# Building a Database to House Survey Results

Winona State University

- Regional mid-sized (approx. 8750 headcount enrollment) University with a predominantly traditional, residential undergraduate student body.

- A campus in Rochester comprised mostly of transfer and graduate students.

Show of Hands

- Annually send students some kind of background survey? Use student surveys to conduct course or instructor assessments?

- Reporting results to staff and faculty quickly after surveys are conducted is a challenge?

- Have a desire to tie survey results to your Student Information System?

- Wish it was easier to do longitudinal comparisons across surveys?
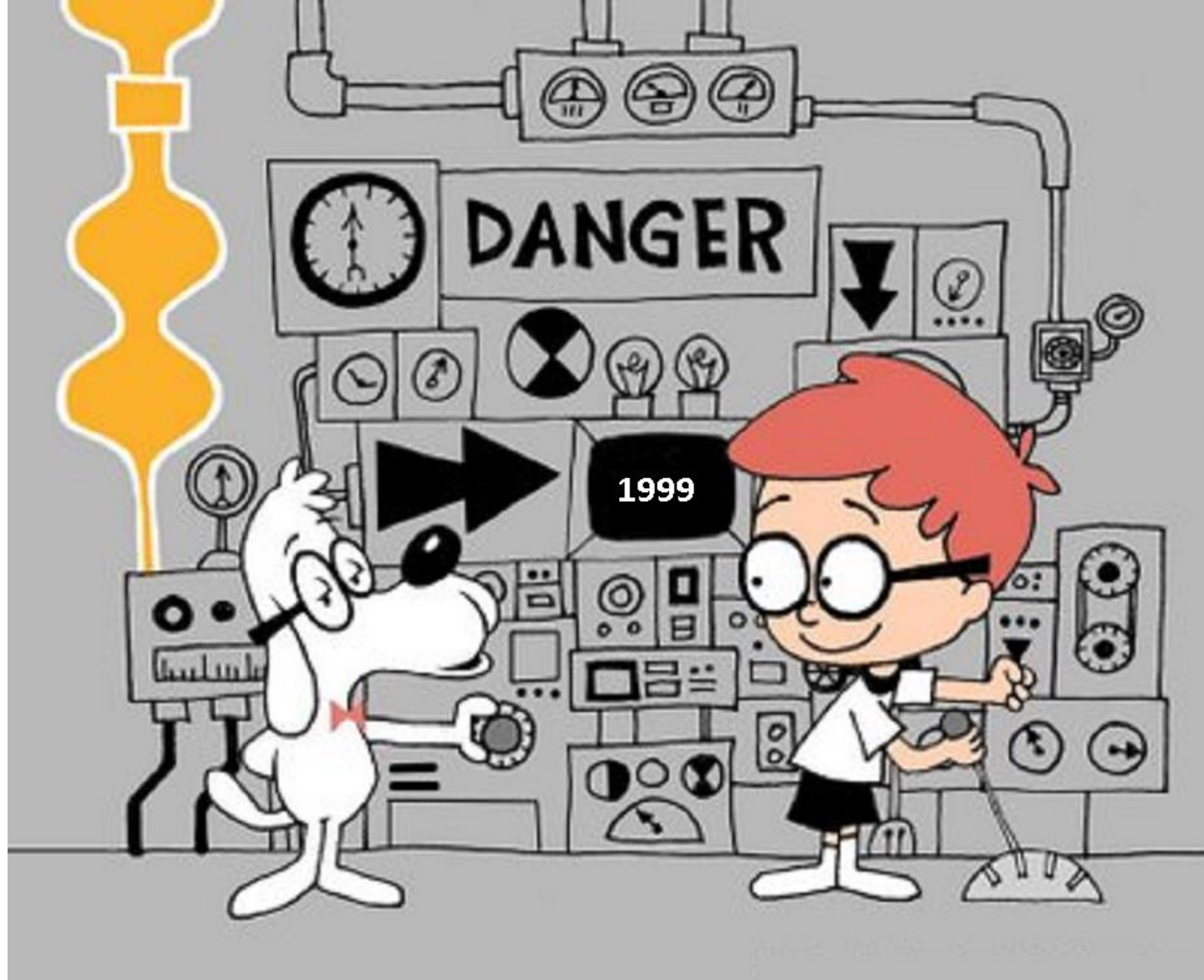
Survey Results

| Standard | Handbook | Review | Survey | | Export |

Admissions Survey ▼ [Change]

Admissions Survey

Year Term: [All ▲]   [Change]
[20085]
[20095 ▼]

Advanced   Expand

Summary

Year Term: *20085*

739 total responses

Please indicate which of the following contacts you had with WSU Admissions before you enrolled: (Choose as many as you remember)

Received information in the mail	**576 - 77%**
Emailed questions to WSU Admissions	186 - 25%
Called the WSU Admissions office with questions	263 - 35%
Accessed Admissions website	357 - 48%
Made an official campus visit including Admissions tours	415 - 56%
Attended a WSU Open House Day	205 - 27%
Attended a College Fair or Career Program with WSU representation	137 - 18%
Had a phone conversation with a WSU Admissions Call-a-thon student	90 - 12%
Attended PALS Weekend	44 - 5%
Met with a WSU Admissions counselor at your high school	149 - 20%
No Response	0 - 0%

Fall 2010: Introduced SurveyDB

- Goal : Support internal surveys and external surveys.
  - Qualtrics: course evaluations, assessment day surveys, etc.
  - National Survey of Student Engagement (NSSE) results

- Goal : Use off-the-shelf tools we were familiar with - Microsoft SQL Server, Qualtrics, SharePoint, Reporting Services, and Powershell.

- Goal : Integrate with data from our Student Information System and data mart to feed "Terrific Reporting".

- Goal: Enable a single launch page for large (multiple) survey sets.

- Goal: Get it done in time for the next Assessment day.

Freshman Survey Set, Fall 2011

We want to hear from you!
Listed below are surveys that will give you the chance to weigh in on your university experience thus far. Please use the links to give us your feedback!

Your Name ▼	Survey Name ▼	Survey Link ▼	Survey Status
Benjamin Nagel	Fall Background Survey (finished)	Take the Survey	finished
Benjamin Nagel	First Year Student Athletic Survey	Take the Survey	not started
Benjamin Nagel	New Student Orientation Survey	Take the Survey	not started

Completion Reporting

Survey Completion Reporting

Reports that track survey completion for large survey efforts like Assessment Day.

Reports:

Fall Freshman Surveys, Completion by Orientation Section
Survey completion information for each section of OR100 (Introduction to Higher Education) for the current term.

