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ABSTRACT

The student affairs researcher often assists student affairs directors and professionals to accomplish their program assessment goals. This study identifies the information, consultation, and training needs in research and assessment of student affairs professionals at a research institution. The paper also summarizes the problems and possibilities of using Web-based surveys, and describes how the results might impact the research office in advancing the program assessment goals of the division. Of 98 full-time student affairs personnel invited to participate, 26 mid-managers and 42 professional staff members responded to a Web survey instrument developed for the study. Results show that most student affairs professionals report a basic level of research and assessment expertise. Although mid-managers and staff members had common needs, each group had distinctive interests. Mid-managers were more interested in accountability measures and the design of assessment projects. Staff members favored more specific service-oriented measurement tools. Student affairs personnel used e-mail and were positioned to respond to activities presented on the Internet. Mid-managers were especially concerned about how to integrate technology into program services, but staff members were mainly concerned about adequate training in the use of new software and technology. The paper discusses the implications of survey findings for student affairs professionals and student affairs research offices, which are often one-person offices with minimal budgets and multiple responsibilities. (Contains 8 tables and 17 references.) (SLD)

A Web-Based Measurement of the Assessment Needs of Student Affairs Professionals and the Role of the Student Affairs Researcher

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A Web-Based Measurement of the Assessment Needs of Student Affairs Professionals and the Role of the Student Affairs Researcher

Abstract

The student affairs researcher often assists student affairs directors and professional staff to accomplish their program assessment goals. This study (1) identifies the information, consultation and training needs in research and assessment of student affairs professionals at a research institution, (2) summarizes the problems and possibilities in using web-based surveys and (3) describes how the results might impact the research office in advancing the program assessment goals of the division.

A Web-Based Measurement of the Assessment Needs of Student Affairs Professionals and the Role of the Student Affairs Researcher

Introduction

Institutional researchers in student affairs, regardless of size of the institution, often conduct institutional and student affairs studies. Many conduct institutional student outcome studies (Hyman, Beeler, and Benedict, 1994) employing instruments such as the Cooperative Institutional Research Program (CIRP), College Student Experiences Questionnaire (CSEQ) or National Study of Student Engagement (NSSE). They also engage in a range of other activities typical of an IR office (Malaney, 1999; Malaney, 1993; Thurman and Malaney, 1989).

Administrators in student affairs recognize student-oriented research and assessment as an important function (Erwin, 1989) and as one way to demonstrate the value and accountability of their programs and services (Hanson, 1990; Malaney, 1993; Schuh and Upcraft, 2001; Sorochty, 1991; Upcraft and Schuh, 1996; Winston and Miller, 1994).

Student affairs directors and professional staff are expected to perform a range of assessment tasks. They are expected to select or design appropriate instruments to measure their program goals, collect pertinent developmental and environmental data, count and monitor contacts, process and analyze data, utilize results to improve programs, determine program demand/use, effectiveness and efficiency, and meet internal and external standards. These are only a few of the relevant tasks.

Similarly, student affairs researchers are expected to work with student affairs mid-managers in conducting program evaluations and other activities (Moxley, 1988). However, student affairs mid-managers are often hired for their leadership, student contact, communication and other skills rather than for assessment competencies (Gordon, Strode and Mann, 1993). Too often the training and development needs of mid-managers are based on administrative opinions rather than on results derived from research, such as a written survey or an interview (Upcraft, 1988). Ways of systematically and easily measuring the assessment needs of student affairs professionals are needed to facilitate their staff development, to assist in achieving program assessment goals and to enhance researcher-personnel collaborative efforts.

The purpose of this study is to: (1) identify the information, consultative and training needs in research and assessment of student affairs mid-managers and professional staff at a research institution, (2) summarize the problems and possibilities in using a web-based survey and (3) describe how the results might impact the student affairs research office in advancing the program assessment goals of the division.

The student affairs research office at this institution conducts entering and undergraduate student surveys, assists in program assessment activities, participates in accreditation reviews, performs special studies, handles data queries, disseminates reports, participates in the Institutional Review Board and provides consultation and training to student affairs personnel. It operates independently from but cooperatively with a fully staffed university system Institutional Research Office.

