USING BI To Help NAU's GEAR UP Program:

BI Lessons Learned from the NAU GEAR UP Data Management System

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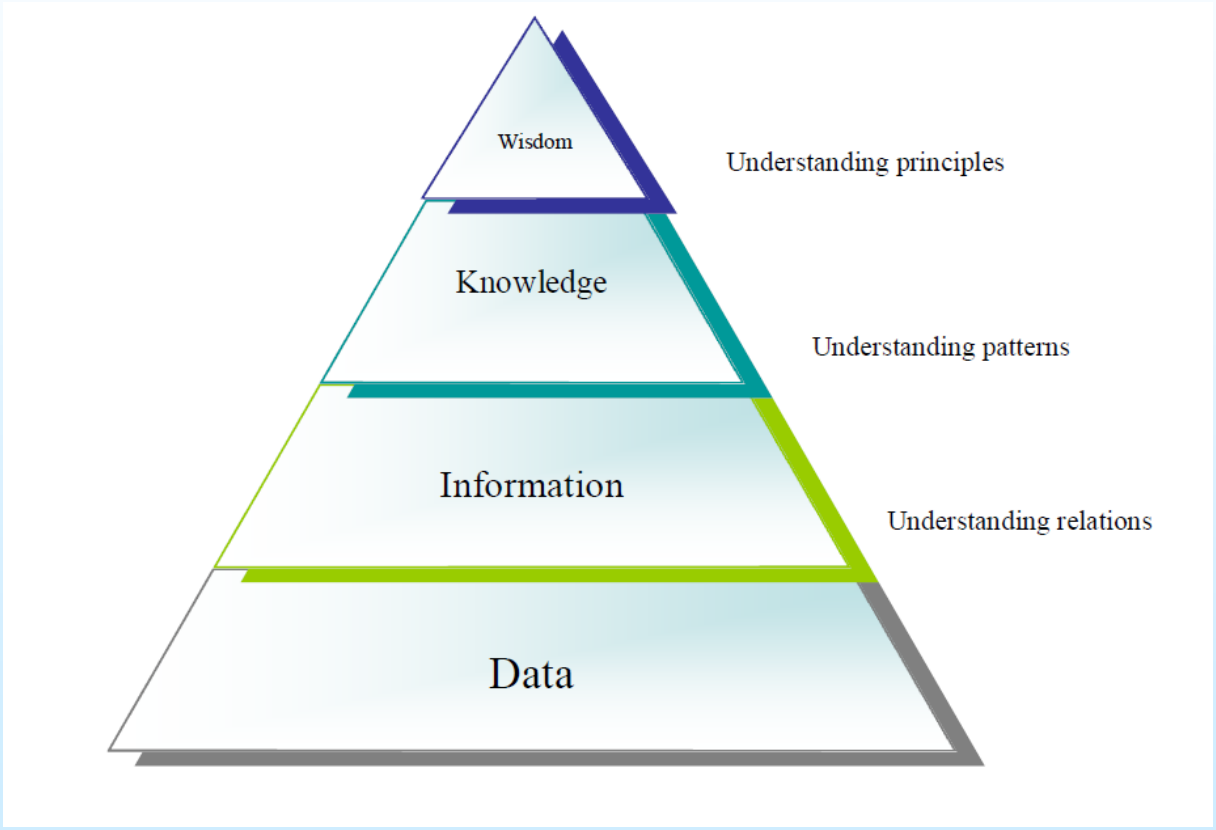
Ackoff's Knowledge Pyramid



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Hart's IT System Bullet Points

► Nobody likes their software system.

► Technology and mythology are intertwined; tech is notorious for over-promising and under-delivering.

► You have to walk before you can run.

► Don't use a sledgehammer to swat a fly.

► State-of-the-art systems require state-of-the-art users in order to achieve intended results.

► Just because you <u>can</u> answer a business question with your IT system doesn't mean that you <u>must</u>.