Survey Completion by Module
Survey completion rates for large survey efforts like Assessment Day or the Fall Freshman survey set. Broken out by

Survey Completion Detail by Course
Survey completion rates and **individual student** completion information for large survey efforts like Assessment Day

Assessment Day Survey Completion by College, Dept, and Major
Survey completion rates for Assessment Day by college, department, and major.

Assessment Day Survey Completion by Residence Hall
Survey completion rates for Assessment Day by student residence hall.

Assessment Day Survey Completion Summary by Course
Survey completion rates for Assessment Day by MnSCU Course ID or WSU course number.
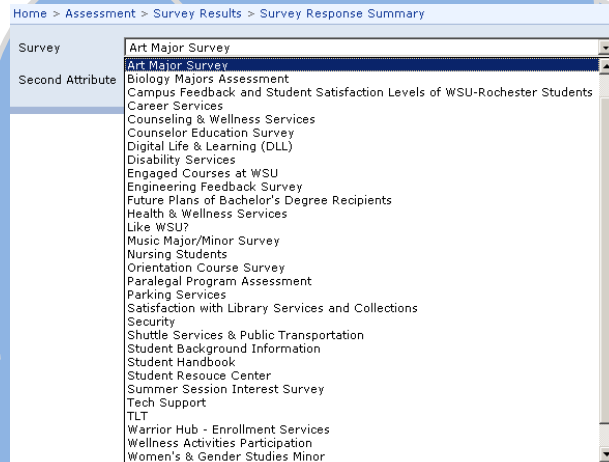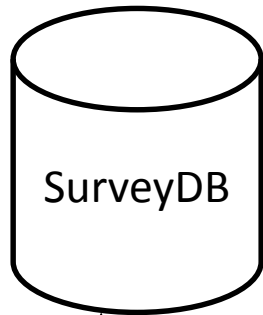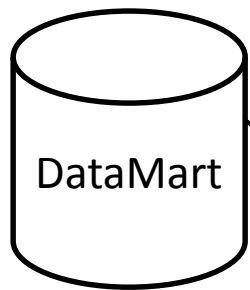
Completion Reporting

Survey: Assessment Day 2011 Surveys ▾   Campus: Rochester, Winona, Unknown ▾

Module(s): Are You Connected to the Winon ▾

|◀ ◀ 1 of 1 ▶ ▶| | 100% ▾ | | Find | Next |

Survey Completion by Module

	Complete	Pct	Not Complete	Pct
Are You Connected to the Winona Community?	420	40%	631	60%
Art Major Survey	63	45%	78	55%
Biology Majors Assessment	346	58%	246	42%
Counseling & Wellness Services	431	41%	613	59%
Digital Life & Learning (DLL)	454	44%	589	56%
Engineering Feedback Survey	76	50%	75	50%
Music Major/Minor Survey	77	64%	44	36%
Nursing Students	333	41%	478	59%
Orientation Course Survey	394	45%	477	55%
Paralegal Program Assessment	24	42%	33	58%
Parking Services	396	38%	649	62%
Satisfaction with Library Services and Collections	412	39%	639	61%
Security	434	42%	611	58%
Shuttle Services & Public Transportation	415	40%	630	60%

DataMart

SurveyDB

Home > Assessment > Survey Results > Survey Response Summary

Survey: Art Major Survey

Second Attribute

Art Major Survey
Biology Majors Assessment
Campus Feedback and Student Satisfaction Levels of WSU-Rochester Students
Career Services
Counseling & Wellness Services
Counselor Education Survey
Digital Life & Learning (DLL)
Disability Services
Engaged Courses at WSU
Engineering Feedback Survey
Future Plans of Bachelor's Degree Recipients
Health & Wellness Services
Like WSU?
Music Major/Minor Survey
Nursing Students
Orientation Course Survey
Paralegal Program Assessment
Parking Services
Satisfaction with Library Services and Collections
Security
Shuttle Services & Public Transportation
Student Background Information
Student Handbook
Student Resouce Center
Summer Session Interest Survey
Tech Support
TLT
Warrior Hub - Enrollment Services
Wellness Activities Participation
Women's & Gender Studies Minor

Fall Freshman Survey Completion by Section, Fall 2011

Course	Course Name	Instructor	Enrollment	Surveys Complete	Percent Complete
		Total	1809	1011	56%
OR100 - 28	Introduction to Higher Education	Alsaker, Eunice	29	9	31%
OR100 - 16	Introduction to Higher Education	Aulik, Nicole	32	20	63%
OR100 - 14	Introduction to Higher Education	Biederman, Jennifer	29	11	38%
OR100 - 07	Introduction to Higher Education	Bork, Cynthia	34	18	53%
OR100 - 47	Introduction to Higher Education	Bowler, Michael	31	5	16%
OR100 - 43	Introduction to Higher Education	Brzezinski, Lynda	31	25	81%
OR100 - 49	Introduction to Higher Education	Civettini, Nicole	32	16	50%
OR100 - 22	Introduction to Higher Education	Cohenour, Gretchen	29	23	79%

Scripts

```
function Get-QualtricsSurvey           {
    [CmdletBinding()]
    param
                                       (
        [parameter(Mandatory=$true)]
                       [String]$QualtricsWSServerID,
        [parameter(Mandatory=$true)]
        [String]$QualtricsWSUserName,
                       [parameter(Mandatory=$true)]
                       [String]$QualtricsWSPassword,
                       [parameter(Mandatory=$true)]
                       [String]$SurveyID

                                       )
```

Qualtrics

Freshman Survey Set, Fall 2011

We want to hear from you!
Listed below are surveys that will give you the chance
to weigh in on your university experience thus far.
Please use the links to give us your feedback!

Your Name	Survey Name	Survey Link	Survey Status
Benjamin Nagel	Fall Background Survey (finished)	Take the Survey	finished
Benjamin Nagel	First Year Student Athletic Survey	Take the Survey	not started
Benjamin Nagel	New Student Orientation Survey	Take the Survey	not started

