



U.S. Department of Education
Institute of Education Sciences
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User's Guide to Developing Student Interest Surveys Under Title IX





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Table of Contents

Introduction to Title IX	1
The Three-Part Test	1
The Title IX Commission and the Assistant Secretary’s letter	2
Background on This User’s Guide	2
The OCR Case Files	3
Findings on institutional differences and similarities	3
Current Survey Practices	5
How to Conduct a Survey of Student Interest	9
Problem formulation	9
Target population	10
Census versus sample	10
Periodicity	11
Excluding students	11
Confidentiality	11
Nonresponse	12
The prototype	13
List of Screens	
Screen 1: Initial screen of the prototype data collection instrument, containing the purposes of the survey, a confidentiality statement, and an explanation of the structure of the instrument	15
Screen 2: Second screen of the prototype data collection instrument, in which respondents provide four items of demographic and student status information. This example shows a respondent who is 20 years old, female, a junior, and a full-time student	16
Screen 3: Third screen of the prototype data collection instrument, on which respondents with no experience, current participation, or interest in future participation can so indicate and complete the process	17
Screen 4: Fourth screen of the prototype data collection instrument, which is reached only by respondents who wish to enter information concerning athletic experience, interests, and abilities	18
Screen 5: Fifth screen of the prototype data collection instrument, which is reached only by respondents who wish to enter information concerning athletic experience, interests, and abilities. Here, respondents select the sports for which they wish to provide	

information. The list is illustrative, consisting of the 23 sports in which the NCAA conducts championships and 7 “emerging sports.” The respondent illustrated here has chosen basketball, lacrosse, and volleyball, which appear in screen 6.	19
Screen 6: Sixth screen of the prototype instrument, on which respondents enter information concerning experience, current participation, interest in future participation, and ability <i>only for those sports selected on screen 5</i>	20
Screen 7: Seventh and potentially final screen of the prototype data collection instrument, which offers respondents the opportunity to provide comments or other feedback, or to request being contacted by the athletic department. Only respondents who check the box are taken to screen 8	21
Screen 8: Eighth and final screen of the data collection instrument, reached only by respondents who expressed interest and ability in specific sports, to ask whether they wish to be contacted by the athletic department and if so, to provide contact information.....	22
Technical Details	23
Additional Steps	24

USER'S GUIDE

TO DEVELOPING

STUDENT INTEREST SURVEYS UNDER TITLE IX

The purpose of this report, prepared by the National Center for Education Statistics (NCES) for the Office for Civil Rights of the U.S. Department of Education, is to provide a guide for conducting a survey of student interest in order to satisfy Part 3 the Three-Part Test established in the 1979 Policy Interpretation of the intercollegiate athletic provisions of Title IX of the Higher Education Act of 1972.

Introduction to Title IX

Title IX (20 U.S.C. §§ 1681-1688), enacted in 1972, addresses issues of gender discrimination in colleges and universities. Specifically, it states that

“...no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance...” (20 U.S.C. § 1681 (a)).

In 1975, the former U.S. Department of Health, Education, and Welfare issued regulations implementing Title IX (34 CFR Part 106). The regulations pertaining to athletics require that a recipient which sponsors interscholastic, intercollegiate, club, or intramural athletics shall provide equal athletic opportunity for members of both sexes (34 CFR 106.41(c)).

Enforcement of Title IX is primarily the responsibility of the Office for Civil Rights (OCR) of the U.S. Department of Education. Courts, however, have resolved some cases. The associated body of case law has addressed legal issues ranging from the standing of plaintiffs to whether Title IX violates the equal protection clause of the Fourteenth Amendment to the U.S. Constitution.

The Three-Part Test

Postsecondary educational institutions may be required to demonstrate compliance with Title IX in response to either specific complaints or OCR's compliance reviews.

The 1979 Policy Interpretation of Title IX established, among other things, three means by which institutions can demonstrate compliance with the interests and abilities factor, which is one of the factors for determining equivalence in athletic benefits and opportunities. Collectively, these are known as the “Three-Part Test” or, alternatively, as the “Three-Prong Test.” An institution may demonstrate compliance in any one of the following ways (44 Fed. Reg. 71,418 Dec. 11, 1979):

1. Demonstrate that intercollegiate level participation opportunities for male and female students are provided in numbers substantially proportionate to their respective enrollments; *or*

2. Where the members of one sex have been and are underrepresented among intercollegiate athletes, show a history and continuing practice of program expansion which is demonstrably responsive to the developing interests and abilities of the members of that sex; *or*
3. Where the members of one sex are underrepresented among intercollegiate athletes, and the institution cannot show a continuing practice of program expansion such as that cited above [in Part 2], demonstrate that the interests and abilities of the members of that sex have been fully and effectively accommodated by the present program.

The Title IX Commission and the Assistant Secretary's letter

On June 27, 2002, then Secretary of Education Rod Paige created the Commission on Opportunity in Athletics to investigate whether further guidance on Title IX requirements regarding intercollegiate athletics was needed. On February 26, 2003, the 15-member Commission issued its final report entitled "*Open to All*": *Title IX at Thirty*.

In response to the Commission's report, on July 11, 2003, OCR issued a Dear Colleague letter providing further clarification on the intercollegiate athletics policy guidance regarding Title IX compliance. The letter reaffirmed that each of the three parts was a valid means of compliance and that "institutions have flexibility in providing nondiscriminatory participation opportunities to their students, and OCR does not require quotas." Further, OCR encouraged schools to request individualized assistance from OCR to meet the requirements of Title IX. OCR also indicated that it would share information on successful approaches with the broader scholastic community.

Background on This User's Guide

Pursuant to the July 11, 2003 clarification letter, OCR desired assistance in providing technical guidance to schools on meeting the requirements of Title IX. At OCR's request, NCES produced this guide and commissioned a related technical report by the National Institute of Statistical Sciences (NISS). The intent of this report is to provide guidance on conducting a survey of student interest with respect to Part 3 of the Three-Part Test.

To lay the foundation for the guide, NISS conducted an historical analysis of the use of surveys for Part 3 within the legal and regulatory context of OCR. The history of the use of surveys to comply with Title IX provides a context for identifying good existing practices as well as desirable improvements. To conduct this analysis, OCR provided files to NCES of the 132 cases of possible noncompliance with Title IX that OCR investigated during the period of 1992–2002. These cases involved 130 colleges and universities in 43 states. Such cases either resulted from complaints or arose from compliance reviews conducted by OCR; all were resolved.

