

~FAST Tex 2005 Program Evaluation Report
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~FAST Tex 2005 Program Evaluation Report

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~FAST Tex 2005 Program Evaluation Report

Executive Summary

The purpose of the Faculty And Student Teams for Technology (~FAST Tex) program is to support technology-based instruction at UT Austin by partnering technology-literate undergraduate and graduate students with faculty to help them incorporate technology into their instruction. The program is operated by the Division of Instructional Innovation and Assessment (DIIA), which provides managerial, administrative, and technical support. The core goals of the program include: 1) the on time and within budget completion of all projects that meet faculty expectations; 2) preparing students for the work world by helping them to learn project management and technical skills; 3) providing UT Austin faculty with technology based instructional resources that positively impact students in their courses; and 4) providing program satisfaction for faculty clients and student developers through technical, administrative and managerial support.

UT Austin faculty submit project proposals to DIIA in the fall. Student developers are hired by program staff and assigned to faculty projects based on their technological skill set and project needs. Student developers are paid hourly wages by DIIA using Instructional Technology Appropriations Committee (ITAC) grant funds and are supervised by both faculty clients and program staff. Depending on student abilities and project needs, some projects are staffed by multiple students and some students work on multiple projects.

In 2005 (September, 2004-August, 2005) the ~FAST Tex program funded 53 projects employing 55 student developers at a total cost of approximately \$70,000. The 53 faculty clients estimated that, once their projects are complete, 19,896 users would be served.¹ The types of projects funded ranged from the development of course websites to the creation of complex databases and instructional tools. The program employed a part-time (75%) program manager, half-time (50%) assistant program manager, and part-time (25%) program administrator, as well as three freelance video specialists.

The purpose of this evaluation is to assess the success of the program based on established program goals and gather information to inform future program implementation, changes and growth. The following evaluation report includes results from an online survey of student developers, an online survey of faculty clients, various program output measures and a quality review of completed projects. It also reports program improvements in 2005 and recommendations for the future to address remaining program challenges.

Overall, the ~FAST Tex program continues to be successful in its core goals of providing a learning experience for its student developers and in providing technical, administrative and managerial support to faculty clients and student developers. In 2005, the program also succeeded in improving the product quality substantially, thereby providing technology based instructional resources that meet faculty expectations. However, some challenges remain such as the timely completion of projects, some projects exceeding their budgets, and project management difficulties. These problems are at least partially related to the program's short operational timeline and insufficient project management guidance for faculty.

¹ All figures in this report are for active projects unless noted otherwise.

Student developers generally liked participating in the program because of the opportunity to learn new skills and to work with DIIA staff. Nearly all student developers reported learning a variety of technical and non-technical skills. A majority of student developers had no technical problems or other difficulties, and when they did they could obtain adequate assistance from DIIA program staff. They were also satisfied with the various facets of the program (orientation, kick-off meeting and the ~FAST Tex online system), and wished to participate in the program again, unless they were graduating. The major difficulties they faced include time-related challenges and faculty related challenges.

Faculty clients were also satisfied with orientation session, kick-off meeting, assistance they received from DIIA, as well as their student developers and the products they produced. More than half of faculty considered the amount of supervision they provided adequate. They also found the ~FAST Tex online system easy to use, but very few actually used it. Time related challenges were cited most frequently by faculty clients, and they were typically pessimistic about their projects' timely completion

An examination of program projects indicated several challenges. Only a third of projects were completed on time (by May 31, 2005) and the on-time completion rate did not improve from last year, despite on-time project starts. Four projects used up 700 hours of the DIIA staff mentor hours, and one-fifth of the projects required 50% more student developer hours than originally allocated 100 hours, suggesting the need to reconsider proposal acceptance criteria and the 100 student developer hour limit for all projects. However, the quality of completed projects improved substantially in all aspects compared to the previous year.

The evaluation recommendations are interrelated, focus on addressing program challenges, and will be most useful if considered holistically. They include refining the proposal process, assisting faculty in project management, modifying program cycle, collecting additional audit measures, choosing projects more selectively, and maintaining activities that contribute to program improvements. Taken together, these recommendations are designed to address all the major program challenges and effective improvement efforts identified in this study.

A summary of study conclusions and recommendations follows.

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Summary of Conclusions

Student Developer Conclusions:

- Most student developers attended the orientation session and felt it was helpful.
- Most student developers viewed the kick-off meeting with faculty as useful.
- Student developers liked participating in the ~FAST Tex program because of the opportunities to learn new skills and to work with DIIA staff who were easy to contact. Dislikes included lack of clarity about the project directions and dealing with mismatches between work hour demands and their desired work hours and between required skills levels and their skills levels.
- Nearly all student developers reported learning a variety of technical (e.g., hardware, software) and non-technical skills (e.g., client, time and project management) as a result of participating in the program with the learning of non-technical skills being reported more frequently.
- Student developers often reported time-related challenges, faculty-related challenges, and skill/knowledge related challenges. They have turned those challenges into learning opportunities.
- More than half of the respondents had no technical problems or other difficulties, and most of those who did sought assistance from DIIA program staff and rated it positively.
- While challenges and difficulties caused by faculty supervisors were often mentioned by student developers, half of them reported that they received appropriate amount of supervision, and the rest tended to feel they received too much, rather than too little, supervision. Most of them felt their faculty supervisors gave them feedback in a timely manner.
- Most student developers who are not graduating wish to participate in the ~FAST Tex program next year for reasons such as learning/experience, good pay and enjoyment of the work.
- The ~FAST Tex online system was easy to use for most student developers.

Faculty Client Conclusions:

- Faculty clients were generally satisfied with both the proposal and project assistance they received from DIIA.
- Faculty members found the orientation session helpful.
- Faculty members felt the ~FAST Tex online system was easy to use, but very few actually used it.
- Time-related challenges, such as getting a late start and time management difficulties, were the challenges most frequently cited by the faculty members. These difficulties are likely contributing to their pessimism about timely project completion. Also, the extension of project scopes often delayed project completion.
- Most faculty members were pleased with the finished projects.
- More than half of the faculty members considered the amount of supervision they provided adequate. Yet the rest perceived they provided too much or too little supervision. Too little supervision by faculty members is likely a contributing factor to project challenges such as communication, work quality, the ability to meet deadlines and projects meeting faculty expectations.

- Most faculty are satisfied with their student developer's ability to communicate, meet deadlines, and do quality work. A few, however, reported dissatisfaction in one or more of these areas. Such dissatisfaction might be alleviated through closer monitoring of projects by program staff or better supervision by faculty.

Program Output Conclusions:

- Only a third of projects were completed on time. The fact that the on-time project completion rate did not improve despite all kick off meeting occurring before February 1. suggests that project management issues between faculty and students and/or the improper scoping of projects may be the problem.
- More than half the projects involve web development, followed by video, programming and database.
- 2005 ~FAST Tex projects will serve an estimated 20,000 students.
- A quarter of projects required mentor hours from DIIA staff. 77% of 904 hours or 700 hours of the DIIA staff mentor hours were used by only four projects, suggesting the need to incorporate the consideration of potential DIIA staff mentor hours at the time of proposal reviews and student developer assignment.
- Student developers spent an average of 117 hours per project – 17 hours over the goal of 100 hours. One-fifth of the projects required 151 or more hours, suggesting that 100 student developer hours may not be realistic for some projects.
- The quality of completed projects improved substantially compared to the previous year. The improvement occurred in all aspects of the products, resulting in the average product score close to “Good” rather than “Satisfactory” last year. Increased project oversights perhaps contributed to improved product quality.

Program Improvement Conclusions

- The 2005 ~FAST Tex program saw significant improvements in multiple areas.
 - All faculty/student teams were in place and all kick-off meetings occurred by 2/1/2005.
 - The project quality has improved substantially.
 - The student developers' orientation attendance has improved dramatically.
 - A majority of student developers reported experiencing no technical problems or other difficulties.
 - The perceived adequacy of the amount of faculty supervision has improved.
 - The ~FAST Tex online system usability and awareness improved.
 - The orientation/kick-off meeting processes were improved.
 - Project oversight was improved, by increased staff, end-of-project reports, and mid-term project meetings.
 - The program cycle started earlier.
 - More evaluation activities were integrated into regular program operations.
- Remaining challenges are in the following areas.
 - On-time project completion rate remains low.
 - Faculty clients face substantial difficulties in project management and need additional assistance.

- Some recommendations made in 2004 have not yet been addressed, including refining the proposal process, being more selective in choosing projects for the program, and allowing flexible project begin and end dates.

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Summary of Recommendations

- 1. Refine the Proposal Process** – Future proposal forms should be more structured and specifically require faculty to state clear project objectives (specific tasks to accomplish), instructional objectives (how will the technology/tool improve instructional outcomes), and precise outcome measures (how will you know if objectives are met). Clearly stated objectives and outcome measures will help program staff to evaluate the appropriateness of projects prior to acceptance and the success of projects upon completion. Having clear and measurable acceptance criteria for projects will also assist staff in systematically determining which projects are most appropriate for the program.
- 2. Assist Faculty in Managing Their Project** – Assisting faculty clients in managing their project will increase on-time completion of projects, improve project quality, and help alleviate project management challenges. Requiring faculty to have at least half of their content materials prepared before their project can be accepted will help ensure timely project starts and give faculty more time to manage their projects. Also having faculty create a project timeline and document specifications for the kick-off meeting will help them plan the project processes and finished products, thereby making project management easier. Furthermore, sending auto-notices to faculty when students enter logs ensures that they are aware of project progress and better able to manage their student developers. Mid-term meeting can also be used to assist faculty clients in aligning project progress status with project specifications and timelines.
- 3. Modify Program Cycle** – Given that only a third of all projects were completed on time, even with all projects starting before 2/1/2005, the program cycle should be further modified. Allowing flexible project begin and end dates, depending on the project scope and complexity, will allow program activities to occur over reasonable period of time. Furthermore, beginning the program cycle earlier will give faculty more time to complete necessary groundwork before the kick-off meeting.
- 4. Collect Additional Audit Measures to Inform Program Decisions** – Among the various audit measures for projecting program resource needs and making decisions, the following were identified as particularly useful: student and consulting hours by project type, cost per project, conducting a focus group with specialized student developers, and changes in project objectives.
- 5. Choose Program Projects more Selectively** – Selecting only projects that fit within the programs goals, resource limits and timeline should reduce program and DIIA staff workloads, minimize project management challenges for faculty, and could further improve project quality. Project proposals that have few prepared materials, unclear instructional objectives, exceed program scope, or are too complex for student developers should not be accepted.
- 6. Maintain Activities that Contribute to Program Improvements** – Recommendations from the 2004 report implemented during the 2005 ~FAST Tex program cycle that resulted in improvements should be continued. These improvement efforts include project tracking, full staffing, timely implementation of program components, and use of expert student developers on multiple projects.

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Background

Program Description

The Faculty And Student Teams for Technology (~FAST Tex) program's purpose is to support technology-based instruction at UT Austin by partnering technology-literate undergraduate and graduate students with faculty to help them incorporate technology into their instruction. The program is operated by the Division of Instructional Innovation and Assessment (DIIA), which provides managerial, administrative, and technical support.

UT Austin faculty submit project proposals to DIIA in the fall. Projects are chosen based on their ability to support instruction, feasibility, technical needs, and scope. Faculty projects come from a variety of disciplines in Liberal Arts, Education, Natural Sciences, Fine Arts, Engineering, Social Work, Communications, Business, and Library and Information Science.

Student developers are hired by program staff and assigned to faculty projects based on their technological skill set and project needs or are nominated to participate by faculty. Student developers are paid hourly wages by DIIA using Instructional Technology Appropriations Committee (ITAC) grant funds and are supervised by both faculty members and program staff. Depending on student abilities and project needs, some projects are staffed by multiple students and some students work on multiple projects.

Center for Instructional Technologies staff provide the bulk of technical, managerial and administrative assistance to ~FAST Tex projects. A variety of DIIA staff members provide technical assistance to student developers. In addition, three video specialists were hired this year to oversee video projects. Project management assistance includes consulting with faculty in developing project proposals, interviewing and matching student developers to appropriate projects, conducting orientation sessions, providing guidance in kick-off meetings, overseeing project progress, and acting as a mediator between faculty and student developers. Administrative support includes making personnel appointments, managing payroll, maintaining the ~FAST Tex online system, and basic recordkeeping.

Program goals

~FAST Tex program manager, Suzanne Rhodes, identified the following as the primary goals of the program:

1. Realize 100% project success as measured by all projects being completed on time (by May 31); on budget (100 hours of student work); and meeting the individual project goals set by faculty.
2. Prepare students for work after graduation by helping them to learn and apply both project management and technical skills.
3. Provide an increasing number of UT Austin faculty with course related, technology based instructional resources that positively impact students.
4. Provide program satisfaction for faculty clients and student developers by providing technical, administrative and managerial support.

Program Timeline

According to the published 2005 ~FAST Tex program timeline (Table 1), a call for proposals was sent to UT Austin faculty in mid-September 2004 with an October 22nd deadline. In early November, faculty clients were notified whether their proposal had been accepted. Three faculty orientation sessions were also conducted in November. Student interviews, project appointments and orientation sessions, as well as kick-off meetings where the faculty, student(s), and program staff, discuss and confirm project plans, took place during November and December 2004 and January 2005. February 1st was set as the target begin date for all projects with May 31st set as the target completion date.

Table 1 – ~FAST Tex 2005 Program Timeline

Date	Activity
September 13, 2004	Call for proposals
October 22, 2004	Deadline for proposal submission
November 2004	Faculty notified of proposal acceptance Faculty program orientation sessions.
November 2004 – February 1, 2005	Student selection. Student interviews Student project appointments Student program orientation sessions Kick-off meetings
February 1, 2005	All projects have begun
May 31, 2005	All projects complete

Program Facts

In 2005 the ~FAST Tex program funded 53 projects employing 55 student developers at a total cost of approximately \$70,000. The 53 faculty applicants estimated that, once their projects are complete, 19,896 users would be served. The majority of these users will be UT Austin students. The types of projects funded ranged from the development of course websites to the creation of complex databases and instructional tools (see Table 16 for a summary of projects by product type). The program employed a part-time (75%) program manager, half-time (50%) assistant program manager, and part-time (25%) program administrator. Table 2 summarizes these ~FAST Tex program facts for the 2005 program year (September, 2004-August, 2005).

Table 2 – ~FAST Tex 2005 Program Facts

Number of Accepted Projects	62
Number of Active Projects	53
Student Developers Employed (active projects)	55
Total cost for hiring student developers (active projects)	Approximately \$70,000
Faculty Clients Served (active projects)	53
End Users* (active projects)	19,796
Program Staff (Full-Time Equivalency)	1.5

* Estimate based on figures from faculty proposals

Evaluation Description

Purpose of Evaluation

The purpose of evaluating the ~FAST Tex program is to assess the success of the program based on established program goals and gather information to inform future program implementation, changes and growth. In its first five years, the program was never systematically evaluated. The first holistic evaluation was conducted in 2004, and this is the second evaluation cycle for the program.

Evaluation Plan

The 2005 evaluation mirrored the 2004 plan except that the student focus group and mid-term survey were not conducted. Questions from the mid-term student survey were combined with the student end-of-semester survey to streamline the evaluation process. Because the 2004 focus group's primary purpose was to inform subsequent evaluation instruments it was not repeated. Phase I of the plan included meeting with program staff to determine 2005 project goals and program needs as well as the development of the Phase II plan. The Phase II plan included:

- Revising and administering existing **online faculty and student end-of-semester survey** instruments.
- Conducting an **audit of program outputs** such as on-time project completions, number of student hours, number of students served, project costs, etc.
- Conducting a **quality review of individual program projects** using a team of reviewers selected by evaluation and program staff.
- Writing a **program evaluation report** for the spring 2005 project cycle

A longitudinal survey of faculty and student developers from past program years to assess program impact and the creation of a long-term evaluation plan for the program (Phase III), is currently in the planning stage for the next program year. A summary of the evaluation timeline is below (Table 3) and a description of each major task follows.

Table 3 – ~FAST Tex 2005 Program Evaluation – Summary Timeline

Begin Date	End Date	Phase/Major Task
1/3/2005	1/31/2005	Phase I: Develop Short-Term Evaluation Plan
4/1/2005	8/12/2005	Phase II: Implement Short-Term Evaluation Plan
4/19/2005	5/25/2005	Modify & Administer End-of-Semester Student and Faculty Surveys
8/1/2005	8/12/2005	Conduct Program Outputs Audit
6/8/2005	7/22/2005	Conduct Quality Review of Individual Projects
8/1/2005	TBD	Phase III: Longitudinal Study and Long-Term Evaluation Plan

End-of-Semester Surveys

Faculty Client Survey. 55² ~FAST Tex grant recipients were sent an email requesting that they complete an online survey to evaluate the program. Faculty also received two follow-up email reminders. The purpose of the faculty survey was to evaluate satisfaction with program staff, technical support from DIIA, the ~FAST Tex online system, project outcomes, and their student developers. Additionally, faculty were asked about project related challenges, likes, and dislikes. The survey was accessible from May 6-25, 2005. See Appendix A for a copy of the survey instrument and response frequencies.

Student Survey. All 59³ ~FAST Tex student developers were sent an email requesting that they complete an online survey to evaluate the program. Students also received two email reminders. The purpose of the student survey was to evaluate satisfaction with program staff, technical support from DIIA, the ~FAST Tex online system, project outcomes, and their faculty supervisors. Students were also asked to identify what they had learned as a result of working on their projects, project-related challenges, and their likes and dislikes about the program. The survey was accessible from May 6-17, 2005. See Appendix B for a copy of the survey instrument and response frequencies.

Audit Measures

Program audit measures were developed in consultation with the program manager and data was provided to the evaluator by program staff. Measures included a complete listing of projects by product type, number of consulting hours, completion status, and estimated number of end users. Information on personnel and other program costs was also collected, as was demographic information on faculty and student developers.

² All faculty clients whose projects were not cancelled plus one faculty client whose project was cancelled.

³ Including four student developers whose projects were cancelled.

Project Quality Review

The purpose of the project quality review was to provide information about the quality of program outputs (i.e., projects). 15 projects randomly selected from 2005 ~FAST Tex projects completed by the May 31, 2005 deadline were reviewed.

Each of the six reviewers reviewed five ~FAST Tex Projects using the review criteria and form provided. Two reviewers reviewed each project—one reviewer with a technical background (Reviewers A-C) and one reviewer with an instructional background (Reviewers D-F). Each technical reviewer was paired with each instructional reviewer at least once. Table 4 depicts the reviewer pairs and the projects assigned to them. Reviewers attended a one-hour training session on June 28, 2005 where the review process was explained and the rating scale and criteria items discussed. Project reviews occurred June 29-July 13, 2005.

Table 4 – Reviewer Assignments to Projects

Reviewer	Project														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	X			X			X			X			X		
B		X			X			X			X			X	
C			X			X			X			X			X
D	X	X	X	X	X										
E						X	X	X	X	X					
F											X	X	X	X	X

Reviewers rated projects on their design and function (4 items), instructional value (4 items) and project objectives (2 items) using a ten-item review instrument (see Table 20). Ratings were based on a five-point scale ranging from “Poor” to “Exemplary” (see Table 21). A design and function category score was calculated for each reviewer on each project by averaging the four item scores in that category. Both reviewers’ category scores were then averaged to produce the project’s composite score for the category. The same process was used to calculate instructional value category and total scores for each project. Composite scores were calculated as follows:

$$\text{Design \& Function Combined Score Mean} = (\text{Sum of Design And Function Score Mean for both reviewers})/2$$

$$\text{Instructional Value Combined Score Mean} = (\text{Sum of Instructional Value Score Mean for both reviewers})/2$$

$$\text{Total Combined Score Mean} = (\text{Sum of Total Score Mean for both reviewers})/2$$

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Findings and Conclusions

End-of-Semester Student Survey Findings:

Demographics of the student sampled

Of the 59⁴ student developers participating in the program, 27 completed the end-of-semester survey for a 46% response rate. The **students sampled** came from a wide range of academic areas⁵ including, Information Studies (3), Business Administration (2), Computer Science (2), Instructional Technology (2), Radio-television-film (2), Architecture (1), Fine Arts (1), Art History (1), Biomedical Engineering (1), Mathematics (1), Counseling (1), Economics (1), Linguistics (1), Music (1), Natural Science (1), and Neurobiology (1). The students sampled were generally representative of all ~FAST Tex student developers with the exception of female students being overrepresented and international students being underrepresented. As for the racial/ethnic background, half of the students sampled represent White, European American or European (57%), and one third of the students are Asian American or Asian (38%). There was also one Hispanic or Latino (5%). Table 5 provides a comparison of the survey sample and the population of ~FAST Tex student developers. A summary of the end-of-semester survey findings follows.