Method

Respondents

Of 98 full-time student affairs personnel, 26 mid-managers and 42 professional staff participated in this study (Mills, 2000, Scott, 2000). Return rates were 100% for mid-managers and 58% for staff for an overall return rate of 69%. Mid-managers include directors and coordinators of programs; staff include faculty specialists and administrative/professional/technical (APT) staff. Their e-mail addresses, obtained through the division directory, were tested and updated. Participants were informed about the survey through announcements at various meetings. Announcements were followed by an e-mail invitation to participate in the survey. That e-mail was linked to the web survey. One staff member with no electronic address was sent a hard copy of the survey. Another visually challenged director was interviewed by telephone.

The Survey Instrument

The Web survey instrument (OSA Assessment Inventory), developed during the summer of 2000, contains five parts: respondent background information; interest in assessment information, consultation and training; technology and on-line searches; statistical analysis; and scheduling and planning. Items were developed after considering the following: current and future assessment issues of the institution, interests of student affairs personnel, topics in national and regional assessment workshops, a 1992 needs assessment administered to the division by the investigator; and, web survey design considerations (Dillman, 2000).

Respondents took about ten minutes to complete the 95-item survey. Survey

items were composed of one choice items, multi choice items, repeated scale items, fill in the blanks, fill in the numbers and short essays. A paper version of the survey provided an option to a respondent who was visually challenged and another who lacked an internet connection.

Data Analysis

Results were processed by downloading the data file from the university server to SPSS (Statistical Package for the Social Sciences) for analysis on an office PC. Data were also captured in e-mail format, monitored and used to create follow-up reminder lists. The analyses of results include descriptive statistics (percentages and mean) and chi-square using an alpha level of .05.

Results

Respondent Background

Respondents averaged eight years of experience in their current or closely related position in student affairs. Length of experience ranged from .5 to 30 years. Most respondents (40%) were from small programs composed of 3-6 members. Although the majority (53%) described their assessment experience as basic, two-fifths (40%) of mid-managers characterized their expertise as intermediate.

Interest in Assessment Topics

This section was a focal point of the survey. Mid-managers and staff were asked to respond to 31 assessment topics. They rated these topics on a scale of 1 = Very Interested, 2 = Somewhat Interested and 3 = Not Interested in obtaining

information, consultation or training in these topics. See Table 1 for a list of the 31 topics.

[Place Table 1 about here.]

The results of a chi square analysis indicated that there were significant differences between the interests of mid-managers and those of staff. Mid-managers were significantly more interested in obtaining assistance in "performance indicators," "benchmarks" and "development of survey items" than staff on an .05 level. The results also confirmed some basic differences in the responsibilities of mid-managers compared to staff.

Table 1 presents the percentages of mid-managers, staff and total group who rated the topics as "Very Interested." When 50% or more of the respondents rated a topic "Very Interested," that percentage appears on Table 1 in bold print. This process helps narrow the number of topics to be considered for consultation or professional development activities. Therefore, based on this 50% criterion, mid-managers were very interested in assistance in 13 of the topics and staff in two of the topics. The top two topics for mid-managers were "design assessment project" and "identify what, when, who, how to measure." The top two for staff were "develop quality checks" and "develop satisfaction surveys." The top two for the total group were "data collection strategies" and "data interpretation."

Table 1 also demonstrates the importance of conducting a subgroup analysis, especially for heterogeneous groups. As noted above, if a needs assessment was conducted on only the total group the top two topics of the total group would not

accurately reflect the top needs of both mid-managers and staff. Additionally, if assessment needs of personnel were based solely on the percentages of the total group and not of mid-managers and staff separately, staff needs would be overshadowed by mid-manager needs since mid-manager percentages are generally higher than staff and therefore would be reflected in the percentages of the total group.

Finally, topics with percentages lower than 50% may be worth addressing when the total number of respondents is large enough and the topic is important to the division or institution. For example, 48% of mid-managers and 47% of staff are very interested in "data use." The number of personnel amounts to 12 mid-managers and 20 staff for a total of 32 personnel very interested in "data use." With the current emphasis at this institution on planning and implementation based on data, such a topic may have more priority for consultation or personnel training.

Technology and Electronic Searches

Almost all (95%) student affairs personnel checked their e-mail at least once a day. More than half (55%) used Netscape Navigator as their primary browser. In regard to search engines, one-fourth of mid-managers used Excite or Yahoo and two-fifths of staff used Yahoo. This information is useful for future staff development activities involving Internet-based activities.