In order to ascertain the unique needs of institutions attempting to demonstrate Title IX compliance using Part 3, the files were examined with two general questions in mind. The first was the degree to which the institutions in the OCR Title IX compliance case files, and the subset of those institutions that used Part 3, were similar to the universe of postsecondary institutions that offer intercollegiate sports programs. To the extent that the

institutions in the OCR case files are similar to the larger universe of institutions, it is easier to generalize from their history.

The second question was with regard to the specific survey practices that were used by those institutions that employed a survey. For instance, what kind of data collection process was used? How did institutions ask about student interest in various sports? How was nonresponse handled? NISS examined the survey instruments that have been employed to date and considered the technical challenges to conducting a survey that will be both easy to implement and adequate to ascertaining whether the interests and abilities of the underrepresented sex have been effectively accommodated.

Once the analyses were conducted, it was possible to develop suggestions for an improved process for conducting a Part 3 interest survey. The next sections of this report summarize the analysis of the OCR case files. The final section of this report provides guidance on how to conduct a Part 3 interest survey. It includes procedures that represent the best of the practices found in the OCR case files and further improvements. The practices that are recommended in this guide do not, in some particulars, meet the standards that would govern the collection and analysis of data by a federal statistical agency such as NCES. The goal was to identify and provide guidance on ways to improve practice within the context of compliance with Part 3 of the Three-Part Test.

This User's Guide draws extensively from a technical report, *Title IX Data Collection: Technical Manual for Developing the User's Guide* (Karr, A.F., and Sanil, A.P., 2005), that is provided as a companion to this User's Guide. The technical report was prepared for NCES by the National Institute of Statistical Sciences, a highly respected independent research institute. This User's Guide presents the information in the technical report that is most relevant to the practical concerns of institutions considering the use of a survey to comply with Title IX.

The OCR Case Files

Findings on institutional differences and similarities

There were 130 unique institutions in the OCR case files ("OCR institutions"). The cases were initiated and resolved during the years from 1992 to 2002. Of these, 95 were the subject of a complaint and 35 were the subject of an OCR-initiated compliance review.

About two-thirds of the 130 OCR institutions opted to use Part 3 (n = 86) rather than Parts 1 or 2 (n = 44) to comply with Title IX. There were so few attempts to comply using Part 2 (n = 8) that separate analysis of Part 2 cases was not conducted. About three-fourths of the 86 institutions that achieved compliance using Part 3 did so by means of a student interest survey (n = 67). The remainder achieved compliance with Part 3 in some other manner (n = 19).

In order to gain a sense of how representative the 130 OCR institutions are, they were compared to a base population of 1,723 institutions that include every institution that is a member of at least one of the intercollegiate athletic organizations: the National

Collegiate Athletic Association (NCAA), the National Association of Intercollegiate Athletics (NAIA), and the National Junior College Athletic Association (NJCAA).

The comparisons were made using 14 different characteristics. These are divided into three groups. The first group, Institutional Characteristics, consists of Sector, Geographical Region, Urbanicity, Carnegie Classification, Selectivity, In-State Cost, and Out-of-State Cost. The second group, Student Body Demographics, consists of Enrollment, Percent Female, Percent Black, and Percent Out-of-State. The third group, Athletic Program Characteristics, contains Association Membership, Football, and Number of Sports. Complete details describing the full set of characteristics and a complete set of tables displaying the results summarized here are given in the accompanying technical report.

Although the OCR cases consist of institutions of all types located in 43 states, there are some differences between them and the comparison population. OCR cases tend to involve large state colleges and universities (including doctoral universities) that are highly involved in intercollegiate sports. More specifically, relative to the comparison institutions, they are more likely to have football as one of their conference membership sports, are more likely to participate in all four major conference sports (i.e., baseball, football, basketball, and track), and are more likely to belong only to the NCAA than to one of the smaller sports associations. In addition, they are more likely to be located in the Southeast and the Far West than are the comparison institutions.

The OCR institutions that used Part 3 to achieve compliance, compared to Part 1 and Part 2 users, are more likely to be public, 2-year institutions and to have a greater percentage of female students and Black students. They are also more likely to be small, less expensive, and located in the Southeast. In contrast, they are less likely to be doctoral universities, belong to the NCAA, participate in conference sports, and to have out-of-state students than those institutions that opted to use Parts 1 or 2.

About three-fourths of the institutions that achieved compliance using Part 3 did so by means of a student interest survey (n = 67).¹ The differences among institutions using Part 3 that employed an interest survey and those that did not are few and are detailed in the technical report.

Finally, there is some evidence that use of Part 3 and the use of surveys to achieve Part 3 compliance have increased over time.

In summary, the OCR institutions tend to be those that educate large numbers of undergraduates. However, the OCR institutions that used Part 3, including those that used a student interest survey, tend to be smaller institutions that are not as involved at the

¹ Following the completion of the NISS analysis, OCR provided documentation showing that 10 of the 29 institutions identified as not having surveys in the NISS report had, in fact, used a survey. However, copies of the survey instruments used were not available for analysis. The numbers in this guide have been adjusted to reflect the change in these 10 cases.

most competitive levels of intercollegiate athletics. We have no way of ascertaining why institutions that use Part 3 differ from those that do not. There is no reason, however, from a statistical and measurement perspective, for student interest surveys to be more appropriate for one type of institution than another.

Current Survey Practices

In this section, we summarize the information obtained from the 52 OCR files containing survey instruments.² This information was used as the foundation for the guidance we provide in the last section on how to conduct a Part 3 interest survey.

The 52 instruments were classified along 20 categorical dimensions.

The first set of dimensions consists of the following properties of the survey itself:

- Whether the case is the result of a complaint against the institution or routine monitoring activities of OCR.
- The target population, which may consist of the entire student body, only females, or some other group. This is the group whose interests and abilities the survey purports to describe.
- The sampling mechanism, which indicates whether there is explicit selection of a subset of the target population or whether the survey is meant to be a census, that is, completed by all students.
- The degree of proactivity in conducting the survey. This is the extent to which the institution exerted effort to secure a reasonable response rate.

The second set of dimensions consists largely of characteristics of the survey instrument. Most of these are the presence or absence of specific kinds of questions:

- Age: are respondents asked their age?
- Class: are respondents asked which class (i.e., freshman, ...) they are a member of?
- Gender: are respondents asked their gender?
- Spectator interest: are respondents asked about their interest as spectators, either in person or via television or radio, of athletic events?
- Attitudes about athletics: are respondents asked explicitly about their attitudes regarding athletics in general or intercollegiate athletics?
- Opinion about the institution's athletic programs: are respondents asked explicitly for opinions regarding whether the institution's athletic programs address their needs (as opposed to implicit questions associated with whether their personal interests and abilities are satisfied)?
- Identifying information: are respondents asked for information that identifies them?
- Ability: are respondents asked explicitly about their athletic ability?