Table 5 – End-of-Semester Student Survey Sample Characteristics

Characteristic	End-of-Semester Student Sample (N=27)	All 2005 ~FAST Tex Student Developers (N=50⁶)
Mean Age	25	25
% Female	39	28
% International Students	35	40
% Graduate Students	47	44

1. Reasons for Participating in ~FAST Tex program

Student developers participate in the ~FAST Tex program for a variety of reasons. Student developers were asked to rank the most, second most, and third most important reasons from the eight options, which were selected based on the student developers' input in the previous year.

- Most student developers (70%) mentioned that they participated in the program because they needed a job/extra income. In particular, ten student developers (37%) said that it was the most important reason for participation.
- Other reasons most often mentioned include “Opportunity to learn new skills,” “Had the necessary skills/experience,” “Good pay rate“ and “Project(s) sounded interesting.”

⁴ Including four student developers whose projects were cancelled.

⁵ Numbers in parenthesis indicate frequencies for each academic area.

⁶ Includes all students who are on the administrative student records.

Table 6 - Ranking the Reasons for Participating in the ~FAST Tex Program.

Rank	Reason	Most Important	2nd Important	3rd Important
1	Needed a job/extra income	10 (37%)	7 (26%)	2 (7%)
2	Opportunity to learn new skills	3 (11%)	6 (22%)	2 (7%)
3	Had the necessary skills/experiences	3 (11%)	5 (19%)	3 (11%)
4	Good pay rate	3 (11%)	3 (11%)	5 (19%)
5	The project(s) sounded interesting	2 (7%)	4 (15%)	4 (15%)
6	Was asked to apply by a faculty member	4 (15%)	0 (1%)	2 (7%)
7	Enjoy technology	1 (4%)	0 (0%)	4 (15%)
7	Opportunity to work with faculty	1 (4%)	0 (0%)	4 (15%)

2. The Orientation Session

Most student developers attended the orientation session and felt it was helpful.

- Only one student developer (4%) reported that s/he did not attend the orientation. Compared to the previous year, when only half of mid-term survey respondents reported attending an orientation, the student developers' orientation attendance has improved dramatically.
- Student developers responded very positively to the orientation session in general. Most respondents who participated in the orientation “Strongly Agree(d)” or “Agree(d)” that the orientation session conducted by program staff was helpful (74%), none disagreed with this statement, and only six (22%) said “Not sure.”
- Suggested improvements to the orientation included:
 - Emphasizing the assistance and resources available and explaining how to obtain them.
 - Ensuring that student developers have strong understanding of what the project will involve.
 - More interaction between presenters and students.
 - Inviting previous ~FAST Tex student developers as speakers.

3. The Kick-off Meeting

Most student developers felt the kick-off meeting with faculty was useful.

- 88% (23) of survey respondents reported that the kick-off meeting with faculty was useful. 8% (2) responded that they were not sure, and 4% (1) felt it was not useful.
- Suggested improvements to the kick-off meeting focus on making sure that all the members on a team are on the same page, as to:
 - What role each member is expected to perform
 - How each member should perform tasks required for the project
 - What the finished product will look/feel like and how it will be used

4. What They Liked

Student developers liked opportunities to learn new skills and working with DIIA staff who were easy to contact.

- When asked **what they liked**⁷ most about their ~FAST Tex experience, student developers frequently reported the following factors:
 - Opportunity to learn new skills (4)
 - Working with DIIA staff (4)

⁷ Open-ended responses to the question “What did you like most about your ~FAST Tex experience this semester?” are reported as frequencies because respondents often gave multiple responses.

- Working on a good project (3)
- Project management (2)
- Flexible hours (2)
- Gaining experience (2)
- Pride in producing a useful tool (2)

The types of skills learned as a result of working on ~FAST Tex projects are described in section 6 “Skills Learned” (below). Student developers’ positive experiences with DIIA staff members were supported by the ease of communication with them: All student developers responded that it was “Very easy” or “Somewhat easy” to contact program staff.

- Other factors mentioned by student developers include the opportunity to work with faculty members, the opportunity to work with technology, the opportunity to be creative, and the opportunity to work in a team.

5. What They Disliked

Student developers did not like their ~FAST Tex experience when the project directions were unclear to them, and there were mismatches between desired and actual work hours, and between their current and required skill levels. **Dislikes**⁸ about the ~FAST Tex experience included the following factors:

- Lack of clarity in the project directions (5) (disorganized at the beginning, unclear of the availability of extended funding, unclear role assignment, unclear scope)
- Time related issues (4): two mentioned the difficulty of managing time between course work and work in ~FAST Tex, while two expressed that they wished they could work more
- Mismatch between the student developers’ skills and the project (3) (two were unsure if they had adequate skills and one mentioned that the project was too easy for his skills.)
- Project procedures (2) (keeping track of hours, understanding project objectives)
- Pay rate (2)
- Interaction with the faculty (2) (the faculty supervisor not having prepared materials, lack of communication with the faculty supervisor)

6. Skills Learned

Student developers learned a variety of skills, including both non-technical and technical skills, through working on their ~FAST Tex projects.

- Non-technical skills: As shown in Table 7, high percentages (58-67%) of students reported non-technical types of skills, such as how to interact with clients/faculty, time management skills and project management skills, as with the case of last year.
- Technical skills: A smaller percentage of students (4-54%) reported learning technical types of skills such as a specific software package, technical process, or piece of equipment.
- More students reported learning information unrelated to their field of study (42%) than learning information related to their field of study (38%).
- Only one respondent indicated he did not learn anything new as a result of participating in the program.

A complete listing of skills learned by student developers is provided in Table 7.

⁸ Open-ended responses to the question “What did you like least about your ~FAST Tex experience this semester?” are reported as frequencies because respondents often gave multiple responses.

Table 7 – Skills Learned by ~FAST Tex Student Developers

Skill Learned	% Yes
How to interact with clients/faculty	67
Time management skills	63
Project management skills	58
A specific piece of software (e.g., Dreamweaver, Photoshop)	54
Information unrelated to my major/professional field	42
Information directly related to my major/professional field	38
A specific technical process (e.g., video streaming, creating a website)	38
A specific piece of equipment (e.g., video camera, scanner)	4
I did not learn anything new as a result of working on my ~FAST Tex project	4

7. Challenges

Student developers reported experiencing a variety of challenges and learning from them. They were asked to check applicable options from the 11 provided.

- Time-related challenges: The most frequently cited challenges were getting a late start (after February 1) on their projects (28%) and time management difficulties (28%). While these time-related challenges appear to be the most significant challenge factors in this survey, it should be noted that the student developers who mentioned getting started late decreased substantially from 46% last year. Moreover, further analysis shows that five of the seven student developers who checked the “Getting started late” option and all of the seven who checked the “Time management difficulties” option anticipate completing their projects on time, suggesting that most of them found ways to overcome these time-related challenges. In fact, six of the seven student developers who checked the “Getting started late” option and five of the seven who checked the “Time management difficulties” option reported that they learned time management skills as a result of working on their project.
- Faculty-related challenges: Students more frequently indicated faculty-related challenges in this survey than last year, including unclear direction from faculty supervisor (24%), difficulty in communicating with faculty supervisor (24%), difficulty in getting necessary content material from faculty supervisor (16%) and faculty supervisor being unprepared/disorganized (16%). Again student developers who met these faculty-related challenges acquired skills to deal with them: most of the developers who reported these faculty-related challenges also indicated that they learned how to interact with client/faculty as a result of working on their project.⁹
- Skill/knowledge-related challenges: some student developers reported challenges related to the mismatch between the task requirement and their knowledge and skills, such as technical difficulties (24%), lack of adequate technical skills (12%), and unfamiliarity with content material for project (8%). However, they appear to have adjusted their perceived lack of skills and knowledge to the project requirement: Nearly all student developers (96%) rated their level of performance on their project as “Excellent” or “Good” in another question. One developer (4%) rated his level of performance as “Poor.”

⁹ All six who checked “Unclear direction from faculty supervisor,” all six who checked “Difficulty in communicating with faculty supervisor,” all four who checked “Faculty supervisor was unprepared/disorganized,” and three out of four who checked “Difficulty in getting necessary content material from faculty supervisor” also checked “How to interact with client/faculty” as a skill learned through working on their ~FAST Tex project.

A complete listing of project related challenges experienced by student developers is provided in Table 8.

Table 8 – Project-Related Challenges Experienced by Student Developers

Challenge	% Yes
Getting started late (after February 1)	28
Time management difficulties	28
Unclear direction from faculty supervisor	24
Difficulty in communicating with faculty supervisor	24
Technical difficulties	24
I did not experience any project-related challenges	24
Difficulty in getting necessary content material from faculty supervisor	16
Faculty supervisor was unprepared/disorganized	16
Unclear division of responsibilities between myself, faculty supervisor and DIIA	12
Lacked adequate technical skills	12
Unfamiliar with content material for project	8
Unclear direction from ~FAST Tex program staff	4
Unclear requirement definition	4

8. Timely Project Completion

Three-fourths of respondents anticipated completing the project by the deadline.

- 75% of survey respondents reported that they anticipated completing the project by May 31, 2005.
- The reasons for anticipated delayed completion include:
 - Faculty client not giving the necessary materials to the developers in a timely manner
 - Late start
 - Team member substitution
 - Expansion of project

9. Problems and Difficulties

More than half the respondents had no technical problems or other difficulties, and most of those who did, sought assistance from DIIA, which they considered to be good.

- 58% (15) of survey respondents reported that they did NOT experience any technical problems or other difficulties related to their projects, and 42% (11) of them reported they did.
- Student developers reported experiencing a variety of problems and difficulties, in the following categories:¹⁰
 - Software problems (3) (e.g., figuring out how to use a software package or two different software packages together)
 - Faculty members not providing the necessary material in time (3)
 - Lack of equipment or facility (2)(e.g., not having the right kind of computer, not having additional server support)
 - Learning how to use equipment (1)

¹⁰ Open-ended responses to the question “Please describe your project-related technical problems or difficulties” are reported as frequencies because respondents often gave multiple responses.

- Not knowing what faculty members expect him to do (1)
- Not having a clear understanding of her role in the team (1)
- Most students (82%) who did encounter project-related problems and difficulties sought assistance from DIIA staff to resolve them. The students who did not seek assistance from DIIA mentioned working late at night and solving problems on their own as reasons for not doing so.
- A majority of respondents (78%) who received assistance from DIIA rated it as “Excellent” or “Good.” One (11%) rated it as “Average” and another (11%) rated it as “Poor.”
- DIIA staff assisted student developers in solving the problems by:
 - Working on the problems with the student developer
 - Providing the necessary facility
 - Teaching how to use equipment or software
 - Mediating among team members

10. Working with Faculty

Half the student developers felt they received the appropriate amount of supervision, and the rest tended to feel they received too much, rather than too little, supervision. Most student developers felt their faculty client gave them feedback in a timely manner, and they did most of the project management.

- Student developers were asked 1) how much supervision they received from their faculty supervisors, and 2) how much supervision they needed, using the following scale:

Extensive: Met or communicated with 3 or more times/week.

Frequent: Met or communicated with 1-2 times/week.

Occasional: Met or communicated with once every other week.

A little: Met or communicated with once a month.

None/almost none: Met or communicated with once or twice during the project.

Student responses to these questions were varied with 44% saying they received “Occasional” supervision, 24% responding “Frequent,” 24% “None/almost none” and “Extensive” and “A little” receiving 4% each. Student self-assessment of supervision needed was also dispersed among the categories with 38% saying they needed “Occasional” supervision, 29% “A little” supervision, 21% “None/almost none” supervision, 13% “Frequent” supervision and 0% “Extensive.”

A cross-tabulation of the two student developer questions provides a more complete picture (Table 9).

Table 9 – Supervision Received by Supervision Needed – Student Responses

Supervision Received	Supervision Needed					Total
	Extensive	Frequent	Occasional	Little	None	
Extensive	0	1	0	0	0	1
Frequent	0	2	1	2	1	6
Occasional	0	0	6	4	1	11
Little	0	0	0	1	0	1
None	0	0	2	0	3	5
Total	0	3	9	7	5	24

10 (42%)	Students who received more supervision than they thought they needed
2 (8%)	Students who received less supervision than they thought they needed
12 (50%)	Students who thought they received the appropriate amount of supervision

Half the student developers perceived that they received the appropriate amount of supervision, while those who felt the supervision they received was too much (42%) greatly outnumbered those who felt it was too little (8%).

- Most (76%) student developers viewed that they “Always” or “Almost always” received feedback from their faculty clients in a timely manner, while the rest (24%) felt timely feedback was provided only “Sometimes” or “Almost never.”
- A majority of student developers (64%) felt that they did most of the project management, while far fewer developers thought that their faculty client (12%) or DIIA staff (12%) took care of the project management.

11. Continued Participation

Most student developers who are not graduating expressed a desire to participate in the ~FAST Tex program next year.

- 60% of the respondents anticipate participating in the ~FAST Tex program next year. The reasons¹¹ they listed for continued participation include the following:
 - Can learn and gain experience (6)
 - Good pay (5)
 - Enjoyed the job and DIIA (4)
 - Flexible work schedule (3)
 - Fits professional goal (1)
 - Can work on campus (1)
- 40% of the respondents do not think they will participate in the ~FAST Tex program next year. The most frequently mentioned reason for discontinuation is graduation (mentioned by seven respondents). Other reasons include being able to earn more in another job, no applicable project, and being too busy.

12. ~FAST Tex Online System

The ~FAST Tex online system was easy to use to most student developers.

- 88% of the respondents felt the ~FAST Tex online system was “Very easy” or “Easy” to use. The rest (12%) responded “Not sure.”

Student Developer Conclusions:

- Most student developers attended the orientation session and felt it was helpful.
- Most student developers viewed the kick-off meeting with faculty as useful.
- Student developers liked participating in the ~FAST Tex program because of the opportunities to learn new skills and to work with DIIA staff who were easy to contact. Dislikes included lack of clarity about the project directions and dealing with mismatches between work hour demands and their desired work hours and between required skills levels and their skills levels.
- Nearly all student developers reported learning a variety of technical (e.g., hardware, software) and non-technical skills (e.g., client, time and project management) as a result of participating in the program with the learning of non-technical skills being reported more frequently.

¹¹ Open-ended responses to the question “Please explain why or why not (you anticipate participating in ~FAST Tex next year).” are reported as frequencies because respondents often gave multiple responses.

- Student developers often reported time-related challenges, faculty-related challenges, and skill/knowledge related challenges. They have turned those challenges into learning opportunities.
- More than half of the respondents had no technical problems or other difficulties, and most of those who did sought assistance from DIIA program staff and rated it positively.
- While challenges and difficulties caused by faculty supervisors were often mentioned by student developers, half of them reported that they received appropriate amount of supervision, and the rest tended to feel they received too much, rather than too little, supervision. Most of them felt their faculty supervisors gave them feedback in a timely manner.
- Most student developers who are not graduating wish to participate in the ~FAST Tex program next year for reasons such as learning/experience, good pay and enjoyment of the work.
- The ~FAST Tex online system was easy to use for most student developers.

End-of-Semester Faculty Survey Findings:

Demographics of the faculty sampled

With a 76% response rate - 41 of 54¹² faculty clients completed the end-of-semester survey - the **faculty sample** represented a wide range of academic areas, representative of all ~FAST Tex faculty participants, as shown in Table 10. The 53¹³ faculty clients managed 53 projects.

Table 10 – College/School of Faculty Survey Respondents

Sample			Program
College/School	Number	Percent	Percent (N=53)
Liberal Arts	11	27	32
Education	8	20	19
Natural Sciences	6	15	13
Fine Arts	5	12	13
Engineering	3	7	8
Social Work	2	5	4
Communications	1	2	2
Business	1	2	2
Library and Information Science	1	2	2
Other	0	0	6
No response	3	7	--
Totals	41	100	100

With respect to gender and rank, the sample was representative of all faculty participants, except for over-representation of male respondents and professors. A majority of respondents (55%) were female and one-third (36%) were professors, followed by assistant professors (26%), associate professors (18%), lectures (18%) and those with administrative positions (3%). Table 11 shows a comparison of the survey sample and the population of ~FAST Tex faculty.

¹² Faculty clients whose projects were active plus one faculty client whose project was cancelled. Three projects were co-managed by two faculty members. Three faculty members had two projects.

¹³ Faculty members whose ~FAST Tex projects were cancelled (eight faculty clients) are not included.

A summary of the end-of semester survey findings follows.

Table 11 – End-of-Semester Faculty Survey Sample Characteristics

Characteristic		End-of-Semester Faculty Sample (N=41)	All 2005 ~FAST Tex Faculty (N=53)
% Female		55	45
Status	% Professors	36	26
	% Associate Professors	18	17
	% Assistant Professors	26	28
	% Lecturers	18	13

1. Proposal Assistance from DIIA Staff

All faculty who received proposal assistance from DIIA found it very helpful.

- Only 7% of the respondents reported not receiving any proposal assistance.
- All respondents who received proposal assistance from DIIA rated it as either “Excellent” (76%) or “Good” (17%).
- When asked about the useful assistance,¹⁴ many respondents cited their satisfaction with the current assistance for the following features, often singling out the program manager, Suzanne Rhodes, for praise:
 - Attentive, prompt, and thorough feedback for technical and non-technical aspects of the proposal (9)
 - Personal contact (1)
 - Openness to questions (1)
- Suggestions for improvement included:
 - Model proposal/template (2)
 - Discussion of past accepted proposals (2)
 - More technical assistance (1)
 - Having a student with knowledge or interest in the content area (1)
 - More information about available resources and cost (1)
 - Better communication of proposal deadlines and application details (perhaps through mass e-mailing) (1)

2. The Orientation Session

All faculty who attended the orientation session found it helpful.

- Only faculty new to the program were required to attend.
- All who attended the orientation session chose “Strongly agree” or “Agree” that it was helpful.
- When asked about ways to improve the orientation,¹⁵ nine respondents said it was thorough and clear with nothing to improve. Two gave suggestions for improvement:
 - More tips for managing interaction/relationship between faculty and student developers (1).

¹⁴ Open-ended responses to the question “What assistance from DIIA staff would be useful to you during the proposal process?” are reported as frequencies, because respondents often gave multiple responses.

¹⁵ Open-ended responses to the question “How could the orientation session be improved?” are reported as frequencies, because respondents often gave multiple responses.

- More tailored to old and new faculty participants (1)

3. Project Assistance from DIIA Staff

The faculty members were, in general, satisfied with the project assistance from DIIA.

- All respondents rated the project assistance from DIIA staff positively as either “Excellent” (83%) or “Good” (17%).
- When asked about useful project assistance,¹⁶ faculty cited the following:
 - Received what was needed and cannot think of anything else (4)
 - Technical assistance (4)
 - Guidance in supervising student developers (such as keeping them on task and understanding their working hours) (4)
 - Immediate consultation when necessary (2)

4. The ~FAST Tex Online System

Most faculty members felt the online system was easy to use, and awareness of this feature improved, but less than one-fifth actually used it.