Mid-managers and staff differed in opinion on their top concern in information technology. Mid-managers expressed concern for all seven items included in the survey with the top concern being the integration of information technology into program services; staff concern focused on adequate training in new software and

hardware. See Table 2.

[Place Table 2 about here.]

Mid-managers expressed greater interest in on-line searches than staff. Table 3 demonstrates that mid-managers show a strong interest in performing efficient computerized searches and to a lesser extent in differentiating search engines and in performing searches for student assessment data.

[Place Table 3 about here.]

Data Analysis Method

Half of all student affairs personnel used a statistical software package for data analysis. A higher percentage of mid-managers (56%) used statistical packages than staff (46%). Excel was used by both groups, whereby SPSS and SAS were used only by mid-managers. None used Lotus. See Table 4.

[Place Table 4 about here.]

In regard to content analysis, 20% of student affairs personnel performed content analysis using a software package. Both mid-managers and staff used Excel for this purpose rather than more complex packages, such as NUD-IST or Ethnograph. See Table 5.

[Place Table 5 about here.]

When asked if they would be very interested in an introductory workshop on statistical or content analysis, most student affairs professionals were interested in Excel or in SPSS. See Table 6.

[Place Table 6 about here.]

Additionally, at this institution, student affairs has a resource room where SPSS is made available through a university license to student affairs personnel, including student assistants, who are working on research and assessment projects. When personnel were asked if they anticipate using this service in the next two years, one-third (34%) of them plan to use SPSS sometime within two years.

Scheduling and Planning

When asked about their time preference for workshops and meetings, student affairs personnel favored early morning (27%) or midmorning (27%). No one selected a late morning or evening period. Mid-manager time preferences were distributed throughout the day, but staff members definitely preferred an early or mid morning schedule. See Table 7.

[Place Table 7 about here.]

Mid-managers (40%) preferred small group meetings and staff (56%) preferred workshops for personnel development activities. See Table 8.

[Place Table 8 about here.]

Summary of Survey Results

The assessment needs of student affairs mid-managers and professional staff a research university were identified using a web-based survey instrument.

- Most student affairs professionals report a basic level of research and assessment expertise.
- Although mid-managers and staff have common needs, each group has distinctive

interests. Mid-managers were more interested in accountability measures and the design of assessment projects. Staff interests favored more specific service-oriented measurement tools, such as satisfaction surveys and quality checks.

- Student affairs personnel check their e-mail at least once a day and are positioned to respond to activities presented on the Internet.
- In regard to technology, mid-managers are especially concerned about how to integrate information technology into program services, whereby staff are mainly concerned about adequate training in the use of new software and technology.
- Mid-managers appear far more interested in on-line search topics than staff with the greatest interest being in performing efficient computerized searches.
- About half of student affairs professionals use a statistical software package, and very few use content analysis software packages. Both groups favor the offering of introductory statistical analysis workshops in Excel and SPSS.
- Mid-managers have no strong time schedule preference for training and development activities; staff prefer an early or mid morning schedule.
- Mid-managers prefer small group meetings and staff prefer workshops for training and development activities.

Problems and Possibilities Using a Web-Based Survey

This study uses Perseus Survey Solutions for the Web (Perseus, 1998), one of several software packages for developing and administering electronic surveys via e-mail or the Web. The advantages of using such a package include its ease in use,

quality, support service, price of the package and cost effectiveness. Also, there are cost savings in paper, handling and postage. Survey Solutions does not require knowledge of html programming, and, for this particular project, serves as a model for student affairs practitioners who would like to utilize similar procedures in their research and assessment projects. Users can employ their institution's or Perseus server to collect data. Results can be stored in various formats, such as an ASCII TSV (tab separated values) file on the server or Microsoft Access databases on a workstation. The package also includes analysis, charting and reporting functions. There are also no additional charges by Perseus for using their server or for the number of records processed. It is advantageous for student affairs research offices with little or no technical computer expertise to involve and collaborate with their university information technology office for needed assistance and consultation.

Potential problems using web-based surveys include: lack of access to the Internet by respondents; lack of Internet use even with connectivity; minimal computer skills by respondents; lack of trust in confidentiality, anonymity and security; and, unexpected breakdown of equipment and software (Dillman, 2000; Schuh 2001). Additionally, subjects may become satiated with web-survey requests as its popularity grows.