² There were a total of 15 OCR case files that did not contain an instrument despite being recorded as having carried out a survey.

- Recruiting: are respondents asked whether they had been recruited as athletes by a postsecondary institution?

The third set of dimensions is the global characteristics of the instrument:

- Caveats and benefits: are questions regarding intercollegiate athletics accompanied by a statement of the potential disadvantages (for example, time spent in practice or missed classes) and advantages (for example, financial aid)?
- Reasons for the survey: are respondents told why the survey is being conducted?
- Statement of confidentiality: are respondents promised explicitly that their responses will be kept confidential?

The final set of dimensions concerns how athletic interest, experience, and ability are represented in the survey instrument.

- For interest, representation of sports (i.e., type of sports activity)
- For interest, number of levels (i.e., amount of interest)
- For experience, representation of sports
- For experience, number of levels.

In examining these surveys, it was found that close to two-thirds (44 of the 67) were administered in response to a complaint being filed. Detailed data were available on three-fourths of these surveys (52 of the 67). Of the institutions with available surveys, a majority included the entire student body in its purview rather than some other group (e.g., campus visitors or applicants for admission). Also noteworthy is that a majority of these surveys included all students rather than just women, as might be expected from the language in Part 3 of the Three-Part Test, which refers only to the interests of the underrepresented sex as being relevant to compliance. Nearly two-thirds of these surveys used a census approach, which attempted to ascertain the responses of all students rather than those of only a sample of students.

As best as could be determined, few if any institutions made an effort to obtain high response rates. The typical institution simply distributed the questionnaires in a central place. Only a few provided incentives for students to complete the survey or provided any indication that they attempted to contact nonrespondents in order to induce them to complete the survey.

A majority of institutions included questions on student age, class (freshman, sophomore, etc.), and gender. More than three-fourths did not ask respondents to provide identifying information.

Most did not ask about student interest as athletic spectators, or their attitude towards intercollegiate athletics in general. Less than one-half of the surveys included a question about their institution's athletic program, and less than 20 percent (10 of 52) of survey instruments contained direct questions about whether interests as spectators are being met. One example of a direct question about interests being met is the following:

“Are your desires for participation in [recreational, intramural, intercollegiate, club] sports met at XXX?”

Less than one-third of the 52 institutions explicitly asked respondents to rate their athletic abilities. Many institutions asked about previous high school experience or previous collegiate experience as a surrogate for asking about athletic ability.

Only a few institutions asked students whether or not they had been recruited as athletes. Less than one-third reported that students were told the purpose of the survey. Less than 20 percent of surveys promised student confidentiality to potential respondents.

Given the purpose of the study, every survey contained some question or questions concerning student interest. There are two separate issues: (1) how were individual sports represented, and (2) how many levels of interest were offered to respondents as part of the question wording.

The most substantive of the differences among the survey instruments are in how they operationalize these concepts. These differences are of two kinds. The first is how sports are represented, which occurs in the instruments three ways:

- By fixed entries (e.g., archery, baseball, basketball, ...) in the “Sport” column.
- By blank entries in the “Sport” column, in which respondents are asked to write in the names of sports for which they wish to provide information.
- By blank entries in the “Sport” column, into which respondents are to place numerical codes for sports of interest, which are listed somewhere in the instrument.

Nearly two-thirds of surveys provided fixed entries for individual sports as a way of representing them in the questionnaire.

The second difference is the number of levels provided to respondents as response categories, which ranges from one (“some interest”) to ten levels. The dominant practice is to offer simply one (non-zero) level of interest for respondents, treating this as a yes/no question. In contrast to the limited variation in questions about interest, questions about previous experience varied widely. There was no predominant pattern of question wording and type, even though every survey contained questions about previous experience. Similarly, the number of levels of experience varied widely, suggesting an absence of a standardized format for response.

Several (15 of 52), albeit a minority, of the instruments contained statements of caveats and benefits associated with participation in intercollegiate athletics. The following statement appeared in several of the instruments:

“Intercollegiate athletics usually requires athletes to devote 20 hours of practice each week during the season. The athlete is expected to follow an individual regimen of training during the off-season. Many intercollegiate athletes receive financial awards that cover all or a portion of school expenses. Athletes are

required to travel and occasionally miss classes. They are given access to academic support services, including tutoring, counseling and study tables.”

It is inherent in Part 3 surveys that questions of interest and ability need to be asked of respondents with respect to many different sports. A number of surveys struggled with this problem unsuccessfully, in that they did not use a format that both maximized the possibilities of obtaining correct information and facilitated responses because it was easy to use. Some of the questionable procedures include insufficient definition of the number of levels of interest, unnecessary forced-choice response categories, and insufficient space for free-form responses. In addition, surveys that use only free-form responses may lead to underreporting of levels of interest in sports that do not immediately occur to respondents as they are filling out the questionnaire.

Many questions included on these surveys appeared to be irrelevant to the purpose of Title IX, including questions about race and ethnicity and student living arrangements. Eliminating superfluous questions would improve these survey instruments.

A major problem with these surveys is that response rates reported by the OCR institutions are typically low. One-half of these institutions reported the data needed to compute their survey response rates; the range varied from 8 percent to 70 percent. Coupled with the problem of low response rates is the lack of attention to questions of nonresponse bias. While it is a reasonable conjecture that most student nonresponse is due to the lack of interest in athletics on the part of those students, there is no evidence that any institution sought to test this view or, alternatively, that they informed students that nonresponse would be interpreted as lack of interest.

On a positive note, while some of the question wording is awkward, there was little or no attempt to slant the responses on the part of the 52 survey institutions by biasing question wording.

In order to see whether student athletic interest surveys have been done more generally, an Internet search for additional survey instruments identified a number of institutions that reported such surveys, including five for which survey instruments were obtained. They are similar to the surveys conducted by the OCR institutions in that they were used to survey the student body rather than applicants, they tend to be complete censuses rather than based on samples, they use questions about experience as surrogates for questions of ability, they do not take steps to deal with any nonresponse problem they may have faced, and they include a question on gender.

A major difference between these five surveys and the instruments used by the OCR institutions is that four of the five were conducted using the Web. In part, this reflects the evolution of survey technology, since these surveys were conducted between the years 2000 and 2004, while the surveys conducted by OCR institutions were carried out between 1992 and 2002 at the latest. However, the additional surveys failed to exploit the full potential of Web interactivity and of Web technology that excuses respondents from unnecessary responses and can help guarantee respondents' confidentiality.

