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Conducting Focus Groups with College Students: Strategies to Ensure Success

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Introduction

Institutional researchers are often asked to conduct focus groups as an efficient way to address an institutional concern or problem. Typically, IR professionals depend on external consultants and specialists to conduct these group interviews for them; however, due to recent resource constraints (staffing, budgets), they are increasingly assuming responsibility for conducting the focus group sessions themselves.

Institutional researchers require specialized skills in order to engage college students in this type of group interviewing; college students present specific characteristics and preferences that require careful consideration. Numerous research studies have used focus groups to support or augment research on college students (Breen, 2006; Diambra, McClam, Fuss, Burton, & Fudge, 2009; Kicklighter, Koonce, Rosenbloom, & Commander, 2010; Naylor, Stoffel, & Van Der Laan, 2008; Ouimet, Bunnage, Carini, Kuh, & Kennedy, 2004; Raby, 2007, 2010; Wellington, 2010; Williams, Bonnell, & Stoffel, 2009), spanning the areas of student satisfaction, assessment of student learning and support services, and program evaluation (Astin, 1993).

As student research programs continue to expand and support campus decision-making, it is important that practitioners develop the necessary skills to effectively plan and conduct focus groups with college students. While some researchers have discussed the challenges of conducting focus groups with children and teens (Morgan,

Gibbs, Maxwell, & Britten, 2002; Raby, 2010), few studies highlight the methods required to work effectively with college students. This paper is intended to assist practitioners by recommending practical interviewing strategies, with particular emphasis on the opportunities and challenges encountered when working with this unique population.

Background

Focus Groups as an Interview Strategy

Krueger and Casey (2009) define a focus group as “a carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment” (p. 2). As a qualitative research method, focus groups have gained significant acceptance and popularity on college campuses. While initially more prevalent in business and marketing domains, focus groups have surfaced in educational research to explore student perceptions, attitudes, beliefs, and experiences. Although generally viewed as a self-contained exploratory, qualitative data collection strategy (Pizam, 1994), focus groups often supplement other data collection methods such as survey questionnaires, observation, and interviews (Morgan, 1997). For instance, survey questionnaire design is often preceded by conducting focus groups to develop the instrumentation or to probe themes and topics that emerge from survey administration (Krueger & Casey, 2009; Morgan & Krueger, 1998; Ouimet et al., 2004; Stewart, Shamdasani, & Rook, 2007).

Focus groups are ideal for obtaining in-depth feedback regarding participants’ attitudes, opinions, perceptions, motivations, and behaviors (Barbour & Kitinger, 1999; Fern, 2001; Liamputtong, 2011; Morgan, 1997; Morgan & Krueger, 1998; Patton, 2002; Vaughn, Schumm, & Sinagub, 1996). The collective experience of the group promotes self-disclosure among participants and

yields personalized rich, detailed descriptions; additionally, participants are encouraged to question one another’s responses and to add to their statements or opinions. In the focus group setting, the researcher is less directive, allowing the conversation and the ideas to emerge from the group itself. This emergent discussion helps participants identify similarities and differences on a given topic and helps the researcher identify the most important issues and themes related to the problem (Krueger & Casey, 2009; Morgan & Krueger, 1998). As Morgan (1997) stresses, focus groups are group interviews designed to capitalize on the group’s evolving interaction. In this sense, the focus group differs from one-on-one interviewing in that the group generates its own outcomes and responses by virtue of being together. This type of group discussion is especially valuable when working with special populations, such as college students (Breen, 2006; Krueger & Casey, 2009; Raby, 2010).

Focus groups are not, however, intended as a way to consolidate individual interviews into a single, more efficient interview (Morgan, 1997; Morgan & Krueger, 1998). They also differ from groups whose purpose is otherwise, that is, therapy (patient-centered), presentations or debates (group-centered), or meetings/decision-making (leader-centered). Interviewing students in the group setting can also provide opportunities to collect data from a group of students while simultaneously allowing for observation and interaction among them (Kitzinger, 1995; Raby, 2007, 2010).

