Using the ACM Model Curriculum for K-12 Computer Science to Support Professional Practice

In a recent Member Satisfaction Survey, we asked CSTA members to tell us if and how they have been using the ACM Model Curriculum for K-12 Computer Science. Here are the direct quotes from our members, organized by use.

Curriculum Design

- Construction of new GA State Curriculum in Computing
- I served as a consultant on the Georgia Department of Education Computer Science curriculum committee. The ACM Model was used as a guide for our high school curriculum
- In development of the state of NH competencies for computer programming vocational programming
- At our next meeting, the Diocese of Venice in Florida is considering using the Model Curriculum to create C.S. education standards for both elementary/H.S.
- I am trying to help the Fredericksburg Virginia School District develop a curriculum that would satisfy the Virginia Standards of Learning Exam and at the same time follow Curriculum for k-12
- One of the strands or our middle States work is technology. It is confirming what we require of our students and when in our curricula we require it.
- Distribution to the local K-12 public school district for implementation (currently under review)
- Used as resource in writing state curriculum for a computing pathway
- Used as input into the development of a national curriculum for South African schools
- As a reference and support for advocating developing a national CS curriculum in Taiwan
- I am working out ways and means to implement it in Indian situations. It was very useful professionally Thanking you
- We rewrote the Curriculum for 2 year college to make it easier for students to transfer to 4-year school. Used guidelines in what topics to offer in each core class
- I am using ACM model as template for me and I am trying to implement its maximum features relevant to my curriculum
- As a guide, we are currently adopting some of the curriculum suggestions into our own curriculum
- To write a new curriculum for 8 - 12.
• Introduced a computer science I class at the high school level
• Implements in high school for 5th to Xth
• I was able to use some at the beginning of the year. Further into the year our technology (outdated) was improved and I found that what I had learned did help me help the kids
• Our school is modeling our curriculum on this document
• To help write a course description for a new Java programming course that we started this year at Holland High School
• Used to develop a middle school curriculum
• I am working on implementing ideas and using it as supporting material
• I used it as a guide to setting the curriculum at my institution
• My school is looking to overhaul their technology curriculum from K-12. I have suggested the ACM model curriculum to my task force that is in charge of curriculum.
• Used in building my courses
• Hope to use parts of it in a general course on Computer Science -- depending on my district.
• Writing new curriculum & writing school technology plan
• To plan curriculum
• Yes. Development/modification of current curriculum.
• To assist with HS curriculum decisions
• To define our curriculum

Curriculum Review/Modification:
• I am working on our districts k12 mathematics curriculum committee and trying to integrate ideas into the earlier grades to increase student's problem solving skills
• Used as a reference in developing/updating CS curriculum at St. Rose HS
• I have taken bits out of it to incorporate into my CS curriculum at the High School level
• Used it in educational leadership meetings for discussions on revising curriculum
• Extending web programming principles into the Business education curriculum.
• I have used it as a resource for courses and inspiration for the classroom.
• Verify the courses follow the new curriculum. Make adjustments to existing curriculum
• I adjusted my curriculum
• I am currently using the information along with other sources as I realign the K-12 curriculum for my school
• To align standards for creating curriculum since there are no national standards
• We used it for making improvements in our curriculum
• CS Curriculum Revision Committee
• Redesign/align our curriculum
• Using the information in the model curriculum to help determine how to improve our district k-12 technology curriculum comparison with current state AND school implementations
• We are using it as a guideline to reconsider our Junior High and High School Computer Science curriculum
• To confirm & adjust curriculum
• The information as used to cross reference against our local proposed National IT curriculum
• It has helped me think about what I should be doing in K-12 Computer Science
• As a guideline as to what I should teach
• Checked to see how my curriculum aligns with listed criteria
• Appropriate instructional objectives
• I use it to evaluate whether the high school curriculum meets the model curriculum requirements
• Comparing our curriculum map to the ACM standards
• Consistency with AP comp sci
• It has helped me to compare the CS curriculum at the school
• I read through it and looked to see if we line up with it at our school
• I compared and improved my curriculum.

