



A College Course:

***Data Quality in
Information Systems***



Key Topics from Research

Measurement

Impacts

TQM

Data Entry

Policies

Error Detection

Dimensions

Change Processes

User Requirements

Information Overload

DQ Audits

Statistics

Data Mining

Data Warehouse

Analytic Models

Relational Algebra

DQ cost/benefit

Software tools

Three types of Capabilities

Interpretative—Self Reflective & social contexts

Change Mgmt, Impacts, Cost/Benefit, Error Detection

Adaptive—Significant interchange with environment

Measurements, TQM, Data entry improvement, User requirements

Technical—Mechanical Predetermined behaviors

Data Mining, Analytic Models, Data Warehouse, Relational Algebra, Statistics

Which Skills are most important?

- ∞ Interpretative—Self Reflective & social contexts
Professor, executives & managers rated these skills as most important.
- ∞ Adaptive—Significant interchange with environment
Consultants, Project Managers & analysts rated these skills as most important.
- ∞ Technical—Mechanical / Predetermined behaviors
All rated technical skills as lowest importance



Importance of Skill Type varies by type of job.

Undergraduate curricula may focus most on adaptive and technical to identify user needs and measure user satisfaction and data quality.

Graduate Programs and Executive seminars may focus mostly on Interpretative so as to assess organizational implications and policies.



Course Objectives

- Understand DQ/IQ impacts and implications of poor data quality in technological projects,
- Understand TQM/TDQM, Information Products, Data quality dimensions & Process Control concepts,
- Recognize patterns of data and design deficiencies,
- Suggest DQ and IQ improvement plans,
- ROI / Business benefits of DQ Improvement plans for databases / warehouses,
- Role and importance of DQ in Decision Making.

Course Approach

REGULAR CLASSES:

- Study text / journal articles prior to classes
- Discuss w/ leading questions and etc.

FOUR PROJECTS:

- Total Quality Management (TQM),
- Use of DQI,
- Data Warehouse cleaning, and
- Information Quality Assessments.



Information Quality Assessment

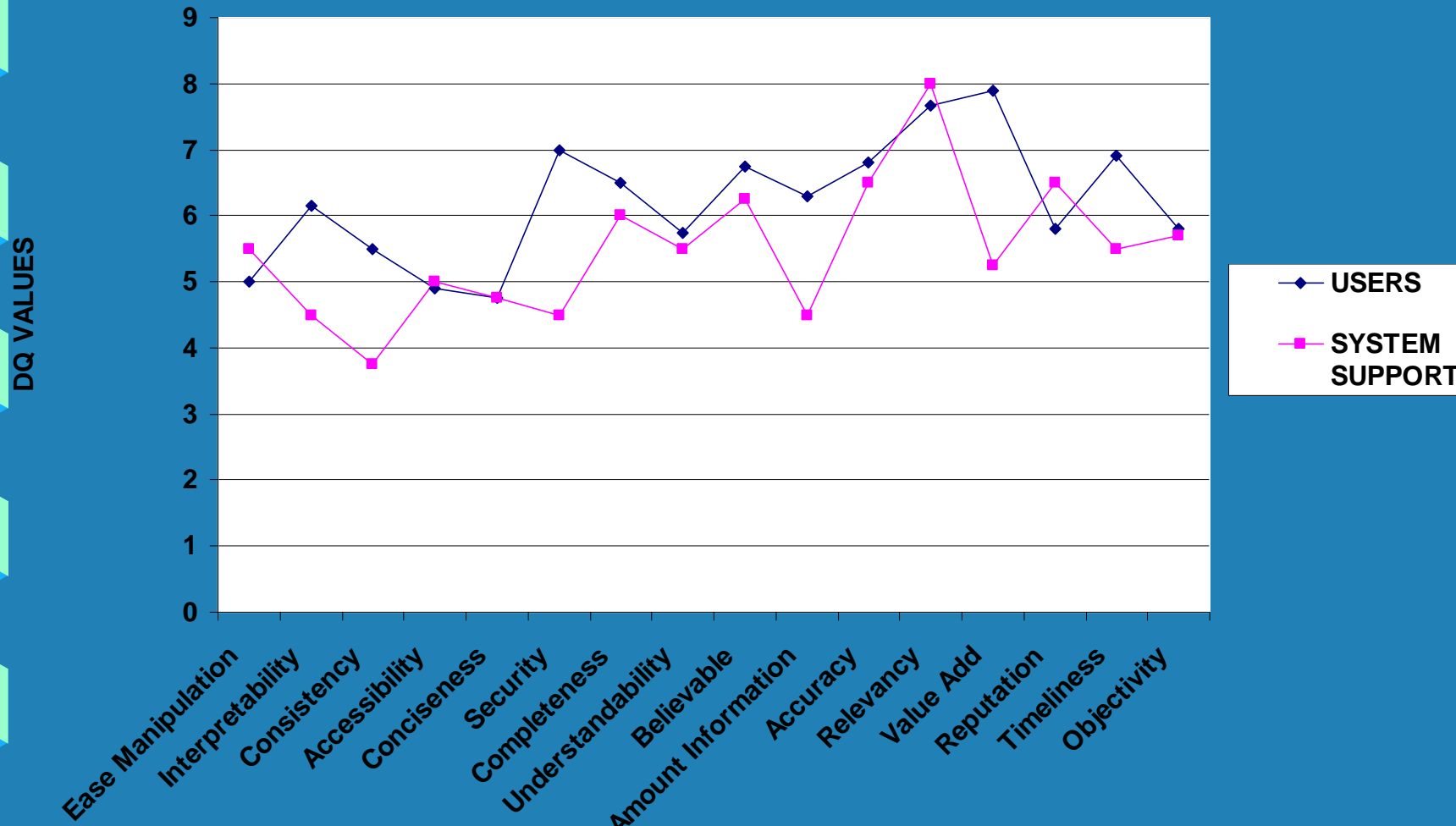
Objective: Perform an assessment of Information Quality in certain areas of XYZ Organization.