One of the goals of a student focus group is to build cohesion around an issue or topic and to develop camaraderie (Lincoln & Guba, 1985; Patton, 2002; Raby, 2010). Multiple perspectives evolve during a discussion, uncovering layers of perceptions and feelings that would normally be too uncomfortable for students to express initially or individually; the focus group setting can be also used to reduce anxiety around controversial or threatening circumstances (i.e., campus incidents

such as a shooting or a fire). Focus groups with students can lead to feelings of acceptance and affirmation, and even relaxation, which are all essential conditions for students to speak freely. Very few studies address the challenges and opportunities inherent in conducting focus groups with college students, and yet this population is regularly engaged in this type of discussion (Bloor, Frankland, Thomas, & Robson, 2001; Hyde, Howlett, Brady, & Drennan, 2005; Kitzinger, 1994; Morgan et al., 2002; Raby, 2010; Vaughn et al., 1996).

Characteristics of College Students

Maturation and Development

Many college students are between 18 and 25 years of age and are actively engaged in a formative period of maturation and self-actualization (Chickering, 1969; Chickering & Reisser, 1993; Erikson, 1994; Rodgers, 1990; Sanford, 1962). This process can complicate the interactions which surface in a focus group setting. Additionally, student development theory suggests that students are often more comfortable in group settings since their sense of identity is still developing and they are typically insecure about expressing their opinions in an individual interview; the one-on-one setting with an adult's focused attention makes them feel exposed or intimidated (Chickering, 1969; Erikson, 1994; Lemons & Richmond, 1987).

Erikson (1994) conceptualized individual development as occurring in chronological phases that depend on the acquisition of skills and knowledge in order for the individual to progress. College students are included in the phase known as *adolescent* (usually spanning the ages from 17–22 years), during which individual identity development occurs, typically amidst role confusion. During these formative years, college students struggle to develop a holistic identity resulting from the fragmented identities he or she adopted through childhood (role confusion).

This identity development occurs in spite of and in the face of peer pressure, a significant factor in adolescent development. It is in this phase that college students come face to face with their peers and their own sense of identity (Chickering, 1969; Chickering & Reisser, 1993; Lemons & Richmond, 1987).

Sanford's (1962) work used Erikson's model to determine that the college years provide a critical crossroad for the maturation point in young adults. It is at this crossroad that focus group research can cultivate dialogue among students as they share personal stories that reveal "identity." Furthering this perspective is the work of Chickering (1969) and Chickering and Reisser (1993), who provide a lens for understanding how college students mature developmentally during college years. Chickering's "Seven Vectors" of development was augmented by his later collaboration with Reisser (1993); they identified four areas of development to include achieving competence, developing autonomy, establishing identity, and developing purpose, all of which are core development phases with which students struggle during college. It is within these frameworks that practitioners can more effectively work with the college student population and assist them to communicate their sense of self to one another in a supportive group environment, particularly when sharing personal insights and experiences (Lemons & Richmond, 1987). Rodgers (1990) describes college student development as "the ways that a student grows or increases his/her developmental capabilities as a result of enrollment in an institution of higher education" (p.127).

Peer Pressure

Peer pressure and perceptions of one's self, as reflected in peers, can also affect the ways in which college students participate and respond in a focus group setting. Psycho-social development theories provide a basis for understanding how college students relate to one another and develop a sense

of identity separate from their peers (Erikson, 1994; Lemons & Richmond, 1987; Sanford, 1962). Krueger and Casey (2009) note that because young adults are so susceptible to peer pressure, their behavior in a group discussion may challenge the moderator. Concerns regarding participants' trust, honesty, conformity, and self-reflection are just some of the issues a moderator faces when conducting student focus groups (Hollander, 2004; Hyde et al., 2005; Raby, 2010).

Focus groups promote self-reflection and allow students to see that they are not alone in the way they feel about a topic. They are more likely to be candid in a group, especially if others willingly share similar feelings. This concept of *normative censure* often aids in the process of soliciting feedback from college students, as they more easily share experiences if the group supports open dialogue and personal disclosure (Hollander, 2004; Kitzinger, 1994; Mitchell, 1999; Warr, 2005).

Gender

Researchers have studied the developmental differences between female and male college students (Baxter Magolda, 1992; Evans, 1995; Gilligan, 1982; Hollander, 2004; Josselson, 1990; Kegan, 1982; Mitchell, 1999). The focus group setting may showcase these differences; Baxter Magolda's (1992) study of gender and autonomy suggests that women value interpersonal relationships more highly than their male counterparts. These values may affect the quality and extent of the focus group discourse. Moderators who wish to maintain a balanced discussion in mixed groups should make a concerted effort to encourage the male participants to comment and elaborate during discussions. As Josselson (1990) stressed, women see relationships as fluid and changeable, while men view relationships in a more static or permanent way. This difference in perspective can alter conversations in groups where young men and women are combined.