In summary, the 52 surveys conducted by OCR institutions and the five Internet surveys exhibit a mixture of strengths and weakness. Lack of explicit bias is one of the great strengths of these instruments, as is the tendency of more recent surveys to explicitly use the Web for their data collection process. One weakness of many of these instruments is that their representation of interest, ability, and experience across many sports is often confused and unnecessarily complex, while another weakness is the inclusion of irrelevant information on the questionnaire. The most serious problem, though, is the inattention to low response rates. A complete discussion and summary of these issues is contained in the technical report.

How to Conduct a Survey of Student Interest

A survey instrument and data collection process that improves on current practice by utilizing the newest Internet technologies and adopting procedures that will generate high response rates is presented below. It avoids many of the problems found in the examination of current practice and seeks to simplify the process for institutions that might wish to comply with Part 3 of the Three-Part Test by means of a student interest survey.

The technical requirements of such a survey, which is designed to measure whether the “interests and abilities of the members of that underrepresented sex have been fully and effectively accommodated by the present program,” indicate that certain choices will make it easier to conform to legal requirements as well as the technical requirements of surveys. All of the criteria for doing so are set out in the technical report.

Problem formulation

In order to simplify the presentation, attention is restricted to a single sport not currently offered at the varsity level for women. We assume that women are the underrepresented sex. An institution employing Part 3 is attempting to determine, using data collected from a student survey, whether the interests and abilities of women have been fully and effectively accommodated by the present program.

An operational formulation of the problem is as follows: There are a minimal number of team members necessary to “field” a team in the given sport. The institution must specify this number. It depends on the sport and possibly contextual factors. For instance, a basketball team cannot play with fewer than five players, but this is not the minimal number of players needed for basketball. Instead, the minimal number is presumably in the range 10–15. NCAA or other association rules may provide other bounds for the number of players, but prevailing values in the conference to which the institution belongs are also relevant.

There is, conceptually, some number of women students who possess the interest and ability to compete in the sport at the varsity level. If that number were known with certainty, then determination of compliance by OCR would be straightforward:

- If the number of women with interest and ability is equal to or greater than the minimum number of players required to field a team, then the institution must take additional steps that could lead to offering the sport at the varsity level.

- If the number of women with interest and ability is less than the minimum number of players required to field a team, then the institution does not have to take steps to offer that sport.

It is the “known with certainty” qualification in this formulation that creates challenges for a survey. In particular, it raises questions about the target population to be surveyed, whether a census or sample is to be used, how frequently the survey should be conducted, and most importantly, how to deal with the problem of students not responding to the survey and the possible bias introduced by such nonresponse.

Target population

The ideal implementation of this kind of survey should fix the population to be surveyed to be the entire undergraduate student body. Even though compliance with Title IX for intercollegiate athletics is restricted to accommodating the interests of full-time undergraduates of the underrepresented sex, a survey of the entire undergraduate population can provide institutions with evidence related to the degree to which unmet demand differs for males versus females and full-time versus part-time students; it avoids the suggestion that the institution is concerned only with the needs of the underrepresented sex and eliminates the need to restrict access to the survey to only a subset of the undergraduate body. Even though the entire undergraduate student body is surveyed, the determination of the number with interest and ability for purposes of compliance with Part 3 should be restricted to full-time students of the underrepresented sex.

An alternative to surveying the entire student population is to survey a catchment population consisting of both the entire student population and potential applicants. However, the use of a catchment population is very problematic. The size of the catchment area is dependent on the student population served by a specific institution. The catchment area might be local for a rural community college, national for a small state college, and international for large 4-year and doctoral institutions. Even if definable, such a large target population is almost surely unreachable in any meaningful way and thus is not recommended here.

Census versus sample

There are two alternative possibilities for selecting cases. The first would be to conduct a census whereby all undergraduates are asked to provide information regarding whether their interests and abilities are accommodated by the present program. The second possibility would be to conduct a sample survey: only a subset of students is asked to provide information regarding whether the present program accommodates their interests and abilities.

While a census is a larger scale undertaking than a sample survey, it is superior in almost every respect for Part 3 interest surveys. Using a census avoids several difficult issues associated with sample surveys: selection of the sampling mechanism, selection of the sample size, and calculation of sampling error. In fact, a majority of the OCR institutions using a survey attempted to conduct a census. For those OCR cases not using a census approach, a few institutions selected a random sample while others used a non-random

purposive sample of what the institution took to be an interested population, such as students in physical education classes. For technical reasons, if an institution intends to select a sample, it is necessary to select an extremely large sample in order to get a precise estimate of interested students of the underrepresented sex. Further, even with technically sophisticated sampling and analysis procedures, the compliance implications of sample estimates are unclear. For instance, how is an institution to handle the margin of error in a sample survey that generates an estimate of 15 interested and able women (with a margin of error of ± 3) in a sport that requires 18 people to form a team? In contrast, the implications of a census in which 15 women identify interest and ability in a sport that requires 18 are clear – the institution has determined that there are an insufficient number of interested females on campus to field that sport. Thus, the recommended data collection strategy is to conduct a census (i.e., to survey all students) rather than to select a sample of respondents.

Periodicity

How frequently should a survey of student interests be conducted? Since most cases of survey use in the OCR files were in response to complaints being filed, there is little case history to indicate how frequently an institution acting proactively should administer a survey. A survey of the entire undergraduate student body that generates high response rates and demonstrates that the interests of the underrepresented sex are fully accommodated might serve for several years if the demographics of the undergraduate population at the institution are stable and if there are no complaints from the underrepresented sex with regard to a lack of athletic opportunities. In contrast, an institution with rapidly changing demographics, or whose previous survey detected levels of student interest and ability in particular sports that were close to the minimum number of players required to field a team, or an institution receiving complaints with regard to unmet needs should consider more frequent surveys.

Excluding students

With respect to varsity participation, part-time students and members of the overrepresented sex should not be included in the calculation of the number of students in the underrepresented sex who have interest and ability. Should institutions exclude seniors from the calculation of this number if the survey is conducted at a point in time when it is too late for the seniors who have completed the survey to participate in the sport in which they have expressed interest and ability? The inclusion of seniors in the calculation of this number is recommended, particularly for those institutions that do not plan to implement an annual survey. The inclusion of seniors provides the best estimate for future years of the number of students in the underrepresented sex who have the interest and ability, and acknowledges the reality that creating a new sports team at the intercollegiate level may be a multiyear process.

Confidentiality

When asking for any personal or potentially individually identifiable data, protecting the respondents' confidentiality is essential to obtaining high quality data and to achieving acceptable response rates. The recommendation to use e-mail and the Internet to improve on current practices may seem to some as increasing the risks of violating confidentiality. However, by utilizing the newest Internet technologies, there are readily available

alternatives (such as one-way hashed keys) that make it possible to track who has responded, while at the same time protecting the confidentiality of their responses. One such alternative would be to embed an encrypted ID within the link to the URL of the data collection instrument. The encrypted ID would be severed from the response itself and used in the database file containing respondents' e-mail addresses to mark that a response had been received. The software would then use the encrypted ID to record that a person has responded without being able to link to that person's response. This strategy allows an institution to track responses, conduct nonresponse follow-up and to protect against multiple responses by a single individual. For example, the institution could use the database with encrypted IDs and e-mail address (but no individual responses to survey items) to send e-mail messages to nonrespondents.