Implications for the Student Affairs Researcher

The typical student affairs research office is a one-person office with a minimal budget and with a wide range of responsibilities (Malaney, 1999). Regardless of size,

most student affairs research offices provide consultation and training to its constituents.

First, identifying the assessment needs of student affairs professionals help the researcher plan, prioritize and focus on the key consultation and training needs of the division. Thus, the researcher will have a plan to guide discussions and decisions, especially when challenged by multiple and competing requests for assistance by different audiences. Such a plan would better insure that the time and effort the researcher dedicates to consultation and personnel development activities are in line with the goals of the research office.

Second, sub analyses of the needs assessment results can enable a researcher to identify and address collectively needs common, not only to mid-managers and staff, but to programs. For example, this study revealed that two of the larger programs, housing and student activities, were very interested in developing web-based instruments to survey students and to convert paper surveys to online surveys.

Third, assessment results provide evidence that may be needed to advance proposals in support of student affairs research activities.

Fourth, web-based surveys can be administered, processed and communicated efficiently. It can save the researcher time and effort. Conversely, with interest in and demand for online research increasing, the researcher will do well to continuously review priorities.

Fifth, the web-based procedure used by the researcher can serve as a model for other student affairs professionals to utilize in their program planning and assessment

activities. To the extent that it does, it facilitates the goals of both parties.

Sixth, web-enabled data collection will become an increasing part of the work style of all researchers independent of the size of the research office.

References

Dillman, D. A. (2000). Mail and internet surveys: The tailored design method. New York: John Wiley and Sons, Inc.

Erwin, T. D. (1989). New opportunities: How student affairs can contribute to outcomes assessment. In U. Delworth & G. R. Hanson (Eds.), Student services: A handbook for the profession (pp. 584-603). San Francisco: Jossey-Bass.

Gordon, E.G., Strode, C.B., & Mann, B. A. (1993). The mid-manager in student affairs: What are CSAOs looking for? NASPA Journal, 30 (4), 290-297.

Hanson, G. R. (1990). Improving practice through research, evaluation, and outcomes assessment. In M. J. Barr & M. L. Upcraft (Eds.), New futures for student affairs (pp. 270-294). San Francisco: Jossey-Bass.

Hyman, R. E., Beeler, K. J., & Benedict, L. G. (1994). Outcomes assessment and student affairs: New roles and expectations. NASPA Journal, 32 (1), 20-29.

Malaney, G. D. (1993). A comprehensive student affairs research office. NASPA Journal, 30 (3), 290-297.

Malaney, G. D. (1999). The structure and function of student affairs research offices: A national study. In G.D. Malaney (Ed.), Student affairs research, evaluation, and assessment: Structure and practice in an era of change, New Directions for Student Services (No. 85, pp 3-10). San Francisco: Jossey-Bass.

Mills, D.B. (2000). The role of the middle manager. In M. J. Barr & M. K. Desler (Eds.), The handbook of student affairs administration (2nd ed., pp. 135-153). San Francisco: Jossey-Bass.

Moxley, L. S. (1988). The role and impact of a student affairs research and evaluation office. NASPA Journal, 25 (3), 174-179.

Perseus SurveySolutions for the Web v2.0 - User Guide (1998). Braintree, MA: Perseus Development Corporation.

Schuh, J. H. & Upcraft, M. L. (2001). Assessment practice in student affairs: An application manual. San Francisco: Jossey-Bass.

Scott, J. E. (2000). Creating effective staff development programs. In M. J. Barr & M. K. Desler (Eds.), The handbook of student affairs administration (2nd ed., pp. 477-491). San Francisco: Jossey-Bass.

Sorochty, R. W. (1991). Planning and assessment equal accountability. NASPA Journal, 22 (4), 355-361.

Thurman Q., & Malaney, G. D. (1989). Surveying students as a means of assessing and changing policies and practices of student affairs programs. NASPA Journal, 27 (2), 101-107.

Upcraft, L. M. (1988). Managing Right. In M. L. Barr (Eds.), Managing Student Affairs Effectively. New Directions for Student Services (No. 41, pp. 65-78). San Francisco: Jossey-Bass.

Upcraft, L. M. and Schuh, J. H. (1996). Assessment in student affairs. San Francisco: Jossey-Bass.

