

APPLYING INFORMATION RESOURCES MANAGEMENT TO IMPROVE LEARNING PROCESS AT ROMANIAN AIR FORCE ACADEMY

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Abstract: *This paper considerate the opportunities and advantages that education and universities development strategies should consider to maintain traditional values of university education and how to synergize and to manage them with information technologies, new kind of knowledge and skills, demanded by students and their future.*

Keywords: *Educational Goals, Information Resources Management, Information Technologies, Information Access, Educational Process Improvement, Interactive Learning.*

1. FOREWORD

Air Force Academy mission is to promote academic and personal development, to inspire and develop outstanding young men and women to become Air Force officers with knowledge, character and discipline, motivated to lead the aerospace force in service to the Romanian army and nation.

The Academy fulfills its mission through excellence and innovation in teaching, outstanding research and creative activities, distinctive scientific and cultural alliances, developing knowledge, skills, values and behaviors patterns needed to be an effective Air Force officer.

The educational program at the Academy is guided by it's based on: academics, military training, athletics and character development. In addition to a military training, students take a broad academic course load with an extensive core curriculum in basic sciences, humanities, social sciences, military studies and physical education.

Each of the components of the program is intended to give cadets the skills and knowledge that they will need for success as air force officers.

The educational goal of the Air Force Academy is based on the duties, ideology and

goal of Romanian Air Force. The accelerating pace of technological change is having an impact on all facets of universities, altering and influencing how students, faculty, and staff interact, with information, with the university and each other.

Online information, sophisticated search engines, digital libraries, and streaming video are transforming where and when students work and what constitutes a classroom. This ease access to information, coupled with student's facility with technology and their ability to multitask, puts increasing pressures on faculty and universities to rethink what learning spaces look like and whether current lecture halls and associated approaches to teaching are still as effective.

This only underscores the importance of the roles of faculty and librarians as guides to knowledge-seeking and critical analysis for research in an information-saturated era.

A significant shift in technology implementations that is apparent in education today is toward greater use of computers (and other devices) as tools in the learning process rather than as instructional delivery devices. Many of the newer technology tools are designed to facilitate educational tasks by providing students with aids for studying content and practicing skills.

Computer-based instruction is commonly divided into two modes of delivery: *Synchronous* and *Asynchronous*.

Synchronous delivery of instruction involves presentation to the student while the instructor is simultaneously available for student-contact with immediate feedback. Examples of synchronous instruction on the computer would be instructor-moderated chat-room discussions, instructor-facilitated application activities, and instructor-driven slide shows, to name a few.

Asynchronous delivery of instruction involves self-directed learning on the part of the student with delayed teacher feedback and indirect student contact. Asynchronous instruction examples would include tutorials, bulletin boards, email discussion lists, and automated computer/Web applications that compile student activity data for teacher review at a later time.

University management should respond to these new challenges by applying new technologies to the existing academic activities because:

- New technologies can offer new opportunities for teaching and learning and improve existing teaching and learning methods;

- These technologies are becoming increasingly available and part of students' everyday life, bringing social pressure to university staff to adopt them in their teaching process;

- Will make teaching and learning more efficient;

- This are the driving force but also basic prerequisites for modern lifelong learning and continuous education programs;

- Will offer better quality control mechanisms for creation and delivery of course content; online teaching activities; student progress;

- It has to be adopted as standard part of higher education practice.

Air Force Academy (AFA) has primary responsibility to ensure that Information Technologies is acquired and information resources are managed in a manner consistent with statutory, regulatory, and academic requirements and priorities. With this

responsibility, it is necessary to provide information resources management advice and assistance, to coordinate and articulate a shared vision and perspective among the academy's information activities, which permit to manage and to protect information and to provide value-added for academic organization.

The actually situation of all educational resources of Air Force Academy requires the implementation of a new activity, to manage: the information resources, the necessary support and access to digital resources, instructional technology, and an interactive learning.

The activity of Information Resources Management department has to provide the instructional and operational necessary support to ensure that students achieve their overall educational goals, to effectively conceive, develop, implement, utilize, and manage appropriate information systems in order to provide integrated and coordinated quality of educational services in line with its vision, mission and objectives.

Alfa's IRM department has to improve student access to computing services through the efficient use of its information resources technologies, to make higher education more effective in the traditional classroom and beyond for degree-seeking and continuing students education, to improve the computing infrastructure and organization at all levels, including the campus network, Internet access, personal computing, computational research, and support services.

2. AIR FORCE ACADEMY IRM GOALS

The activity of department for Information Resources Management will provide high quality information technology resources in support of teaching, learning and research and will facilitate the efficient execution of administrative and service functions of the Academy. It is critically important that the Air Force Academy information technology (IT) infrastructure, architecture and ongoing operations, support the mission of the institution. This policy establishes the nationally recognized codes of practice and

educational performances with which the university aligns its educational activities and IT infrastructure, architecture and ongoing operations.