- Nearly all respondents who had used the system rated it as either “Very easy” (46%) or “Easy” (37%) to use. One was not sure (2%) and no one responded negatively. Compared to 18% reporting the site to be “Very difficult” to use last year, the perceived ease of use has improved this year.
- Fifteen percent of respondents said that they had never used the system.
- Despite the perceived ease of use, most respondents reported not using the system (83%). Awareness of the system has improved this year: 18 % were unaware of this feature this year compared to 46% last year.
- While most respondents commented¹⁷ that the system is good as it is now (7), two forgot about it. One suggested that students’ reports be e-mailed to faculty members when they are updated. One other comment expressed preference for personal interaction rather than online information access.

5. Challenges

The faculty members reported a variety of challenges, citing most frequently time-related challenges.

- Time-related challenges: As with student developers, faculty respondents most frequently cited time related challenges such as getting a late start (after February 1) (27%) and time management difficulties (27%). Also, four mentioned time related challenges, such as not having enough time and more interaction/work early on, in “Other” section. As with student developers, the percentage of faculty respondents who checked “Getting a late start” option decreased substantially from 44% last year. While most student developers who reported these time-related challenges anticipated timely completion of their projects, their faculty counterparts were more pessimistic, most anticipating not being able to complete their projects on time.
 - All faculty respondents who reported time management difficulties and nine out of 11 (82%) who reported getting a late start did not anticipate completing their project by May 31, 2005.

¹⁶ Open-ended responses to the question “What project assistance from DIIA staff would be useful to you?” are reported as frequencies because respondents often gave multiple responses.

¹⁷ Open-ended responses to the question “How could the ~FAST Tex online system be improved?” are reported as frequencies because respondents often gave multiple responses.

- Other most frequently mentioned challenges were:
 - Difficulty in getting necessary content material to student developer (27%)
 - Project management difficulties (22%)
 - Technical difficulties (10%)
- Approximately quarter (27%) reported that they did not experience any project-related challenges.

Table 12 shows a complete listing of project-related challenges experienced by faculty and student developers.

Table 12 – Project-related Challenges Experienced by Faculty and Student Developers

	Faculty % Yes (N=41)	Students % Yes (N=25)
Getting started late (after February 1)	27	28
Time management difficulties	27	28
Difficulty in providing/receiving content material	27	16
Technical difficulties	10	24
Unclear division of responsibilities	5	12
Unclear direction from ~FT staff	0	4
No challenges experienced	27	24

- The response patterns for the faculty supervisors and the student developers are very similar, except that faculty respondents reported difficulty in providing/receiving content material more and students reported technical difficulties more.
- Other challenges that faculty mentioned include keeping student developers on task (2) and personal problems (2) (illness, family emergency).

6. Timely Project Completion

Only one-third of the faculty anticipated on-time project completion, and the others attributed the delayed completion to the faculty and the students not devoting enough time and extended project scope.

- One-third (38%) of the faculty anticipated completing their projects on time (by May 31). This contrasts with the response pattern of the student developers, three-fourths of whom anticipated a timely completion.
- Those who did not anticipate on-time completion most frequently cited the following reasons:¹⁸
 - Faculty members could not devote enough time (8), which delayed preparation of content materials to give to their student developers.
 - Student developers could not devote enough time (4) or withdrew (2).
 - The projects became larger or more complex than originally anticipated (6).
 - Projects were started late (2).

7. Project Quality

¹⁸ Open-ended responses to the question “Please explain why your project will not be complete by May 31, 2005” are reported as frequencies because respondents often gave multiple responses.

Most faculty members were pleased with the finished projects because the projects approximated what they planned and their student developers performed well.

- Most faculty (95%) felt that the finished projects would meet their expectation. Reasons¹⁹ given included:
 - The finished projects were, or were on the right track for, what they planned in terms of functionality, features, usability and/or content. (7)
 - The student developers were skilled and motivated, sometime improving the faculty's original idea. (6)
 - The projects were completed on time. (2)
 - Other reasons: expected contribution to the faculty's class (1), DIIA program staff (1), clear specification of technical requirements (1), and content material available in time (1).
- Those who felt the finished projects did not meet their expectation cited their problems/faults, such as not directing the involved people adequately and lack of experience with Web-based materials.

8. What They Liked

The faculty members liked the assistance they received from DIIA and their student developers.

- When asked what they liked²⁰ about the ~FAST Tex program, the respondents frequently reported the following factors:
 - Excellent assistance from DIIA staff (14), with many identifying the program staff Suzanne Rhodes and Michael Sweet by name for their responsiveness, attentiveness, supportiveness, and flexibility. (Also see sections 1 "Proposal Assistance from DIIA Staff" and 3 "The Project Assistance from DIIA" (above) for more detailed faculty reactions to services provided by DIIA staff.)
 - The quality of work by student developers (9)
 - Technical expertise and support (5)
 - Learning through the projects (3)
 - Opportunity to accomplish the faculty's projects (3)
 - Being able to create educational resources (2)

9. What They Disliked

Faculty's dislikes varied, with time burden and student developer issues being mentioned most.

- Dislikes²¹ about the ~FAST Tex program included the following features:
 - Faculty not being able to devote enough time to their projects (4)
 - Communications with student developers (2)
 - The pace of project progress with no clear sense of it (2)
 - The limitation of 100 hours (2)
 - Uncertainty about student developers' quality (2)

¹⁹ Open-ended responses to the question "Please explain why your project will or will not meet expectation" are reported as frequencies because respondents often gave multiple responses.

²⁰ Open-ended responses to the question "What do you like most about the ~FAST Tex program" are reported as frequencies because respondents often gave multiple responses.

²¹ Open-ended responses to the question "What do you like least about the ~FAST Tex program" are reported as frequencies because respondents often gave multiple responses.

- Other dislikes included unclear division of responsibilities at different phases of the project (1), the faculty’s lack of knowledge about Web design (1), having to monitor student developers (1), and the online application process (1).
- Seven faculty responded that they disliked nothing about ~FAST Tex program.

10. Working with Student Developers

More than half of the faculty members considered their supervision adequate and they evaluated their student developers highly. However, there may be a gap in the perception of project management responsibility between faculty and the student developers.

- The faculty were asked to rate 1) how much **supervision** they provided for their student developers and 2) how much supervision they thought their student developers needed, using the following scale:

Extensive: Met or communicated with 3 or more times/week.

Frequent: Met or communicated with 1-2 times/week.

Occasional: Met or communicated with once every other week.

A little: Met or communicated with once a month.

None/almost none: Met or communicated with once or twice during the project.

Response frequencies were similar for both questions. Nearly one-third of all respondents indicated that they provided “Occasional” supervision (31%) and more than one-third indicated their student developers needed “Occasional” supervision (38%). No faculty reported providing “Extensive” supervision, but 8% felt “Extensive” supervision was necessary. While 15% reported providing no/almost no supervision, slightly more (18%) felt no/almost no supervision was necessary.

A cross-tabulation of the faculty responses to the two questions shows a more complete picture (Table 13).

Table 13 – Supervision Provided by Supervision Needed – Faculty Responses

Supervision Provided	Supervision Needed					Total
	Extensive	Frequent	Occasional	Little	None	
Extensive	0	0	0	0	0	0
Frequent	1	3	5	0	1	10
Occasional	1	1	7	2	1	12
Little	1	1	3	6	0	11
None	0	1	0	0	5	6
Total	3	6	15	8	7	39

- 9 (23%) Faculty who provided more supervision than they thought their student needed.
- 9 (23%) Faculty who provided less supervision than they thought their student needed.
- 21 (54%) Faculty who provided the same amount of supervision as they thought their student needed.

Approximately half of the faculty respondents (54%) reported that they provided the appropriate amount of supervision, while the rest were equally divided between those who gave “too much” supervision and those who gave “too little.”

- The students’ response pattern to parallel questions is similar to that of faculty, with half perceiving the amount of supervision as adequate. However, the percentage of students

who felt the supervision they received was too much greatly exceeded that of those who felt it was too little.

- One-third (33%) of the faculty responded that they did most of the project management. 23% thought their student developers did, and 15% reported DIIA staff did. Also, 26% (most included in “Other”) of the faculty reported that the faculty, student developer, and/or DIIA staff as a team managed the project together.

Table 14 shows a comparison of the faculty’s response pattern with that of the student developers.

**Table 14 – Who Did the Most of the Project Management
– Faculty and Student Responses**

	Faculty % Yes	Student % Yes
Faculty did	33	12
Student did	23	64
DIIA staff did	15	12
Other	28	12
Totals	100	100

- Both the faculty and student developers tended to perceive that they provided the project management more than the other party thought they did. There seems to be a gap in the perception of who took care of project management in some teams.
- Further analysis suggests that students or DIIA staff often took up the faculty’s project management responsibility: in the cases where the faculty provided little or no supervision, the faculty reported students (41%) or DIIA staff (18%) did most project management.
- Faculty respondents generally evaluated their student developers’ communication ability highly. 82% rated it as “Excellent (49%)” or “Good (33%),” while 8% rated it as “Fair” (3%) or “Poor” (5%).
- Most (76%) of the respondent rated their student developer’s ability to meet deadlines as “Excellent” (45%) or “Good” (32%). However, some rated it as “Fair” (3%) or “Poor” (11%).
- Most respondents seemed pleased with the quality of their student developers’ work by giving ratings of “Excellent” (71%) or “Good” (18%), with one respondent giving a rating of “Fair.”

Faculty Client Conclusions:

- Faculty clients were generally satisfied with both the proposal and project assistance they received from DIIA.
- Faculty members found the orientation session helpful.
- Faculty members felt the ~FAST Tex online system was easy to use, but very few actually used it.
- Time-related challenges, such as getting a late start and time management difficulties, were the challenges most frequently cited by the faculty members. These difficulties are likely contributing to their pessimism about timely project completion. Also, the extension of project scope often delayed project completion.
- Most faculty members were pleased with the finished projects.
- More than half of the faculty members considered the amount of supervision they provided adequate. Yet the rest perceived they provided too much or too little supervision. Too little supervision by faculty members is likely a contributing factor to project challenges such as communication, work quality, the ability to meet deadlines and projects meeting faculty expectations.
- Most faculty are satisfied with their student developer's ability to communicate, meet deadlines, and do quality work. A few, however, reported dissatisfaction in one or more of these areas. Such dissatisfaction might be alleviated through closer monitoring of projects by program staff or better supervision by faculty.

Program Outputs

The evaluation sought to assess program outputs in two ways. First, outputs were assessed through a program audit that compiled quantifiable output measures such as number of projects completed, types of products produced, estimated number of end-users, amount of consulting time used, and student developer hours. Second, evaluators conducted a quality review of completed projects. The findings from these two approaches are presented below.

Audit Results

A total of 72 project proposals were received from faculty. Of these, 62²² (86%) were accepted as ~FAST Tex projects.

Completion Status

The target end-date for all ~FAST Tex projects is May 31st of each program year and one of the central goals of the program is to have all **projects completed on time** (i.e., by May 31st). Table 15 shows the overview of project completion status as of July 22nd, 2005. Only 20 (32%) of all projects were completed on time, with an additional 29 (47%) to be completed during the summer (June 1-August 31, 2005). The status of four (6%) of the projects was unknown.

²² The ~FAST Tex program actually included two more projects in 2005. These are ~FAST Tex projects that had been thought completed in 2004, but were found to require more work to eliminate newly detected problems. A total of 180 student developer work hours were used on these two projects by July 22, 2005, when one of them was complete and the other was estimated to be complete by September 1, 2005.

Nine projects (15%) were cancelled for a variety of reasons. Some were cancelled because the faculty clients and/or student developers did not have time or because the project became low-priority for the faculty client. Some projects received other sources of funding and support and still others could not obtain consensus and cooperation from the involved stakeholders.

Table 15 – Number and Percent of Projects by Completion Status*

Completion Status*	Number	Percent
Completed by May 31, 2005 (on time)	20	32
Completed June 1 through July 31, 2005	13	21
To be complete August 1 through August 31, 2005	20	32
Cancelled	9	15
Total	62	100

* Completion status as of July 22, 2005

Project Type

The completion of a single project often involves the development of several **products** to make it fully functional. For example, a web-based lab simulation may involve the development of a database, animated images requiring programming, and a web interface. Other projects, however, may only require web development or simple programming. Table 16 shows the number of ~FAST Tex projects using each product type. The most frequently produced product type is web development. More than half the projects (52%) involved web development with 33% creating some type of video product and 30% requiring programming. Other types of products include database, graphics, authoring, content organization, instructional design, design documentation, and audio.

Table 16 – Number of projects by product type

Product Type	Number of Projects*	Percent
Web Development	33	52
Video	21	33
Programming	19	30
Database	15	23
Graphics	8	13
Authoring	6	9
Content Organization	3	5
Instructional Design	1	2
Design Documentation	1	2
Audio	1	2

* Projects may have multiple product types

Number of End Users

Table 17 shows the estimated numbers of end users per year.²³ The 2005 program products will serve an estimated 20,000 students, for an average of 380 students served per project. This estimation has dropped significantly from 32,000 estimated users in the previous year. A majority of projects (63%) are used by 100 or fewer students, and the large average number of end-users is skewed by the 6 (12%) projects that serve more than 1,000 students. Two projects serve less than 10 students, and nine projects serve 20 or less students.

Table 17 – Number of End Users

		Active Projects
Number of projects		52*
Total		19,796
Average		380
Range		6 - 5,000
# of projects with ...	1-100 end users	33 (63%)
	101-500 end-users	13 (25%)
	501-1,000 end-users	0 (0%)
	more than 1,000 end-users	6 (12%)

* There was no record of estimated number of end users for one project.

Number of Staff Mentor Hours

Table 18 provides the numbers of DIIA staff mentor hours. The number of DIIA staff mentor hours includes the hours that DIIA staff other than ~FAST Tex program staff spent to assist the ~FAST Tex projects, in various areas such as project management, technical problem solving, design, content organization, and compression. About a quarter of projects required an average of 60 mentor hours from DIIA staff. Of those projects, seven required 10 mentor hours or less and four required 100 hours or more using up a total of 700 hours (77% of the total DIIA staff mentor hours). This suggests that the average of 60 hours is skewed by some projects that required unusually large amounts of assistance.

Table 18 – Number of Staff Mentor Hours

		Active Projects
Number of projects		53
Number of projects requiring staff mentor hours		15 (28%)
Staff mentor hours total		904
Average for all projects		17
Average for the projects requiring staff mentor hours		60
Range		2 - 300

Some types of projects (e.g., database, video) may require more assistance from DIIA staff than others. However, the DIIA staff mentor hours could not be analyzed by project types, because

²³ Number of end users are based on faculty estimates reported in program application.

the audit data did not include the description of the kind of assistance provided. This type of data should be collected in the future to inform the project selection process and DIIA professional development decisions.

Number of Student Developer Hours

The number of hours student developers spent on ~FAST Tex projects are shown in Table 19. For active projects, student developers spent an average of 117 hours per project - 17 hours over the goal of 100 hours. More than half the projects were completed within this goal. However, about one-fifth of the projects required 151 hours (50% more than the goal) or more, of which seven projects resulted in using 200 or more hours. This suggests that 100 student developer hours is not adequate or realistic for some projects. A total of 79 hours was spent on cancelled projects.

Table 19 – Number of Student Developer Hours

		Active Projects	Cancelled Projects	Total
Number of projects		52*	6	58
Total		6,196	79	6,275
Average		117	13	108
Range		20 - 400	0 - 30	0 - 400
Number of projects with...	100 hours or less	29 (56%)	6 (100%)	35 (60%)
	101 -150 hours	13 (25%)	0 (0%)	13 (22%)
	151 hours or more	10 (19%)	0 (0%)	10 (17%)

* There was no record of student developer hours for one project.

Project Quality Review

The project quality review process consisted of reviewing 15 randomly selected ~FAST Tex projects from 20 projects completed by the May 31, 2005 deadline. Reviewers rated projects on ten criteria (Table 20) using a five-point scale (Table 21).

Table 20 – Review Criteria Items for Project Quality Review

I. Project Objectives
a. Rate the clarity of the project objectives.
b. Rate the degree to which project objectives were met given program parameters (i.e., was it likely that project goals could be accomplished in 4 months using 100 hours of labor).
II. Design & Function
a. Rate the overall design of the product (e.g., use of color; look; attractiveness).
b. Rate the functionality of the product (e.g., does it do what it is supposed to do; does it work or are there bugs).
c. Rate the usability of the product (e.g., ease of navigation; ease of use; can you find what you're looking for).
d. Rate the scalability/reusability of the product (e.g., is there potential for other application; is it adaptable to other uses; can its scope be expanded).

III. Instructional Value

- a. Rate the product's ability to solve or address a pedagogical problem (e.g., to what extent does it assist in the learning of content; how does it improve learning).
- b. Rate the product's ability to support instructional best practices (e.g., student centered, active learning, collaborative learning, multiple modes of learning).
- c. If the product is primarily a *resource*, rate how well the product expands access to information. OR If the product is primarily a *technical teaching tool*, rate how effectively students are engaged.
- d. Rate the overall instructional value of the product.

Table 21 – Rating scale for project quality review items

- 1 = Poor** – Unacceptable or unusable. No project objectives met.
- 2 = Fair** – Needs work. Below average. Few project objectives met.
- 3 = Satisfactory** – Just O.K. Average. Some project objectives met.
- 4 = Good** – Impressive. Above average. Most project objectives met.
- 5 = Exemplary** – The ideal. Meets all project objectives or goes beyond them.

Improvement in 2005

The most notable aspect in 2005 Project Quality Review compared to that in the previous year is the significant improvement in the scores. As shown in Table 22, the average total score has improved from 3.22 to 3.79, which suggests that the product quality, on average, is close to “Good (Impressive. Above average. Most project objectives met.)” rather than “Satisfactory (Just O.K. Average. Some project objectives met.)” The improvement occurred in all aspects of the products. There was at least a 0.5 point improvement in both Design and Function and Instructional Value ratings. It is particularly worthwhile to mention that the lowest rated project in 2005 is now close to “Satisfactory” (2.75) compared to the lowest rated project in 2004 at 1.70 “Fair (Needs work. Below average. Few project objectives are met.)”

Table 22 – Improvement in Quality Review Scores in 2005

	2004	2005	Improvement in 2005
Average Total Score	3.22	3.79	.57
Average Design & Function Score	3.16	3.84	.68
Average Instructional Value Score	3.18	3.72	.54
Range	1.70 – 4.40	2.75 - 4.70	

Table 23 shows the fifteen projects reviewed in rank order according to their Total Combined Score Mean. This score is essentially the “overall score” for each project. The table also shows the Design and Function Combined Score Mean and Instructional Value Combined Score Mean for each project. See Appendix C for individual item/review ratings for each project.

