeting people and learning about what's happening at other schools and getting current with MD events		X	X		
Met new people. Learned about available classes.		X	X		
Networking and learning about opportunities		X	X		
Networking and table topics		X		X	
Networking the playground interactive stations		X		X	
Network with other CS teachers. A lot of resources were showed.		X			X
Personal and professional resources being able to network at multiple level		X			X

What worked best about the Maryland Computing Education Summit?	General setup of day	Networking / learn from others	Learning about landscape	Specific session	Resources provided
The topics and availability to talk to people who can lead me in the right direction. Also gave me resources to help me in building an AP Program.		X			X
Access to the stake holders at all levels		X			
Being new to CS, it was useful to interact with all the people and organizations influential in the field. Networking!		X			
Chance to talk with educators about CS in MD and learn about initiatives		X			
Getting to network and hear about other initiatives		X			
Great network opportunities within sessions		X			
Have the chance to meet out of school CS providers		X			
I appreciated being able to network		X			
Lots of opportunities for networking!		X			
Meeting people		X			
Network opportunities with others		X			
Networking		X			
Networking & info sharing		X			
Networking!		X			
Networking. I appreciate the opportunities.		X			
Opportunity to network with others		X			
Perspective of other schools and systems		X			
That there were people from many locations and levels.		X			
The variety of people attending led to great networking opportunities		X			
Hearing from Keynote about the timeline of CS/CP. Opportunity to hear about CS in MD			X	X	
The employer industry panel work best for me because of the various questions raised and the quality of information shared.			X	X	

What worked best about the Maryland Computing Education Summit?	General setup of day	Networking / learn from others	Learning about landscape	Specific session	Resources provided
Great way to provide info about initiatives and funding plus grant opportunities. Research on how kids learn cs is great.			X		X
Learning new materials/resources and being able to view and understand the framework.			X		X
Provided more information on teachers training network, support and success. Also the future goal of computing education			X		X
Great to learn about the future of CS education in MD where we are headed with it.			X		
It gave a great opportunity to see the need to improve CS in education			X		
Seeing the across the board range of ed. program implementation			X		
Update on new/current curriculum			X		
Updates from other parts of the state/consortium regarding CS ED.; challenges of past, present, future; names and faces (CS Advocacy Movement)			X		
Use the time to introduce and excite people about the future of CS not so much time on history. Every session recapped history.			X		
Breakout sessions				X	
Breakouts				X	
Breakouts and table discussions				X	
Excellent panel				X	
Industry panel				X	
Panel discussions were excellent				X	
Really enjoyed the workforce panel.				X	
The Q and A				X	
CS resources work best for me who just started to learn about computer science education					X
I developed a better and clearer understanding of the expectations regarding curriculum and resources for the classroom					X
Everything was fantastic	X				

What changes would you make to improve the Maryland Computing Education Summit



What changes would you make to improve the Maryland Computing Education Summit	Logistical / venue	Additional activity / resource	Activity / format Change	Change to interactions / networking	Follow-up	Scheduling
personal tech integration (modeling techniques for education and enhancing engagement): access resources on phones during presentation, QR codes to scan, real time surveys, etc.	X	X				
Allow more interaction among participants from differing districts who have similar positions (e.g. elementary tech person). Discourage reading of PPT slides and talking heads. Start with a "what's new" in CS Ed in MD since the last summit.	X		X	X		
3 degrees warmer. Just more information and time with the panel. Recording via video or make this PDF a webinar in the future.	X					X
Bigger screens in all rooms, in person presenters are preferred. More opps to network, more heat less AC	X					X
More organization	X					X
Better set up for keynote. Better Wi-Fi.	X					
Bigger screens for projections. Double screens in ballroom	X					
Bring better Wi-Fi	X					
Catered hot food lunch, available outlets for device charging	X					
Change facility. Poor Wi-Fi connection. Uncomfortably cold. Uncomfortably squeezed at 10 per table in main room.	X					
Display screens needed to be larger. Maybe a hotel could better house a conference in terms of technology	X					
I liked the UMBC venue better.	X					
I would love to see it moved to the mid-shore!	X					
Improve facility platform. Main conference room screen was difficult to view. Also speakers were too low in volume - difficult to hear.	X					
Include advanced warning on the parking	X					
It was excellent. Lunch networking can happen organically - too hard to walk around room to discover discussion topics.	X					
Larger venue	X					