Improving Instruction:
• Found standards that aligned with my curriculum. Used the information to adjust my own teaching practice
• To improve my lessons
• To make sure I was covering what was expected of my courses
• I design outreach activities for K-8 students as part of my school's mission. I have used the model curriculum to help select appropriate activities.
• To make sure I’m teaching to the curriculum
• When teaching computer science, I used the Model to make sure I was including relevant information to my students
• As a first year Computer Science teacher it has helped me judge what to include in my instruction.
• I have used it to make sure I am keeping abreast of current issues and curriculum developments.
• It helps me get an idea of what I should be teaching and what the students should be learning
• I used it when restructuring my curriculum maps
• Help me build a 3D Game Animation curriculum
• Helps me with planning, evaluation.
• Lesson Plans in the classroom
• In my lesson plans and curriculum
• Ideas for activities

Advocacy:
• It has been a great resource for us in outreach as well as a good impetus to try to get CS education up to speed in our state
• More to encourage its use in our elementary and middle schools to prepare and encourage kids to try this field
I used some information to help me recruit minority and female students.
Used in advising the Administration on our curriculum
To encourage administrator to develop curriculum in our elementary school
During meetings on the state educator and business partner level.
Suggestions for our administrators and suggestions for coursework
Basis for discussion with school administration.
As documentation to administrators that Computer Science concepts can and should be taught at lower grade levels.
I have shown it to the Assistant Superintendent for Curriculum to encourage more and better instruction as it relates to the curriculum for VA SOL's for technology
I shared it with my administration
I have given a copy to my curriculum coordinator in hopes that they will continue to support the computer science budget instead of cut it
I have simply shared it with others in order to prevent the demise of the CS program in our area
Shared with District level administration for vertical articulation
In meeting with administrators and for planning purposes
Basis for more computer classes
I shared it with the Director of Mathematics at my school, who is also in charge of our Computer Science curriculum. I also shared it with the Superintendent for Instruction and Technology. I used it to make the case that we should change our Freshman required computer course (half year) to provide a small introduction to programming.
I gave our administrators a copy
Passed it on to county administrators
Introduce it to professor and students in Korea. We are now developing more materials for it.

Planning Resource:
I used the info when writing the scope and sequence of our technology courses for our school
Developing lesson plans
I have referenced it for my overall lesson planning
I used it to help me plan my syllabus.
In development of materials to deliver online training to high school students
Local planning of curriculum
Justify concepts and algorithms taught in class
As a framework to prepare my lessons and units
developing content standards and objectives for courses
I was formerly the head of CS education for a university and used it in my methods course. I have just started looking at the new version as I recently re-entered the HS teaching ranks
Shared with colleagues; given to folks who are starting up programs

Reference:
• Being a faculty in computer engineering I find these matter and techniques very useful and they add extra edge to my teaching
• As a source of information to the CS department at CMU
• Information helps me to design the curriculum for various undergraduate, graduate and post graduate courses.
• As example/reference during curriculum development meetings
• I used it as a reference in my master's project
• Included it in my syllabus
• To set syllabi for First Year Under Graduate courses
• We have an ACM student chapter here and discuss all related problems and its solution for this and hence proceed with respective manner
• I've referenced it in papers and used it in grant applications
• A reference in my master's thesis and as a reference in a presentation to our counseling dept
• To know the entry level ((prerequisites) for computer science college
• Used it in several papers towards my Master's. Also use it to support my curriculum
• Help define curriculum, set standards in K-12 schools.
• Help look into the future

Teacher Certification:
• Research for initiating a CS endorsement for Teachers
• To help develop the Competencies and Skill Sets for the Florida Teacher Certification Examination in K12 Computer Science. To help establish an acceptable computer curriculum for my school district
• I used the recommended IT certification
• Review of Curriculum for academic accreditation