The Information Resources Management activity goals are:

1. To enhance academic performance of educational missions through the appropriate use of information resources. This goal is addressed through the appointment of an IRM strategy that completes all educational requirements.

2. To deliver improved student access to computing services through the efficient use of its information resource technologies. AFA faculty, staff, and students should have more direct and immediate access to programmatic and administrative information in order to have more time to devote to the academic mission.

3. To ensure the privacy, security, integrity, and relevance of AFA critical data. This goal has been addressed through the IT Security Manager, whose primary responsibility is the protection of AFA assets and information that are processed by or stored in our computerized information systems.

3. IRM OBJECTIVES

1. Make the instructional and operational support for academics programs available to the faculty staff and students on an “on demand” basis that takes into account the students locations, time constraints, and other similar factors.

2. Provide a robust, differentiated, technology-rich environment that enables significant innovation in teaching and learning; that makes higher education more effective in the traditional classroom and beyond for degree-seeking and continuing education students.

3. Provide access to AFA students by making as many of the informational resources of the Academy available to learners via electronic means.

4. Ensure that AFA students have the capability to reach all of the informational resources that they require in order to achieve their educational goals.

5. Implement an integrated Student Information System, including recruitment, admission, student records, student financials, and academic advisement, using a Relational Database Management System.

4. AIR FORCE ACADEMY IRM ACTIONS

1.1 To develop a particularly effective educational program, which utilizes distribution via the intranet network, students may access course work developed for intranet delivery at a time and place that is independent of a scheduled class.

1.2 Distribution by an intranet network of courses produced by the faculty staff for student use, homework and evaluation will increase the number of hours that students and also faculty use this source and will quantify the successes of this strategy.

2.1 AFA needs to operate an effective and robust on-campus network that ensures that students will be able to access all of the computing resources that are available to them on the campus.

2.2 AFA continues to strengthen its working relationship with the System of Telecommunications Services, in order to ensure that network traffic entering and leaving the campus has sufficient bandwidth to provide students and faculty with adequate access to the Internet and to other electronic resources that may reside outside the AFA campus. This allows AFA faculty staff and students to access research material and informational resources that may not be available on campus. An excellent example of this is accessing informational databases and other similar Library materials that may exist in other similar universities.

3.1 A computer laboratory (Internet Café) should be open in the Library area allow any library research, both locally and remotely via the Internet. This project provides general access to AFA informational resources on campus whiles the current policy, restricts the access of students and faculty staff in other computing labs of the university.

4.1 As one example, Alfa’s Education Centre will provide the needed capabilities and

will assist faculty in the development of courses targeted for Internet delivery or delivery via other interactive means. The Centre for Education will become an increasingly important aspect of curriculum development for the university and will:

- Coordinate and expand library resources and services to maximize support for interdisciplinary initiatives, teaching, learning, and research;
- Exploit digital technology to provide convenient, seamless access to scholarly resources;
- Enhance AFA's information and instructional technology resources.

4.2 To facilitate greater opportunities for learning, "Henri Coandă" Air Force Academy has to provide tools to enhance the discovery of new information, and to provide access to higher education to students. AFA has to allocate funds to create technology-equipped classrooms, for educational software's acquisition and provide faculty rapid and reliable user support in the classroom.

Successful implementation of this strategy requires the following establishments and facilities:

- Centre for Education (Digital Library)
- Central Library (Online Resources & Assistance, Instructional Technology)
- Computer Classrooms
- Basic Sciences Laboratories (Classrooms with six networked computers)
- Social Science Laboratories (Classrooms with six networked computers)
- Foreign Languages Laboratories (Wireless Classrooms)
- Multimedia Technology Workshop - enabled Lecture Classroom

5.1 AFA's administrative applications require multiple database platforms. By acquiring a system and integrating all administrative applications, AFA would greatly simplify the management and flow of information across departments, provide much-needed query capabilities that are not

currently available, streamline processes, and improve reporting.

5.2 The acquisition of a Relational Database Management System would enable students to review classes, check grades and other educational information's, consult with advisors, and request transcripts over the Internet using a standard Web Browser.

5. CONCLUSIONS

The vision, goals, priorities, and strategies documented in this paper work, define the path forward for the IT community to support educational program and make significant contributions to the accomplishment of AFA educational missions. This IRM department will shape the redesign of educational work processes, will guide the development and maintenance of educational architecture and will control the investment process.

Strategic planning is the process by which it determines future direction, identifies resources and transformational agenda needed to meet that direction and establishes an accountability system by which to manage progress towards that direction.

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