Table 23 – Quality Review Combined Scores by Project

Rank	Project Title	Design & Function Combined Score Mean	Instructional Value Combined Score Mean	Total Combined Score Mean
1	Interactive Teaching Resources for Biology	4.63	4.75	4.70
2	Online Student Peer-Evaluation and Feedback	4.38	4.75	4.60
3	Does Costing Matter in Determining a Product’s Price in a Competitive Market Setting	4.25	4.88	4.50
4	Use of Authentic Audio-Visual Materials in Advanced Language Classes	4.13	4.50	4.40
5	Teaching Indigenous Culture	4.13	3.88	3.95
6	Non-Linear PowerPoint to Aid Learning of Probability, Random Processes, and Statistics	3.88	3.63	3.85
7	Memories of Older Adults: A Risk and Resilience Perspective	4.63	2.88	3.75
8	Incorporating Learning Tools and Adding Resources into Instructor Websites	4.25	3.63	3.70
9	Best Practices	3.38	3.75	3.65
10	Mediation Training	3.63	3.50	3.60
11	Virtual Study Abroad: Writing Place and Space in a Moo	3.13	4.00	3.55
12	Digital Microscope Tutorial Web Page	3.75	3.38	3.50
13	Development of a Revised Web-Based Health Physics Course	3.50	3.13	3.35
14	Introducing German! – German Outreach Program to Local Schools	2.50	3.25	3.00
15	EON: A Distributed Computing System to Extend the Time Scale of Molecular Dynamics Simulations	3.38	1.18	2.75

Program Output Conclusions:

- Only a third of projects were completed on time. The fact that the on-time project completion rate did not improve despite all kick off meeting a occurring before February 1. suggests that project management issues between faculty and students and/or the improper scoping of projects may be the problem.
- More than half the projects involve web development, followed by video, programming and database. Future ~FAST Tex resources, including student developers, DIIA staff, hardware and software, should be allocated to these areas.
- 2005 ~FAST Tex projects will serve an estimated 20,000 students.
- A quarter of projects required mentor hours from DIIA staff. 77% of 904 hours or 700 of the DIIA staff mentor hours were used by only four projects, suggesting the need to incorporate the consideration of potential DIIA staff mentor hours at the time of proposal reviews and student developer assignment.
- Student developers spent an average of 117 hours per project – 17 hours over the goal of 100 hours. One-fifth of the projects required 151 or more hours, suggesting that 100 student developer hours may not be realistic for some projects.
- The quality of completed projects improved substantially compared to the previous year. The improvement occurred in all aspects of the products, resulting in the average product score close to “Good” rather than “Satisfactory” last year. Increased project oversights perhaps contributed to the improved product quality.

Program Improvement in 2005

The ~FAST Tex 2004 Program Evaluation Report concluded that the ~FAST Tex program was successful in its core goals of providing a learning experience for its student developers and in providing technical, administrative and managerial support to faculty clients and student developers. However, some challenges were also identified:

- Many projects started late
- Low on-time completion rate
- Some projects of low quality
- Over-burdened program staff

In order to overcome these challenges, seven recommendations were made in the 2004 report. In response to the recommendations, the ~FAST Tex program staff made many concrete changes to the program operation in 2005. Table 24 provides an overview of the recommendations made in the 2004 report and the related changes made by ~FAST Tex program staff.

Table 24 – 2004 Recommendations and 2005 Changes to ~Fast Tex Program

	Recommendations	Changes Made
1.	Increase program support staff or reduce the number of projects accepted during a single program year.	Hired a half-time assistant program manager.
2.	Refine the proposal process by: <ul style="list-style-type: none"> • Making proposal forms more structured by specifically requiring faculty to state clear project objectives, instructional objectives, and precise outcome measures • Establishing clear and measurable acceptance criteria for proposals 	To be addressed in 2006.
3.	Refine the orientation/kick-off meeting processes by: <ul style="list-style-type: none"> • A program manager attending all kick-off meetings • Requiring all student developers to attend orientation sessions • Providing both faculty clients and student developers with some instruction in the management of technology related projects 	All the recommendations were addressed. <ul style="list-style-type: none"> • Program staff attended all kick-off meetings. • Required all student developers to attend an orientation session and all students (both new and old) attended it. • Developed structured project organizers to assist with project management. • Provided faculty clients and student developers with guidance and recommendations in the project management via e-mails, during the kick-off meetings, and via the project organizers. • For several large-scale projects, the program staff served as project managers.
4.	Improve project oversight by: <ul style="list-style-type: none"> • Increasing the monitoring of project progress • Requiring faculty to complete an end-of-project report 	Project oversight was improved by: <ul style="list-style-type: none"> • DIIA staff assisting with the management of several projects • Hired three video specialists (ex-student freelancers) to oversee video projects • Hired a half-time assistant program manager • Required student developers to complete an end-of-project report for about half of the projects • Conducted mid-term project meetings

Table 24 – 2004 Recommendations and 2005 Changes to ~Fast Tex Program (Continued)

	Recommendations	Changes Made
5.	<p>Improve project quality by:</p> <ul style="list-style-type: none"> • Becoming more selective in choosing projects for the program • Assigning student developers to only one project at a time • Hiring experienced student developers who can act as “specialist” on multiple projects 	<p>The following changes were made:</p> <ul style="list-style-type: none"> • Dramatically reducing the number of students working on multiple projects. • Increasing the number of people who can act as specialists on multiple projects, such as DIIA staff, experienced student developers, and freelancers. • Offered to pay student developers for 2 web development training sessions. One took two sessions and two took one session.
6.	<p>Modify program cycle by</p> <ul style="list-style-type: none"> • Beginning the program cycle earlier • Allowing flexible project begin and end dates 	<p>The following changes were made:</p> <ul style="list-style-type: none"> • Beginning the program cycle ten days earlier • All faculty/student teams in place by 2/1/2005
7.	<p>Integrate evaluation activities into regular program operations by</p> <ul style="list-style-type: none"> • Maintaining and regularly updating audit measures • Continuing mid-semester and end-of-semester student surveys while further automating data analysis activities • Using mid-term progress meetings as a data gathering opportunity • Tracking project milestones 	<p>The following changes were made:</p> <ul style="list-style-type: none"> • Used the note section prepared for each project in the online project management system for faculty clients and student developers to update the audit measures. Data includes: date each required meeting occurred, the project end date and final URL of project, other project information • Requiring student developers to update weekly progress reports before timesheet were accepted and signed • Creating student and faculty project organizers to help collect information • Used <i>Survey Monkey</i> to streamline conducting and analyzing surveys • Conducted mid-semester meetings for all projects

Documented Improvements

The following improvements were observed in the 2005 ~FAST Tex evaluation.

Fewer projects started late

Indicators:

- Fewer faculty clients and student developers report experiencing late starts as a challenge. For faculty members, the percentage of choosing this option declined from 44% in the 2004 survey to 27% in the 2005 survey and for student developers it declined from 46% to 28%.

Continued Challenge:

- While the number of projects starting late has decreased, this still remains the most frequently mentioned challenge by both faculty clients and student developers: about one-fourth of each group reports feeling this challenge. Because program staff had made all project assignments and conducted all orientation and kick-off meetings on-time (before 2/1/2005), program staff will need to identify faculty and/or student interventions to increase on-time starts.

Improved project quality

Indicators:

- The project quality scores have improved significantly from 2004 to 2005. Improvement was observed in all aspects of the product quality, as reflected in the average total scores, the average Design and Function scores, and the average Instructional Value scores (from “Satisfactory” to “Good” level in all areas). In particular, fewer projects were rated as “Fair” and even the lowest score was nearly “Satisfactory” in 2005.
- Most faculty (95%) reported that the finished projects would meet their expectations in the 2005 survey.
- Project oversight was improved by hiring an assistant program manager and video specialists, obtaining other DIIA staff’s help, conducting mid-term meetings, and requiring student developers to complete weekly progress reports and an end-of-project report.

Other indicators of program improvements

Other indicators of improvements that would indirectly contribute to the attainment of program goals were also observed.

- The student developers’ orientation attendance has improved dramatically. The attendance rate rose from half in the 2004 survey to 96% in the 2005 survey.
- More than half the student respondents reported experiencing no technical problems or other difficulties in the 2005 survey, and most of those who did could obtain adequate assistance from DIIA.
- The perceived adequacy of the amount of faculty supervision has improved. Half the faculty and the student developers perceived that the amount of faculty supervision given to students was appropriate in the 2005 survey, while only 43% and 20% thought so respectively in the 2004 survey.
- The ~FAST Tex online system usability and awareness improved. Both faculty clients and student developers felt the system was easy to use in the 2005 survey. The faculty members reporting the system as difficult to use decreased from 18% in 2004 to none in 2005. Furthermore, awareness of the system improved from 46% being unaware in 2004 to 18% being unaware in 2005. These improvements should contribute to better faculty monitoring of their student developers and projects. However, 65% of the faculty respondents reported that they did not use the system.

Remaining Challenges

While many improvements occurred, the program continues to face challenges in a few important areas.

Lower on-time project completion rate

Indicators:

- The on-time project completion rate declined slightly from 35% in 2004 to 32% in 2005.
- Only one-third (38%) of the faculty anticipated completing their projects on-time, while three fourths of student developers anticipated it in the 2005 surveys. These survey results suggest two possibilities: 1) faculty knowing their project progress status but not taking appropriate measures, and 2) student developers not grasping their project progress status.

Need for increased assistance for faculty

Indicators:

- Faculty members reported that the prime reason for the delayed project completion was their lack of time.
- Several projects were cancelled due to faculty's lack of time.
- Students more frequently indicated faculty-related challenges in the 2005 survey, including unclear direction from faculty supervisor (24%), difficulty in communicating with faculty supervisor (24%), difficulty in getting necessary content material from faculty supervisor (16%) and faculty supervisor being unprepared/disorganized (16%).

Recommendations not addressed.

The following 2004 recommendations were not addressed in the 2005 program operation. These recommendations should be addressed in 2006.

- Refine the proposal process (Recommendation 2) by:
 - Making proposal forms more structured by specifically requiring faculty to state clear project objectives, instructional objectives, and precise outcome measures
 - Establishing clear and measurable acceptance criteria for proposals
- Improve project oversight (Recommendation 4) by:
 - Requiring faculty to complete an end-of project report. Alternatively, the program may require faculty to complete a mid-semester report, in which they report their project progress status and their plan for the rest of the project period. This should contribute to higher on-time project completion rate.
- Improve project quality (Recommendation 5) by:
 - Becoming more selective in choosing projects for the program.
- Modify program cycle (Recommendation 6) by:
 - Allowing flexible project begin and end dates

Program Improvement Conclusions

- The 2005 ~FAST Tex program saw significant improvements in multiple areas.
 - All faculty/student teams were in place and all kick-off meetings occurred by 2/1/2005.
 - The project quality has improved substantially.
 - The student developers' orientation attendance has improved dramatically.
 - A majority of student developers reported experiencing no technical problems or other difficulties.
 - The perceived adequacy of the amount of faculty supervision has improved.
 - The ~FAST Tex online system usability and awareness improved.
 - The orientation/kick-off meeting processes were improved.
 - Project oversight was improved, by increased staff, end-of-project reports, and mid-term project meetings.
 - The program cycle started earlier.
 - More evaluation activities were integrated into regular program operations.
- Remaining challenges are in the following areas.
 - On-time project completion rate remains low.
 - Faculty clients face substantial difficulties in project management and need additional assistance.
 - Some recommendations made in 2004 have not yet been addressed, including refining the proposal process, being more selective in choosing projects for the program, and allowing flexible project begin and end dates.

~FAST Tex 2005 Program Evaluation Report

Recommendations

The following recommendations are all interrelated and will be most useful if considered holistically. Based on the above findings and conclusions, it is recommended that DIIA leadership and ~FAST Tex program staff considers the following:

1. **Refine the Proposal Process** – The project proposal process used in 2005 made only general requirements of faculty applicants in terms of stating objectives and outcome measures and specific criteria for selecting projects for inclusion in the program are unclear. Program staff should consider refining the proposal process by:
 - a. ***Making proposal forms more structured*** by specifically requiring faculty to state clear project objectives (specific tasks to accomplish), instructional objectives (how will the technology/tool improve instructional outcomes), and precise outcome measures (how will you know if objectives are met). Having clearly articulated objectives and outcome measures will help faculty to better understand the informational, technical, and human requirements for their project and will likely improve their ability to manage them. Clearly stated objectives and outcome measures will also help program staff to evaluate the appropriateness of projects prior to acceptance and the success of projects upon completion. Program staff should also assist faculty individually during the application process to help them establish realistic objectives and outcome measures.
 - b. ***Establishing clear and measurable acceptance criteria for proposals.*** Each proposal should be systematically evaluated according to established criteria and the decision to accept a project into the program should be based on this evaluation. In particular, program staff should consider potential consulting costs, difficulty level, scope, and the cost per potential user when evaluating project applications.
2. **Assist Faculty in Managing Their Project** – The ~FAST Tex 2005 program evaluation indicated that substantial number of projects are delayed or cancelled due to the difficulties that faculty clients faced in project management. These evaluation results suggest that assisting faculty clients in managing their projects will help increase on-time completion of projects, improve project quality, and help alleviate project management challenges. Program staff should consider assisting faculty in managing their projects by:
 - a. ***Requiring faculty applicants to have at least half of their content materials prepared BEFORE their project can be accepted.*** Preparing materials after acceptance demands a lot of faculty clients' time, and often delays their projects. Requiring faculty to prepare some materials before the projects start ensures timely project starts and gives them more time to manage their projects. It also allows faculty to build more concrete visions of their projects early on thereby reducing the number of changes after the project has begun. Project staff should consider requiring them to submit a list of materials already in place and provide an estimate of the time needed to prepare the remaining materials. If faculty clients wish to use the Fall semester to gather content materials, program staff could award a ~FAST Tex grant contingent on them having materials in place by

February 1. Faculty applicants who do not meet this criterion could also be given a deferred acceptance for the following year.

- b. *Requiring faculty to create a project timeline and document specifications for the kick-off meeting.*** Design should be the first step for any project. It determines the processes (workflows) of the project, and defines the finished product. Hence, project specifications (project design) should be prepared with as much detail as possible before the kick-off meeting and presented there to guide the project. The design requirements should be in a form that is easily created by faculty clients and understandable to student developers. Program staff could provide some design forms (user scenarios, page layouts, prototypes, or even the other similar products) at the orientation session that faculty clients could employ by the time of the kick-off meeting. For faculty clients needing more complex designing, specialized, experienced student developers could be assigned in the Fall to assist them. This would also benefit student developers in that they would gain experience in another part of the project process. Program staff should also provide information as to how much time is usually required for different types of work (making one minute animation, one page of website, digitizing one slide, etc.).
 - c. *Sending auto-notices when students enter logs.*** The ~FAST Tex 2005 program evaluation showed that faculty client rarely used the ~FAST Tex online system to monitor student progress despite its perceived ease of use. If a notice is sent automatically to the faculty each time students make a log entry, faculty clients will be more aware of project progress and better able to manage their student developers.
 - d. *Using mid-term meeting to align project progress status with project specifications and timeline.*** The mid-term meeting is the only opportunity for faculty clients and student developers to review the overall project progress status with program staff during the project. Program staff should take this opportunity to provide as much project management assistance as possible. The agendas for the meeting should include:

 - Providing faculty clients with the student log data so that they can review project progress
 - Clarifying any changes made in the project specifications (including project objectives) and updating them
 - Checking project progress status against the timeline, and, if necessary, adjusting the timeline
 - Confirming the product assessment plan
 - e. *Documenting the mid-term meeting results in the project file.*** The results of mid-term meetings should be clearly documented and recorded in the project file. Documentation should be shared with student developers and relevant program staff.
- 3. *Modify the Program Cycle*** – In 2005, the FAST Tex program cycle started 10 days earlier than the previous year. This contributed to all projects starting before 2/1/2005. Yet, the on-time project completion rate did not improve. In order to improve the rate, the program staff should consider the following:
- a. *Allowing flexible project begin and end dates*** based on project scope and difficulty rather than the academic calendar. For example, a complex project requiring a longer timeline could begin December 1st and end June 30th. Additionally, the end date

established at the project's inception could be modified after a mid-project progress review/meeting. Allowing and planning for a range of begin and end dates will give program staff the ability to scope projects appropriately, complete program activities over a longer time frame, reduce the time management challenges for staff, faculty and students, and decrease the tensions associated with "missing the deadline." Given that the majority of projects already are being flexed, this would be more of a change in policy than in practice with the primary advantage being that the flexibility is planned and proactive rather than being unplanned and reactive.

b. *Beginning the program cycle earlier* includes calling for proposals at the *beginning* of the Fall semester with an early October deadline; make award decisions by early November; conducting faculty orientations in November and December; and hiring and orienting students November 1-January 15. If faculty clients are required to prepare content materials, project specifications, and/or timelines before the kick-off meeting, as suggested above, they need more time in between proposal acceptance and the kick-off meeting. Beginning the program cycle earlier allows faculty clients to have groundwork done before student developers start working on their projects and should help reduce project management challenges.

4. Collect Additional Audit Measures to Inform Program Decisions – Audit measures yield information useful for projecting program resource needs and making decisions. In order to obtain such information, program staff should collect the following data:

- Student and consulting hours by project type. This data helps identify which types of projects cost more/less and is useful when reviewing future projects for acceptance.
- Cost per project.
- Focus group with specialized student developers to document the specific benefits and challenges faced by this group and identify any needs.
- Changes in project objectives. Specific project objectives often change as the project progresses and these changes should be documented. Such information would make the project review process easier and more accurate.

5. Choose Program Projects More Selectively – Two years of evaluation indicate that some accepted projects do not fit with the current program's goals and structure. Some projects were cancelled while others required exceedingly large amount of student developer and DIIA mentor time and extended into a second program year. Selecting only projects that fit within the programs goals, resource limits and timeline should reduce program and DIIA staff workloads, minimize project management challenges for faculty, and could further improve project quality. Project proposals that have few prepared materials, unclear instructional objectives, are beyond program scope, or too complex for student developers should not be accepted. Accordingly, such requirements should be included in the proposal acceptance criteria.

6. Maintain Activities that Contribute to Program Improvements – Recommendations implemented during the 2005 ~FAST Tex program cycle resulted in several improvements and should be continued. They include:

- Project tracking
- Full staffing

- Timely implementation of program components:
 - Proposal process
 - Orientation sessions
 - Kick-off meetings
 - Mid-term progress meeting
- Use of expert student developers on multiple projects

~FAST Tex 2005 Program Evaluation Report

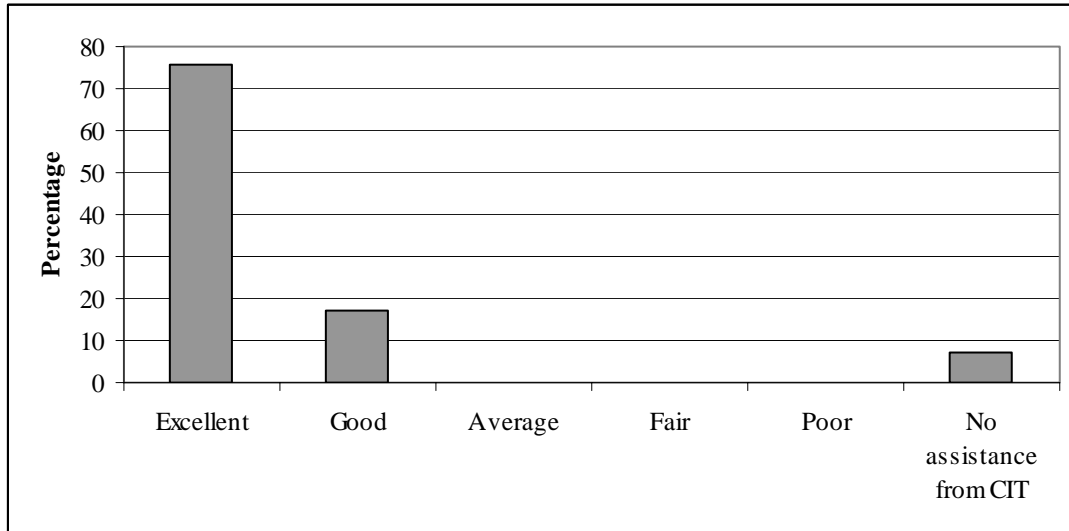
Appendices

Appendix A:
~FAST Tex End-of Semester Faculty Survey and Results
Spring 2005
 Results (n=41)

Please assist us in improving the ~FAST Tex program by answering the questions below. Your individual responses will be kept anonymous. Result will be used to evaluate the program and inform future planning.