Basic Storage Elements
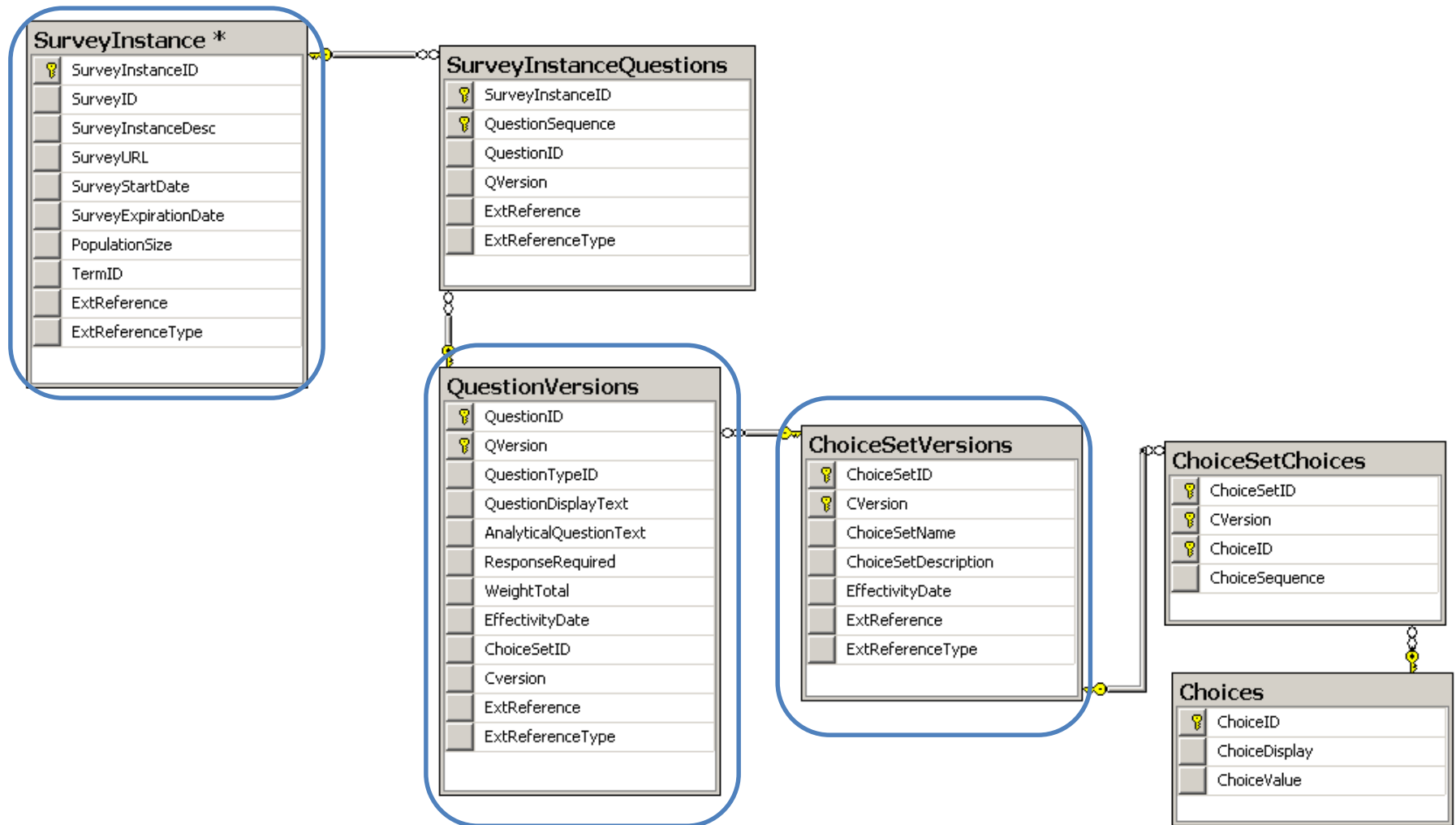
SurveyInstance vs. Survey

Think of a **SurveyInstance** as the delivery of a **set of questions** to a **group of participants** on a **given occasion**.
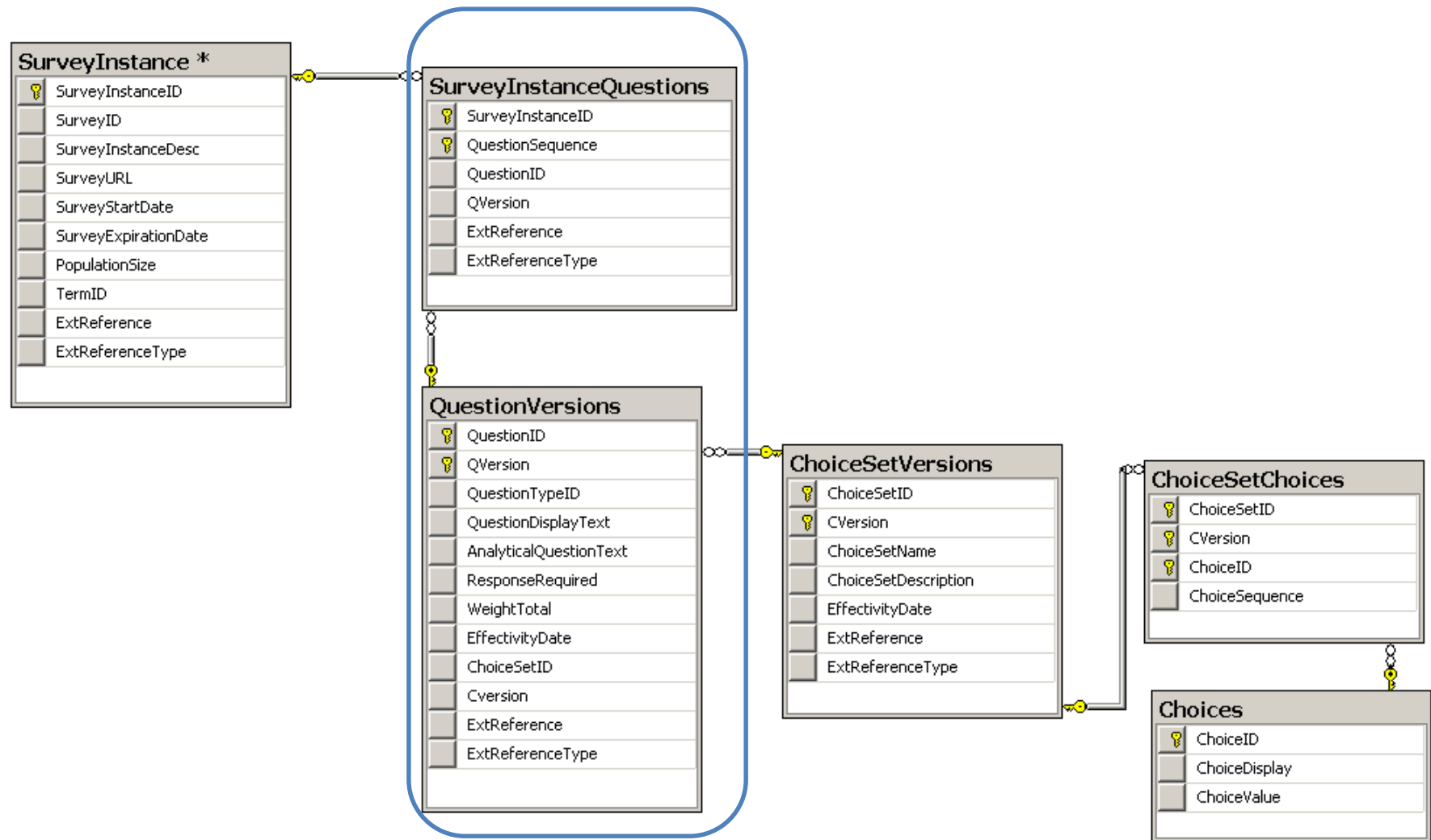
Instance 1: Opinion survey given to new incoming freshman the 10th day after courses begin.

