

*A Second Response From
Hillsborough Community College
to a Data Quality Site Review*



August 2008

A RESPONSE FROM HILLSBOROUGH COMMUNITY COLLEGE TO A DATA QUALITY SITE REVIEW

Hillsborough Community College (HCC) seeks to continually improve the integrity of its data systems. In the summer of 2006, President Gwendolyn Stephenson appointed a Program Coding Task Force to find “ways in which program codes can be more accurately assigned to students throughout their tenure at HCC.” The first recommendation of the Task Force was to “schedule a Data Quality Site Review by the Florida Department of Education and follow-up on recommendations.”

Five staff from the Bureau of Community College and Technical Center Management Information Systems (CCTCMIS) of the Florida Department of Education conducted a site visit from November 13 to 15, 2006 in which they met with numerous individuals at the district office as well on the campuses. The purpose of the visit was to review procedures for data collection and reporting that impact State and Federal reports and to make recommendations for process improvement. The final report, containing fourteen recommendations, was received by the College in June 2007.

A first report of progress toward implementation of the recommendations was completed and returned to CCTCMIS in August 2007. This document represents a second and final report of progress; however, HCC will continue to strive toward improvements in data quality. Indeed, pursuit of the CCTCMIS Data Quality Award is a priority.

In the remaining pages, prefacing contextual remarks and the recommendations are extracted from the Data Quality Site Visit report. Every recommendation is followed by brief statements of the institution’s report of progress. All responses have been updated or appended since the first report of progress except for responses to recommendations #12 and 14.

Recommendation #1

IT staffing, while appearing adequate in overall numbers, appears to be on the short side when considering the "pure programming" staff, those that are often called the "data processing" staff. While Hillsborough has recently expanded their programming staff, colleges of comparable size usually maintain a staff somewhat larger than the five positions at Hillsborough.

The need for increased data processing staff is also justified due the backlog of requested services. Statewide mandated changes are still pending far beyond the date when some should have been implemented. One case in point would be the Adult Hours for FTE reporting and the related withdrawal process. Also, the Datatel software features tools that could /should have been implemented, but the lack of resources have prevented development in that area.

Evaluate IT staff resource distribution. Consider dedicated staff to implement available software tools

Institutional Response:

As a result of the data quality review and a recognized shortage of programming staff, the College approved the hiring of 4 new programmers for the 2007-08 fiscal year. Due to the state-wide budget reductions, the number of new programmers has been reduced to 2 for the current fiscal year. The search will remain open so if qualified programmers beyond 2 individuals are found, contractual agreements can be pursued.

August 2008 Update: Two new programmers have been hired and are working full-time. We are still looking for 2 additional programmers. Our overall goal is to have 10-12 programmers on staff.

Recommendation #2

On a related staffing issue, turn-over and therefore retention of key staff is an issue everywhere. Hiring, and retaining, qualified staff usually means providing a quality employment package. That is especially important in the IT areas, and the position of Records Specialist. The former is obvious with the IT market as it is, but the Records Specialist plays one of the most important roles in data collection and reporting. This person is usually the very first to interface with a student or their information and eventually input those data into a local data base. If a mistake is made, it will often trickle all the way to Washington, D.C. in the form of federal reports.

Develop aggressive staffing plans that would provide for quality recruiting and retention.

Institutional Response:

Staffing in all areas at all campuses could be increased. There has been turnover in some offices while other offices have experienced little staff change over the years. In addition to in-office training, HCC has offered Admissions, Registration and Records Forums to discuss the importance of data accuracy and the role each staff member has in data integrity as it relates to student records and state reporting. There have also been

dialogues with academic advisors regarding the need for putting students in the right academic program and the relationship of hours to degree and program progression.

August 2008 Update: A change in organization structure permits the new position of Student Services Systems Officer to provide training prior to staff receiving their access to the administrative computing system. Training will involve data integrity issues and a state reporting overview. Additionally, this new position will continue to provide training to academic advisors about the need for program accuracy and time to degree issues. These are plans that will go into effect spring 2009.

Recommendation #3

When any college submits their data to FDOE, the data are "loaded" if all edits are successful. Upon loading, dozens of "verification" reports are generated. These reports are made available, electronically, to the Reports Coordinator at the institutions. It was determined during our visit that the major responsibility of reviewing this large volume of data was being handled by this single individual.