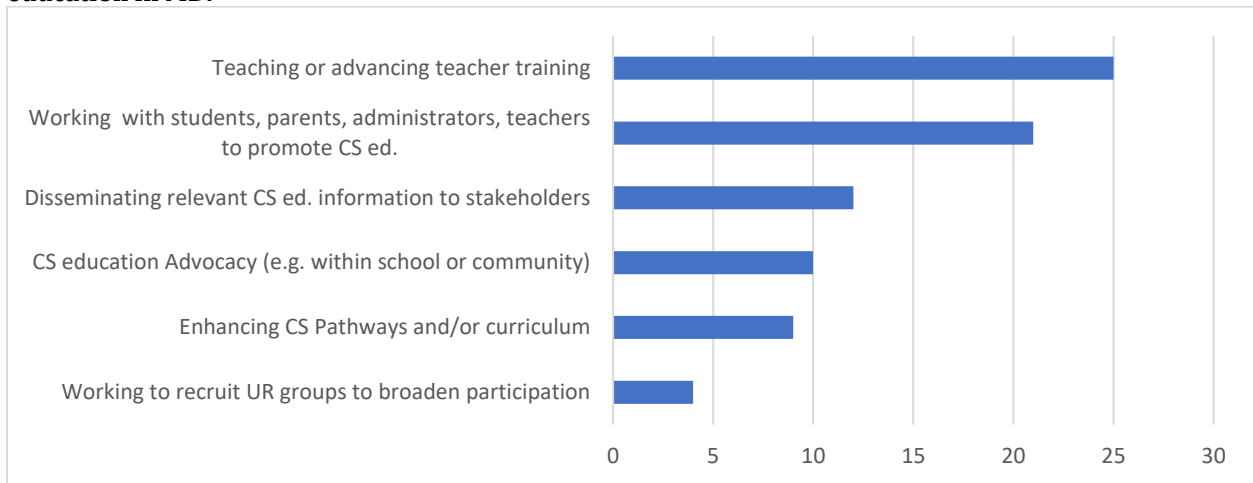
What changes would you make to improve the Maryland Computing Education Summit	Logistical / venue	Additional activity / resource	Activity / format Change	Change to interactions / networking	Follow-up	Scheduling
Location	X					
Location was interesting - very cold inside	X					
Make sure the Wi-Fi works!	X					
More inviting atmosphere, a centered screen hard to see it from the sides at the entrance	X					
More outlets, better Wi-Fi (or suggest in registration to bring hotspots.)	X					
Presenters in the main room need to be in center, need heat - hard to focus it was so cold, connecting conference - bad Wi-Fi	X					
The summit was good. I would however make sure that the facility is better prepared. It was cold and Wi-Fi didn't work that well.	X					
The venue might (could) be improved	X					
Warmer space	X					
Wi-Fi - obvs	X					
Wi-Fi that works	X					
More hands on and less lecture based. Incorporate examples of program curriculum and lessons and examples of how other like teachers advertise computer ed courses or experiences of teachers who initially taught a non-computer course but switched to teaching computer courses		X	X			
More open dialogue and interactive workshops		X		X		
Add a session about starting/implementing a program		X				
Add session on CT. Add sessions to address needs of elementary and middle school teachers.		X				
Continued advocacy to various content instructors outside of CS		X				
Cyber curriculum ideas		X				
Demonstrations		X				
Do birds of a feather earlier.		X				