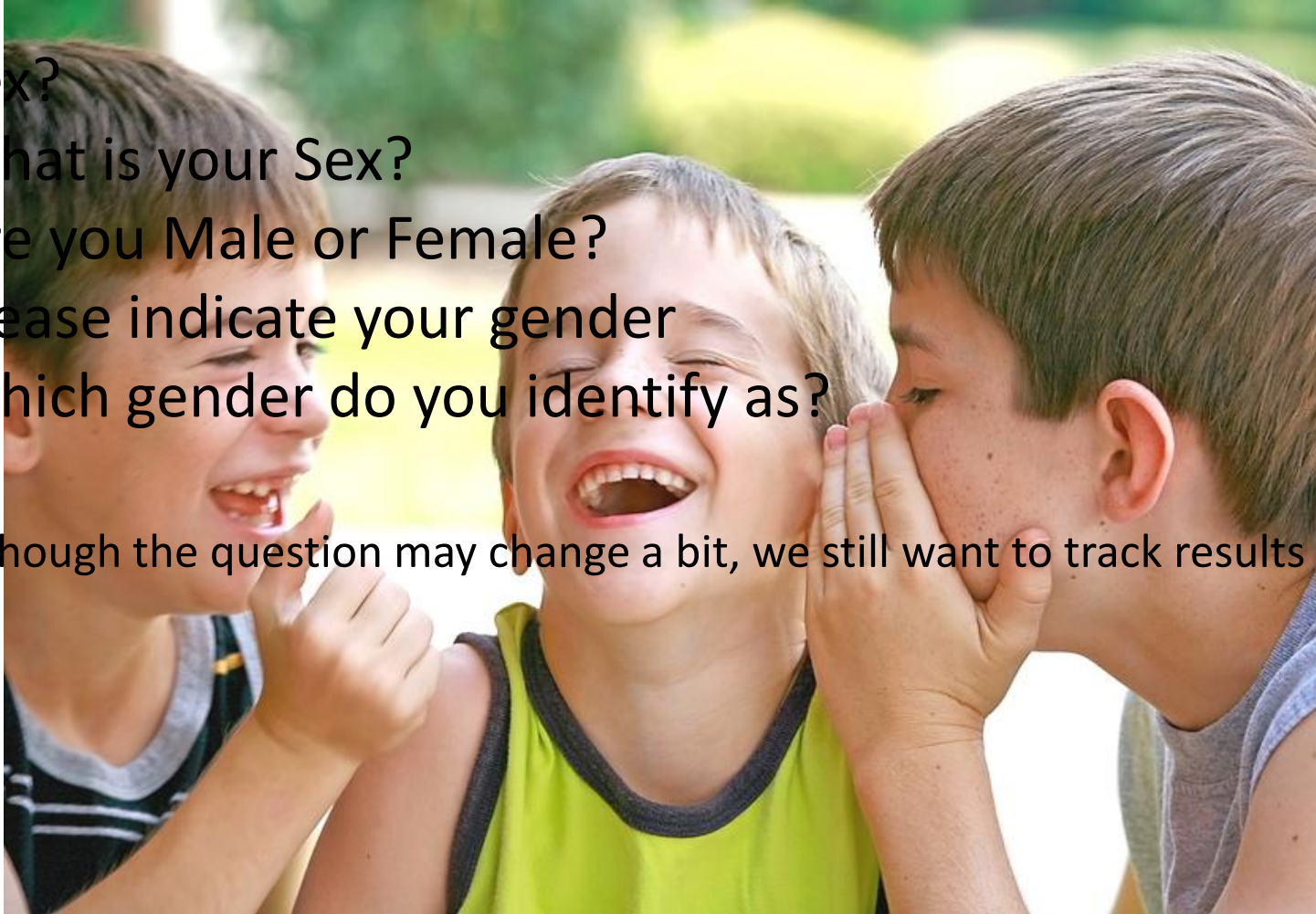Instance 2: Same questions asked of those same people right after finals in Fall.
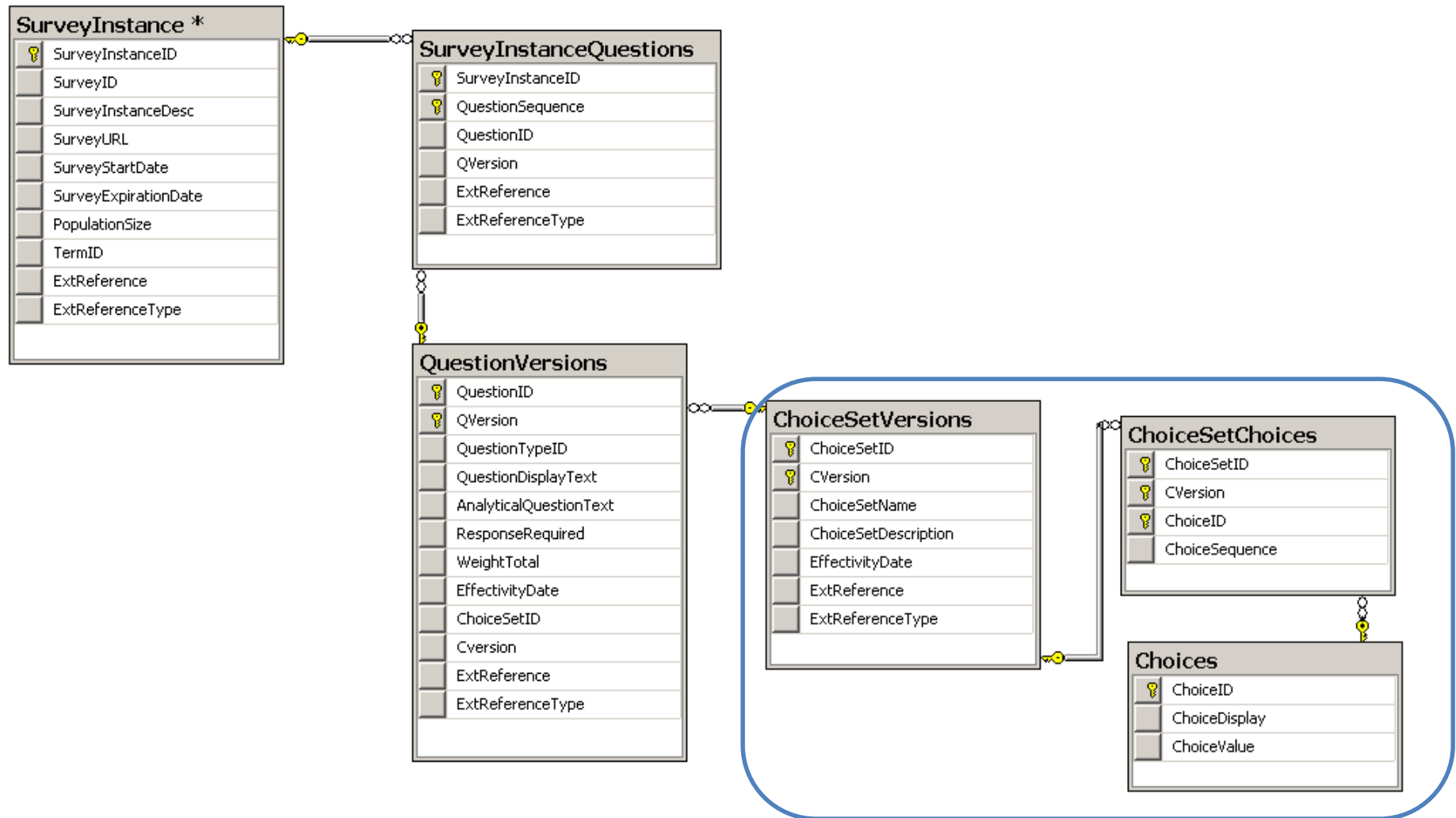
Storing Question Structure