Group Interactions Among College Students

One of the challenges of working with students is getting them to talk to each other in a conversational manner. Surprisingly, Millennial college students often view the group setting as a safer environment in which to express their ideas, particularly if they are with friends or acquaintances (Ricketts, 2009). Students are used to group interactions since their entire educational experience is rooted in classroom settings and group settings. They are relatively at ease when the discussion is guided, their thoughts solicited, and diverging viewpoints are expected; however, most of their experience in groups involves one person talking at a time, while they listen and wait to respond. An effective moderator can work with the students to guide the discussion and elicit their "stories" and personal narratives (Hollander, 2004; Kitzinger, 1994; Raby, 2010; Wilkinson, 1998).

Emergent discussions are one way to uncover "truths"; however, what college students say in the first 15 minutes may not necessarily be the most truthful or substantive—the process needs to unfold in order to ensure candor from participants. Students may take time to relax with and trust the moderator to the extent that they talk to each other in a meaningful, conversational manner (Vaughn et al., 1996). Diambra et al. (2009) suggest that group cohesion deepens through group interactions where camaraderie develops; for students in this age group, a sense of "belonging" allows for better responses and reflection amongst participants.

The Millennials

Today's college students are typically from the Millennial generation, which comprises individuals born between 1982 and 2001. As a group, they exhibit unique characteristics, setting them apart from previous generations of college students, and challenging college faculty and staff in many ways. They have their own sense of relating to the

world and to each other (Howe & Strauss, 2007; Rickes, 2009) and, as a generation, Millennials have been encouraged to feel special, rewarded for everything they accomplish (Howe & Strauss, 2007). Respectful of authority, they prefer positive learning environments where there is a flexible structure and order; they value teamwork and collaboration and are accustomed to classroom settings with myriad technology and multimedia to teach them and entertain them, simultaneously.

The Millennials are the most diverse generational group, to date (Howe & Strauss, 2007). They have been raised by attentive parents who encouraged their involvement in numerous activities; some would say that their lives have even been too tightly scheduled and structured for them (Raines, 2003). They are natural multitaskers, used to dealing with a wide range of communication modes, and prefer multitasking in achievement-oriented settings, such as the classroom.

Gregoryk and Eighmy (2009) find that Millennials need open-ended discussions in group settings and find that a moderate structure suits them best; furthermore, Millennials appreciate the chance to voice their opinions in a safe setting and prefer to respond to questions in turn. Additionally, for a generation used to group interactions that involve multiple participants with multiple purposes affected by multiple stimuli, moderators will need to ensure that the purposes and process of the focus group session are clearly explained to students at the beginning of the interview, such as the use of an outline or agenda (Krueger & Casey, 2009; Raines, 2003). Focus groups with college students can easily provide a climate that offers all of these characteristics, thus facilitating significant and meaningful dialogue amongst them.

Focus Group Design: Strategies to Engage College Students

As institutional researchers know, focus groups are a form of applied research, intended

to help practitioners address organizational or programmatic challenges while exploring the experiences and attitudes of specific populations. If you are dealing with an issue or concern about which little is already known, or for which you need narrative or detailed descriptions and stories, then focus group research is an optimal exploratory or supplementary research method (Krueger & Casey, 2009; Morgan & Krueger, 1998; Ouimet et al., 2004; Pizam, 1994; Stewart et al., 2007). To effectively conduct focus group sessions with students, specific preparations and accommodations must be coordinated to include (a) determining research objectives, (b) developing instrumentation, (c) selecting and inviting participants, and (d) conducting focus groups in a welcoming environment, all of which will be addressed below.

Research Objectives

Prior to determining whether a focus group is the best method for obtaining student feedback, determining a clear research objective is essential (Krueger & Casey, 2009). While many college administrators believe that the most direct method is to “just ask students,” some questions cannot be effectively answered in this format (Breen, 2006; Raby, 2010). The following guidelines can help to clarify the research purpose when considering student focus groups:

- 1) **Problem statement.** What do you want to know? Who else needs to know and why? How can you frame the problem you are trying to solve? Is the information exploratory (i.e., is there little known about the issue that requires “discovery” or “exploration”)?
- 2) **Purpose of the study.** What are your main objectives and central research questions? What do you hope to find out when you are finished? Who will benefit? Is the problem actionable and “solvable”?
- 3) **Results and outcomes.** How will your results be used and by whom? What is

the timeframe for sharing results? Is this an issue that requires a quick solution or response?