Nonresponse

The final issue is the question of nonresponse. Most OCR institutions that included surveys either did not report their response rates or reported them as low. None explicitly considered any kind of nonresponse bias analysis to determine whether those students who did not respond to the survey differed in interests and abilities from those who responded.

In general, institutions have treated nonresponse as indicating no interest in future sports participation. This assumption is defensible if all students have been given an easy opportunity to respond to the survey, the purpose of the survey has been made clear, and students have been informed that the institution will take nonresponse as an indication of lack of interest.

The procedures for conducting an analysis of nonresponse bias and generating statistically valid adjustments to the original data based on such an analysis are complicated and beyond the capacity of some institutions. Thus we conclude that the best method for dealing with nonresponse is to generate high enough response rates that nonresponse can safely be ignored for the purposes of Title IX compliance. A web-based survey instrument, which is described in detail below, can accomplish that goal, either by being made mandatory or by being provided in a context in which most students will complete it. For instance, a web-based survey that students have to complete or actively by-pass to access the web screens that allow them to register for courses is likely to produce very high response rates. Another possibility is for institutions to send an e-mail to all students that describes the purpose of the survey, includes a link to the web-based survey, and includes a disclaimer that states that if a student does not respond to the survey, the institution will understand that the student is not interested in additional athletic participation. Although rates of nonresponse may be high with this procedure, nonresponse is interpretable as a lack of interest.

In addition, a data collection instrument suitable for gathering information regarding whether "interests and abilities of the members of the underrepresented sex have been fully and effectively accommodated by the present program" with minimal respondent effort is best implemented on the Web. This allows effective implementation of skips and other selection devices through which a respondent can go to a list of sports and choose those that the respondent wishes to respond to in detail.

The prototype

Our proposed survey instrument, a prototype, consists of eight screens. Not all respondents need to proceed through all eight screens.

Screen 1 introduces the survey and informs respondents of the purposes of the census, provides an explicit confidentiality statement, and provides an explanation of the structure of the instrument.

Screen 2 requests four items of demographic information—age, year in school, gender, and whether the student is full-time. The dropdown boxes and radio buttons constrain responses to those allowed by the institution conducting the census.

Screen 3 explains the next set of questions—on athletic experience, participation, and ability. It allows respondents with no interest in future participation in athletics to so indicate and complete the instrument without having to view any of the other screens.

Screen 4 of the proposed instrument is reached only by respondents who wish to enter information concerning athletic experience, interests, and abilities. It lists the responses that will be allowed when the information is requested (on screen 6), and contains a neutral statement of the burdens and benefits associated with participation in intercollegiate athletics. A more sophisticated version of the instrument might contain hyperlinks to definitions of various terms.

Screen 5 allows respondents who wish to enter information concerning athletic experience, interests, and abilities to *select the sports for which they wish to provide information*. The purpose of this is to reduce the size and complexity of screen 6, on which the information is actually entered. Only those sports selected on screen 5 are listed on screen 6. The NCAA administers championships in 23 sports for its member institutions. In addition, it recognizes 7 “emerging sports” that are intended to provide additional athletics opportunities to female student-athletes. The number of intercollegiate sports sanctioned by the NAIA and NJCAA is smaller. We recommend listing all the NCAA championship and “emerging sports” on screen 5.

Screen 6 is where actual information regarding experience, current participation, interest in future participation, and self-assessed ability is entered. These four categories appear side-by-side, which is sensible conceptually and psychometrically but was not done in any of the 57 survey instruments in the OCR case files. The allowable responses, which are constrained by radio buttons that also prevent multiple responses, are as follows:

- For experience at the high school level, “Recreational,” “Intramural,” “Club,” “Junior Varsity” and “Varsity.”
- For current participation, “Recreational,” “Intramural,” “Club” and “Varsity.”
- For interest in future participation at the institution: “Recreational,” “Intramural,” “Club” and “Varsity.”
- For ability: “Yes, I have the ability” and “No, I would need to develop the ability.”

The reason for inclusion of four separate categories is that a determination of interest and ability is related to the pattern of response across these categories. For example, to determine the number of students of the underrepresented sex with interest and ability in a varsity sport, the students to be counted could be those who express an interest in future participation at the varsity level, indicate that they have the ability to do so, and have current or high school experience beyond the recreational level.

Although not shown in screen 6, hyperlinks could be used to provide access to definitions of these terms (or any other terms, for example, sports with which not all respondents may be familiar). Placing the definitions in a separate window avoids impeding the flow of the survey instrument.