Handling Changes in Questions

- Sex?
- What is your Sex?
- Are you Male or Female?
- Please indicate your gender
- Which gender do you identify as?

Even though the question may change a bit, we still want to track results over time.

Storing Multiple Choice Options

ChoiceSetVersions

- Used for True/False, Yes/No, and multiple choice questions.

- ChoiceSetVersions can be shared by different questions.

- ChoiceSetVersions may change over time.

- We want to retain the set of choices available at the time the question was asked.

Why Would the Set of Choices Change?

Question 7: Which tools did you bring with you to college?

Choices Change Over Time

Storing Survey Responses

- *"A SurveyResponse represents an individual's set of responses to a SurveyInstance."*

- It identifies the individual responding.

- Indicates the current status of the response: Not Started, Started, Finished.

- Denotes the dates and times when the survey response was started and completed.

Storing Responses to Questions

- *"A QuestionResponse represents the answer to a particular version of a question within a SurveyInstance."*

- If the question is a fill-in-the-blank type, the QuestionResponse contains the answer.

- If the question is multiple choice, the QuestionResponse points to a Choices record.

- Note that a question can be tagged as "seen, but not answered"

Survey Response
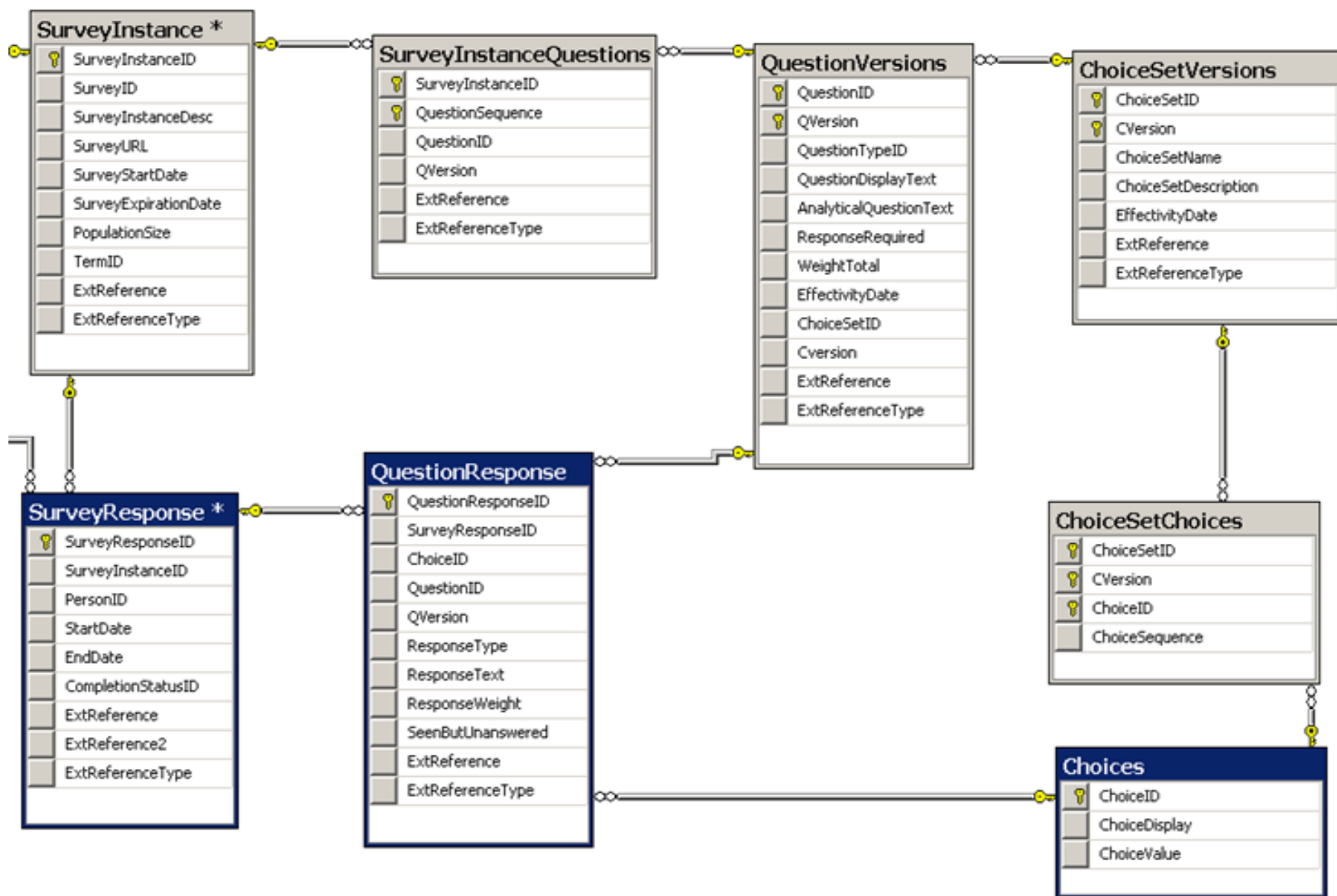
Structures for Identifying Respondents

- **A Person** is an individual. Person records tie the individual back to our student information system and to SurveyResponses.