Some examples of the types of issues that focus groups can address are included below.

- 1) In order to help you attract, recruit, and enroll the most qualified undergraduate students, you need to know how applicants perceive your admissions materials.
- 2) Why do increasing numbers of students switch majors in their junior year? What are their reasons and motivations?
- 3) How do students feel about the new food service meal plans?
- 4) How do undergraduate students describe the experience of student leadership programs?

Instrumentation: The Moderator's Guide

The Moderator's Guide is essentially a list of questions or topics the researcher uses to guide the focus group discussion (Morgan & Krueger, 1998). The same guide is used for all focus group sessions within the same topic area; this helps the researcher maintain a balance between the moderator's emphasis and the group discussion. The guide also ensures that there will be relative consistency across groups and that the same questions will be asked in the same sequence (Morgan, 1997).

Asking the "right" questions will ensure a successful focus group session with students (Kitzinger, 1994). Certain types of questions are preferable for student groups; questions designed to facilitate detailed responses and questions that encourage reflection and interaction are the most effective (Krueger & Casey, 2009; Raby, 2010). Most importantly, questions should focus on behaviors and motivations, not just satisfaction and opinion. Asking students to describe what they do to prepare for their classes will generate better

discussion than asking them how much time they spend getting ready for class; this is an example of the distinction between examining behaviors versus opinions. Asking open-ended questions also encourages detailed responses and invites group interaction (i.e., "How do you and your advisor share responsibility for planning your program of study?" or "What could you do to improve your advising experience?"), focusing on the factors that contribute to the depth and substance of those experiences.

Additional points to consider when constructing focus group questions include:

- 1) Avoid questions with "yes-no" answers and focus on questions that demand elaboration and details. Young people often give one-word answers, sometimes because they are used to this response in the classroom setting (Krueger & Casey, 2009; Warr, 2005).
- 2) Avoid questions that "threaten their independence or freedom" (Krueger & Casey, 2009, p. 158). Avoid asking about things where students must admit that they had to depend on their parents or other authority figures—they will be reluctant to admit these things in front of their peers (Kitzinger & Barbour, 1999; Krueger & Casey, 2009).
- 3) Avoid asking questions that may border on asking whether they have engaged in illegal behaviors such as alcohol or drugs (Krueger & Casey, 2009; Vaughn et al., 1996).

Determine the suitability of a topic for a focus group. When working with students, the content and types of questions need to be examined for age-appropriateness and sensitivity. Some topics are too personal to be explored in a group. For instance, questions involving personal issues such as depression, abuse, violence should not be the focus of a group session (Krueger & Casey, 2009).

Additionally, opening or icebreaking questions can set the tone for the shift from listening to conversing, just by asking questions that are of interest to students, even if they are not directly related to the main topic. For instance, asking students their opinion about something that just happened on campus, or about how their semester is going, or anything that is going to relax them will acclimate them to the group dynamics. Once they are comfortable with the conversational mode, you can move on to the essential content questions. Allow for concluding and debriefing questions to end the session, so that students can express emotions or frustrations resulting from difficult or challenging conversations (Breen, 2006; Krueger & Casey, 2009; Morgan, 1997; Vaughn et al., 1996).

Selecting and Inviting Participants

The composition, number, and size of the focus groups, as well as the use of incentives, are important issues to consider, essential to the success of your research.

Sampling. Students should be invited to participate in focus group sessions based on their special knowledge or experience. This type of purposeful selection is appropriate for qualitative research; participants are chosen based on their “information-rich” potential (Patton, 2002). Use caution, however, about including pre-existing groups or creating groups of students who know each other too well. Students tend to be most comfortable with their friends or classmates—this is great for social situations but restrictive when it comes to focus group discussions (Morgan & Krueger, 1998; Raby, 2010). Using the research objective as the guide, determine whether intact student groups or mixed groups best serve your purpose. Ideally, between three and five group sessions should be conducted.

Size. A group of 10 students is the ideal size for most sessions; too few students will deprive you of variety while too large a group means that some voices may never be heard. Shyer students

may need coaxing, particularly in a setting where students do not know each other (Leedy & Ormrod, 2005). However, if you wish to conduct a session with at least 10 students, a minimum of 20 students should be invited. Diligent reminders will offset “drop-outs” or no-shows (Breen, 2006; Vaughn et al., 1996).