Winston, R. B. Jr. & Miller, T.K. (1994). A model for assessing developmental outcomes related to student affairs programs and services. NASPA Journal, (32 (1), 2-19.

Table 1

Mid-Managers and Staff Very Interested in Assessment Areas

Assessment Areas	% Very Interested		
	Mid-Managers n=26	Staff n=42	Total Group n=68
1. Design assessment project	**67**	41	**53**
2. Identify what, when, who, how to measure	**67**	41	**53**
3. Data collection strategies	**60**	48	**54**
4. Data analysis	**58**	40	48
5. Data interpretation	**63**	47	**54**
6. Graph development	44	24	33
7. Report writing	39	31	35
8. Data dissemination	35	31	33
9. Data use	48	47	47
10. Surveys	**52**	41	46
11. Student tracking	**54**	37	44
12. Focus groups	38	28	32
13. Telephone interviews	29	10	19
14. Observations	42	21	30
15. Document review	38	21	28

16. Audio visual	43	30	35
17. Web survey forms	**54**	41	46
18. E-mail surveys and forms	**50**	41	45
19. Test scoring machines	29	18	22
20. Benchmarks	**52**	24	37
21. Performance indicators	**60**	35	46
22. Program evaluation	**60**	41	50
23. Accreditation	33	14	23
24. Council for the Assessment of Standards	38	23	30
25. Write measurable objectives	**56**	39	47
26. Measure use/demand/need	**52**	41	46
27. Measure effectiveness	**60**	43	**51**
28. Measure efficiency	48	40	44
29. Develop satisfaction surveys	46	**50**	48
30. Develop quality checks	44	**52**	48
31. Develop survey items	**50**	38	43

Table 2

Information Technology Issues of Concern to Mid-Managers and Staff

Information Technology Issues	%		
	Mid-Managers	Staff	Total
1. Integrating info tech into program services	85	45	60
2. Financing replacement of hardware & software	58	45	50
3. Financing the purchase of new technology	69	48	56
4. Providing adequate user support to students	58	41	47
5. Providing adequate user support to staff	69	55	60
6. Receiving adequate training to use new software and technology	73	62	66
7. Using the Web in on-line and distance ed services	58	41	47

Table 3

On-Line Search Topics of Interest to Mid-Managers and Staff

On-line Search Topics	%		
	Mid-Manager	Staff	Total
1. Different search engines and their purpose	50	29	37
2. Performing efficient computerized searches	69	35	50
3. Web searches for student assessment data	50	41	41

Table 4

Statistical Software Packages Used by Mid-Managers and Staff

Statistical Software Packages	%		
	Mid-Managers	Staff	Total
1. None	44	54	50
2. Excel	28	42	36
3. Lotus	0	0	0
4. SPSS	16	0	7
5. SAS	8	0	4
6. Other	4	3	4

Table 5

Content Analysis Software Packages Used by Mid-Managers and Staff

Statistical Software Packages	%		
	Mid-Managers	Staff	Total
1. None	84	77	80
2. Excel	16	20	18
3. NUD-IST	0	0	0
4. Ethnograph	0	0	0
5. Other	0	3	2

Table 6

Interest in an Introductory Workshop by Mid-Managers and Staff

Interested in Introductory Workshops	% Very Interested		
	Mid-Managers	Staff	Total
1. Excel for statistical analysis	44	47	45
2. Lotus for statistical analysis	18	19	18
3. SAS for statistical analysis	6	29	18
4. SPSS for statistical analysis	35	44	40
5. NUD-IST for content analysis	24	23	23
6. Ethnograph for content analysis	30	13	21

Table 7

Best Time Schedule for Workshops for Mid-Managers and Staff

Time Schedule	%		
	Mid-Managers	Staff	Total
1. Early morning	20	31	27
2. Mid morning	20	31	27
3. Late morning	0	0	0
4. Around the noon hour	20	13	15
5. Early afternoon	0	6	4
6. Mid afternoon	20	13	15
7. Late afternoon	20	6	12
8. Evenings	0	0	0

Table 8

Preferred Mode of Personnel Development by Mid-Managers and Staff

Preferred Mode	%		
	Mid-Managers	Staff	Total
1. One-to-one meetings	16	13	14
2. Small group meetings	40	22	30
3. Workshops	28	56	44
4. Telephone interactions	8	3	5
5. Electronic mail interactions	4	3	4
6. Literature	4	3	4

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