

The Integration of the Portfolio-based Intel “Teach to the Future” Model to Enhance Pre-service Teacher Education Program

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Abstract: Around the nation, school districts and teacher education programs have received the Intel “Teach to the Future with Support from Microsoft” grants and as a result, have participated in workshops to learn how to implement the portfolio-based modules into current curriculum. The Intel “Teach to the Future with Support from Microsoft” grant from Intel Corporation has also reached the teacher education programs in other countries. In spring 2001, four professors from the Department of Urban Education at the University of Houston Downtown received this Intel grant. In fall 2001, ten more faculty members from the department attended another Intel workshop offered at UHD. This training is having a positive impact in the way we prepare pre-service teachers as well as in the delivery of instruction. We hope our experience benefits other school districts and teacher education programs that may already be or may become involved in this grant project.

Introduction

University faculty members are at different levels in implementing technology to deliver their courses and prepare the students for the technology age. This situation is of primary importance in teacher preparation programs. Faculty in these departments must be leading the way in the use and teaching of technology since they are in charge of training teachers. The Intel “Teach to the Future with Support from Microsoft” grant has allowed the Urban Education Department at the University of Houston Downtown to continue training its faculty. This paper will include a general description of the Intel training, a brief description of the modules from the Intel binder, the team work of the professors in Urban Education Department to teach the modules, a showcase of some student work and electronic portfolios as artifacts of the grant implementation, and the monitoring of the implementation of the technology component in teachers’ classrooms.

Description of Intel Training

In spring 2001, the Department of Urban Education at the University of Houston Downtown received the Intel “Teach to the Future with Support from Microsoft” grant. Four faculty members, each representing the math education program, the language arts and social studies education program, the technology education program, and the bilingual education program, participated in an intensive workshop held in Seattle, Washington. The training focuses on the integration of technology in the teacher education curriculum. The days were very well planned. The first day was a Friday. The meeting started at 8:00 a.m. and ended at 7:30 p.m. The group covered module 1. The team had the opportunity to discuss the technology initiatives in their universities over dinner. It was an interesting discussion since the people were from a variety of universities in the USA. The second day began at 8:00 a.m. with a

continental breakfast and ended at 7:30 p.m. with a required dinner. During the dinner, the discussion was about the role of students' sample works in the pre-service program. The participants went through modules 2, 3, and 4 during this day. The third day opened with a continental breakfast at 9:00 a.m. and ended at 4:00 p.m. The team covered modules 5 and 6. The last day began at 8:00 a.m. and ended at 4:00 p.m. The group covered modules 7, 8, 9, and 10. The afternoon was spent in showcasing the participants' work. Several forms were used to give feedback to each other. Some of the participants exchanged samples of their products to be shared with their students. The last 30 minutes were used for a general assembly where participants gave feedback about the training. The Intel trainers were very open to suggestions but the general opinion from the participants was that the training and the materials were excellent. It was the general consensus that it was a great addition to the curriculum for training teachers. One of the professors who attended the Seattle training from the Urban Education Department took upon herself the responsibility to organize an Intel training for the rest of the faculty in the department. This training was conducted in December 2001. Ten professors from the department participated as well as some professors from other universities in the USA. The Intel grant provides the Intel binders at no cost to the students in the programs for the term of the grant.

Brief Description of the Intel Binder

The Intel binder includes information for locating resources for electronic portfolios, creating student multimedia presentations, creating student publications, creating student web sites, developing plans for implementation, putting together electronic portfolios, and showcasing the electronic portfolios. The binder has ten modules. Each module has activities and homework. Module one is "Getting Started". It includes a general description of the Intel grant, creating a program folder, beginning the planning process for a unit, creating a multimedia presentation, and sharing a multimedia presentation with the class. The homework activities consist of exploring copyright laws related to computer and software use, locating curricular resource materials, and creating a works cited page. This last one will help to locate Internet addresses more easily and to cite the sources properly. Module two is "Locating Resources for Unit Portfolios". The activities include using directories and web search engines, locating Internet resources, and locating resources using Microsoft Encarta. The homework is evaluating resources on the Internet. Module three is "Creating Student Multimedia Presentations". The activities are creating a multimedia presentation, reflecting on the sample presentations, and revisiting the plan for the unit. The homework is creating an evaluation tool for the multimedia presentation. Module four is "Creating Student Publications". The activities are creating a publication, reflecting on the student publications, and revising the unit plan. The homework is creating evaluation tools for the publications. Module five is "Creating Unit Support Materials". This module helps with the use of Microsoft Word, Publisher, and Internet Explorer. Activities are creating unit support materials and revising unit plans. The homework is planning student web sites. Module six is "Creating Student Web Sites". The activities are the creation of web sites using publisher, reflecting on the web sites, and revising unit plans. The homework is the creation of web sites tools. Module seven is "Creating Teacher Support Materials". This module presents ideas for using e-mail as classroom projects. The activity is creating teacher support materials. The teachers could create a multimedia presentation, a web site or a publication to introduce or support the unit. The homework is revising the unit portfolio. Module eight is "Developing Plans for Implementation". Activity one is the development of a timeline for both when and how the events are going to happen before, during, and after the implementation of the unit. Activity two is creating management documents. These documents would assist the teachers with the logistics in the management of the equipment and the classroom. The homework is modifying the unit portfolio. Module nine is "Putting Unit Portfolio Together". Activity one in this module is revising completed units, and activity two is putting unit portfolios together. This module allows for final revision of all the components in the portfolio. There is a strong emphasis that all unit components to comply with copyright law. Homework one focuses on locating additional Internet resources for educators, and homework two is the completion of the unit portfolios. Module ten is "Showcasing the Unit Portfolios". The participants have the opportunity to show their products to each other. They receive feedback and suggestions. The participants evaluate the training and make suggestions not only for the implementation of the training but also in the way the binder is organized. The binder also includes a CD-ROM. This is a valuable tool that shows concrete samples of all the components in the binder. It also provides additional Internet links, and useful