1. How would you rate the proposal assistance you received from DIIA staff? (n=41)

	N	%
Excellent	31	76
Good	7	17
Average	0	0
Fair	0	0
Poor	0	0
I did not receive any proposal assistance from DIIA	3	7
Total	41	100

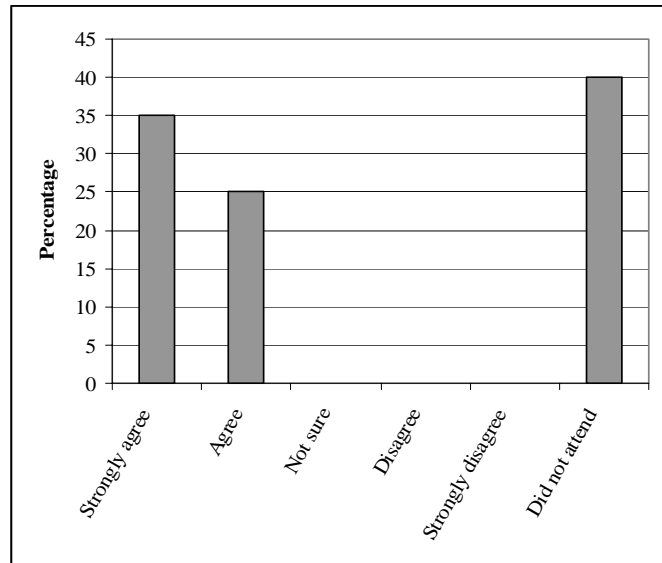


2. What assistance from DIIA staff would be useful to you during the proposal process? (n=19)

- Personal contact- a real person.
- Suzanne was VERY helpful during the proposal process. She was attentive, prompt and thorough.
- I appreciated the feedback I received on the proposal. I also appreciated the fact that I could ask questions as I was putting the proposal together.
- More technical assistance.
- Model proposals might be helpful.
- The DIIA staff were very helpful in providing feedback regarding my proposal. I can only suggest that you keep up the good work!
- An electronic template.
- I have had help that went beyond the call of duty.
- The same consultation that was provided to me this time. Options were reviewed for format and technical specifics were outlined.
- It was very helpful to discuss the project with the DIIA staff and have them assess the technology needs. I couldn't have written my proposal without Suzanne Rhodes, who worked tirelessly on my behalf.
- A bit more guidance in how to supervise the workers. Sometimes it is a bit difficult to know what the workers are up to.
- The assistance I received at that time was perfect - suggestions about what work would be needed for what I was hoping to achieve.
- It would have been helpful to have a student who had knowledge or specific interest in the content area.
- A lot is already available, for which I'm very grateful.
- Consultation about available resources, 'costs,' and feedback about similar projects in the past.
- The proposal deadlines and details of application are not well-communicated to all faculty. You may do mass-emailing through DIIA or other service.
- Advice from Suzanne Rhodes has been quite helpful during the proposal process. Her comments were precise and specific. (On the question below. I attended an orientation session the first time I received a grant from DIIA.)
- Overall it has been a good experience. I think I am aware of what the FAST Tex students can do, and if I can describe that during the proposal process so much the better.
- Conversations about the kinds of proposals that have been approved in the past, discussion of goals and possible ways of achieving them.
- I've had excellent assistance from Suzanne Rhodes. At this point, I cannot think of other assistance that I've needed that has not been supplied.
- BEING ABLE TO TALK THROUGH THE SUBMISSION--BUT IS ALREADY AVAILABLE.
- Just what I received: recommendations, technical specifications, discussion of what's possible and what may not be possible with technology; specific language to describe what I wanted.

3. The orientation session conducted by program staff was helpful. (n=40)

	N	%
Strongly agree	14	35
Agree	10	25
Not Sure	0	0
Disagree	0	0
Strongly disagree	0	0
Did not attend	16	40
Total	40	100

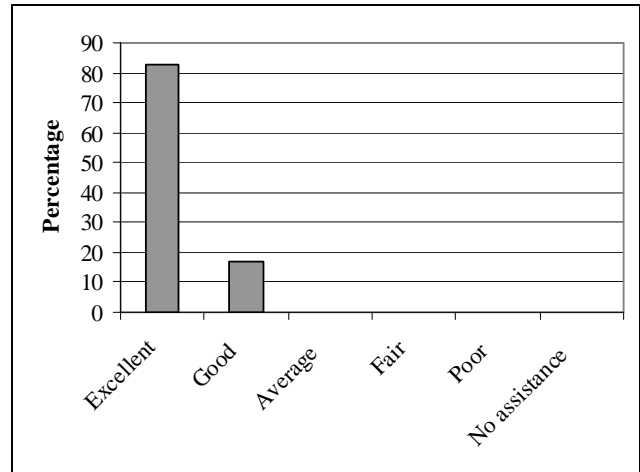


4. How could the orientation session be improved? (n=11)

- I thought it was pretty perfect.
- Again, I found it informative and have nothing to suggest.
- I thought it was excellent in all respects.
- Nothing really.
- I see no need for improvement. All the necessary info about how to proceed and timelines were presented.
- I can't think of anything.
- No need for any changes. All the staff are very congenial, clear in communication and helpful after the session is over. Sata.
- As long as Suzanne is there nothing can be improved. She knows all or will find it out.
- Focus somewhat more on interaction between faculty and students employed; tips for managing that relationship effectively.
- No thoughts come to mind.
- MORE TALORED TO OLD AND NEW.

5. How would you rate the project assistance you received from DIIA staff? (n=41)

	N	%
Excellent	34	83
Good	7	17
Average	0	0
Fair	0	0
Poor	0	0
I did not receive any project assistance from DIIA	0	0
Total	41	100

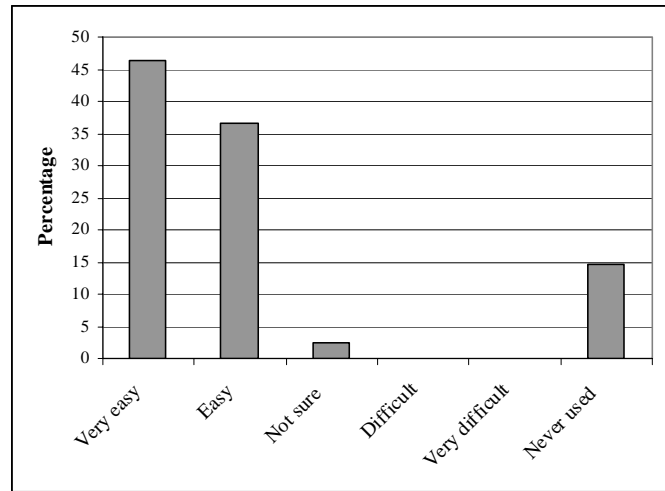


6. What project assistance from DIIA staff would be useful to you? (n=16)

- Well, assigning a graduate student to help was the ultimate assistance.
- An awareness of what FT is looking for.
- More technical assistance.
- Prompt return of emails/questions. Support during execution of the project outcomes.
- I needed help keeping the student assigned to my project on task. The DIIA staff helped and eventually replaced him.
- Same consultation provided -- on call assistance via email and face-to-face help when requested.
- Some accounting of the hours the workers are using to accomplish various tasks. Often I had little idea how many hours workers were taking to accomplish a particular task.
- Suzanne Rhodes is a great help.
- N.A.
- Guidance about expectations for student assistance. Information about interfacing project with campus systems (Blackboard, EID authentication, etc.).
- Integration of software and hardware services and coordination with departmental staff. It is worth considering a centralized assistance for teaching (instructional) services from DIIA similar to what has happened to e-gradebook and blackboard.
- Again, the advice of DIIA staff during this project has been precise, specific, and useful. I can't think of anything else they might have done.
- Everything I've needed has been forthcoming from the staff.
- I don't know how effective supervision of student was.
- I have had numerous projects through Fast tex - early on I had some uneven experiences - mostly in getting the necessary technical help (re - video compression). But recently, I've received great technical assistance.
- Received what I needed

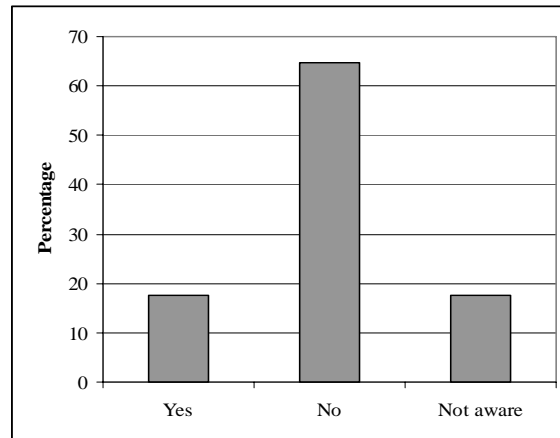
7. In general, how easy was it to use the ~FAST Tex online system? (n=41)

	N	%
Very easy	19	46
Easy	15	37
Not sure	1	2
Difficult	0	0
Very difficult	0	0
I never used the ~FAST Tex online system	6	15
Total	41	100



8. Did you use the ~FAST Tex online system to monitor your student developer's progress or hours? (n=34)

	N	%
Yes	6	18
No	22	65
I was not aware of this feature	6	18
Total	34	100

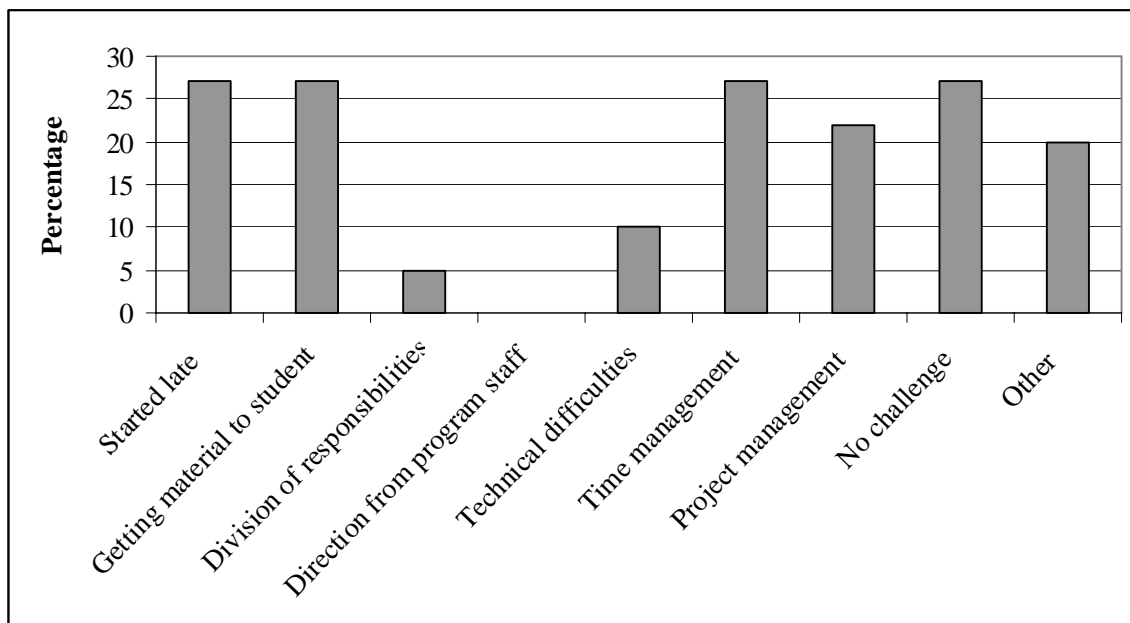


9. How could the ~FAST Tex online system be improved? (n=10)

- It all looks very good.
- This slipped my mind completely! The semester was a busy one. I am sure we would have made more progress if I had monitored the hours.
- Fine as is.
- I think it's great; I just forgot about it this semester!
- I don't know. It is very clear as it is.
- I didn't do it even though I should have. ;) Perhaps when the ~FAST Tex student updates the hours an email notification can be sent to the ~FAST Tex Faculty member, so there isn't a constant need to check in except when something has changed. Perhaps you already have this feature and I didn't use it?
- It depends on the need. I like personal interaction more than online as it encourages quicker result and we can be more creative.
- Not sure.
- No comments.
- Can't think of anything.

10. Which of the following project-related challenges did you experience this semester? (Check all that apply) (n=41)

	N	%
Getting started late (i.e., after Feb 1)	11	27
Difficulty in getting necessary content material to student developer	11	27
Unclear division of responsibilities between myself, student developer, and DIIA	2	5
Unclear direction from ~FAST Tex program staff	0	0
Technical difficulties	4	10
Time management difficulties	11	27
Project management difficulties	9	22
I did not experience any project-related challenges	11	27
Other (please specify)	8	20

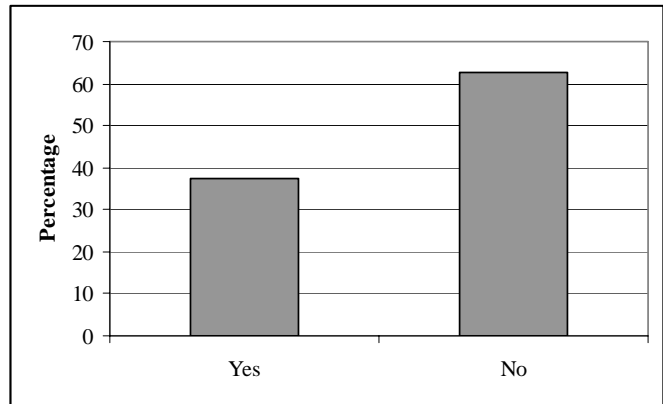


Other project-related challenges:

- Would like to have had more interaction early on in the project.....even now we are meeting and doing 'development' things.
- Not enough hours to get everything done.
- I had trouble keeping my student developer on task.
- Required more effort/time.
- All delays were my own time management issues.
- Keeping student developer on task.
- Illness & family emergency.
- This was just a bad semester for me - the problems were mine - not Fast Tex.

11. Do you anticipate completing your project by May 31, 2005? (n=40)

	N	%
Yes	15	38
No	25	63
Total	40	100



12. Please explain why your project will not be complete by May 31, 2005. (n=25)

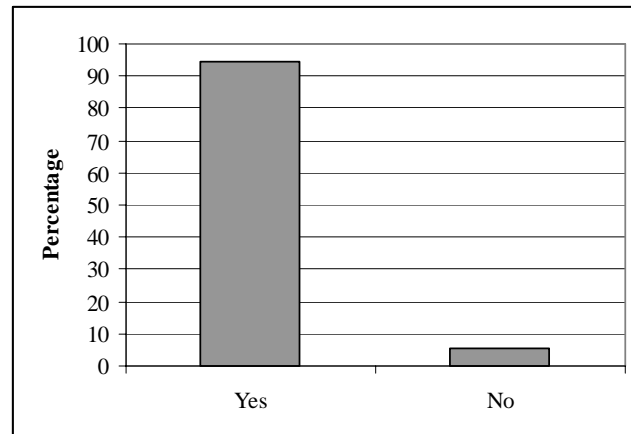
- Well, the first phase will be completed with two courses, but those students did not know in advance that they would be working with a MOO and it was only optional for one of two assignments. I expect to be much better prepared to test it in the Fall on three classes.
- The project is much bigger than I anticipated and I hope will be on going for us. It was extremely successful, and I think what we have accomplished is an excellent groundwork for a continuing program of digitization and data basing (is that a word?) My student and I were both very motivated by the future possibilities presented with this beginning.
- The project was more involved than anticipated.
- The project turned out to be larger than we anticipated it would be. The animation that I expected to be less than a minute in length turned out to be almost 10 minutes and that was only one part of a multiple part animation.
- Scope of project.
- We'll finish the phase I proposed, which is part of the bigger project. We'll continue to work on the entire project. I appreciate the support I received from DIIA in getting the project to this stage.
- Student developer has been too busy with other things.
- I had less time to spend on the project than expected.
- The project will probably be about 80% complete. Besides getting off to a late start, the student developer suffered an injury that slowed her down some. Also, I had problems finding the time to edit some of the materials prior to submitting them for the final steps of the project. I'm still working on those things. We would probably need one more month to bring everything together.
- Requires more effort and time. Most of the work till now was devoted on converting a Fortran code for the generation of prop geometry into Java. The next phase will be devoted to rendering the propeller geometry graphically using Java-3D.
- The delay is entirely my fault. I dropped the ball and submitted material too late. Suzanne Rhodes has been wonderful in supporting me and helping me work on

my project. I cannot express in strong enough terms the extent to which Suzanne and the student developer have been helpful!

- Project began late and match with student happened later than planned. Student wished to work a few weeks into summer and this worked for my schedule as well.
- Student worker had to withdraw from project.
- Find more materials during the development of the project.
- Time pressures.
- It has taken a lot longer than anticipated to complete one of the modules. Once one is completed and it is in very good shape according to John Slatin, then we should be able to move forward a lot more quickly.
- It is complex and implementation is requiring some detailed interfacing with campus security features. Also, I have not had time to provide all of the content needed. Still, I hope to have it working for pilot efforts at implementation this summer.
- My assistant, Michelle Green, was ill on and off for three weeks, which resulted in missing several work sessions. By the time she was well, my schedule made it impossible for me to meet with her. The upshot was that the project wasn't finished in time for my class in comedy acting. The good news is we've agreed to work during the early part of the summer, and I've changed a class I was going to teach next fall to a comedy acting class. Therefore, I'll be able to fully use the material and get vital feedback from the students.
- I had difficulty getting some content video put together. Also, I had unusual extra duties to perform within my department as well as some unexpected professional travel.
- Partly my fault: I got the wrong .fla file and gave it to the FAST Tex student. Not a major problem but it will be cleared up very soon.
- The student working on this project has been busy with course work. Nevertheless, he has achieved significant progress. More applets will be added to our library this summer.
- We got 3/5 of the material digitized but still have some technical problems.
- This project required the assistance of some non-DIIA student assistants, one of whom dropped the ball in mid-semester. Hence, some more hours are needed to finish details of the project. Also, this project just seems like it never wants to get done....
- Unanticipated new responsibilities this semester prevented me from spending the necessary time.
- Because I have not put the time in to it that is needed for the student developer to proceed; we are going to work on it this summer; time is an issue.

13. Will the finished project meet your expectation? (n=38)

	N	%
Yes	36	95
No	2	5
Total	38	100



14. Please explain why your project will or will not meet your expectations. (n=24)

- It has all specified functionality and features established for the project product.
- It was much bigger than I first anticipated (the Bio-Doc project), so we've scaled back the primary goals to produce a smaller version for initial trial, then we'll add in bells and whistles later. All of the people involved in the project far exceeded my expectations. I was really really impressed by the effort that went into this project.
- Everything was completed on time.
- It is exactly what I had hoped.
- Actually I believe the project will exceed my expectation. Our programmer is very talented and has been a genuine pleasure to work with. He has invested time to learn the topic we are animating so that he can make contributions to the process. It has been a real team effort with our programmer as major team player. The project is not complete yet -- but I gave my class a sneak peak a week ago and they were amazed by what they saw.
- What is finished is what we planned.
- I did not do an adequate job explaining to my instructors who were to be filmed the KIND of classroom activities I wanted them to focus on. This is entirely my own failure of judgment and one that I will correct in the future.
- I have yet to see how things are looking, but I think we are on the right track in consolidating all of my audio-visual materials into a packaged medium.
- There are still some loose ends but the product is something I can administer in my classes this Fall.
- Because of competent Java programmers.
- Will offer deeper content in which to teach my class.
- The student is exceptionally skilled and self-motivated, so I am pleased with his work. He embraced the initial idea and even improved upon it.
- Production goals were met.
- The project was conceptually rather simple. The primary difficulty was one of compiling the material to digitize and the time it took to digitize.