Scheduling. There are optimal times of the day and days of the week for conducting focus groups with students. Scheduling focus group sessions around meal times, especially for lunch or dinner, tends to work well with this age group; additionally, early evening sessions, where snacks are offered, also work well (Breen, 2006).

Conducting focus groups during the middle of the week (Tuesday–Thursday) are the best times to engage students and secure their attention. Weekends are the least favorable time to ask for student participation, unless the campus is largely residential and there is a significant incentive that will draw students (Krueger & Casey, 2009).

Incentives. Determine customized incentives, if any, which will motivate focus group participation. Food is generally the key to creating a welcoming and relaxing environment for student participants. Serving a meal or refreshments is a clear inducement to attend; consider what appeals to college students and avoid formal settings (Krueger & Casey, 2009; Naylor et al., 2008).

Additionally, other types of incentives are useful. For instance, students may be interested in a chance to participate in a raffle for a gift certificate or special item (iPod or laptop, for example). Incentives are more likely to encourage students to participate in focus group sessions if there is the promise of a “reward” as a result of that participation (Morgan & Krueger, 1998; Naylor et al., 2008).

Conducting Focus Group Sessions

Location. The key to a successful focus group session with college students begins with a welcoming environment. When college students are participating in comfortable, familiar

surroundings, they are more likely to be candid and relaxed in their conversation. One way to establish an inviting atmosphere is to choose a location that students frequent, such as the Student Union or student lounges. Public or open meeting places level the playing field. Consider having students sit in a lounge area or on the floor to “send the message that the conversation is comfortable and casual” (Krueger & Casey, 2009, p. 159). In particular, some locations represent places where students assume proper roles, that is, school buildings or classrooms may remind students of their subordination to adults or professors (Krueger & Casey, 2009; Carnaghi, 1992).

Selecting the appropriate moderator. It is essential to choose a moderator who will encourage discussion without judgment or respond negatively to student comments. An experienced moderator will be able to facilitate a discussion even when there are divergent viewpoints or disagreements. A moderator who is intimidating will end the session before it begins.

Asking a Vice President or the Provost, or worse still, the President, to run your session may backfire; the referent power of these individuals may be off-putting to students who have something to share. If students do attend sessions with these moderators, they are less likely to be candid in their responses (Carnaghi, 1992).

Someone who is skilled at talking to students, treats them respectfully, and listens carefully will yield the best results. If you are running groups with freshmen, for example, perhaps a senior or a grad student could facilitate the session—this would be one way to help students relax and talk more freely (Vaughn et al., 1996).

Opening the session. Once the session begins, it is important to thank students for volunteering their time and for their willingness to provide their input; explain the purpose of the session and how the results will be used. Assure students of the confidentiality of the discussions; explain that no one will be named specifically or identified with any

comments or findings that are shared or reported. When students feel that they are being treated with respect, and that their opinions matter, they will be more likely to share their feelings and opinions (Krueger & Casey, 2009).

Directing the conversation. Find the right methods to get students talking...and keep them talking! As Krueger and Casey (2009) note:

Young people may be skeptical of the moderator’s claim that all opinions are wanted and that both negative and positive views are appreciated. Young people regularly find themselves in situations where adults seemingly want feedback but then react in an unpleasant manner when contrary or negative ideas are expressed. (p. 156)

One way to diffuse any skepticism and promote candid sharing is to deflect the focus from the individual. Additionally, it is important to get acquainted with the jargon, language, and issues surrounding the topic area so you can be understood and understand your students (Patton, 2002).

Effective facilitation begins with choosing a focus and maintaining the attention of the group on that focus. Using agendas for student focus groups is a valuable tool which gives them a sense of what will be discussed and allows them time to think about where they can insert themselves into the conversation. Since students are used to syllabi and course outlines, the use of an agenda to guide a group discussion will seem perfectly natural to them (Hassanien, 2007; Raby, 2010).

What is the story or event that you will use as the centerpiece of your discussion? Many moderators use visual aids to open the session gently and allow for various levels of group interaction. Moderators can help students feel safe sharing their thoughts and ideas in the group by using visuals, flip charts, list-making activities, or drawings. For example, icebreaker questions often

start with a flip chart asking each student to make a statement that allows everyone to talk at least once but also allows for all ideas to be shared and accepted equally. This activity also negates peer pressure influences. Asking participants to bring or draw/create visuals in order to tell their story or offer their opinion can help them shed their natural defensiveness (Vaughn et al., 1996). "List-making," as used by a facilitator, creates a structural aid that allows participants to offer opinions and see visible results on a chart, building and adding to a list of ideas. List-making also takes the focus away from the participant and focuses the attention of the group on the chart and the list, or the emerging ideas and concepts generated by the group (Krueger & Casey, 2009; Vaughn et al., 1996).