What changes would you make to improve the Maryland Computing Education Summit	Logistical / venue	Additional activity / resource	Activity / format Change	Change to interactions / networking	Follow-up	Scheduling
Embedded opportunities to build on participants understanding of how to get more CP time		X				
Engaging more students with the curriculum		X				
Have more resources for elementary teachers/students		X				
I would create more opportunities for teachers to learn hands on activities for students.		X				
Maybe have ES, MS + HS breakout session		X				
Maybe just more choices but these were great		X				
Maybe offer ways for K-8 educators to gain/fund courses to reach a pathway		X				
More engaging session with specific strategies to move CS forward. Too much talking about the obvious. Everyone knows CSP exists!		X				
More take home lessons plans for in class teachers.		X				
Have grade based strands (elementary, middle, high, college) sessions for teachers to integrate CS instruction. More elementary level content			X	X		
Similarity of sessions on same track in schedule/there were 2 tracks where there were multiple sessions that were of interest but could have been spread out among tracks.			X			X
Eat during the keynote speakers speech			X			
More dynamic keynote. More inspiring.			X			
More seminars			X			
More sessions for K-5			X			
More sessions that go a little deeper into specific programs that can be used Pre-K to 8			X			
Sorting into ele, mid, and high session tracks			X			
This is a challenge because of everyone coming from different backgrounds.			X			
Too much programmatic information on the CCEI and plans for the new facility			X			

What changes would you make to improve the Maryland Computing Education Summit	Logistical / venue	Additional activity / resource	Activity / format Change	Change to interactions / networking	Follow-up	Scheduling
Get more teachers to attend - even if it's an online webinar format.				X		
I would have liked a focused share time based on levels. It would be nice to hear what other elementary teachers are doing.				X		
More counselors, principals invited/pushed to attend				X		
More networking time (group tables by geographic area or level of teaching)				X		
More time with MSDE for teachers to cover more of their particular questions or concerns regarding certification areas				X		
Network teachers learning CS with teachers that are successful (ex. CTE teachers)				X		
Not a thing - well possibly bring in industry leaders				X		
Teachers should share more best practices.				X		
A list of business that will send out speakers					X	
All resources available prior to presentations					X	
Continue them every year!					X	
Maybe post presentations PPT on the website. So we can review & reflect.					X	
More meetings per year					X	
Record each session so we can look back and watch the ones we missed.					X	
Set up the online site to promote and allow for ongoing discussion and sharing of ideas and resources.					X	
Video tape/share panel presentation					X	
Would love to see shared notes via Google drive. Also, would love to consolidate lists of organizations represented.					X	
Add more days to the summit						X
Have popular sessions more than once						X
More time for sessions. Each session ran out of time.						X

What changes would you make to improve the Maryland Computing Education Summit	Logistical / venue	Additional activity / resource	Activity / format Change	Change to interactions / networking	Follow-up	Scheduling
Share the information about it to my work area as well as to my family				X		
None - it was great!						
Nothing comes to mind						
N/A						
None						

If applicable, please describe the actions you see yourself taking part in to improve computing education in MD.

