
Background: Adding to the Partnership Academies Model

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1 Introduction

I am currently in my third year as a high school art teacher at Monache High School, Porterville, California. My program, which is in its second year at the school, uses Autodesk Maya 8.5. This program is under the umbrella of the State of California’s Partnership Academies. The Partnership Academy Model is a three year program for grades 10-12 and is structured as a school-within-a-school. This model originated with the Philadelphia Academies, 1960 and was started in California in the 1980’s. The program is part of the high school reform movement and includes integrating academic and career technical education. (http://www.cde.ca.gov/ci/gs/hs/cpagen.asp)

Business partnerships are established between the academy supervisor and students and each grade is given a community project based on the partnership agreement. Academies have been evaluated and shown to have a positive impact on raising pass rates on high school exit exams, higher rates in English and Math than the state average. The Academy model has effectively increased student academic achievement and enrollment in post-secondary education. This is amazing considering half the students enrolled in these academies are identified as “at-risk”. (Jung, T., 2006).

2 Exposition

Because the emphasis of the Academies includes forward thinking concerning post-secondary education, I looked at the core areas addressed by ACM SIGGRAPH Curriculum Working Groups knowledgebase (ACM SIGGRAPH). These core areas also fit well in addressing the National Standards for Visual Arts Education for the secondary school level. The areas covered are CGF fundamentals “students begin an in-depth study of the discipline by introduction to fundamental vocabulary, history and tools” (Orr et al. 2007) used in CG programs, the film industry, and animation past and present. It is my hope that by using a CG program to address the art standard Connections, Relationships, Applications (California Art Standard 5.0) this program would tie into the Physical sciences; understanding the real to create virtual worlds, and the use of visual literacy to convey a story beginning with visual writing or storyboard. (Orr et al. 2007). I also hope it will give marginal students who “have checked out”, not by lack of ability or talent, a reconnect with high school because they can learn vocational skills to be used immediately after graduation from high school or in higher education.

Initial First Year of Program and Goals: During the first year of our computer graphics class, we worked in Maya 7.0; we had 22 licenses available and 22 students applied. Out of those 22 students half the students had previous training in Photoshop for photography as an art course, yearbook, web page design or AutoCAD (for their engineering/physics or drafting classes). Few students had any drawing background. The first 4 weeks of the year we spent learning basic drawing and composition, storyboarding characters, and designing environments. Students were introduced to the UI elements of Maya 7.0 which can be overwhelming to beginners, and then were assigned projects in Getting Started in Maya. Through trial and error, I found students worked best in pairs helping each other read through extensive material and new vocabulary. Quizzes were given after four weeks of introducing students to the UI hoping they would also understand why an action or tool was used. The best results occurred when students collaborated. Students who caught on quickly gave helpful information to the other “confused” students. After finishing Getting Started in Maya, first year students finished their second semester working on Maya 6 Foundation projects of “Jack in the Box” and building NURBS and Polygon space ships. These three projects were well written and thorough in showing production pipeline in creating animations with NURBS and Polygons.

Second Year Developments in the Program: This year 2007-2008 word spread among students and more informed students in Photoshop art, and web page design registered for the class. We also picked up several students from the Cisco academy classes. All these classes are offered in the Academy Partnership Program. Students from the Cisco program were familiar with gaming and expressed interest in MEL programming skills. Many of these students improvised their projects from Getting Started in Maya and as a result all were finished with this book by end of the first semester. Their semester final was a portfolio of their first semester work.

This second semester I asked students do the Jack in the Box project and the NURBS /Polygon Spaceship projects from Maya 6 Foundation during the third quarter. The Jack project gives the students experience in basic and secondary animation, character sets and sculpting. The spaceship projects show the differences in polygonal and NURBS surface modeling as well and the use of dynamics and the painting program in Autodesk Maya. From this foundation, I required a final project of a short animation. Students were paired in teams. They began by storyboard an environment and two characters. Principles 1 are introduced through online readings on Acting and Animation 2. They were also introduced to the various camera shots used in film to help them decide camera angles, shots and batch rendering.

3 Conclusion

Our Board of Education adopted the 3D graphics curriculum for Fall, 2007. Our class also was approved to become a two-hour Regional Occupational Program class for our county in the future. I hope this still occurs despite state spending cuts. I will be selecting an advisory committee to further help define our future needs; equipment recommendations, business partnerships, visiting artists, UC accreditation, and adoption of our course for community college credit or certificates. We hope to work with
local community colleges that offer computer graphic courses like ours so that students will earn advance placement credit.

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References

ACM SIGGRAPH EDUCATION COMMITTEE. http://www.siggraph.org/education/.


http://education.siggraph.org/resources/knowledge-base/FrontPage/report