OVERVIEW: GEAR UP 2006-12

► History/Purpose

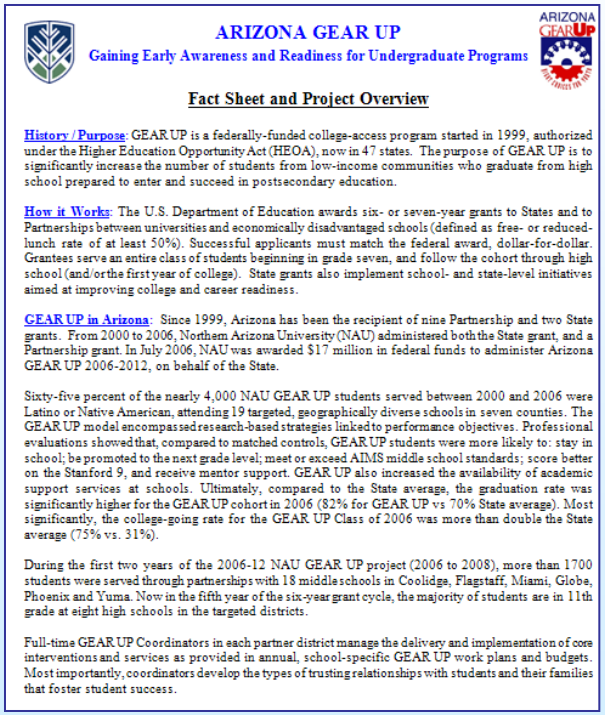
- ❖ 1999 Higher Ed Opportunity Act
- ❖ College preparation/access

► How It Works

- ❖ 6 (or 7)-year awards from USDOE
- ❖ Higher Ed + K-12 Partnerships
- ❖ Cohort model (7th -12th Grade)
- ❖ 1:1 Match

► GEAR UP in AZ (NAU)

- ❖ 2000-06: NAU administered 2 successful grants , 19 schools, 4,000+ students statewide
- ❖ 2006-12: NAU is administering, 18 schools, 1,700+ students
- ❖ Multiple interventions managed by Site Coordinators



ARIZONA GEAR UP
Gaining Early Awareness and Readiness for Undergraduate Programs

Fact Sheet and Project Overview

History / Purpose: GEAR UP is a federally-funded college-access program started in 1999, authorized under the Higher Education Opportunity Act (HEOA), now in 47 states. The purpose of GEAR UP is to significantly increase the number of students from low-income communities who graduate from high school prepared to enter and succeed in postsecondary education.

How it Works: The U.S. Department of Education awards six- or seven-year grants to States and to Partnerships between universities and economically disadvantaged schools (defined as free- or reduced-lunch rate of at least 50%). Successful applicants must match the federal award, dollar-for-dollar. Grantees serve an entire class of students beginning in grade seven, and follow the cohort through high school (and/or the first year of college). State grants also implement school- and state-level initiatives aimed at improving college and career readiness.

GEAR UP in Arizona: Since 1999, Arizona has been the recipient of nine Partnership and two State grants. From 2000 to 2006, Northern Arizona University (NAU) administered both the State grant, and a Partnership grant. In July 2006, NAU was awarded $17 million in federal funds to administer Arizona GEAR UP 2006-2012, on behalf of the State.

Sixty-five percent of the nearly 4,000 NAU GEAR UP students served between 2000 and 2006 were Latino or Native American, attending 19 targeted, geographically diverse schools in seven counties. The GEAR UP model encompassed research-based strategies linked to performance objectives. Professional evaluations showed that, compared to matched controls, GEAR UP students were more likely to: stay in school; be promoted to the next grade level; meet or exceed AIMS middle school standards; score better on the Stanford 9, and receive mentor support. GEAR UP also increased the availability of academic support services at schools. Ultimately, compared to the State average, the graduation rate was significantly higher for the GEAR UP cohort in 2006 (82% for GEAR UP vs 70% State average). Most significantly, the college-going rate for the GEAR UP Class of 2006 was more than double the State average (75% vs. 31%).

During the first two years of the 2006-12 NAU GEAR UP project (2006 to 2008), more than 1700 students were served through partnerships with 18 middle schools in Coolidge, Flagstaff, Miami, Globe, Phoenix and Yuma. Now in the fifth year of the six-year grant cycle, the majority of students are in 11th grade at eight high schools in the targeted districts.

Full-time GEAR UP Coordinators in each partner district manage the delivery and implementation of core interventions and services as provided in annual, school-specific GEAR UP work plans and budgets. Most importantly, coordinators develop the types of trusting relationships with students and their families that foster student success.