- The web site design looks great. It was enormously helpful to have not just the student worker and I looking at the design at various stages, but also to get Suzanne's input!
- A lot has to do with my lack of experience in developing web-based materials.
- It is very close to my goal. The developer has awesome skills.
- It will meet expectations because technical requirements were clearly defined at the start and there were no periods where the content to be worked on was not available or delayed.
- The project has allowed me to concentrate on content and structure because the assistant can handle what to me are daunting technical challenges.
- Greatly improved and better organized data on server. Site expanded.
- This is hard to answer since my project is incomplete. I think the student tried hard and was held up by my own problems. All I have at this point, though, even if it gets worked out, is 3/5 of the material digitized.
- I haven't seen it yet, so I'm not certain-- but I think the project is understood in sufficient detail by all.
- Will be ready to beta-test with students in the fall.
- It's beautiful, easily usable, and FULL of content my students can use. The only thing is I would like to be able to continue to revise and add to it and I'm not sure how possible that is.

15. What do you like most about the ~FAST Tex program? (n=36)

- That it exists!!
- Excellent resource!!!
- The assistance from the student developers.
- A great educational resource.
- Easy accessibility. Access to expertise in fields unfamiliar to our department. Opportunities for unimagined integration of pedagogical tools.
- I like being able to develop ideas related to technology and teaching.
- I appreciate the ease completing the project proposal and the availability and responsiveness of the DIIA staff.
- The opportunity to get technical assistance to create a project I could NEVER do myself!
- Easy application process. Good chance in getting funding. Effective project management. Supportive staff.
- Pushes tech projects.
- Michael and Michelle.
- It is a good way of getting something done that I had hoped to do, but didn't have the time for.
- Suzanne Rhodes' outstanding leadership and support.
- Flexibility, help by the coordinator (Ms. Rhodes) in finding programmers and replacements in case they cannot continue.
- The fact that I do not have to be extremely computer literate.
- Support from DIIA, project has deepened my technology and subject learning.

- The DIIA staff (Suzanne Rhodes) is particularly helpful and realistic. The student (Scott Herrick) is a joy to work with.
- Quality of student.
- That I don't have to digitize the material myself. The technical assistance was also most helpful.
- The collaborative element. The ability to get a first-rate product and to have UT students supported for this work!
- Tech support and resources.
- It is a new experience for me, so I am learning new things. Suzanne is very helpful.
- I've learned a lot about technology from these projects.
- Innovation.
- Level of skill of the students and their attention to detail.
- Very practical. The staff works with you, listen actively and try to help you to their fullest ability.
- In addition to the above, the assistants (first David Hartstein and then Michelle Green) have provided invaluable feedback that has influenced the overall design of the project. Both are savvy about film history, the relation of sound and image, and (because both have been teaching assistants?) how students learn. I cannot compliment them enough. I also appreciate the supportive atmosphere the DIIA staff creates. They're always resourceful and cheerful about finding solutions to my problems, and they do just the right amount of supervision to ensure things are going smoothly.
- The professionalism.
- Generally very good help from students and staff.
- It provides motivation and resources to do something that is useful for understanding the complex behavior of mechanical systems.
- I think the staff is wonderful, attentive, helpful and professional. Michael Sweet couldn't have been more of a positive.
- It gives me help in accomplishing things that I simply would not have the time to do myself but that make my work in the classroom and in research more effective.
- A person with time and expertise to carry out my vision!
- Suzanne!
- The consistency of working with Suzanne. The project I have been working on is really a long-term project. Suzanne has been instrumental in helping to shape appropriate goals for each step.
- EXCELLENT PEOPLE TO WORK WITH.

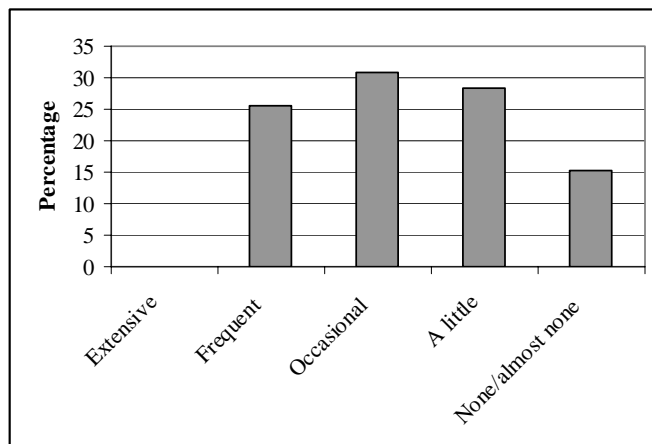
16. What do you like least about the ~FAST Tex program? (n=25)

- More money for fall, spring and summer.
- No complaints on this project.
- Not sure that the design team working on my project felt that I had much to offer - and that things that we are still working on could have been clarified or worked through earlier if there had been more/better communication.
- None.

- Nothing.
- Having to buy materials.
- It became an additional component in my already busy schedule, so I had difficulty getting to things that would help to speed up the work.
- The uncertainty of the dedication of the developer.
- Having to monitor my student developer.
- It appears that not as many students apply to it.
- Lack of time for more work on the project, but this isn't FAST Tex's problem.
- It's not the fault of the program, but keeping tabs on the project was difficult. With so many other projects, students, and responsibilities to deal with as a part of my normal semester, I was not as proactive as I should have been. It was hard to keep on top of things, to set benchmarks and deadlines. I understand the basics of project management, but it was hard to put that into practice.
- Responsibilities for various phases of the project weren't always clear.
- Nothing.
- Pay for the project assistant and the number of hours.
- This has more to do with me. I wish I had more knowledge about what content and formats work best on a web site. I wish I had more to invest in learning about this.
- It is hard to develop these things.
- None.
- So far, I haven't found anything not to like about the program.
- I think it's a great program.
- The random progress and interactions with the student working on this. I believe this is intrinsic, and the current student is the best I have seen thus far.
- My only worry this time is that I haven't had a clear sense of intermediate progress toward goals.
- The variability in the quality of student assistants I have had.
- The online application - some of the questions require (or appear to require) a level of technical expertise that I don't have. I always call to find out how I should answer a question.
- More time and hours?

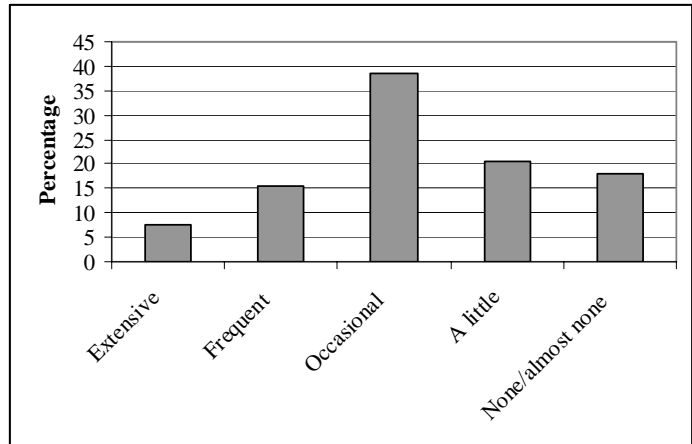
17. How much supervision did you provide to your student developers? (n=39)

	N	%
Extensive	0	0
Frequent	10	26
Occasional	12	31
A little	11	28
None/almost none	6	15
Total	39	100



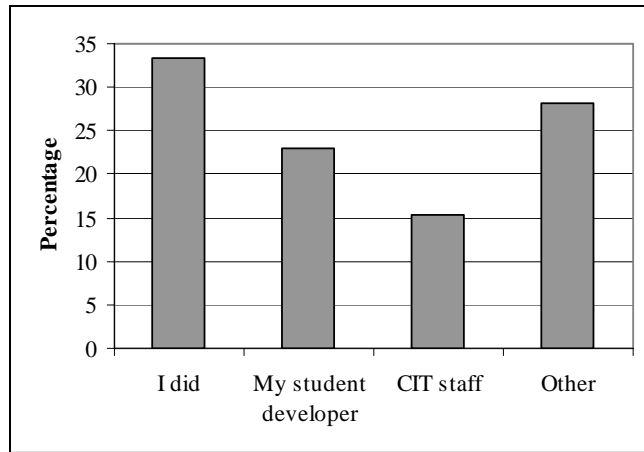
18. How much supervision did your student developer need? (n=39)

	N	%
Extensive	3	8
Frequent	6	15
Occasional	15	38
A little	8	21
None/almost none	7	18
Total	39	100



19. Who do you feel did most of the project management? (n=39)

	N	%
I did	13	33
My student developer	9	23
DIIA staff	6	15
Other	11	28
Total	39	100



Other

- Idea Studio.
- Suzanne put a lot of work into the project, but I think everyone put a fair bit of time in.
- The student developer and I together.
- We worked as a team.
- It was a team effort -- a colleague and I led the way and the developer worked closely with us.
- Suzanne kept me and Rong on track, but I think Rong did the best job checking in with me.
- Suzanne did a lot. It was probably a combination.
- His expertise was required at this point.
- All three.
- Seems to me all of the above made valuable contributions.
- Answering based on past Fast Tex projects - good coordination between DIIA, student developer & me.

20. In general, how would you rate the communication ability of your student developer? (n=39)

	N	%
Excellent	19	49
Good	13	33
Average	4	10
Fair	1	3
Poor	2	5
Total	39	100



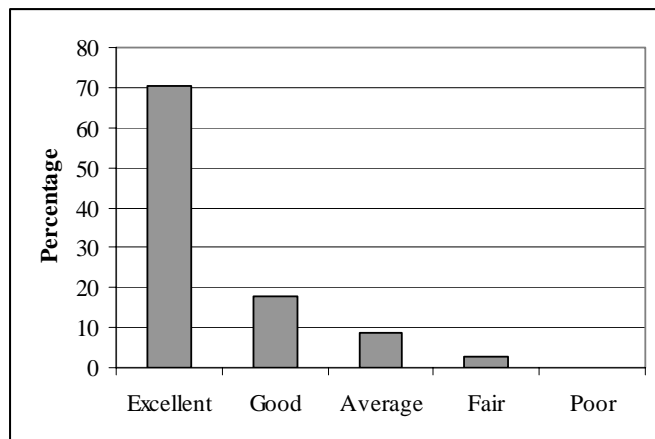
21. In general, how would you rate the ability of your student developer to meet deadlines? (n=38)

	N	%
Excellent	17	45
Good	12	32
Average	4	11
Fair	1	3
Poor	4	11
Total	38	100



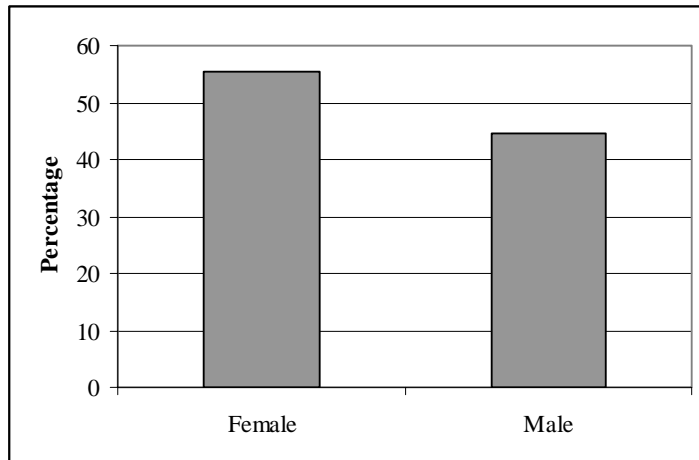
22. In general, how would you rate the quality of work completed by your student developer? (n=34)

	N	%
Excellent	24	71
Good	6	18
Average	3	9
Fair	1	3
Poor	0	0
Total	34	100



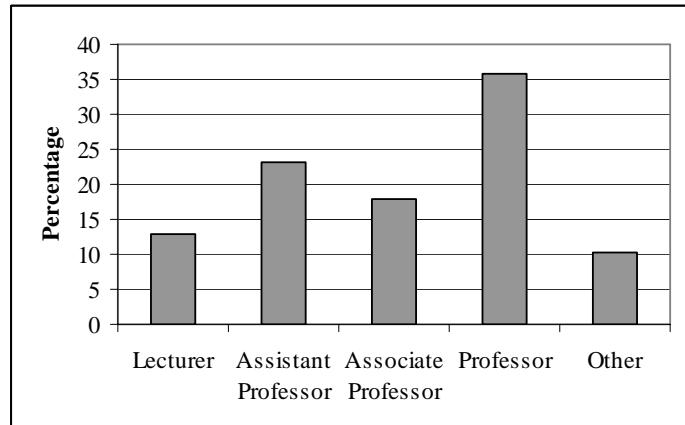
23. What is your sex? (n=38)

	N	%
Female	21	55
Male	17	45
Total	38	100



24. What is your university status? (n=39)

	N	%
Lecturer	5	13
Assistant Professor	9	23
Associate Professor	7	18
Professor	14	36
Other	4	10
Total	39	100



Other

- Clinical Assistant Professor
- Project Coordinator
- Senior Lecturer
- Sr. Lecturer

25. What is your department? (n=38)

- Accounting
- Bio Sci
- Biology
- BME
- C&I
- C&I
- Civil engineering
- Communication Studies
- Curriculum and Instruction
- Curriculum and Instruction

- English
- English
- EPY
- French and Italian
- German studies
- Germanic Studies
- Germanic Studies
- Germanic Studies
- Human Ecology
- Human Ecology
- Integrative Biology
- KHE
- KIN
- Kinesiology & Health Education
- Liberal Arts Instructional Technology Services
- linguistics
- Mechanical Engineering
- Music
- Open-Ended Response
- Philosophy
- Physics
- School of Information
- School of Music
- School of Music
- Social Work
- SOCIAL WORK
- Spanish & Portuguese
- Theatre & Dance
- Theatre and Dance

Appendix B:
~FAST Tex End-of Semester Student Survey and Results
Spring 2005
 Results (n=27)

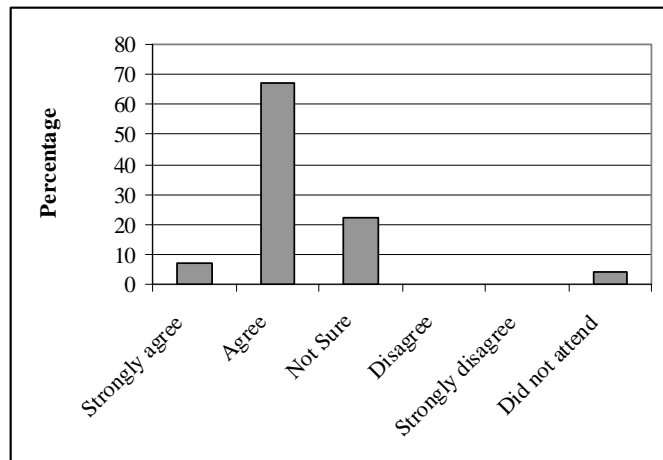
Please assist us in improving the ~FAST Tex program by answering the questions below. Your individual responses will be kept anonymous. Result will be used to evaluate the program and inform future planning.

1. From the list below, please rank the three most important reasons you decided to apply for the ~FAST Tex program? (n=27)

Rank	Reason	Most Important	2nd Important	3rd Important
1	Needed a job/extra income	10(37%)	7(26%)	2(7%)
2	Opportunity to learn new skills	3(11%)	6(22%)	2(7%)
3	Had the necessary skills/experiences	3(11%)	5(19%)	3(11%)
4	Good pay rate	3(11%)	3(11%)	5(19%)
5	The project(s) sounded interesting	2(7%)	4(15%)	4(15%)
6	Was asked to apply by a faculty member	4(15%)	0(1%)	2(7%)
7	Enjoy technology	1(4%)	0(0%)	4(15%)
7	Opportunity to work with faculty	1(4%)	0(0%)	4(15%)

2. The orientation session conducted by program staff was helpful. (n=27)

	N	%
Strongly agree	2	7
Agree	18	67
Not Sure	6	22
Disagree	0	0
Strongly disagree	0	0
Did not attend	1	4
Total	27	100

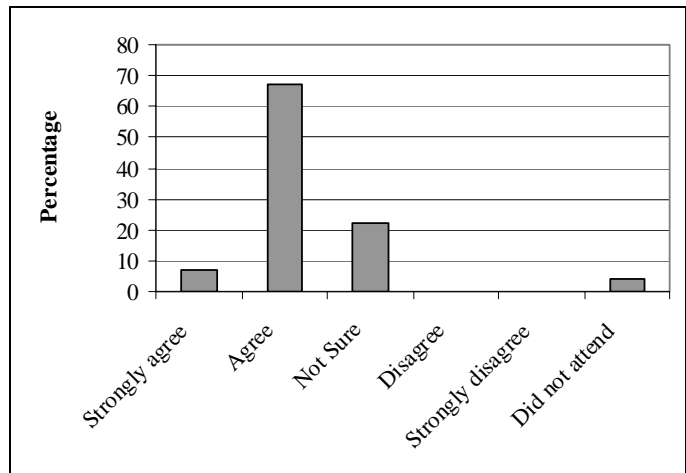


3. How could the orientation session be improved? (n=11)

- It wasn't bad at all. I think that if Sigrid was there it might have been more clear, but she's busy. I really liked how this job turned out and it was impossible to tell where I'd be scanning at the first meeting.
- Emphasize that help is available with these projects. Make sure each student has a fairly strong foundation of what the project will involve.
- more interaction between presenter and students.
- Was unsure of how the computers were used. I ended up using outside computer sources, because I was never quite sure if I had to have an account or what....
- Have a past ~FAST Tex employee (student(s)) present his/her experiences and answer questions.
- no comment.
- I don't really think it needs to be changed. I got enough information from the orientation. If I had a question later, the staff was always available and very helpful.
- Orientation was excellent.
- I thought it was successful as is.
- I don't know because I did not have one.
- Since I was taking over for another student, I should have asked for more details about the original scope of the project.

4. The kick-off meeting with faculty was very useful. (n=26)

	N	%
Strongly agree	9	35
Agree	14	54
Not sure	2	8
Disagree	1	4
Strongly disagree	0	0
Total	26	100



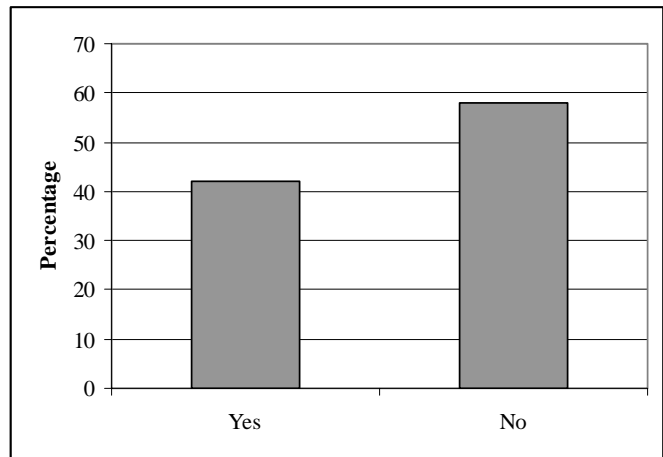
5. How could the kick-off meeting be improved? (n=9)

- Make sure the student knows exactly how to perform the tasks required for the project.
- Have a clearer vision of what finished product will look/feel like and be used for.
- If faculty members have more ideas and information about the website, it will directly trigger students' involvement with the project.
- It doesn't need to be changed.

- During kick-off meetings, make sure that all team members are on the same page as to what is wanted for the project. If all the subject-matter experts involved have very similar ideas as to the direction they want the project to take, it makes the development process go smoothly.
- N/A
- Important to clearly define roles within that first meeting.
- I think it is quite good as of now.
- Since I was taking over for another student, I should have asked for more details about the original scope of the project.