information to assist in the planning of the portfolio units. It is important to point out that during the training there was no need to look for any other additional materials. The CD-ROM and the Internet proved to be the ideal tools for this planning.

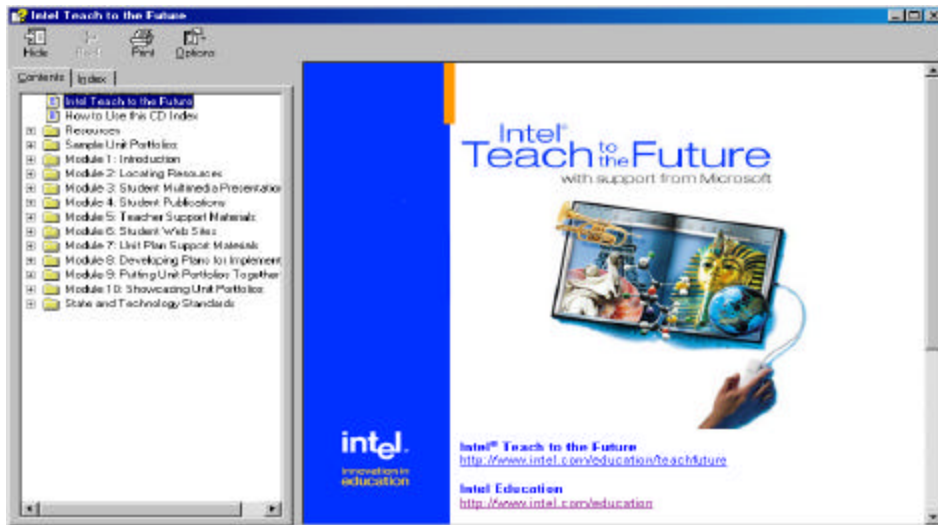


Figure 1: Intel Binder Table of Contents

Team Work to Implement the Modules

Faculty members at the Department of Urban Education, UHd see the Intel project as an initiative and source of ideas to incorporate technology into the teacher education courses. Extensive discussions among the faculty members have been done to divide the modules into several courses the students are going to take in different semesters, so that by the end of their studies they could cover all components. The nature of the Urban Education Program is very conducive to this teamwork. The programs in elementary, bilingual, and secondary run in blocks of three courses for each block. The students have to complete three blocks to finish their degrees. The professors teaching the courses in a block have to do careful planning among the members of team. The students produce combined assignments. They receive the same grade in all the courses in a block. This dynamic interaction of the courses makes it possible to plan and deliver the Intel module in a more effective way. The students in the bilingual Block II for example focus on modules three, four, six, nine, and ten. These students are expected to have covered the rest of the modules in the ETC course. This is a technology class that all the students take before the blocks. The pre-service teachers as well as the PB seeking certification are also expected to have mastered several software programs such as Power Point, Excel, Publisher, and Words before entering the blocks.

The faculty teaching the blocks is constantly assessing the delivery of instruction. After the first implementation of the Intel Teach to the Future curriculum, there were some issues that needed to be addressed. For instance, the access to computer equipment was critical to the students. More than 90 % of the students enrolled in the courses did not own a computer. They depended on the university computer lab to complete their assignments. Since all the assignments had technology components, the students had to expend endless number of hours in the UHd lab and even had to miss work to complete the assignments. The department is fully aware of this situation. Therefore, as part of the Unit Plan the department is hoping to have a wireless lab dedicated exclusively to the Urban Education students. It is also exploring ways to assist the students in purchasing computers. As we move further into the technology age, the need to have a computer is becoming a necessity. However, until this problem is

addressed, the number of assignments related to technology may be reviewed in the blocks as well as the re-distribution the Intel modules. The Urban Education Department will continue its emphasis in technology as long as the school districts want to hire teachers proficient in technology.