Reports should be disseminated to a wider (relevant) audience for review and ultimate feedback to the Reports Coordinator.

Institutional Response:

August 2008 update: With the recent requirement that college presidents are to certify data, a new process of data certification was devised and implemented in 2007-08. It is predicated on a broad-based review of the data by stakeholders and their corresponding cabinet officer. The Director of MIS distributes verification reports and other internally developed data tables to facilitate the reviews. If the data are found to be reasonably accurate, the cabinet officer emails their approval to the Special Assistant to the President for Strategic Planning & Analysis. If the data have issues, the Director of MIS works with appropriate staff toward resolution. Once all cabinet officer approvals are gathered, the Special Assistant meets with the President to certify the data. The President has written assurance from her executive staff that the data have been reviewed and found to be valid portrayals of the College.

This process is adhered to for each state reporting period. It has successfully led to HCC meeting all state deadlines in 2007-08 – a milestone that has not been achieved in many years. See the appendix for the spring/end-of-year data certification cycle and the list of data reviewers per each report.

Recommendation #4

Two important issues came to light during campus visits with Records Specialists. There are no "required" fields for data entry, and there are not edits on data entry input. The former allows for "blank" data fields to be moved forward into the databases. Even if automated decisions are made to "fill" blank fields, seldom is the assumption correct. The latter allows for data to be inputted that is totally unreasonable, such as a Date of Birth of 1846 or 2004. Consideration of these issues, when resources permit, should help to minimize data entry errors.

Implement local data edits to prevent blank data fields in the local data base.

Institutional Response:

August 2008 update: Local data edits have been developed for each record type on the Student, Personnel and Facilities Data Bases. Critical and informational errors can now be identified and corrections can be made prior to submitting the State files. In addition, reports revealing missing or invalid data are distributed to the campuses periodically throughout the term so that the data can be corrected prior to the State data base submission period. Modifications to the Datatel Colleague forms (screens) to require data entry on select fields has not been addressed at this time. Enhancements such as required fields for data entry will be considered after the implementation of the Datatel Colleague Workflow feature scheduled for 2009.

Recommendation #5

Continue to provide (refresh) training to all data entry staff and keep them informed about the importance of their function and the impact of data and reporting on the college. Training should be a continuous "in-service" effort directed at all levels of staff, not just data entry, but include any position that is impacted by data.

The wider dissemination of verification reports (see item 3 above) should also be accompanied by training of those individual that will be reviewing the data. Training to the level of data element definitions would be an asset to those staff tasked with analysis of the verification reports.

Ensure that refresh training is accomplished. Also, develop the necessary training for staff that will be involved with the verification report review process.

Institutional Response:

August 2008 update: The Director of MIS provides training on a continuous basis to a diverse audience of data entry personnel and data users. A space was recently dedicated primarily to training on the enterprise software (Datatel Colleague). It has been outfitted with appropriate computers, presentation technology, and furniture at the District Administrative Offices. In addition the MIS Manager has developed on-line tutorials and training aids available on the departmental web site. She also began to assist in the delivery of training during 2008.

In collaboration with the District Student Services System Officer, new employee and refresher training will be expanded. For a large multi-campus institution, this will help in covering the district's training needs. This will also make more training opportunities available during routine in-service workshops scheduled during the fall and spring semesters.

Formal training of stakeholders such as deans/directors in the verification of data has not begun but is an important element toward addressing recommendation #3 as well as recommendation #5.

A training and discussion session was held with all academic deans, assistants, program managers and staff responsible for the college's course schedule. Additional college-wide training/discussion sessions are planned for the future.

Recommendation #6

Frequent multiple data submissions in the same term are time consuming and inefficient. Institutions often submit in this fashion solely for the purpose of "editing". This is not necessary since the same edit programs used at FDOE during data submission periods are available to institutions to use locally.

Consider using the FDOE edit programs locally to verify data before submission to FDOE.

Institutional Response:

August 2008 update: A planning objective within the areas of strategic planning/institutional research/MIS has identified the need to implement the SAS verifications reports. This objective will be pursued within the 2007-09 planning biennium. Although the development and implementation of the SAS verification reports has not begun, the college has developed internal reports that mimic the critical error/edit reports generated by the State. See also response to Recommendation # 4.

Recommendation #7

Data submissions occurring as early as possible after the window opens allows the maximum opportunity to review verification reports and resolve any existing data anomalies that might be discovered.