OVERVIEW: GEAR UP 2012-19

- **RFP Released by USDOE in June 2011; Proposal Submitted by NAU July 2011; award notice pending(?)**
  - 7-year awards (services to be continued into first year of college)
  - Higher Ed / K-12 Partnerships
  - Cohort model (7th -12th Grade + 1st year of college)
  - NAU "appointed" State Grant Applicant by AZ Governor
  - School partners are in place (9 rural communities statewide + other statewide initiatives)
  - USDOE providing technical assistance
  - Similar project design as previous projects (multiple interventions, managed by Site Coordinators), more schools, more students served than the current (2006-12) project design

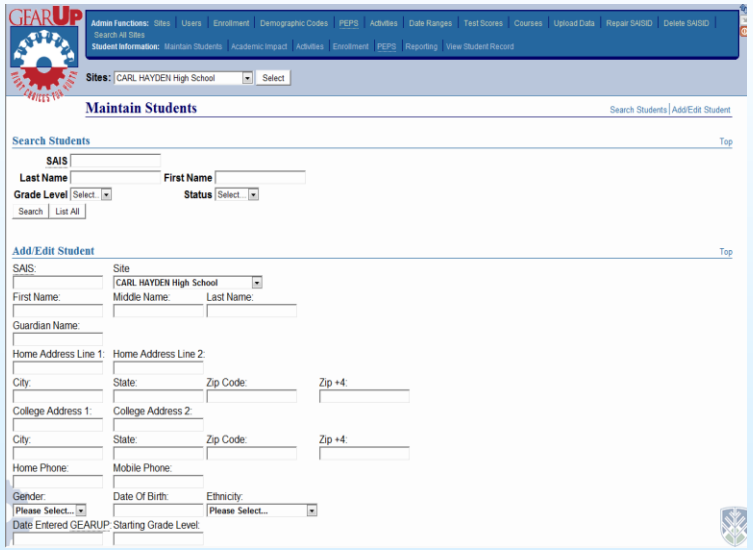
OVERVIEW: GEAR UP 2012-19

- **NAU's Application Included a Data Management Plan**
  - Derived mainly from Project Design, Evaluation Plan
  - Impacts Project Budget
  - Data is collected so that NAU can measure/demonstrate project outcomes in support of overarching project goals & objectives

DATA MGMT: Current

► Overview

- ❖ Custom application (built by NAU ITS)
- ❖ Oracle/.Net environment
- ❖ SAP Business Objects XI R2 / WebI
- ❖ App. Server: Dell Poweredge 2950
- ❖ Webserver
- ❖ Current volume: 2,500(?) records, 5 screens of data, multiple yrs per screen
- ❖ 62MB disk space; prod & qa



► Web Connection

- ❖ Password-protected
- ❖ Participation data (activity type and duration) gathered by Coordinators, entered centrally by an Admin Assistant
- ❖ Academic Impact data (courses/grades, attendance, GPA, etc.) transmitted electronically by schools, uploaded via custom utility

DATA MGMT: Current (continued)

► Student Data Tracked

- ❖ Demographic data (entered once when a student joins the cohort)
- ❖ Academic data (files uploaded each semester)
- ❖ Enrollment data (entered as enrollment changes occur, mostly at the end of each school year when students are promoted or retained)
- ❖ Participation data (entered weekly)
- ❖ Postsecondary Education Planning Session (PEPS) data

Parent participation in GEAR UP activities is also entered into the database on a weekly basis, as it occurs.

A View Student Record inquiry screen presents a detailed screen shot of all data captured on a given student record.

NAU ITS recently added screen-to-screen navigation capability.

DATA MGMT: Current (continued)

► Users

- Currently 6 "power" users (report developers/designers):
  - 2 GEAR UP Assistant Directors (do most of the B/O rpt-writing)
  - 1 GEAR UP Admin Assistant (some B/O rpts + heavy data entry)
  - 1 GEAR UP Assistant Director (uploads + liaison for tech issues)
  - 1 GEAR UP Evaluator (annual evaluation / APR)
  - 1 InfoSol consultant (complex B/O reporting tasks)

- Currently 12 "casual" users: 9 GEAR UP Coordinators (1 Coolidge, 2 Flagstaff, 1 Globe, 1 Miami, 2 Phoenix, 2 Yuma); 1 GEAR UP Assistant (Yuma); and 2 GEAR UP Liaisons (Yuma)

DATA MGMT: Current (continued)

► Maintenance (provided by NAU ITS)

- ❖ Required for database and server software, security and environmental controls
- ❖ Weekly full back-up
- ❖ Daily incremental back-ups
- ❖ Daily schema export

DATA MGMT: Current (continued)