Systems: Various IS Applications / Systems.

Personnel: Management and staff from the User areas and the I T department.

ABC Databases: Sys Support v. Users

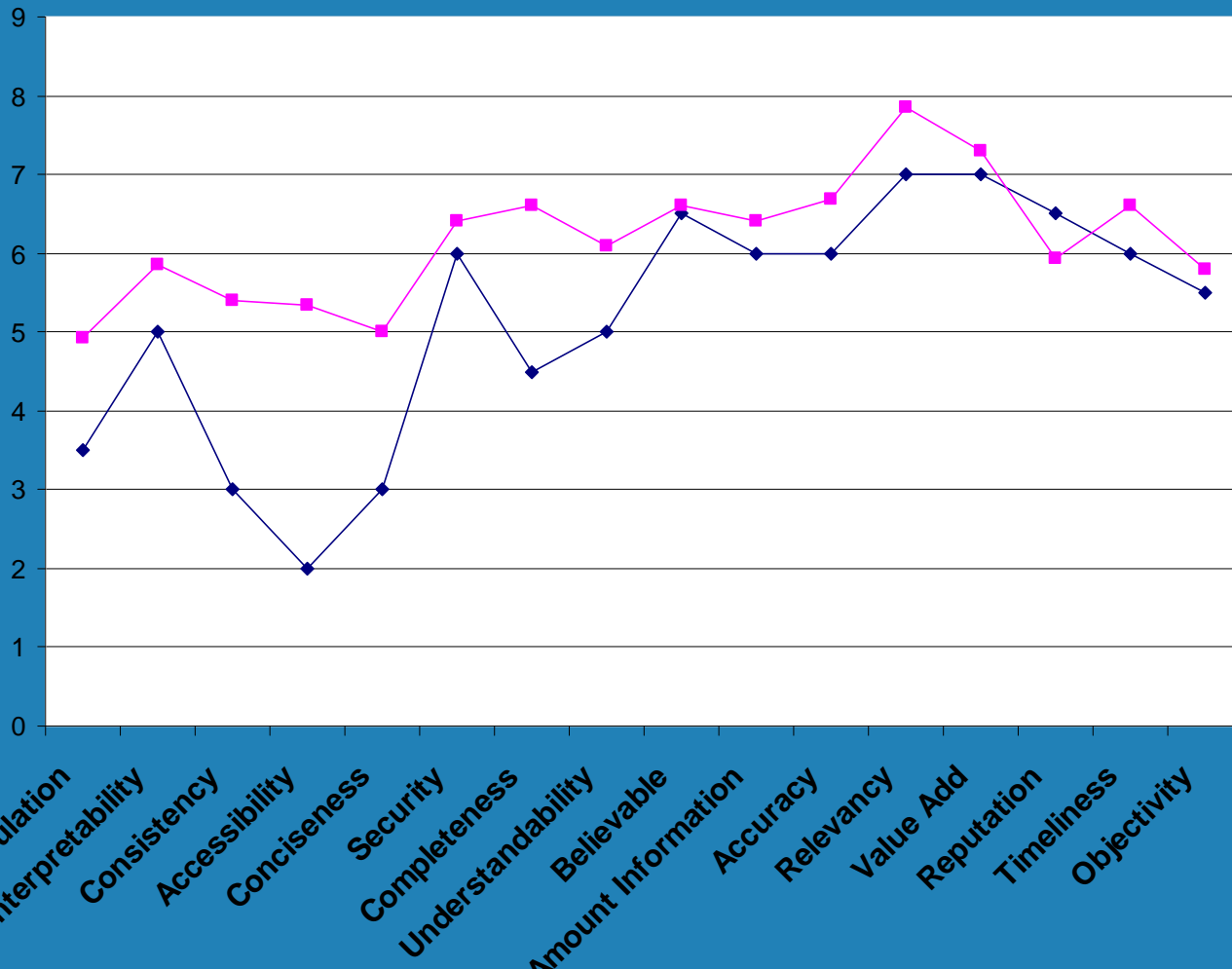
REGISTRATION DATA



User Data: mgr v NonMgr

REGISTRATION DATA

DQ VALUES



MANAGER
NON MANAGER