Consider reviewing the timing of data submission activity. This would include altering local processes to allow data submission files to be available earlier than they are currently.

Institutional Response:

August 2008 update: Local data edits have been developed for each record type on the Student, Personnel and Facilities Data Bases. Critical and informational errors can now be identified and corrections can be made prior to submitting the State files. In addition, local queries have been developed to identify missing or invalid data on the Student Data Base that are run periodically throughout the term and disseminated to the campuses for review and correction. The data base files are now extracted several weeks before the submission period and the review of the data begins before the reporting window opens for submission. See also Recommendations 3, 4, and 6.

Recommendation #8

We sensed a "disconnect" between the Management Information Systems (MIS) staff and the Information Technology (IT) staff. This may be a communications problem, a coordination problem, or an organizational control issue.

These two areas must develop a better working relationship in order for data reporting to be correct and for data quality to rise. Better communications, perhaps via some sort of process review team (including staff from each area) would be advisable.

Institutional Response:

Great strides have been made in 2006-07 toward improvements in the working relationships of MIS and IT. This is evidenced, in part; by meeting state certification deadlines for the spring and annual data submissions – heretofore an uncommon event. This requires a cooperative effort involving many. IT has also developed valuable diagnostic tools for the Director of MIS to allow her to locate data problems and their root cause.

Within the last year, an Administrative Systems Advisory Council (ASAC) has been established composed of Cabinet Officers and locally designated “systems agents” to prioritize IT projects and plan for their coordinated implementation.

August 2008 Update: Weekly meetings are scheduled with the Director of MIS and IT staff responsible for State reporting. The review of the programs developed and the logic used to define and extract data for the State Databases is under constant review and evaluation.

Recommendation #9

There appears to be a lack of synchronization between campuses, even with consideration of similar staff operational functions. Example 1: Orientation of First Time in College (FTIC) students is required at one campus and optional for students at another campus. Example 2: A lack of operational synchronization of the course scheduling at various campuses.

Coordination among campus operations will provide a clearer understanding for students and allow for more consistency with regard to data overall.

Institutional Response:

With the implementation of Imaging software, the Student Services areas, specifically the Admissions, Registration and Records offices have begun to review all processes, procedures and district-wide policies with the goal of achieving more cohesive and consistent business practices.

August 2008 Update: Student Services PMTs (process management teams) in the various functional areas are meeting to review and modify processes and procedures to increase consistency of services and functions district wide.

Recommendation #10

Students with multiple or mis-coded program codes cause serious problems with data reporting and data integrity. The former allows for inflated enrollment numbers and misrepresents data cohorts, such as vocational student pools. The latter adversely impacts issues like graduation rates.

Use of a "general freshman" category will allow students to be counted properly prior to official entry into a program. The general freshmen are not included in graduation rate computations.

Institutional Response:

August 2008 update: The coding of degree-seeking students who have earned less than 25% of college credit towards their degree is now reported as General Freshman. This was implemented and is reflected in the 07/08 Student Data Base. To this end, the number of students reported as enrolled in a degree program on the AA-1A report for the T3E 2008 submission was significantly reduced.

	A.A. Degrees				A.S./A.A.S. Degrees			
	2006-07	2007-08			2006-07	2007-08		
	AA1A	AA1A	DIFF	% change	AA1A	AA1A	DIFF	% change
HCC	17,698	11,056	-6,642	-37.53	4,719	2,787	-1,932	-40.94

Recommendation #11

As proposed by the internal task force, we concur that a process to identify students as they achieve benchmarks such as 15, 30, and 45 hours toward the completion of their program will be very advantageous. Such a process will assist staff in decision to accept or deny students entry into controlled programs, help verify correct use of program codes, and minimize excess hours taken by students.

Implement recommendations from the Program Code Taskforce.

Institutional Response:

August 2008 update: Efforts to implement recommendations from the Program Coding Taskforce are in concert with those of the Data Quality Site Review. The most recent report of progress has been appended to this document.

A project request to IT has been submitted to identify students at the 15/30/45 hour thresholds. It was ranked 3rd in prioritization by the Administrative Systems Advisory Committee (ASAC) for implementation in 2008. However, challenges in conversion to a new version of the administrative software (R18, Datatel) have led to a postponement of many priorities (reference the response to recommendation #13 for more information). Nonetheless, this recommendation remains important and is a central element of the draft Enrollment Management Plan developed in 2007-08.