Students' Works and Electronic Portfolios

The students presented their electronic portfolio at the end of the summer semester 2001. This particular group of students is very unique. Some of the students were PB getting certification and were enrolled in the Master in Teaching program. They came to class for nine weeks. They were enrolled in Block II. They took Teaching Reading and Language Arts in Spanish, Curriculum in Bilingual/ESL, and Assessment. As part of the assignments for the block, this bilingual group of students focused on developing an interdisciplinary unit, a science project, an evaluation kit, and a case study. They were asked to include a multimedia presentation, a brochure or a newsletter, and a web site as part of the interdisciplinary unit for bilingual students. The students could choose a partner for the projects. They could also pick the grade level and the topic for the unit. All the objectives for the interdisciplinary unit had to be at the levels of analysis, synthesis, and evaluation. The students followed the guidelines from the Intel binder for their projects. Two weeks of class time was dedicated to work in the assignments. The students indicated that the binder was very helpful in the completion of their work. There were several products of a very high quality. The students felt that they had learned a great deal, but the work was very intensive. Some samples of their work follow.

Diana and Octavio's interdisciplinary unit was the Water Cycle. They used Microsoft Power Point to do the multimedia presentation of their science project. The presentation was about the formation of clouds.

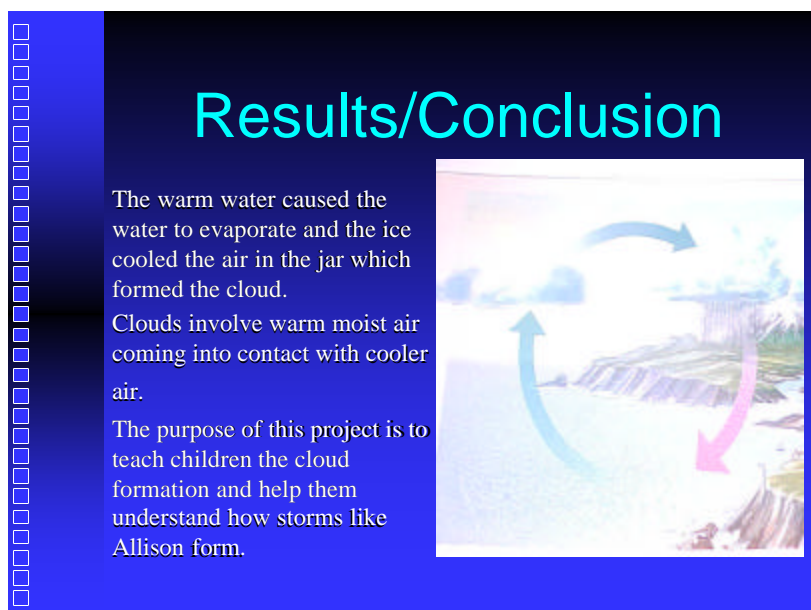


Figure 2: Slide from Student PowerPoint Presentation

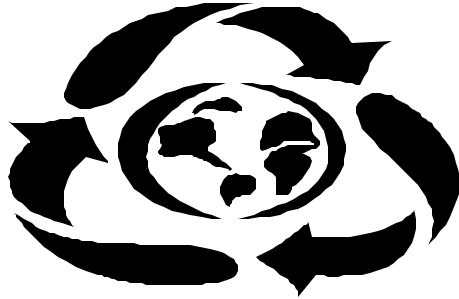
Ana and Rafael chose Earth Day for their interdisciplinary unit. Their unit was based on the following essential question: How can we as inhabitants of the planet Earth better the environment for the future? One of their activities was to produce the flier below.

By Kids Care

Earth Day

Kids Care

Essay Writing Contest



*“How would
Planet Earth be
without plants?”
Submit essays on:*

Date: April 1, 2002

Time: 2:30 p.m.

*For More Information contact
Ms. Caballero's Room 29
Mr. Rosa's Room 21*

There will be a winner per grade level. This is your opportunity to express yourself and be creative. Join us on this journey of conservation of Planet Earth.

Each winner will have their essay publish in the school newsletter plus a gift certificate to Scholastic Books!

R E C Y C L E R E C Y C L E R E C Y C L E

Figure 3: Flier from Student Presentation

Conclusion

In conclusion, we hope our experience will benefit other school districts and teacher education programs that are participants or are going to be participants in the Intel “Teach to the Future with Support from Microsoft” grant. Technology is a powerful tool for the twenty-first century. Universities and school districts will not be able to produce curriculum or students that are at the cutting edge unless they have the community and the business support. The support provided by the Intel grant allowed the University of Houston Downtown, Department of Urban Education to take one step ahead in the preparation of teachers with a strong component in technology. This support is greatly appreciated since our mission is to prepare teachers for inner-city schools. We hope other institutions will take advantage of this program sponsor by Intel. They will be hosting twenty-four training sessions around the country in 2002. The contact person is Cynthia Reed at Cynthia.d.reed@intel.com

References

Candu, D; Doherty, J; Judge, J; Yost, J; & Kuni, P. (2001) *Intel Teach to the Future with Support from Microsoft. Intel Innovation in Education.*