6. Have you experienced any technical problems or other difficulties related to your project? (n=26)

	N	%
Yes	11	42
No	15	58
Total	26	100

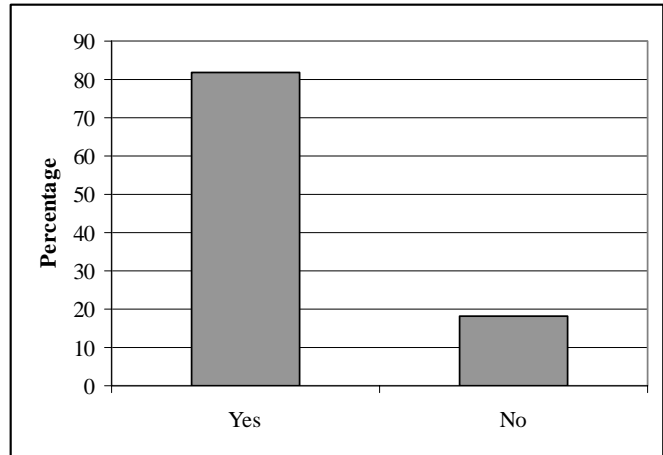


7. Please describe your project-related technical problems or difficulties. (n=11)

- The video clips won't play.
- Figuring out how to use the Flash components from XML connectivity proved to be frustrating. However once I figured them out they are quite useful.
- Learning how to use the equipment and getting more material from the professor. However, everyone in the DIIA lab was very helpful.
- I don't have a Mac.
- Improve video sound.
- Faculty members do not provide the content of the website in time.
- No materials from faculty member. Don't know what they want. Two faculty members had different thought on the project.
- Minor technical issues with the development software; otherwise, basically trouble-free.
- We had trouble with roles in the team, which took some time to sort out.
- Problems with software - these were resolved. 2. Problems with faculty member's TA disappearing when we relied on her for help with this project.
- Needed additional server support.

8. Have you sought assistance for these problems or difficulties from DIIA staff?
(n=11)

	N	%
Yes	9	82
No	2	18
Total	11	100



9. Please explain your reason(s) for not seeking assistance from DIIA staff. (n=2)

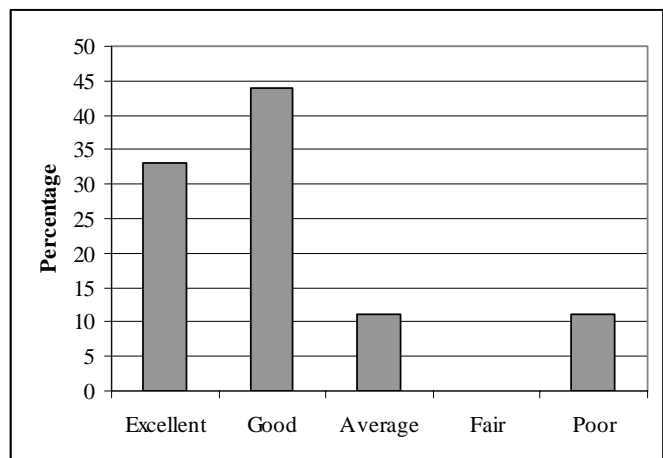
- I was working on the problem late at night.
- Solved the problems on my own.

10. What assistance did DIIA staff provide? (n=6)

- Try it on a different browser.
- Exactly how to use the equipment and software.
- Help with solving the problem and teach me how to use the software.
- We substituted some team members and revised roles clearly.
- Resolved software issue. 2. Problems with TA in the process of resolution.
- Provided a different server

11. How would you rate the project assistance you received from DIIA? (n=9)

	N	%
Excellent	3	33
Good	4	44
Average	1	11
Fair	0	0
Poor	1	11
Total	9	100

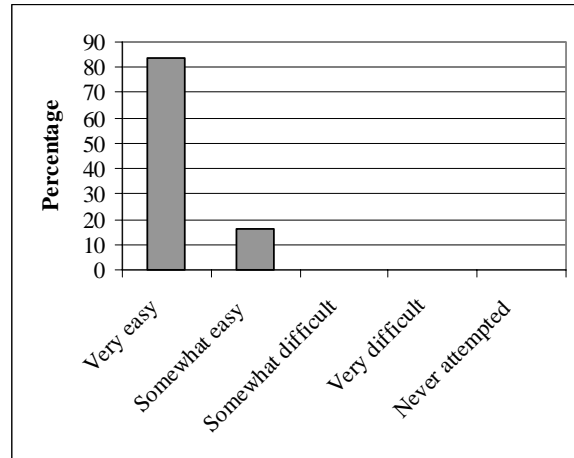


12. How could the project assistance provided by DIIA be improved? (n=1)

- I think they're doing a great job. =)

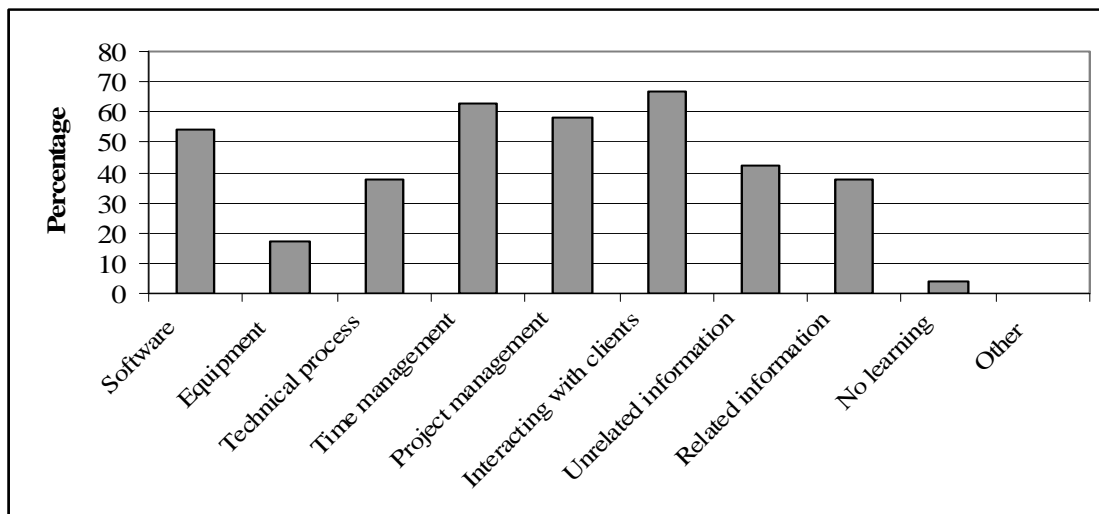
13. How easy is it to contact program staff (Suzanne Rhodes, Michael Sweet, or Jane Ann Parker)? (n=25)

	N	%
Very easy	21	84
Somewhat easy	4	16
Somewhat difficult	0	0
Very difficult	0	0
I have never attempted to contact program staff	0	0
Total	25	100



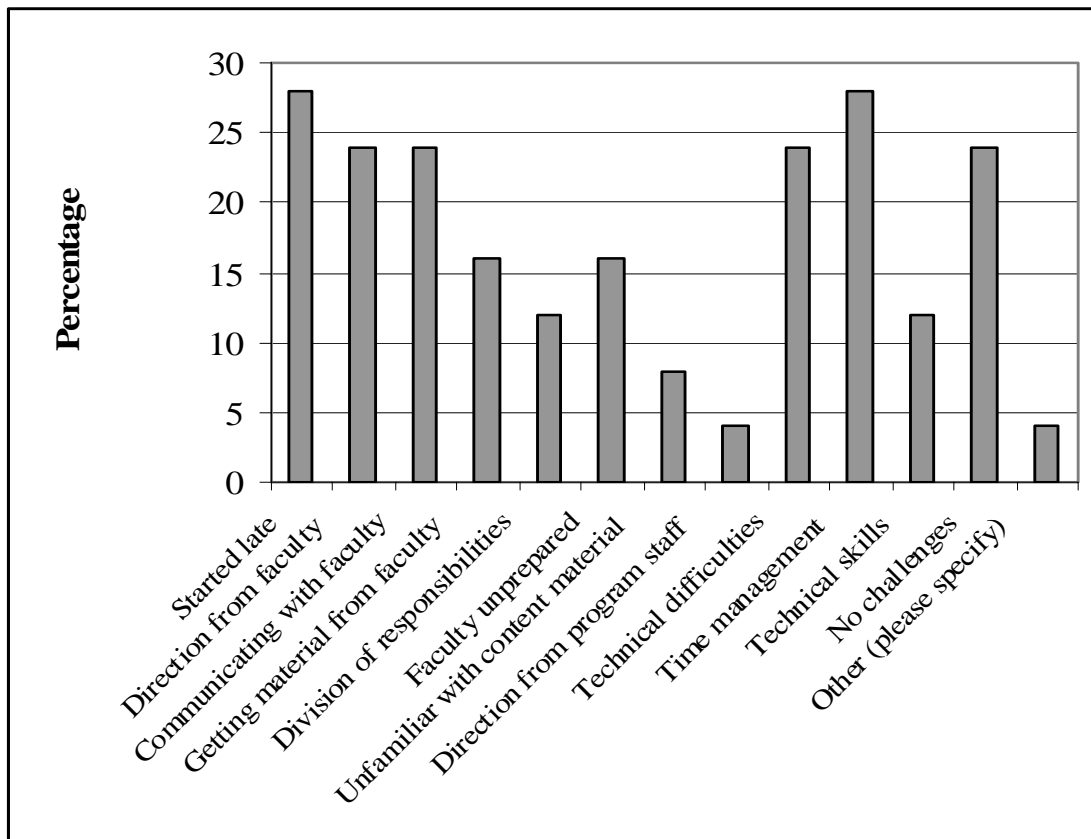
14. What did you learn as a result of working on you ~FAST Tex project? (check all that apply) (n=24)

	N	%
A specific piece of software (e.g., Dreamweaver, Photoshop)	13	54
A specific piece of equipment (e.g., video camera, scanner)	4	17
A specific technical process (e.g., video streaming, creating a website)	9	38
Time management skills	15	63
Project management skills	14	58
How to interact with clients/faculty	16	67
Information unrelated to my major/professional field	10	42
Information directly related to my major/professional field	9	38
I did not learn anything new as a result of working on my ~FAST Tex project	1	4
Other (Please specify)	0	0



15. Which of the following project-related challenges did you experience this semester? (Check all that apply) (n=25)

	N	%
Getting started late (i.e., after Feb 1)	7	28
Unclear direction from faculty supervisor	6	24
Difficulty in communicating with faculty supervisor	6	24
Difficulty in getting necessary content material from faculty supervisor	4	16
Unclear division of responsibilities between myself, faculty supervisor and DIIA	3	12
Faculty supervisor was unprepared/disorganized	4	16
Unfamiliar with content material for project	2	8
Unclear direction from ~FAST Tex program staff	1	4
Technical difficulties	6	24
Time management difficulties	7	28
Lacked adequate technical skills	3	12
I did not experience any project-related challenges	6	24
Other (please specify)	1	4

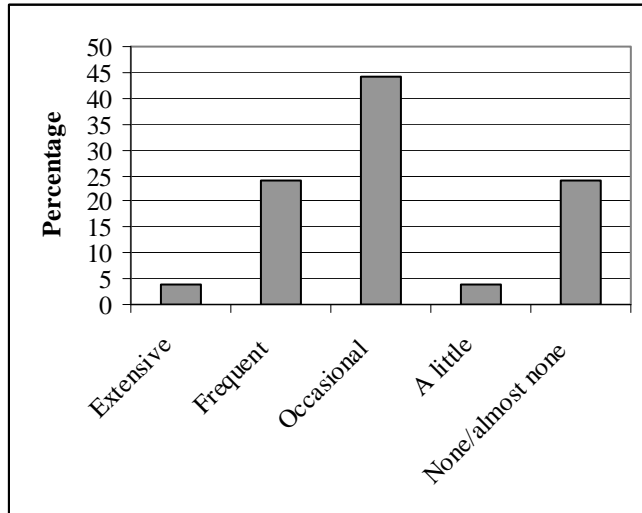


Other

- Requirements definition was not clear - requirements kept changing.

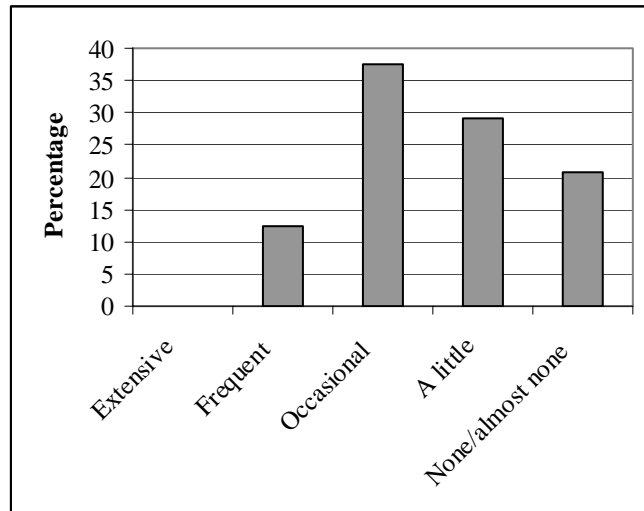
16. How much supervision did you receive from your faculty supervisor? (n=25)

	N	%
Extensive	1	4
Frequent	6	24
Occasional	11	44
A little	1	4
None/almost none	6	24
Total	25	100



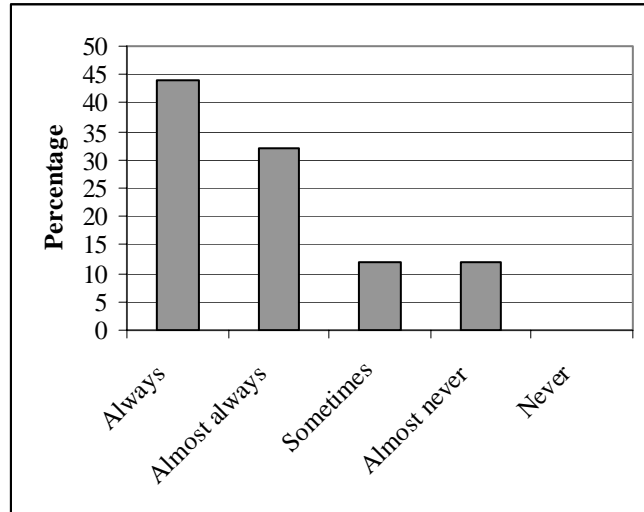
17. How much supervision did you need? (n=24)

	N	%
Extensive	0	0
Frequent	3	13
Occasional	9	38
A little	7	29
None/almost none	5	21
Total	24	100



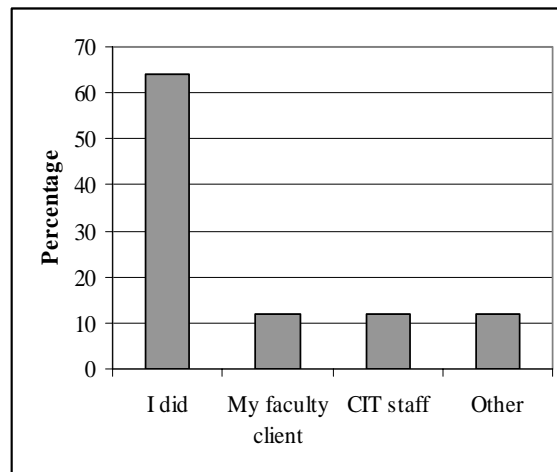
18. Did you receive feedback from your faculty client in a timely manner? (n=25)

	N	%
Always	11	44
Almost always	8	32
Sometimes	3	12
Almost never	3	12
Never	0	0
Total	25	100



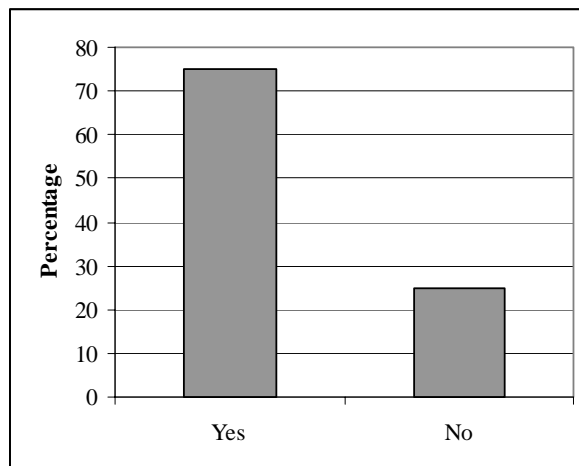
19. Who do you feel did most of the project management? (n=25)

	N	%
I did	16	64
My faculty client	3	12
DIIA staff	3	12
Other	3	12
Total	25	100



20. Do you anticipate completing your project by May 31, 2005? (n=24)

	N	%
Yes	18	75
No	6	25
Total	24	100

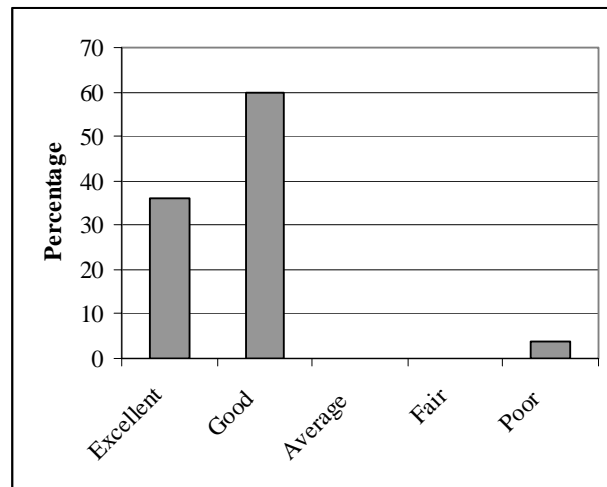


21. Please explain why your project will not be complete by May 31, 2005. (n=5)

- Finished the primary project very quickly in half the time allotted, moving on to further stages over the summer.
- I started mid march, and maybe I will finish by May 31st if not soon after
- The faculty client was not prepared for the project, the resources for the project was not ready.
- The professor did not give the content of the website, yet.
- Because of team member substitutions a significant delay in the projects development occurred. It should be finished by this summer with no problem.

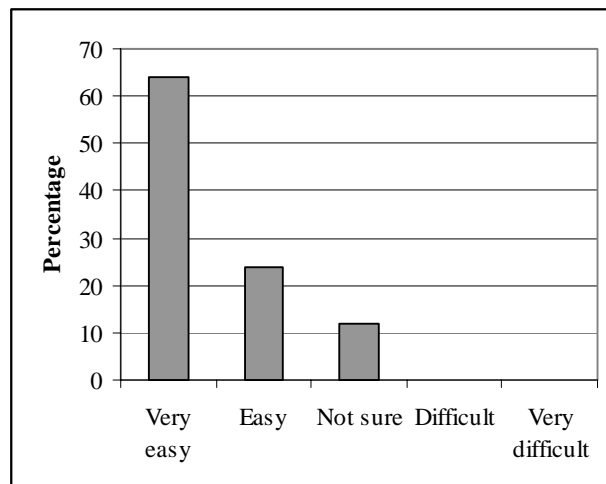
22. Please rate your level of performance on your project. (n=25)

	N	%
Excellent	9	36
Good	15	60
Average	0	0
Fair	0	0
Poor	1	4
Total	25	100



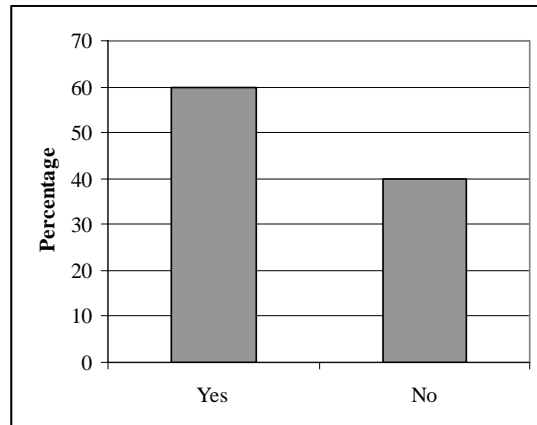
23. In general, how easy was it to use the ~FAST Tex online system? (n=25)

	N	%
Very easy	16	64
Easy	6	24
Not sure	3	12
Difficult	0	0
Very difficult	0	0
Total	25	100



24. Do you anticipate participating in the ~FAST Tex program next year? (n=25)

	N	%
Yes	15	60
No	10	40
Total	25	100



25. Please explain why or why not. (you anticipate participating in ~FAST Tex next year) (n=21)

- If you have a project for me in the fall I will work. However, I am graduating in December.
- I was paid more working as a GRA on the same project a year earlier.
- If they have work for me, I loved the job, the DIIA and the VRC people, and it paid well.
- Graduating
- Graduate in the fall
- I'm really enjoying all that I have learned so far, and I consider this to be a great experience, as well as a wonderfully well-paying freelance job.
- Learn more about technology and great pay and flexible schedule.
- I am graduating this summer!
- Want to get more experience and more money.
- I am not really sure. I'd like to, if asked back because it fits into my professional goals and time availability.
- I enjoy doing project and meet different people
- I want to get more experience in this area.
- It was a great job, especially for a college student with a hectic schedule. It allowed me to work as much as I could, when I could. Also, the pay was great, and I gained technical skills.
- If opportunities are available in the future to do work of this nature, it would be an attractive position. Also, the idea of working on campus is a bonus when all you have to do to get from work to class is to walk across the street.
- I will be graduating.
- I am graduating.
- I enjoy working with the staff and helping faculty improve their instructional tools
- No applicable projects.
- It has been great working on FAST Tex projects. I learnt new things working on different projects. Enjoyed working with people at DIIA.
- I would like to, but I will most likely be too busy.
- I'm graduating.