Recommendation #12

There was some early consideration that students could accomplish program choice on their own. After interviewing several staff, in several capacities, it appears to be almost a consensus opinion, and ours as well, that students always require some level of staff assistance when choosing and changing programs.

Develop processes that would always provide some level of staff assistance for students when initially choosing their program of study, and when considering a change of program.

Institutional Response:

HCC currently provides the following on-line assistance: advising guides for each academic program and degree audit available via FACTS.ORG and HawkNet. The College has purchased E-Advising which will provide the student on-line assistance in the form of a student educational planner which will blend the degree audit and registration functions. However, academic advisors are available to explain how a student's choices have and will impact their goals when a change is made. They take into consideration transferability of coursework and statewide articulation agreements when discussing the student's options.

August 2008 Update: No change.

Recommendation #13:

While interviewing Hillsborough staff, several comments were made referencing the Datatel Software not being very robust, nor did it provide flexibility, i.e., easy to change and modify. Our findings point more to this being a staffing resource issue, not a problem with the core software. Several available modules/tools of the software simply have not been put into use due to workload and staffing issues.

Dedicate needed resources to develop and implement the software modules that will provide the robust environment desired.

Institutional Response:

All complex ERP software packages have strengths and weaknesses. Datatel Colleague is no different from their competitors. Datatel Colleague's strength is in its ability to process a very high volume of transactions quickly. Its greatest weakness is its reporting ability. It requires a depth of knowledge about its data structure that is beyond the casual user, therefore 'getting data out' is cumbersome and not for the faint-hearted.

When Datatel Colleague was initially implemented the goal college-wide was to implement a 'plain vanilla' version of Colleague. The idea behind this implementation philosophy was to modify the College's business processes to adapt to Colleague's capabilities and not modify the product except in extenuating circumstances. In many instances what resulted was to maintain current business processes but create labor intensive 'work-arounds' that added significant complexity and hand labor to many business processes and did not take advantage of the automation provided in the Datatel Colleague product line.

It is correct that some modules were purchased and never implemented. There are a variety of reasons for this delay in implementation some being complex technical issues. Nonetheless, the focus now is on re-evaluating all of the modules currently owned by

HCC to determine if value could be gained from implementing these modules in conjunction with a review and potential modification of the current business processes, college-wide. The goal being to better align our business processes with the unused capabilities of the Datatel Colleague product.

A second effort is to create a new flexible reporting environment that focuses on providing browser based, easily accessible, flexible reporting system that will support data-driven decision-making across the college.

August 2008 Update: For the past 10 months the College and IT have been working on a major upgrade to the Datatel product. This upgrade is now almost completed and when done, many resources will become available – both within IT as well as in the user community. IT staff training is scheduled for ELF (a data import tool) and Datatel’s work flow module. There are also discussions about integrating the Instant Enrollment module for the Community Education program courses later in the academic year. These modules are the most frequently requested or strategically needed for improving organizational efficiency.

While it is not related to specific modules, we have contracted with Datatel to come on site to audit the use of their product in Financial Aid and to recommend how we can use their product more effectively within that unit. It is our intent to also do this for other areas in the College that depend on Datatel for operational efficiencies.

Recommendation #14

Simple errors often occur during initial data entry. Students have no opportunity to observe (proof), therefore confirm the validity of their demographic data when inputted into the local data base. A simple review could easily detect and allow for correction of simple items like residency, gender, race, name spelling, etc.

Review could be accomplished via a paper insert into the student acceptance letter and/or enhancement of the web screen already available to students, but which displays only partial data.

Institutional Response:

Through the use of the communications management module in our administrative software, a welcome letter is generated to accompany the admissions packet. The body of the letter includes student name and address, academic program, and residency status. This information is also available on-line via HawkNet in the student profile screen. On campus, edit reports identifying database errors are generated for review by staff throughout the term.

August 2008 Update: No change.

APPENDICES

1. Update to Program Coding Task Force Recommendations
2. HCC Data Certification Cycle and Roster of Reviewers
3. Letter of appointment designating alternate to certify HCC data
4. Research Brief: *Validating the Accuracy of the Student Success Rate* (FTIC study)

STATUS OF PROGRESS, August 2008

Implementation of Recommendations, Program Coding Task Force

1. Schedule Data Quality Site Review

Done. First and second progress reports to the FDOE have also been completed. No additional progress reports to the FDOE are scheduled.