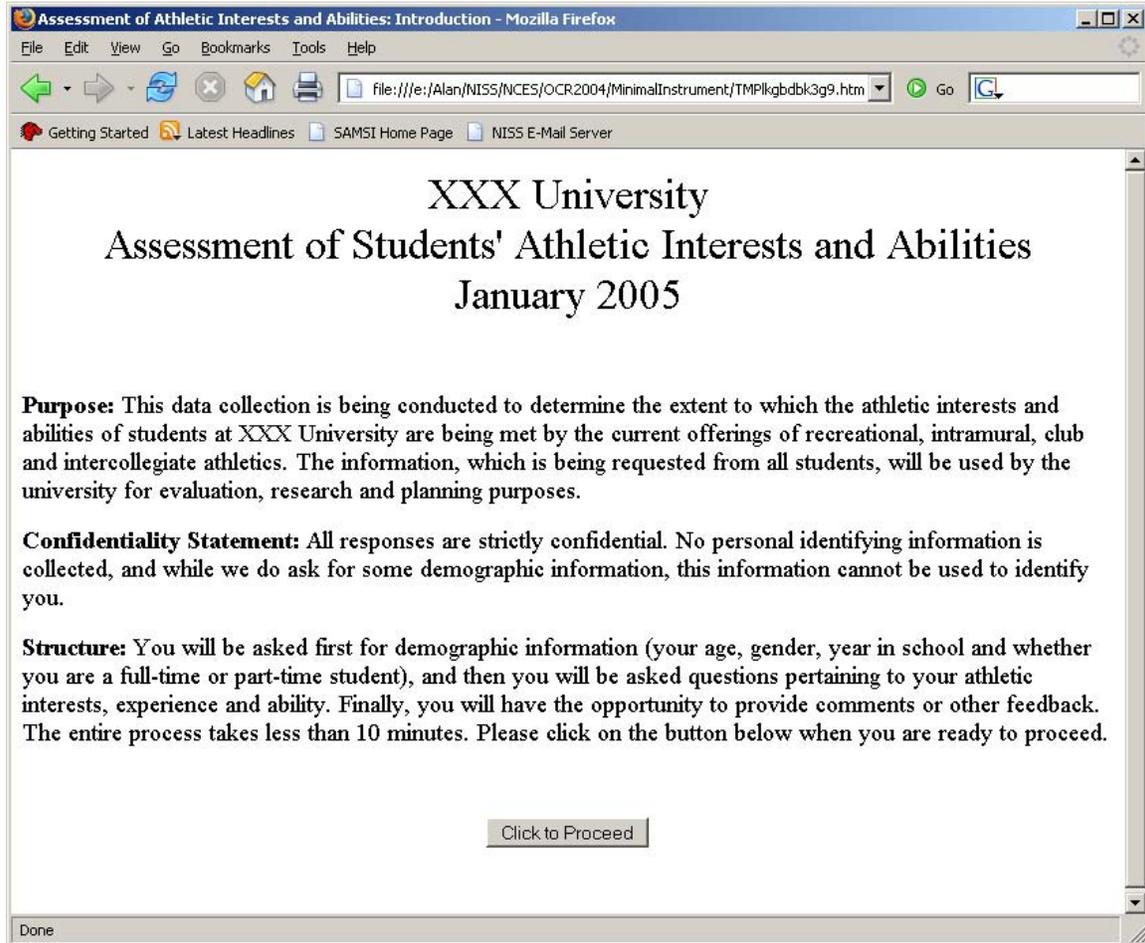
Screen 7 offers respondents the opportunity for comments or other feedback, asks them to click a button to record their responses, and thanks them for participating.

Screen 8 is a pop-up screen that appears only for full-time students of the underrepresented sex who have expressed an interest and ability to participate at a higher level. It lists the sport(s) in which the student has indicated an ability and interest in future participation, and asks the student to provide contact information if the student wishes to be contacted by the athletics department or some other organization in the university with respect to her interests. The student can exit this screen without providing the requested information by indicating that she does not wish to be contacted.

This prototype web-based data collection instrument has the following properties:

- Simplicity;
- Explicit explanation of reasons for the data collection;
- Explicit confidentiality statement;
- Opportunity for global “no interest or ability” response;
- Opportunity to filter sports for which detail is provided;
- Nonprejudicial wording of items;
- Inclusion of all of experience, current participation, interest in future participation, and ability; and
- Fixed-form responses.

Screen 1: Initial screen of the prototype data collection instrument, containing the purposes of the survey, a confidentiality statement, and an explanation of the structure of the instrument.



SOURCE: NISS-produced prototype.

Screen 2: Second screen of the prototype data collection instrument, in which respondents provide four items of demographic and student status information. This example shows a respondent who is 20 years old, female, a junior, and a full-time student.

The screenshot shows a Mozilla Firefox browser window with the title "Assessment of Athletic Interests and Abilities: Demographic Information". The address bar shows a file path: "file:///E:/Alan/NISS/NCES/OCR2004/ProposedSurveyInstrument/TMPwb0zdb7fk3.htm". The browser's bookmark bar includes "Getting Started", "Latest Headlines", "SAMSI Home Page", and "NISS E-Mail Server".

The main content area of the browser displays the following text and form elements:

XXX University
Assessment of Students' Athletic Interests and Abilities

Demographic Information

Please provide the following demographic information. When you have entered the information, click the button to proceed.

Your age:

Your gender: Female Male

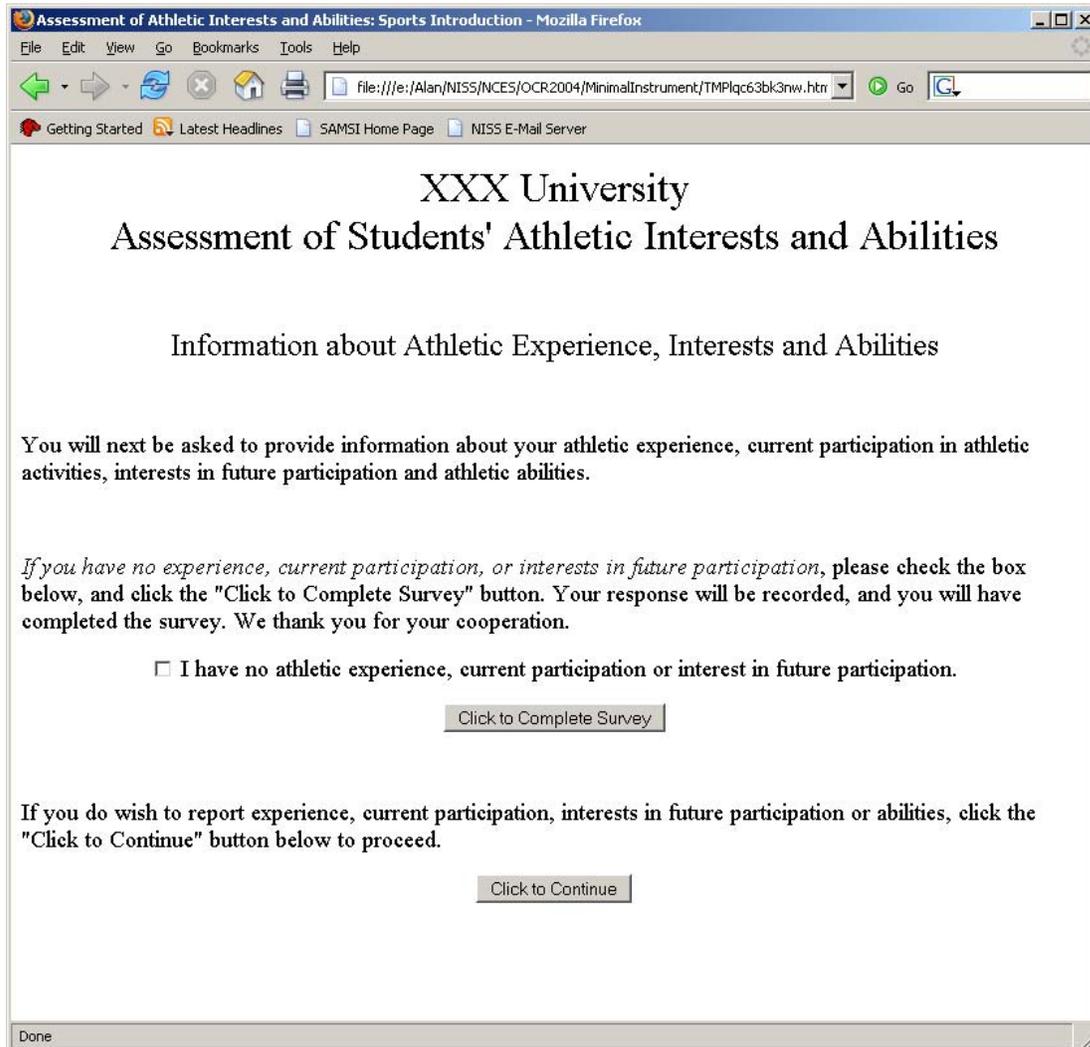
Your year at XXX:

Your student status: Full-time Part-time

Done

SOURCE: NISS-produced prototype.