► Reports

- ❖ Reports showing student-level data, organized per user-specifications, are created using Business Objects
- ❖ Currently, there is 1 defined Business Objects production universe and 72 WebI documents defined and usable by NAU project staff and evaluator
- ❖ A desktop moderated by NAU ITS allows remote access to a local testing environment; as directed by NAU GEAR UP, InfoSol consultant remotely accesses the local test system to design and test complex reports before they are exported to Live

Reports allow project staff and evaluator to link achievement data with participation to evaluate the effectiveness of interventions and to guide the targeting of services

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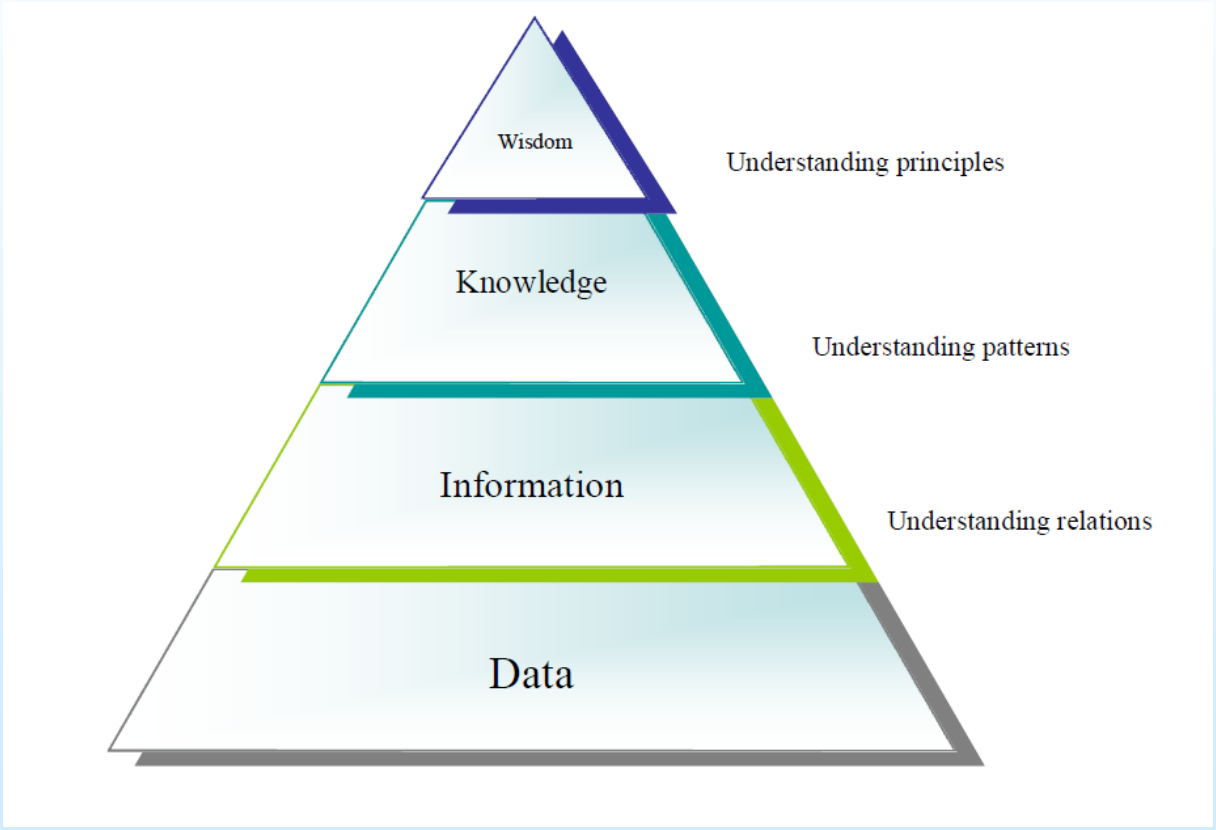

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DATA MGMT: InfoSol's Role

► Major NAU GEAR UP BI Challenges Resolved in Collaboration With InfoSol 2010-12

- ❖ Identify GEAR UP student(s) who had ***not yet*** received a service or intervention (so that follow-up could be done)
- ❖ More deftly analyze AIMS scores (i.e. sift through them to determine students' highest AIMS scores after multiple attempts; determine the % meeting / exceeding AIMS standards each year; etc.)
- ❖ Determine the % of students completing the more rigorous college preparatory curriculum
- ❖ Systematically compile and analyze students' postsecondary choices and scholarship offers

QUESTIONS?

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