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"EDCATS: AN EVALUATION TOOL"

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INTRODUCTION

The purpose of this research is to explore the development of Marshall Space Flight Center Unique Programs. These academic tools provide the Education Program Office with important information from the Education Computer Aided Tracking System (EDCATS). This system is equipped to provide on-line data entry, evaluation, analysis, and report generation, with full archiving for all phases of the evaluation process. Another purpose is to develop reports and data that is tailored to Marshall Space Flight Center Unique Programs. It also attempts to acquire knowledge on how, why, and where information is derived. As a result, user will be better prepared to decide which available tool is the most feasible for their reports.

RESEARCH APPROACH

The initial approach to this research was to look at the NASA-Wide programs. Because EDCATS has many facets, I needed to explore the variety of information that could be generated from the data feedback reports, program sessions, and field center final reports. I had to examine how the information was currently being collected, tabulated, reported and disseminated. Looking at the six indicators for the system, I needed to determine whether or not all information was being collected. I discovered there were specific performance indicators used in the evaluation system. The indicators included the target population, indefinite program techniques, content, data collected and analyze supplementary material being distributed. These essentials provided a first- hand account of NASA's accomplishments of its education goals and objectives that pertained to the program.

After the information is gathered it could be used in a plethora of areas. Some of the areas of utilization are reports, follow-up studies, changes in existing programs, and development of new programs. Recently, I examined the Center-Unique Programs. It is comprised of the Discover Lab, Project Laser Database, Explorer Post, and Moon Buggy. This examination required research into different types of programs. I had to determine the type of information that was necessary for these programs. An analysis of the goals set forth by NASA and the program managers were vital. For each program, I looked at the participants and data/feedback report, program session report, and the field center final report. This examination was necessary to determine what questions to address that was related to each program. Each program has unique information that is useful for the program manager. To better understand this uniqueness, I talked to the program managers to better determine what data is important for a particular program. After this information was gathered, I "tackled" the task of going through each data feedback form to explore whether or not the criteria were met by the objectives of EDCATS and by the program manager.

Next, I had to view the program session and determine what was needed for the reports and choose the most feasible way of gathering data. The information for the program session required that data be entered by the program manager with no input from participants. The success of using on-line evaluations was another consideration. In making this determination, I asked several questions related to the evaluation. What would the information be used for? If the information was entered correctly, how would a true result be realized? I had to determine how the programs would be operated/reported and who was responsible for the different forms? Does EDCATS have the necessary ability for reporting, data collection and keeping track of budget procedures? A plethora of forms was examined in effort to determine if any difference existed. The participant's opinion on whether or not to complete on-line evaluations are another consideration that can't be ignored. After seeing how the data was collected and generated into different reports, I better understood the internal functions of the program.

RESULTS

While conducting my research, I immediately perceived the evaluation forms as being somewhat lengthy, but I would later discover how quickly the forms could be completed. It is much more feasible with the aid to computer to enter the necessary information. After completion of the form it is then ready for immediate feedback. However, the current setup makes it more difficult for the participant to make corrections. Any changes are usually made by the program manager. Once the information is compiled and stored, it is easier to develop different types of databases. This database is helpful with follow-up in the educational community for programs.

The next area of concern involves the program session, these questions do not coincide with the teacher/student feedback. The program manager will be responsible for entering this information. There is no linkage between forms. If the information was asked on the evaluation form it could automatically be mapped to other forms and prevent a duplication of entry. Oftentimes, trying to generate a report from the information gathered is difficult because the evaluation may not have asked relevant questions. If a pre-define summary is used for each component then the data and vital information would be in place. The field center final center report is generally based on funds. This form would be filled out by the program manager and /or resource manager. In looking at these components we need pre-define summaries to realize a report that is functional. Also, using the Ad-Hoc user reports will help to develop an illustrated report. When using the Ad-hoc report tools you have no totals of the information you have gathered.

EDCATS and Microsoft Excel or Microsoft Access programs can be used to develop databases. These are valuable tools that provide linkage and helps gather information for reports. Excel makes it easier to develop spreadsheets and graphs that highlight gathered information. This method helps the center conduct follow-ups on participants in different programs.

Information about participants in other programs would also be included. Information gathered can be used to support the programs' effort aimed at the betterment of education, needed improvements, and the reporting of data as a team. Monthly reports can be generated with information collected from the evaluations. This information can be used as an update for all programs in the Education Program Office. The total can be used to develop statistical data for the center and numbers the office might need. The different reports offer variety for the individual and help to better relay the message.

CONCLUSION

Evaluations are important to the development and implementation of programs that are designed to aid education. The system (EDCATS) is an important step in gathering the opinions of educators who are embarking on new and real-time experience in space. The exploration of these avenues, in my opinion, couldn't be more urgent. The following are suggestions that I strongly believe would be helpful: make sure information gathered from teachers and students via EDCATS will help make needed changes and provide additional programs. Programs that are not useful should be "scratched". Inform participants that the forms seem lengthy but only take a short period of time to complete. Office reporting should be done monthly using spreadsheets to keep track of activities within the office from a team perspective. Other suggests would be to develop a linkage between the programs, have training for users, and gather information from EDCATS programmers. These suggestions would make it possible to view the entire sphere of EDCATS and take full advantage of the system's capabilities. Knowing the capabilities will only further assist user. The Program Inventories are very helpful because they highlight NASA's efforts in the area of Education. The information that is used in the program inventory, the number of participants, and applicant is also valuable for prospective participants. This data helps to make determinations related to the competitiveness of the program. In using EDCATS we need to implement a system of checks-and-balances. EDCATS is a good program but should not be viewed as a "cure all"

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