Screen 3: Third screen of the prototype data collection instrument, on which respondents with no experience, current participation, or interest in future participation can so indicate and complete the process.



SOURCE: NISS-produced prototype.

Screen 4: Fourth screen of the prototype data collection instrument, which is reached only by respondents who wish to enter information concerning athletic experience, interests, and abilities.

Assessment of Athletic Interests and Abilities: Sports Explanation - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

File:///E:/NISS/NCE5/OCR2004/MinimalInstrument/data-sportsintro2-minime

Getting Started Latest Headlines SAMSI Home Page NISS E-Mail Server

XXX University

Assessment of Students' Athletic Interests and Abilities

Information about Athletic Experience, Interests and Abilities

For the sports that you choose on the next screen, you will be asked to provide information about your athletic experience, current participation, interests in future participation and abilities. The format in which the information is to be entered is:

- **Experience:** At what level did you participate in this sport in high school? Responses from which you may choose are "Recreational," "Intramural," "Club", "Junior Varsity" and "Varsity."
- **Current Participation:** At what level are you participating in this sport at XXX? Responses from which you may choose are "Recreational," "Intramural," "Club" and "Varsity."
- **Interest in Future Participation:** At what level do you wish participate in this sport at XXX? Responses from which you may choose are "Recreational," "Intramural," "Club" and "Varsity."
- **Ability:** Do you believe that you have the ability to participate at the level at which you indicated interest? Responses from which you may choose are "Yes, I have the ability" and "No, I would need to develop the ability."

Because of the large number of sports, please check the boxes below for those sports for which you wish to provide information about your athletic experience, current participation, interests in future participation, and abilities. When you have done so, click the button to proceed. *You will be able to enter information only for those sports that you have checked.*

Before you proceed, you should be aware that participation in intercollegiate athletics imposes burdens on student-athletes, but also creates opportunities. For example, intercollegiate athletics usually requires athletes to devote 20 hours of practice each week during the season, as well as individual regimens of training during the off-season. Athletes are required to travel and occasionally miss classes. On the other hand, many intercollegiate athletes receive financial awards that cover all or a portion of school expenses. They are also given access to academic support services, including tutoring, counseling and study tables, that are not available to other students. Of course, how these burdens and opportunities balance against one another is a matter of personal circumstances and judgment.

Click to Proceed

Done

SOURCE: NISS-produced prototype.

Screen 5: Fifth screen of the prototype data collection instrument, which is reached only by respondents who wish to enter information concerning athletic experience, interests, and abilities. Here, respondents select the sports for which they wish to provide information. The list is illustrative, consisting of the 23 sports in which the NCAA conducts championships and 7 “emerging sports.” The respondent illustrated here has chosen basketball, lacrosse, and volleyball, which appear in screen 6.

Assessment of Athletic Interests and Abilities: Sports Selection - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

file:///E:/Alan/NISS/NCES/OCR2004/MinimalInstrument/TMPigwbracy0.h

Getting Started Latest Headlines SAM51 Home Page NISS E-Mail Server

XXX University

Assessment of Students' Athletic Interests and Abilities

Information about Athletic Experience, Interests and Abilities

Because of the large number of sports, and since any one person is unlikely to have experience, current participation, or interest in future participation in more than a few, please check the boxes below for those sports for which you wish to provide information about your athletic experience, current participation, interest in future participation, and abilities. When you have done so, click the button to continue. *You will be asked to enter information only for those sports that you have checked.*

Sport	Sport	Sport
<input type="checkbox"/> Archery	<input type="checkbox"/> Golf	<input type="checkbox"/> Squash
<input type="checkbox"/> Badminton	<input type="checkbox"/> Gymnastics	<input type="checkbox"/> Swimming and Diving
<input type="checkbox"/> Baseball	<input type="checkbox"/> Ice Hockey	<input type="checkbox"/> Synchronized Swimming
<input checked="" type="checkbox"/> Basketball	<input checked="" type="checkbox"/> Lacrosse	<input type="checkbox"/> Team Handball
<input type="checkbox"/> Bowling	<input type="checkbox"/> Rifle	<input type="checkbox"/> Tennis
<input type="checkbox"/> Cross Country	<input type="checkbox"/> Rowing	<input type="checkbox"/> Indoor Track and Field
<input type="checkbox"/> Equestrian	<input type="checkbox"/> Rugby	<input type="checkbox"/> Outdoor Track and Field
<input type="checkbox"/> Fencing	<input type="checkbox"/> Skiing	<input checked="" type="checkbox"/> Volleyball
<input type="checkbox"/> Field Hockey	<input type="checkbox"/> Soccer	<input type="checkbox"/> Water Polo
<input type="checkbox"/> Football	<input type="checkbox"/> Softball	<input type="checkbox"/> Wrestling

Done

SOURCE: NISS-produced prototype.

Screen 6: Sixth screen of the prototype instrument, on which respondents enter information concerning experience, current participation, interest in future participation, and ability *only for those sports selected on screen 5.*

XXX University
Assessment of Students' Athletic Interests and Abilities
 Information about Athletic Experience, Interests and Abilities

The sports listed below are those you selected on the previous screen.

- *If the list is not correct, please use your browser's back button to return to the previous screen and modify your choices.*
- *If the list is correct, please fill in all applicable responses. You do not need to respond to every question, and missing responses will be treated as (depending on category) "No Experience," "No Current Participation," "No Interest in Future Participation" and for Ability, "Not applicable." When you have completed all answers that you wish to complete, click the button to record your responses and proceed to the final part of the survey.*

Sport	Experience: At what level did you participate in this sport in high school?	Current Participation: At what level are you participating in this sport at XXX?	Interest in Future Participation: At what level do you wish to participate in this sport at XXX?	Ability: Do you believe that you have the ability to participate at the level at which you indicated interest?
Basketball	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Junior Varsity <input type="radio"/> Varsity	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Yes, I have the ability <input type="radio"/> No, I would need to develop the ability
Lacrosse	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Junior Varsity <input type="radio"/> Varsity	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Yes, I have the ability <input type="radio"/> No, I would need to develop the ability
Volleyball	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Junior Varsity <input type="radio"/> Varsity	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Recreational <input type="radio"/> Intramural <input type="radio"/> Club <input type="radio"/> Intercollegiate	<input type="radio"/> Yes, I have the ability <input type="radio"/> No, I would need to develop the ability

[Click to Proceed](#)

SOURCE: NISS-produced prototype.