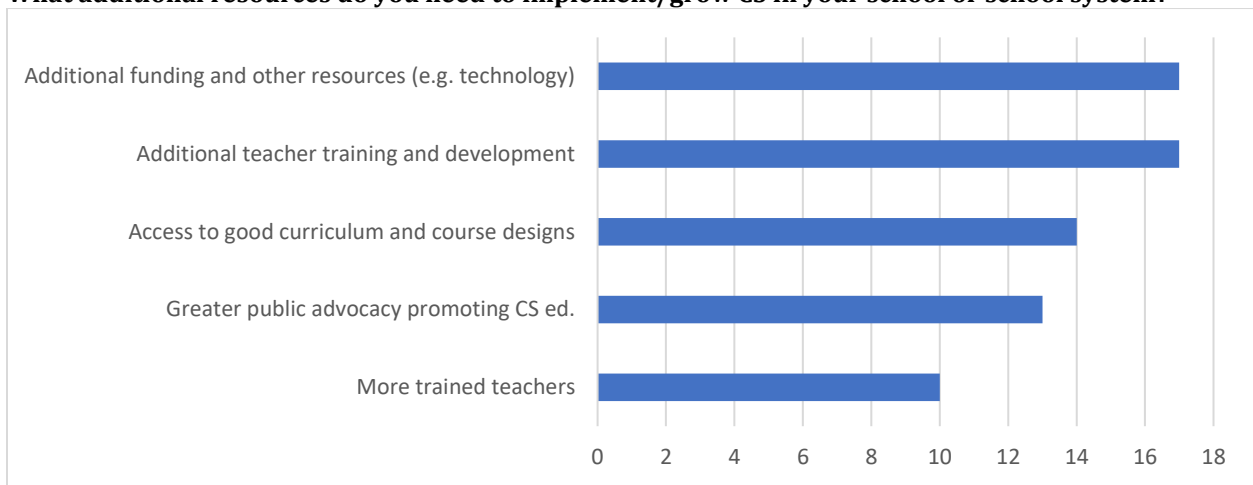


If applicable, please describe the actions you see yourself taking part in to improve computing education in MD.	PD / teaching	Work w/ stakeholders	Disseminate info	CS Advocacy	CS Pathways / curriculum	Work on BPC
I will continue to provide CS education to my students and network to enhance my practice.	X	X				
Looking for additional training and ways to connect with other educators.	X	X				
Recognizing my high flyers and encouraging them to learn more and pursue opportunities outside of school.	X	X				
Work with other schools. Start planning form PD grants!	X	X				
To improve and stimulate my students in a new way of learning. To attend more of these summits and make my voice be heard, put specific part of framework for ES.	X		X		X	
Doing more research in order to learn more CS and how to better help students to access programs which would provide CS learning.	X		X			
I will continue to do my part in education myself so that I can teach and share the importance of computing education.	X		X			
Offer CS programs at public library, girls who code, hour of code, code.org units	X		X			
Out of school time education	X		X			
Trying resources discussed to teach myself and sign up for training; encourage students to check out comp prog. courses and career fields using computers	X		X			
Advocate CS ed. in our schools and other schools. Continue teaching CS principles to my students.	X			X		
I feel more empowered to argue for teaching CS at the elementary level.	X			X		
Using my skills to help students and teachers.	X			X		
Promoting additional CS courses within my school	X				X	
Reviewing some of the other curriculums to supplement my classroom instruction and trying to bring more females and minorities into the CS classes	X					X
After school clubs, in class applications	X					
Attend the computer science principal training/course during Summer 2018. Please consider allowing teachers to attend this training even if school principals are avoiding giving their permissions.	X					
Continue to teach code and robotics in elementary schools	X					

If applicable, please describe the actions you see yourself taking part in to improve computing education in MD.	PD / teaching	Work w/ stakeholders	Disseminate info	CS Advocacy	CS Pathways / curriculum	Work on BPC
Getting CS endorsement on teacher certification. Taking Java programming workshop	X					
I am participating in more PD. I will overtly share with my students.	X					
I'll be attending training at Hood this Summer to be better prepared for my new class in Sept. It's not for MD as whole, but I'm doing my part for Worcester.	X					
Learning more about to teach this to K-12 utilizing my 30 yrs. CS experience	X					
More education for myself	X					
signing up for workshops and explore code.org	X					
Using it more often in the classroom.	X					
Attending and actively participating in this kind of conference and be able to share and connect.		X	X			
Inform my colleagues of what is happening in CS ed in MD		X	X			
Making connections with teachers in my county. I didn't realize they were struggling so much.		X	X			
Provide more PD to teachers		X	X			
Sharing "outside" CS opportunities with students. Focus more the ethics of CS!		X	X			
Starting the discussion at my school on how to build our program		X	X			
Continuing to advocate at my school and others. Work with admin ?? Schools now.		X		X		
Working to integrate CS better into the other content areas. Help my school staff develop a deeper understanding of the breadth of CS.		X			X	
Working with teachers and administrators to bring more CS content across all grade levels.		X			X	
I will be meeting with the STEM coordinator to develop a strategy to increase student participation and family engagement.		X				X
Bring what I have learned today and back to school and share with staff		X				
Communicating with parents, students, and communities/town meeting forum		X				
Continue to volunteer to speak to students		X				
Encouraging more teachers to get involved in CS edu.		X				