26. What did you like most about your ~FAST Tex experience this semester? (n=20)

- My project gave me an opportunity to be creative and try out some new skills.
- The project was great, and Suzanne was very helpful.
- Flexibility, good supervisors
- Got a chance to finish off and polish earlier projects.
- Project management
- How much I have learned, technologically.
- Work with technology and faculty members who are willing to teach me.
- It's a great way to supplement your income - at least I thought so! I was working on technology I knew, and was able to schedule my work according to my course work - this flexibility was most important to me. I had a very understanding faculty supervisor - he understood when I could not get to something because I had some coursework to get done first.
- Getting to work in some areas that I need to develop in.
- The content of the projects and getting professional experience.
- Michael Sweet really helps a lot, I like his quick response when help is needed.
- It was interesting to see how much I could accomplish. It also helped me to become far more organized than I was in the past. The project came out well, and I am proud to have finished it.
- Opportunity to be involved in a project that will be benefiting many students in the future.
- The new experience.
- Learning new skills. I had never done web design before.
- Meeting and working with ~FAST Tex staff.
- I enjoyed working with the team and I truly believe the website is going to be extremely beneficial to SOA students.
- Great helpful staff, great projects.
- Very cool project!
- Project management and client interaction.

27. What did you like least about your ~FAST Tex experience this semester? (n=17)

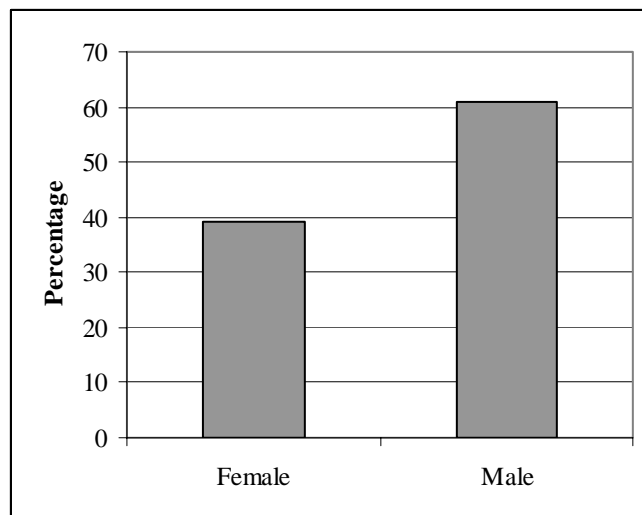
- Trying to fit in work while taking 18 hours of class, but that's really my fault.
- Pay rate, keeping track of hours.
- A little unorganized at first, nothing that bothered me
- A little disorganized, unclear financial situation as far as extension/funding made things sort of in the air.
- Feeling like my skills may have been inadequate at the start of the project.
- Understanding project objective.
- The pay! I would like to get paid more (who doesn't). But I think it was fair!
- Would have liked to work more hours and earn more money (either on the same project or on two at the same time).
- Unsure if I was doing a good/adequate job as I went along.
- The faculty client is not prepared. It is highly suggested that clients have the materials ready before the project starts
- Occasionally, especially toward the beginning and end of the semester, I had trouble fitting in enough time to work on the project. I became stressed trying to fit in time to study and work on the project.
- Lack of communication with the faculty.
- Wish the projects could be extended past 100 hours of work
- I felt unsure of my roles for quite a while and therefore felt like I was not benefiting the project very much.
- None.
- Some scope-creep issues.
- My projects were too technically easy and very repetitive.

28. What is your age? (n=21)

Mean = 25 Range=19-35

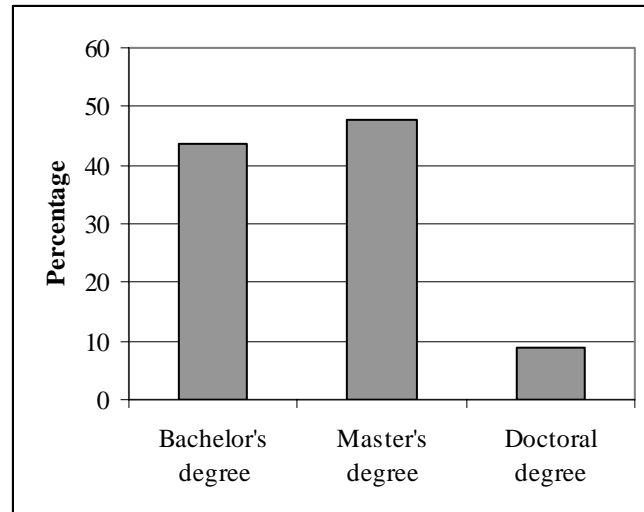
29. What is your sex? (n=23)

	N	%
Female	9	39
Male	14	61
Total	23	100



30. What type of degree are you currently undertaking? (n=23)

	N	%
Bachelor's degree	10	43
Master's degree	11	48
Doctoral degree	2	9
Total	23	100

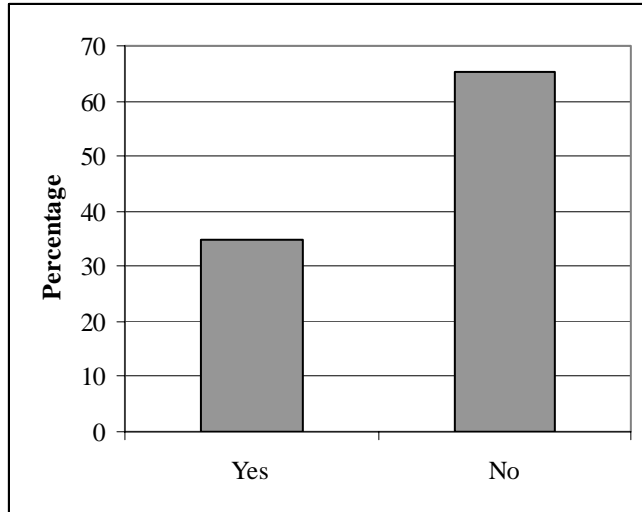


31. What is your major/primary area of study? (n=21)

	N	%
Information Studies	3	14
Business Administration	2	10
Computer Science	2	10
Instructional Technology	2	10
Radio-television-film	2	10
Architecture	1	5
Fine Art	1	5
Art History	1	5
Biomedical Engineering	1	5
Mathematics	1	5
Counseling	1	5
Economics	1	5
Linguistics	1	5
Music	1	5
Natural Science	1	5
Neurobiology	1	5
Total	21 (1 double major)	

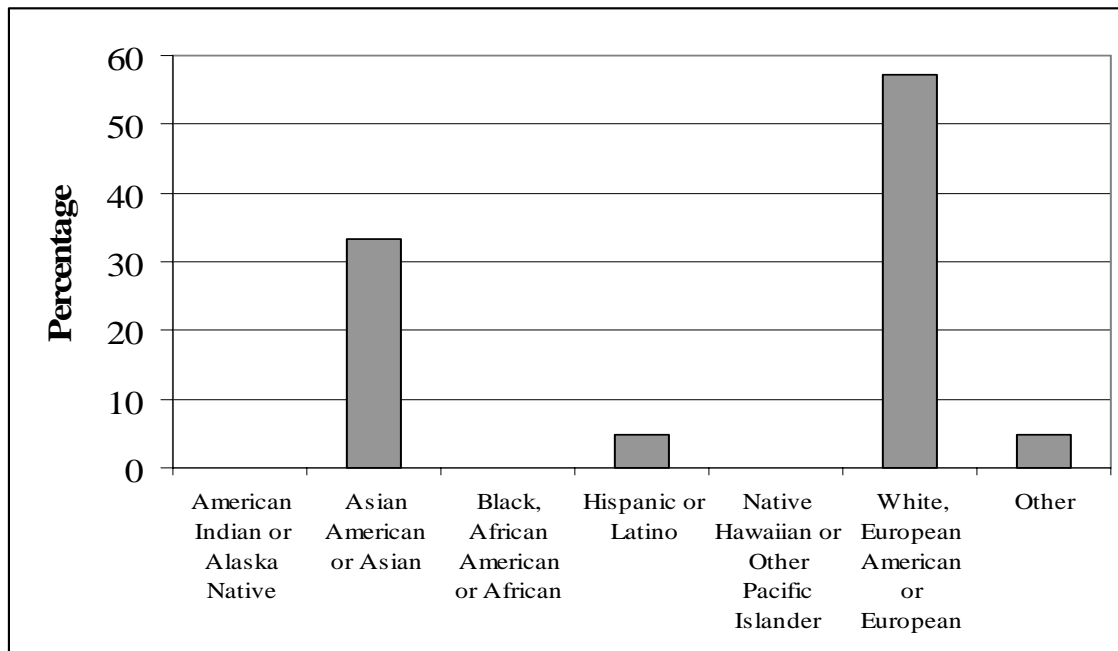
32. Are you an international student? (n=23)

	N	%
Yes	8	35
No	15	65
Total	23	100



33. Which of the following categories best describes your racial/ethnic background? (n=21)

	N	%
American Indian or Alaska Native	0	0
Asian American or Asian	7	33
Black, African American or African	0	0
Hispanic or Latino	1	5
Native Hawaiian or Other Pacific Islander	0	0
White, European American or European	12	57
Other	1	5
Total	21	100



Appendix C:

~FAST Tex 2005 Project Quality Review Results

PROJECT 1 – Digital Microscope Tutorial Web Page			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.25	4.25	3.75
Instructional Value Combined Score Mean	3.00	3.75	3.38
Total Combined Score Mean	3.00	4.00	3.50
Individual Items:			
Clarity of objectives	3	4	
Degree to which objectives were met	2	4	
Overall design	3	5	
Functionality	4	4	
Usability	3	3	
Scalability	3	5	
Ability to solve pedagogical problem	3	4	
Ability to support instructional best practices	3	3	
Ability to present content	3	4	
Overall instructional value	3	4	
Inter-rater Agreement (%)	70%		

PROJECT 2 – Non-Linear PowerPoint to Aid Learning of Probability, Random Processes, and Statistics			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.50	4.25	3.88
Instructional Value Combined Score Mean	2.50	4.75	3.63
Total Combined Score Mean	3.10	4.60	3.85
Individual Items:			
Clarity of objectives	4	5	
Degree to which objectives were met	3	5	
Overall design	3	5	
Functionality	4	5	
Usability	4	3	
Scalability	3	4	
Ability to solve pedagogical problem	3	5	
Ability to support instructional best practices	2	4	
Ability to present content	2	5	
Overall instructional value	3	5	
Inter-rater Agreement (%)	40%		

PROJECT 3 – Introducing German! – German Outreach Program to Local Schools			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.00	2.00	2.50
Instructional Value Combined Score Mean	3.25	3.25	3.25
Total Combined Score Mean	3.30	2.70	3.00
Individual Items:			
Clarity of objectives	5	3	
Degree to which objectives were met	3	3	
Overall design	2	4	
Functionality	3	2	
Usability	3	1	
Scalability	4	1	
Ability to solve pedagogical problem	3	2	
Ability to support instructional best practices	3	4	
Ability to present content	4	4	
Overall instructional value	3	3	
Inter-rater Agreement (%)	60%		

PROJECT 4 – Virtual Study Abroad: Writing Place and Space in a MOO formerly Virtual Oxford: Writing Place and Space in a MOO			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.25	3.00	3.13
Instructional Value Combined Score Mean	3.50	4.50	4.00
Total Combined Score Mean	3.30	3.80	3.55
Individual Items:			
Clarity of objectives	4	5	
Degree to which objectives were met	2	3	
Overall design	3	3	
Functionality	3	3	
Usability	3	2	
Scalability	4	4	
Ability to solve pedagogical problem	4	4	
Ability to support instructional best practices	4	5	
Ability to present content	3	5	
Overall instructional value	3	4	
Inter-rater Agreement (%)	90%		

PROJECT 5 – Use of Authentic Audio-Visual Materials in Advanced Language Classes

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.25	5.00	4.13
Instructional Value Combined Score Mean	4.00	5.00	4.50
Total Combined Score Mean	3.80	5.00	4.40
Individual Items:			
Clarity of objectives	4	5	
Degree to which objectives were met	5	5	
Overall design	2	5	
Functionality	4	5	
Usability	3	5	
Scalability	4	5	
Ability to solve pedagogical problem	4	5	
Ability to support instructional best practices	3	5	
Ability to present content	5	5	
Overall instructional value	4	5	
Inter-rater Agreement (%)	70%		

PROJECT 6 – Best Practices

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.50	3.25	3.38
Instructional Value Combined Score Mean	3.25	4.25	3.75
Total Combined Score Mean	3.30	4.00	3.65
Individual Items:			
Clarity of objectives	3	5	
Degree to which objectives were met	3	5	
Overall design	3	2	
Functionality	4	4	
Usability	2	3	
Scalability	5	4	
Ability to solve pedagogical problem	3	4	
Ability to support instructional best practices	4	4	
Ability to present content	3	5	
Overall instructional value	3	4	
Inter-rater Agreement (%)	70%		

PROJECT 7 – EON: A Distributed Computing System to Extend the Time Scale of Molecular Dynamics Simulations

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.00	3.75	3.38
Instructional Value Combined Score Mean	2.75	1.00	1.18
Total Combined Score Mean	3.20	2.30	2.75
Individual Items:			
Clarity of objectives	4	2	
Degree to which objectives were met	5	2	
Overall design	3	3	
Functionality	4	4	
Usability	4	4	
Scalability	1	4	
Ability to solve pedagogical problem	1	1	
Ability to support instructional best practices	4	1	
Ability to present content	3	1	
Overall instructional value	3	1	
Inter-rater Agreement (%)	40%		

PROJECT 8 – Interactive Teaching Resources for Biology

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	4.50	4.75	4.63
Instructional Value Combined Score Mean	4.75	4.75	4.75
Total Combined Score Mean	4.70	4.70	4.70
Individual Items:			
Clarity of objectives	5	5	
Degree to which objectives were met	5	4	
Overall design	5	5	
Functionality	4	4	
Usability	5	5	
Scalability	4	5	
Ability to solve pedagogical problem	5	5	
Ability to support instructional best practices	4	4	
Ability to present content	5	5	
Overall instructional value	5	5	
Inter-rater Agreement (%)	100%		

PROJECT 9 – Online Student Peer-Evaluation and Feedback			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.75	5.00	4.38
Instructional Value Combined Score Mean	4.75	4.75	4.75
Total Combined Score Mean	4.40	4.80	4.60
Individual Items:			
Clarity of objectives	5	5	
Degree to which objectives were met	5	4	
Overall design	3	5	
Functionality	4	5	
Usability	3	5	
Scalability	5	5	
Ability to solve pedagogical problem	4	5	
Ability to support instructional best practices	5	5	
Ability to present content	5	4	
Overall instructional value	5	5	
Inter-rater Agreement (%)	80%		

PROJECT 10 – Memories of Older Adults: A Risk and Resilience Perspective			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	4.25	5.00	4.63
Instructional Value Combined Score Mean	2.25	3.50	2.88
Total Combined Score Mean	3.30	4.20	3.75
Individual Items:			
Clarity of objectives	3	3	
Degree to which objectives were met	4	5	
Overall design	5	5	
Functionality	5	5	
Usability	5	5	
Scalability	2	5	
Ability to solve pedagogical problem	2	3	
Ability to support instructional best practices	1	2	
Ability to present content	3	5	
Overall instructional value	3	4	
Inter-rater Agreement (%)	80%		

PROJECT 11 – Does Costing Matter in Determining a Product’s Price in a Competitive Market Setting

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.75	4.75	4.25
Instructional Value Combined Score Mean	4.75	5.00	4.88
Total Combined Score Mean	4.30	4.70	4.50
Individual Items:			
Clarity of objectives	5	5	
Degree to which objectives were met	4	3	
Overall design	3	5	
Functionality	4	4	
Usability	3	5	
Scalability	5	5	
Ability to solve pedagogical problem	5	5	
Ability to support instructional best practices	5	5	
Ability to present content	5	5	
Overall instructional value	4	5	
Inter-rater Agreement (%)	80%		

PROJECT 12 – Development of a Revised Web-Based Health Physics Course

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.50	3.50	3.50
Instructional Value Combined Score Mean	2.00	4.25	3.13
Total Combined Score Mean	2.70	4.00	3.35
Individual Items:			
Clarity of objectives	3	5	
Degree to which objectives were met	2	4	
Overall design	2	4	
Functionality	5	4	
Usability	5	3	
Scalability	2	3	
Ability to solve pedagogical problem	2	4	
Ability to support instructional best practices	2	5	
Ability to present content	2	4	
Overall instructional value	2	4	
Inter-rater Agreement (%)	20%		

PROJECT 13 – Teaching Indigenous Culture			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	4.25	4.00	4.13
Instructional Value Combined Score Mean	3.75	4.00	3.88
Total Combined Score Mean	3.90	4.00	3.95
Individual Items:			
Clarity of objectives	3	5	
Degree to which objectives were met	4	3	
Overall design	5	4	
Functionality	3	4	
Usability	4	4	
Scalability	5	4	
Ability to solve pedagogical problem	4	4	
Ability to support instructional best practices	3	3	
Ability to present content	4	5	
Overall instructional value	4	4	
Inter-rater Agreement (%)	90%		

PROJECT 14 – Incorporating Learning Tools and Adding Resources into Instructor Websites			
Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	3.75	4.75	4.25
Instructional Value Combined Score Mean	3.75	3.50	3.63
Total Combined Score Mean	3.50	3.90	3.70
Individual Items:			
Clarity of objectives	3	2	
Degree to which objectives were met	2	4	
Overall design	3	5	
Functionality	3	5	
Usability	4	4	
Scalability	5	5	
Ability to solve pedagogical problem	3	3	
Ability to support instructional best practices	4	3	
Ability to present content	4	3	
Overall instructional value	4	5	
Inter-rater Agreement (%)	70%		

PROJECT 15 – Mediation Training

Composite Scores:			
	Reviewer 1	Reviewer 2	Combined
Design & Function Combined Score Mean	2.50	4.75	3.63
Instructional Value Combined Score Mean	3.00	4.00	3.50
Total Combined Score Mean	2.90	4.30	3.60
Individual Items:			
Clarity of objectives	5	4	
Degree to which objectives were met	2	4	
Overall design	2	4	
Functionality	2	5	
Usability	3	5	
Scalability	3	5	
Ability to solve pedagogical problem	3	5	
Ability to support instructional best practices	3	4	
Ability to present content	3	3	
Overall instructional value	3	4	
Inter-rater Agreement (%)	40%		