- **Panels** are pre-defined lists of people.

- **EligibleParticipants** are people are individuals who have been invited to respond to a SurveyInstance.

People Relationships
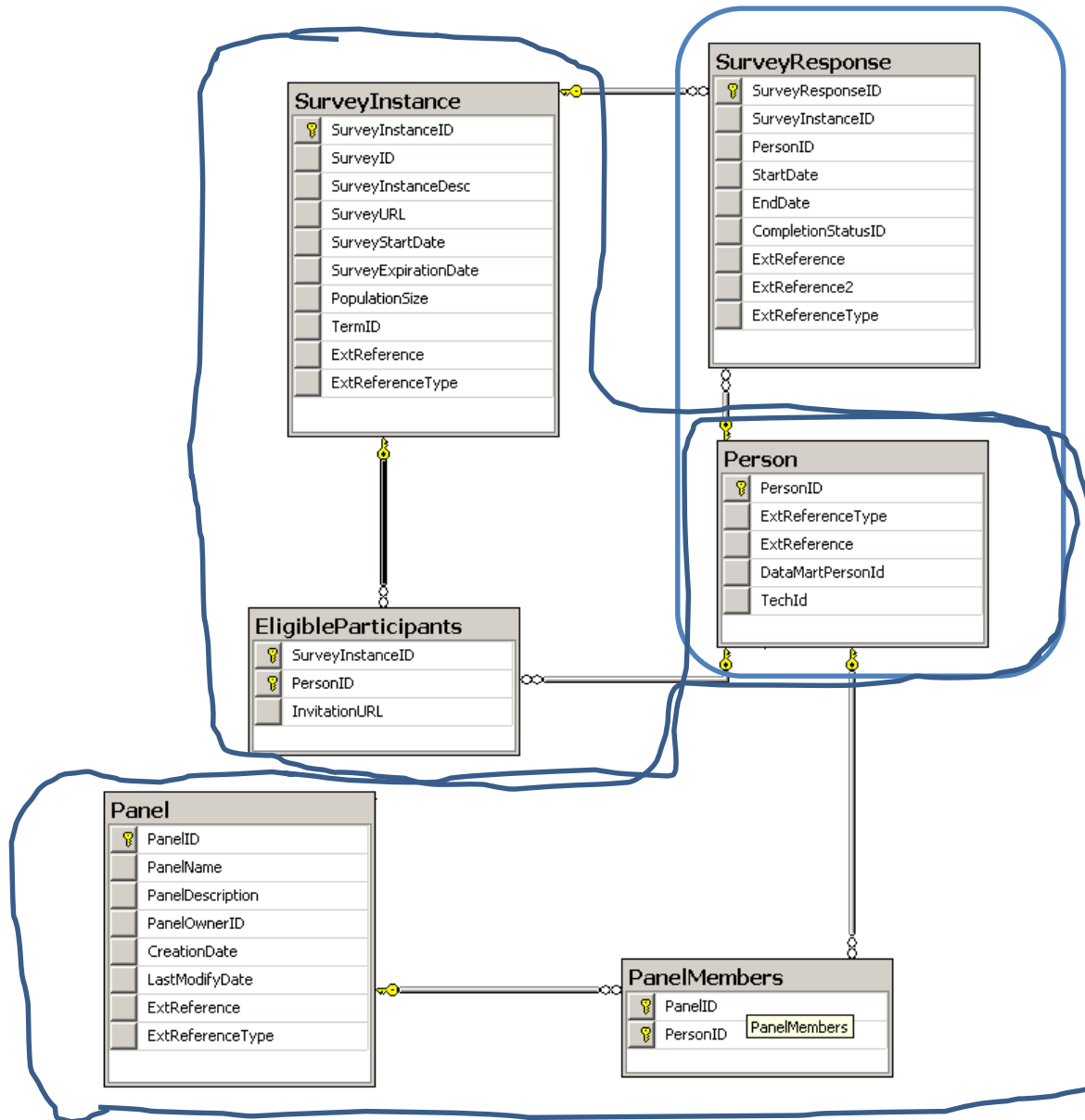
Survey Relationships

- A **Survey** is a group of related SurveyInstances.

- A **SurveySet** represents a group of SurveyInstances that are part of an overall survey effort – Fall 2011 New Freshman Surveys for example.

- A **SurveySetCollection** represents a SurveySet offered over time – Assessment Day surveys from 2007 thru 2011 for example