If applicable, please describe the actions you see yourself taking part in to improve computing education in MD.	PD / teaching	Work w/ stakeholders	Disseminate info	CS Advocacy	CS Pathways / curriculum	Work on BPC
Set up and run PD in my geographic area		X				
Sharing with district leaders about industry needs and available, free resources and support.		X				
Submitting some of my CS learning materials/lessons for use in the MD district school systems		X				
Helping to design and develop curricula and research effects				X	X	
Working to step up a program for students in my afterschool program to earn college or AP credit for the work they do in our CS courses / part of the MD CS K-12standards writing group				X	X	
Advocacy of STEM and art (STEAM ED) in and out of the classroom setting via/ with K-12 districts, higher ed. institutions, non-profit organization				X		
Advocating for more computer science, cyber security, and software engineering courses in the high school and middle schools				X		
Community resource to support my community empowered. Thank you.				X		
I would love to be more involved at a regional level				X		
Bringing a continuum to PK-12 in my district, Increase access					X	
I want help with curriculum writing					X	
Working on the review of the CS standards					X	
Female and minority recruiting						X
Showcasing and attracting more into CS						X
Finding a new mission.				X		
Look for internship opportunities		X				
New levels in awareness - Also reinvigorated and excited about the CS/CT challenges that lay ahead.				X		
PLTW					X	
N/A						

What additional resources do you need to implement/grow CS in your school or school system?



What additional resources do you need to implement/grow CS in your school or school system?	PD / training	Funding / resources	Courses / curriculum	Public advocacy	Teachers
More access to PD and resources	X	X			
More specific workshop about each individual CS resources	X	X			
Pay for me to obtain certification... money. Provide funding for all CS PD. Access to software installation privileges	X	X			
Integrated curriculum. PD on integration, CS knowledge, more than just coding	X		X		
Resources on CT to help teachers in content areas, particularly science (NGSS)	X		X		
Summer training info (free teacher or student training, online courses, or curricula that's free	X		X		
Lists of supports/organizations. Opportunities for professional development. Opportunities for students. Statewide competitions.	X			X	
MCCE to help get districts on board. Connect to providers.	X			X	
Frequent training/webinar for teachers	X				
Further coaching	X				
More content knowledge	X				
More PD conferences	X				
Take AP CS Principles workshop	X				
Time to learn myself and implement	X				
Training	X				
Training, online programs, 3-D printer/maker space info	X				
Where can I get super low cost or free CS training?	X				
Info about what is out there in one place. There is so much, have a way to find it all.		X		X	
Infrastructure, hardware is outdated and is unreliable. Buy-in from district or admin. Resources to share with families to educate the on CS.		X		X	
Funding and qualified trained staff		X			X
More teachers in the field, more resources		X			X
Resources/trained staff		X			X

What additional resources do you need to implement/grow CS in your school or school system?	PD / training	Funding / resources	Courses / curriculum	Public advocacy	Teachers
Funding and admin support of CS in K-8		X			
More hardware. Raspberry PI, Arduino, Ipad		X			
More resources and maybe a grant to purchase some kits, Chromebook carts. Need funded in school with 95 % students with free and reduced meals.		X			
More technology (spheros, ozobots, etc.)		X			
Robot kits (REV, FTC, etc.). Support for after-school programs such as First Tech Challenge, First Robotics, NSBE, MESA, Ten80 Racing Challenge, etc.. Resources: 3D printer, tablets		X			
time		X			
Up-to-date computers!		X			
Up-to-date computers, better LCD projector		X			
We really need better computers, or the right kind of computers for coding		X			
I need an AP CompSci A curriculum. It would also be helpful to have an in-class aide who can help answer student questions when the student teacher ratio is 30:1.			X		X
Independent Ed Tech consultant / instructional design			X		X
Computational thinking curriculum in K-5 math and science			X		
Curriculum for CSA			X		
Curriculum, using code.org			X		
Just a cohesive curriculum a lot of problems with implementation is the time schedule! A program that responsive at times to schedule changes.			X		
Lots of resources are available for curriculum but most only have introductory info for free. To get full use of materials we need the school districts to purchase licenses!			X		
more curriculum			X		
More summer programs			X		
Please keep attendees abreast of developments/rollout of standards and access initiative efforts and resources			X		

