

BOF Summary

"Playing Nice: How to Teach Interdisciplinary Collaboration" at Siggraph 2008

Gitta Domik and Holly Rushmeier

[domik \[at\] uni-paderborn.de](mailto:domik[at]uni-paderborn.de), [holly.rushmeier \[at\] yale.edu](mailto:holly.rushmeier[at]yale.edu)

WE asked YOU the following questions:

1. On "Breadth versus Depth"

- How much should you study the other subject? Is it really worth taking an introductory course in a subject (say like chemistry or biology) to be working with a postdoctoral researcher in that field?
- How much time can you allow to wander away from your own field – can you allow students to lose depth in order to gain breadth?
- Should collaborative courses be offered only for Master students in order to find enough depth in their knowledge, or should it be offered as early on as possible in a university program before students feel too strongly attached to their "scientific tribe"?
- Does a one semester course allow for enough collaboration and depth on a project to be of true value to a student? Or should we gear for 2 or 3 semester courses?

2. On "One discipline versus the other"

- Who is the boss? Who is in charge of an interdisciplinary project? As computer scientists we are tool makers, we have to somehow deal with the fact that our collaborators are defining success and what is important in the project.
- How can computer scientists avoid being a code slaves? We need to accept that there will be a certain amount of coding that is mundane but necessary for the people we collaborate with
- How can we involve non-CS students into the technological part of a project without having to send them to a programming course first?
- Are our collaborators treated as guinea pigs? Sometimes we just want them so at the end of our paper we can say that people in another field actually used our work.

3. On "Getting Recognition"

- How can we get recognition from our CS colleagues for applied work? What makes something novel enough that it is in our interest to get involved?
- Are there any ideas (papers, books) that support the argument FOR interdisciplinary, collaborative courses ... and that we can use to convince our department chairs?

4. On “Communicaton”

- As non-experts in the other field, we should understand that the important questions in another research field are not what we may first expect. Often questions a layman thinks are important are either obvious to an expert in the field or are just not interesting. It's important to learn to really listen to the needs in another field before pressing solutions on them.
- How can educators help students to start communication and collaboration with students they have little in common with?

Clearly, we did not get ALL the answers, but some valuable opinions:

1. On Depth-vs-Breadth we heard that specialization is very important to find and fulfil a job after graduation. Because jobs will demand knowledge outside ones one area of expertise it is important that the skills needed for collaboration are taught early on.
2. Also, there are content areas that are strongly enhanced if people of different disciplines collaborate. This happens with visualization, animation or game design courses.
3. Getting experience in collaboration should be mandatory in (at least) higher education. We heard that some schools have this objective already in place.
4. On “One discipline versus the other” we learned that computer scientists often feel used by other disciplines (e.g. artists) as the “programming slaves” and not getting recognition for their creative part in a collaborative project. We learned that artists often feel used by other disciplines (e.g. computer scientists) as “art slaves” developing a suitable colour scheme and seeing it being owned by the computer specialist just for converting it into code. This could go on
While it is a good starting point for collaboration between disciplines to know about typical abilities and habits of other “tribes”, pure stereotyping is not helpful as all people are individuals. There should always be room for learning about the personal habits of the collaborator.
5. Also, we would like to point you to chapter 1 of the book "Interdisciplinary Collaboration" by S.J. Derry, Ch. D. Shunn, M.A. Gernsbacher (Editors): "Ethnocentrism of Disciplines and the Fish-Schale Model of Omniscience" by Donald T. Campbell will give you a solid basis for discussion with your department chair about the “value” of unidisciplinary education as compared to the value of collaborating with other departments.
6. Another important item: It sounded like many of you had something interesting to say about Education on Graphics/Visualization. Think of writing a paper for the Education Programme (papers and workshop!) at Eurographics 2009 (deadline December 11, 2008):
http://www.eurographics2009.de/calls/education_papers/index.html