Relating Surveys to One Another
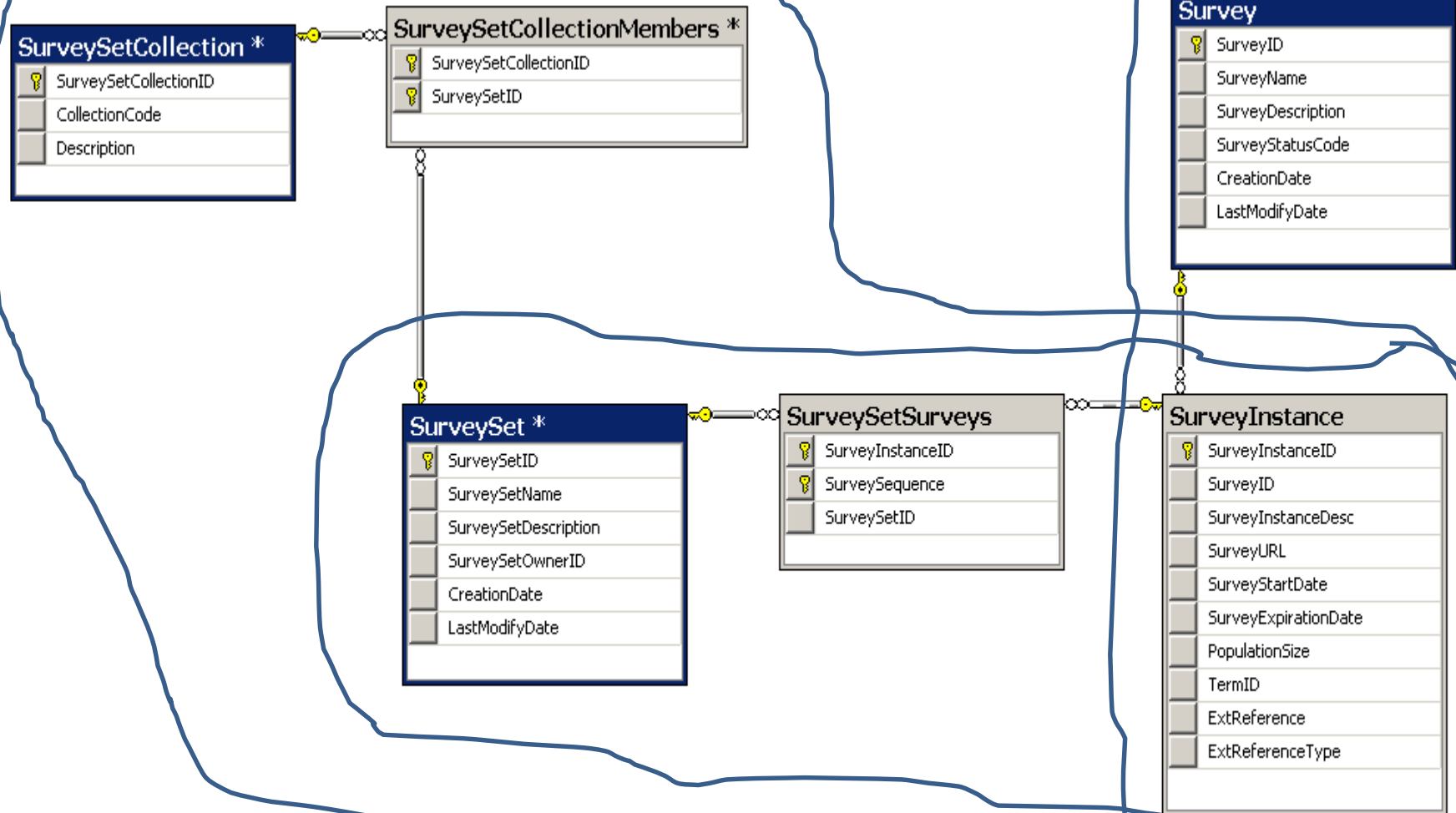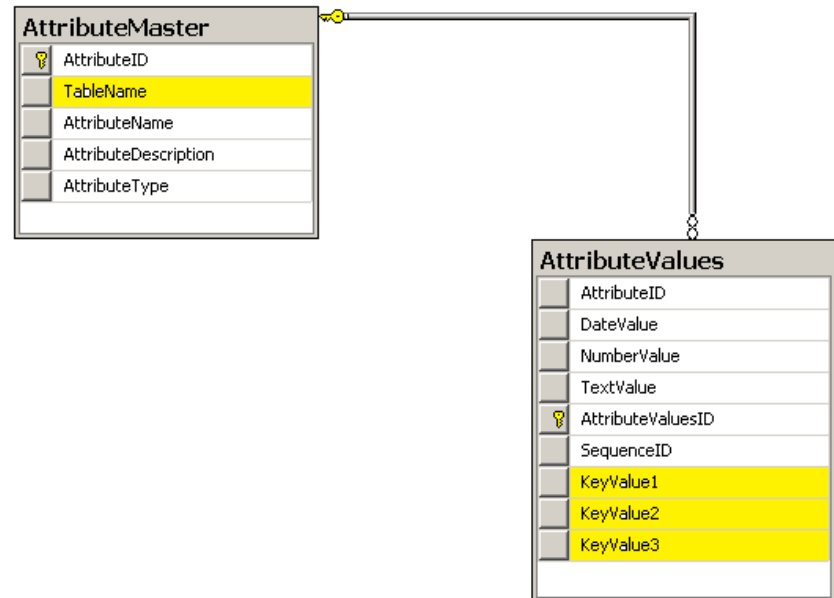
External References
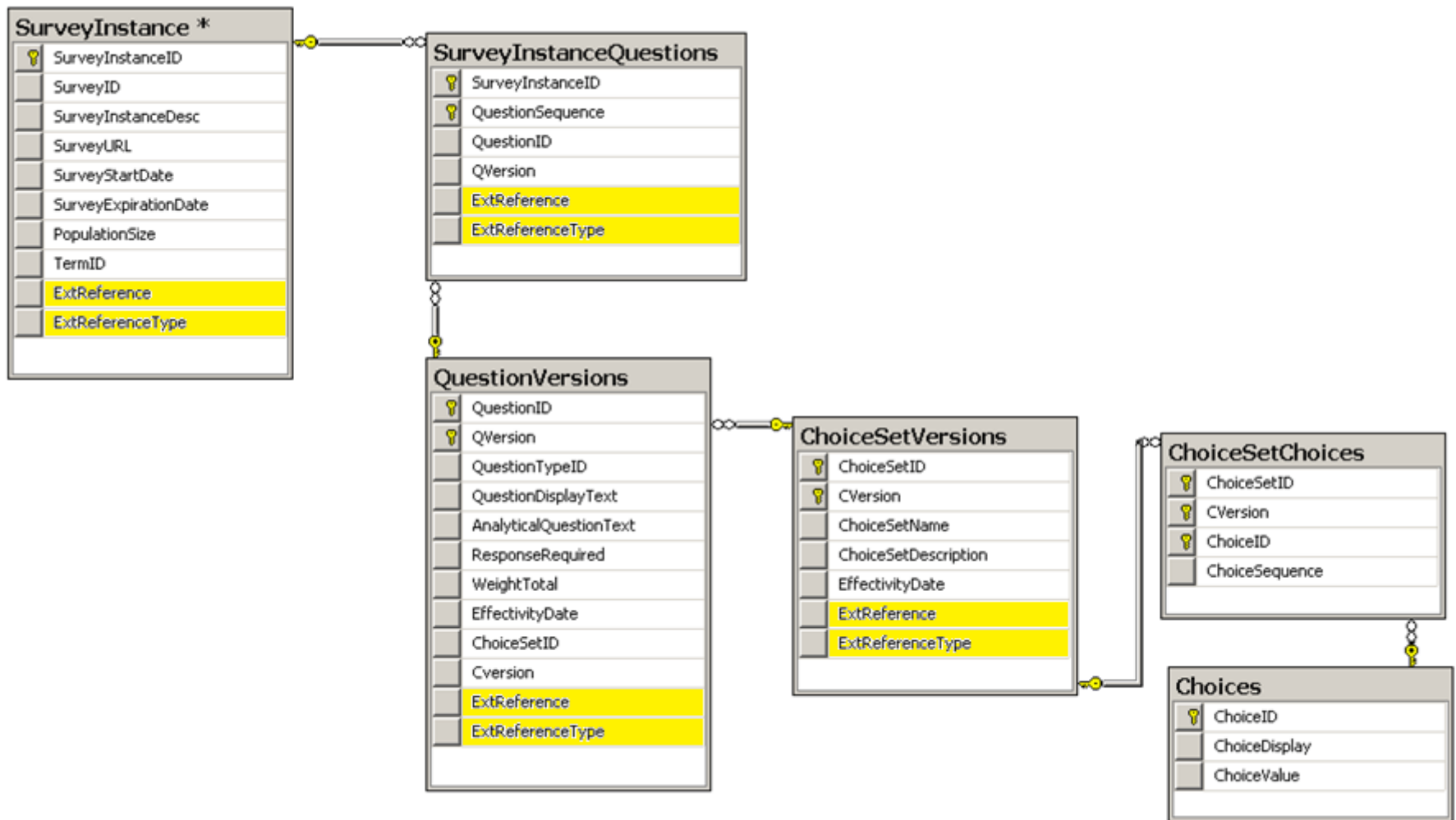
External References

- Some entities have "external reference" fields which help relate records to other systems.