Screen 7: Seventh and potentially final screen of the prototype data collection instrument, which offers respondents the opportunity to provide comments or other feedback, or to request being contacted by the athletic department. Only respondents who check the box are taken to screen 8.

Assessment of Athletic Interests and Abilities: Completion - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

file:///e:/Alan/NISS/NCES/OCR2004/MinimalInstrument/TMPy5k1nbpyk.

Getting Started Latest Headlines SAMSI Home Page NISS E-Mail Server

XXX University

Assessment of Students' Athletic Interests and Abilities

If you *do not* wish to provide comments or other feedback, simply click the "Click to Record Responses" button.

If you *do* wish to provide comments, please enter them in the box below, and then click the "Click to Record Responses" button.

Some students who have indicated interest and ability in one or more sports will be taken to one final screen, on which they may request to be contacted by the athletic department regarding these interests. If you expressed interest but do not wish to be contacted, check the box below.

Check here if you do not wish to be contacted.

Thank you very much for your cooperation and support!

Done

SOURCE: NISS-produced prototype.

Screen 8: Eighth and final screen of the data collection instrument, reached only by respondents who expressed interest and ability in specific sports, to ask whether they wish to be contacted by the athletic department and if so, to provide contact information.

Assessment of Athletic Interests and Abilities: Demographic Information - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

file:///E:/Alan/NISS/NCES/OCR2004/MinimalInstrument/TMP7gxdebal7.htm

Getting Started Latest Headlines SAMSI Home Page NISS E-Mail Server

XXX University

Assessment of Students' Athletic Interests and Abilities

Request to Be Contacted by Athletic Department

You have indicated interest and ability in one or more sports, as summarized below:

Age:	20
Gender:	Female
Year in school:	Junior
Status:	Full-time
Sport(s):	Lacrosse Experience = Varsity Current Participation = Intramural Interest in Further Participation = Intercollegiate Ability = "Yes, I have the ability"

If you would like to be contacted by the athletic department regarding these interests, please fill in the information below, and then click the "Click to Submit Request" button. This request is optional; your responses have already been recorded. Thank you.

Name:	<input type="text"/>
E-mail address:	<input type="text"/>
Telephone:	<input type="text"/>

Done

SOURCE: NISS-produced prototype.

Technical Details

The above screens are static HTML prototypes. There are at least two paths to create the software for a full-blown implementation.

The first of these is commercial tools for web surveys. The extent to which commercial products support functionality such as confidentiality-preserving nonresponse follow-up is not clear. They may also involve significant hardware and software overheads that are really not necessary in the setting of this chapter.

The second path is to create CGI or Java or Visual Basic scripts that

- Allow movement from each screen to the next, including dynamic generation of all screens other than the initial one in screen 1; and
- Record responses (see additional discussion below).

Implementation of these scripts, together with appropriate security and support, would be a straightforward programming task.

The screens and scripts would be customized with such items as

- The institution's name;
- Details of wording, with defaults provided that can be edited as necessary;
- The list of sports on screen 5; and
- The sport-dependent responses on screen 6.

Storage of responses is straightforward. Other than the free-form text response on screen 7, the instrument generates only a small number of data items for each respondent:

- Four items of demographic information from screen 2;
- One Yes/No global “no athletic interest, current participation, or interest in future participation” from screen 3;
- K Yes/No responses for each sport from screen 5, where K is the number of sports listed there; and
- At most $4K$ categorical responses from screen 6, one each for experience, current participation, interest in participation in the future, and ability.

The total number of items is $5K + 5$. To illustrate, for the 30 sports shown in the example in figure 5, the survey generates 155 items.

There are, of course, constraints on the item values. First, the instrument itself permits only predefined responses to all items (other than on screen 7). This guarantees that responses are interpretable and analyzable. Second, if the value of the global Yes/No response on screen 3 is “No,” then the remaining $5K$ responses are empty. Similarly if the screen 5 response for a sport is “No,” meaning that it is not listed on screen 6, then its four items associated with screen 6 are empty.

Finally, the software could store the data in a comma-separated-variable (CSV) file, with one (5K + 5) item line for each response. Since no identifying information is stored, confidentiality of responses is guaranteed. The CSV data file can then be read and manipulated by tools ranging from Microsoft Excel to more powerful statistical packages such as SAS, SPSS, STATA, or S-Plus.

The results from screen 8, the pop-up for students meeting the criteria of interest and ability, can be sent directly to a designated e-mail address without being stored in the CSV file, thereby insuring that the analytic file contains no personally identifiable information.

Once the data are collected, analysis is quite straightforward. The numbers are simply tabulated and compared to the levels of interest needed to field various varsity teams in particular sports. If the number is less than the minimum, no additional effort is necessary, and if the number is equal to or greater, then the institution must take additional steps that could lead to offering particular sports at the varsity level.

Additional Steps

The purpose of this guide is limited to providing guidance on conducting and interpreting an interest survey. However, institutions should be aware that although findings from a survey can indicate that there are unmet interests and there may be sufficient numbers and ability to field a new sport, additional steps would be necessary before such a sport could be offered. We provide here a brief example of what an institution might do next with survey results. For intercollegiate athletics, OCR enforcement of Title IX is generally related to interest, ability, and competitive opportunity with the institution's competitive region (or sports conference). Within this context, suppose an institution in which women were the underrepresented sex conducted a survey that disclosed that the number of women expressing both interest and ability to play lacrosse at the varsity level was greater than the number of women necessary to field a lacrosse team. If there is competitive opportunity for women's lacrosse by virtue of it being a varsity sport within the institution's conference, or failing that, a varsity sport at other colleges within the institution's competitive region, a next step might be for the institution to call a meeting of women students to see if there is enough interest to field a team. A desirable practice in obtaining attendance at the meeting would involve both direct contact with those women who had self-identified and provided contact information through the survey, as well as advertising the meeting through flyers or announcements in the campus paper. Given sufficient turnout, coaches could then conduct tryouts to evaluate the ability of prospective athletes. An evaluation of ability through a tryout would take precedence over a student's self-appraisal of ability on a survey. Details and authoritative guidance are provided in OCR's own policy guidelines that are distributed with this guide.