2. Monitor headcount enrollments: 1) develop an internal unduplicated enrollment report and 2) expand review of the official headcount report (AA1A) to stakeholders.

Completed an *Annual Unduplicated Enrollment Report* with distribution to HCC Community and with presentations to the BOT. This has been followed by Fall and Spring Semester reports.

With implementation of a new and broad-based data review & certification process, there is more regular and widespread review of the AA1A report as well as many other data reports.

3. Use the most recently applied program as a student's official program code.

This effort has been replaced by one in which the student's official code is the one in which they have the most activity as evidenced by the student's progress towards degree completion as reported on the Student Data Base. Additional investigation is needed here to determine if this approach reflects the students' intended educational pursuit.

4. Refine business rules & programming logic impacting state reporting with special emphasis on data supporting state performance measures, i.e. FTIC.

Corrections have been made to programming logic that led to inaccurate counts of the FTIC cohort. A study was completed to determine the degree of error in past FTIC reporting and provide evidence of its corrections. See the attached research brief.

5. Automated notification to students after having completed 15/30/45 college credit hours to verify their program code.

A project request to IT was submitted. It was ranked 3rd in prioritization by the ASAC for implementation in 2008. However, challenges in conversion to a new version of the administrative software (R18, Datatel) have led to a postponement of many priorities. Nonetheless, this recommendation remains important and is represented in the draft Enrollment Management Plan developed in 2007-08.

6. Develop & implement auto-graduator routine with first phase restricted to college credit certificate programs.

This has been identified as priority #4 by the ASAC. Its projected start date for development is 2008. See explanation above for delays in implementation. Again, this recommendation appears in the draft Enrollment Management Plan, strategic planning objectives, and work appraisals for the Special Assistant to the President for Strategic Planning & Analysis and the Director of MIS.

7. Implement Datatel's E-Advising system.

An IT project request has been completed and ranked #5 in priority by the ASAC. The programs have been received but implementation is projected for 2009.

8. Implement "General Freshman" designation.

General Freshman was implemented as evidenced by reductions in state reported program enrollment and corresponding increases in General Freshman enrollments.

9. Eliminate option of allowing students to have two degree program codes (i.e. AA and AS, or two different AS, etc.).

Implementation of recommendation #3 should remedy this. It should be recognized that some students are deliberately pursuing two degrees (i.e. nursing). Research was also completed indicating a marginal occurrence of students having more than one program code.

10. Produce class section rosters with student program codes for faculty verification.

This is available but usage varies widely. Eventually, the rosters should be available for online verification. More recently, workforce deans have agreed to restricted registration in select gateway courses if the student has not been assigned the correct program code. The restriction is enforced through the administrative software.

11. Develop an alternative program code for financial aid funding instead of dumping them in AA.

Director of Financial Aid shares that there were technical degree programs that were ineligible to receive financial aid for their students. This was due to not having them on a federal listing of eligible programs. She has updated the federal roster for those programs that HCC's internal computer programs will accept (all but short-term programs that don't meet institution-imposed thresholds for credit or clock hours).

12. Use Campus Cruiser to allow students to verify the accuracy of their program codes.

The Datatel product, E-Advising, provides the ability for a student to review and verify their program information with an assigned advisor. Most likely, the implementation of this feature will be sometime in 2009 – see recommendation #7. Campus Cruiser will probably not be the tool that will be used to provide program verification.

13. Have a workshop with student services personnel on program coding.

A meeting was held with the new VP of Student Services. Subsequently additional meetings have occurred regarding the importance of accurate program coding among student services deans and Admissions/Registration and Records personnel.

14. Provide clear cut direction about program codes and criteria to staff/advisors/faculty.

See recommendations #13, 10. Continue to maintain awareness of the issue in newsletters, research briefs, all college-day, faculty in-service, ongoing training/discussion sessions with Advisors and Admissions/Registration and Records staff, Enrollment Development Coordinators, etc. During 2007-08, select staff from the Division of Strategic Planning, Research, MIS & Grants met with the leadership on each of the four campuses to discuss program coding issues.

15. Appoint task force to review the entire advising system.

The recently appointed VP of Student Services has appointed an Enrollment Management Planning Steering Committee that will be examining this matter as well as others. The draft Enrollment Management Plan has been completed. In addition, the Ybor Campus has begun efforts to devise a faculty/staff advising system.