What additional resources do you need to implement/grow CS in your school or school system?	PD / training	Funding / resources	Courses / curriculum	Public advocacy	Teachers
Standards for CS in K-8			X		
Trying to get other teachers involved in training to promote CS outside of a stand-alone class.				X	X
A way to inform higher level admin of the importance, better accessibility to curriculum and resources, training				X	
Administrative/management support from school/district leadership				X	
Advocacy help to see that CSP doesn't have requests so more students join. Keep kids engaged despite admin pressure				X	
I tried to start a club this year but was denied. Educate school leaders on the variety of opportunities.				X	
It would be great if MSDE could help spread the message to superintendent for us.				X	
More contact with principals and administration				X	
Someone to convert administrator!				X	
Speakers willing to come explain what they do to my students and inspire them to continue in this field.				X	
Additional qualified CS teachers					X
Another CS teaching position					X
College CS teachers presenting					X
Teachers!					X
Logic					
Unsure at this time					
None additional					
None at this time					
N/A Great job					
none					
None					
N/A					

Please provide any additional comments or questions.

Please provide any additional comments or questions.
A worthwhile event. Many good things are happening around the state!
Are there any intro to comp ed. courses or integration programs that are more basic and interdisciplinary than CSP? Perhaps an online program that could be implemented or incorporated in non-computer subjects like biology or other core classes?
Because this conference was packed with valuable information, I suggest video recording all the sessions and making them available for teachers to share with other teachers, administrators, parents, and students
Great conference, very informative
Great Job.
Great location but cold.
Great summit
Great summit! Please get exhibitors (Industry Partners) to attend.
Great work and momentum building!
Great!
I'm interested in assisting with PD of teachers from a digital literacy perspective.
I am seriously peaked and interested in any employment opportunities that would utilize my classroom teaching experiences; artist-educator experiences; STEM Ed/video game design and development/ computer animation experiences; education management and admin experiences
I like the fact that there is a Google site that is accessible to participants. We were able to hear from individuals involved in the CS policy making process.
Idea to think of and support computer education outside of schools. Public libraries can reach home school students and students whose schools don't yet offer CS classes, as well as classroom extension opportunities. Also promote to Boys & Girls Clubs, Scouts, etc.
If you could keep us on a mailing list it would be great. Please provide the Google link to summit info from presenters if possible.
Industry panel reflected largely US Government related professionals. It would have been a plus to hear from a truly private sector company such as Google or Microsoft, etc.
Keep up the good work! I love the inclusiveness and open minded philosophy
Lack of internet was a large issue
N/A
Nice

Please provide any additional comments or questions.

Once students are "hooked" into CS how do we keep them with additional courses

Thank you for this great opportunity!

Thank you for this opportunity

Thank you so much. This is a wonderful opportunity for me to increase knowledge about computer science education and educating our youth.

Thank you!

Thanks for hosting today!

Thanks!

There are some counties that are not represented that should be reached through liaisons

The main speaker for the Cybersecurity was from a conference call. I know this probably not what you had planned and it had to be done that way, but it was very long and a lot of talking about programmatic information CCEI and their new facility. He couldn't really see our verbal cues from the audience.

The presenter on the phone was not clear could not hear every word that was said. This made it difficult to follow his presentation. Very good information to take to my school.

This was a really helpful summit

Very good PD sessions

Very good summit

Was hoping cybersecurity talk was going to be focused more on opportunities for students/teachers but it was not at all. Only takeaway was I'm looking forward to see what the new cryptologic museum has to offer when it opens in 2020.