- The **ExtReference** field contains a key to the data in the external system, QID1 for example.

- The **ExtReferenceType** identifies what object the external reference refers to: Qualtrics, SIS, etc.

- Used to make integration easier.

Extensibility Via Attributes

- "Attributes" are user-defined fields that allow us to store new types of information without changing the structure of SurveyDB.

- Any entity can have attributes attached to it. The "TableName" field is used to identify the entity the attribute applies to.

- Attribute values are matched with table records via "KeyValue" fields.

- Sample uses:
  - ✓ Gender of Eligible Participant.
  - ✓ CourseID that Survey applies to.

AttributeMaster
- AttributeID
- TableName
- AttributeName
- AttributeDescription
- AttributeType

AttributeValues
- AttributeID
- DateValue
- NumberValue
- TextValue
- AttributeValuesID
- SequenceID
- KeyValue1
- KeyValue2
- KeyValue3

How Information flows from SurveyDB to Qualtrics and Back Again
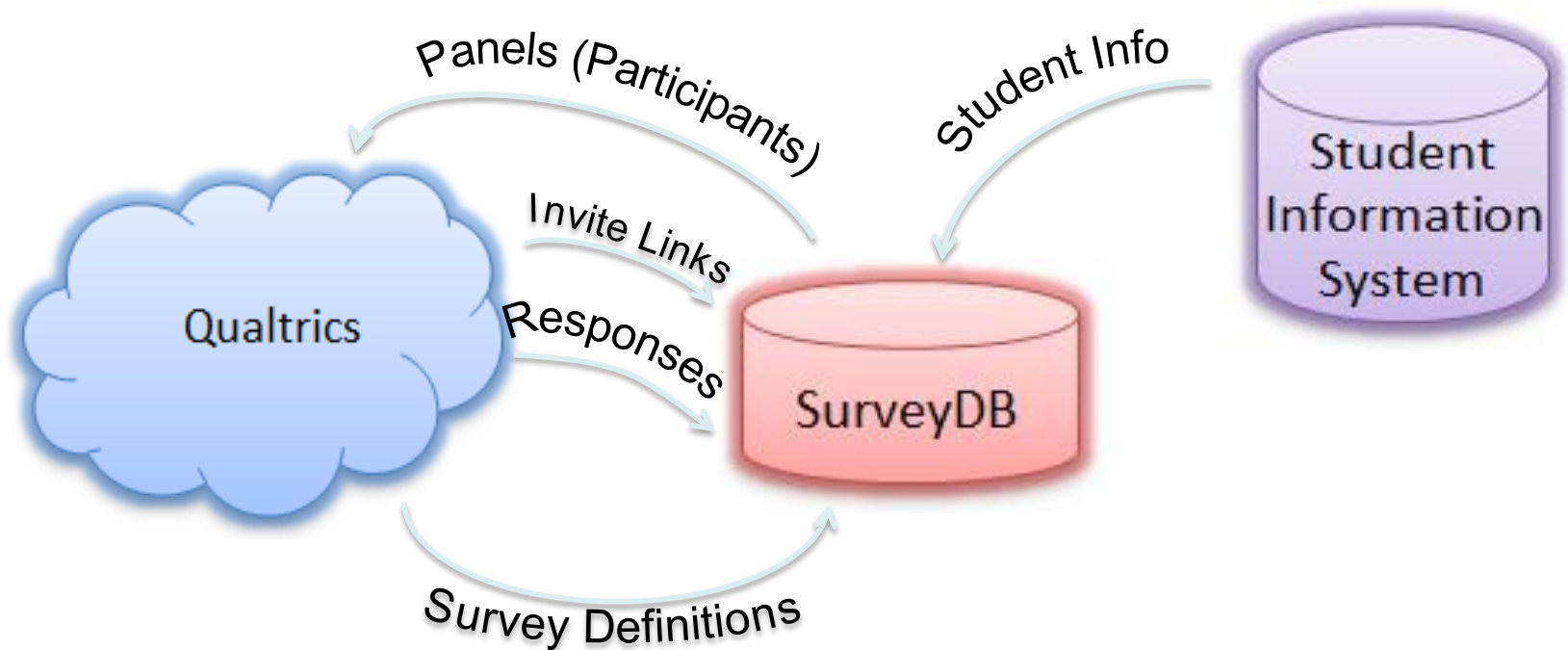
Obligatory Funny Picture

Qualtrics Web Svcs Demo

Qualtrics Web Svcs Demo

- Panel Upload
- Create Distribution
- Download Invitation URLs

Survey Definitions, Too…

```xml
<?xml version="1.0" encoding="UTF-8"?>
- <SurveyDefinition>
    <SurveyName>Wellness Activities Participation - AIRUM</SurveyName>
    <isActive>1</isActive>
    <CreationDate>2011-10-02 08:43:26</CreationDate>
    <LastModifiedDate>2011-10-02 13:59:13</LastModifiedDate>
    <StartDate>2011-02-16 00:00:00</StartDate>
  - <Questions>
      + <Question QuestionID="QID1">
      + <Question QuestionID="QID2">
      - <Question QuestionID="QID3">
            <Type>MC</Type>
            <Selector>MACOL</Selector>
            <SubSelector>TX</SubSelector>
          + <QuestionText>
          + <QuestionDescription>
          + <ExportTag>
          + <Choices>
        </Question>
      + <Question QuestionID="QID4">
      + <Question QuestionID="QID5">
      + <Question QuestionID="QID6">
    </Questions>
  + <Blocks>
  + <SurveyFlow>
</SurveyDefinition>
```

Obligatory Humorous Quotes

"A child of five would understand this. Send someone to fetch a child of five."
Groucho Marx

"Ending a sentence with a preposition is something up with which I will not put."
Winston Churchill

Recap

1) Surveys in Qualtrics
2) SurveyDB to hold survey structure, participants, & results
3) PowerShell scripts for integration
4) SharePoint as a front-end for survey takers
5) SQL Server Reporting Services to report results