Session length. Most focus group sessions span 90–120 minutes in length; for student groups, condense the time of the session from the usual 90+ minutes to no more than 60 minutes. Young adults often need to change their positions or mental orientation every 45 minutes or so; their attention span tends to evaporate after this point, and certainly by the one-hour mark (Breen, 2006; Carnaghi, 1992). The most important questions should be asked within the first 45 minutes. Since time with the students is limited, a consolidated questioning guide is useful; a moderator may only be able to work through 4–6 questions before the group becomes distracted (Breen, 2006; Williams et al., 2009).

Concluding and thanking participants.

Students are busy and have given their time to attend a session. Moderators must thank participants, ask if there are any concluding questions, and emphasize how important their participation has been to the success of the research (Howe & Strauss, 2007).

Data management. Although the intent of this paper is not to discuss preferred data management for focus groups in detail, it is important to manage data effectively in order to maximize the use of the

results. A data management plan divides data into the following categories: raw data management, content analysis and coding, trustworthiness, and reporting.

Raw data management. The moderator and the note-taker (they should be two separate individuals) should review notes immediately after each session and debrief; debriefing allows the moderator and note-taker to assess perceptions, issues that have surfaced, and to record observations (nonverbal and body language) that add to the meaning of participant words and phrases (Krueger & Casey, 2009). Audio and/or videotaping each session is strongly advised; participants must provide their consent to allow for these recordings; forms should be prepared in advance of each session for distribution and collection. Additionally, hiring a transcriptionist is an excellent way to ensure comprehensive and accurate representation of the focus group discussions. An alternative to hiring a transcriptionist is to purchase software applications that translate recorded dialogue into a modified word document, such as Dragon@.

Content analysis and coding. Once transcripts are completed, the work of analysis and coding begins. In order to assess the meaning of participant comments and behaviors, Krueger and Casey (2009) recommend a simple strategy known as the Classic Approach for data analysis. This process involves a holistic review of the transcripts, preliminary coding of possible categories, followed by a more detailed process of creating categories of themes within the data. Saldana (2009) recommends using a First Cycle/Second Cycle process for analyzing qualitative data; there are other methods of analysis and coding that can be used just as effectively (Miles & Huberman, 1994). Overall, the Classic Approach is an excellent way for the researcher to quickly immerse himself or herself in the data and identify themes and meaning units quickly. Krueger and Casey (2009) also supplement

their recommendations about the Classic Approach with an excellent table (p. 125) that compares the various analytic frameworks. While many researchers accomplish data analysis and coding manually, others prefer computer software programs, such as Nudist@, NVivo@, or SPSS@'s qualitative data management software.

Trustworthiness. A correlate to the validity-reliability measures used in quantitative research methods are the qualitative strategies espoused by Lincoln and Guba (1985). They suggest that trustworthiness strategies are essential to evaluating the "worth" of a study. For the purpose of focus group research, member checking (asking select participants to review transcripts or portions of transcripts for accuracy and appropriate representation) is a way to establish credibility; "thick" description or detailed reporting of the findings assist in establishing transferability of the findings; external audits (external review of the findings and interpretation) is a means to establishing dependability; and creating an audit trail (a blueprint of the research design) is a way to establish confirmability.

Reporting the results. Research, evaluation, and assessment programs are an essential part of any student life program. Soliciting student opinions through focus group interactions yields valuable descriptive information, which not only supplements quantitative findings but which also offers a unique perspective regarding student opinions and attitudes. While electronic technology has dominated so much of our communication with students in recent years, this face-to-face qualitative methodology offers the benefits of encouraging in-person group dialogue and also uncovers participant nonverbal interactions and meanings. Focus groups, when employed effectively, utilize the group's personality and dynamics to reveal participant perspectives through "storytelling." The skilled moderator is able to elicit these stories through the appropriate use of probing and questioning sequencing (Krueger, 1997).

Informing Practice: Using the Results for Effective Management

In what ways will the results of your focus group findings improve policy and practice at your institution?

- 1) Provides practical information for program development and improvement.
- 2) Allows for ongoing assessment and evaluation.
- 3) Identifies how well programs are working.
- 4) Builds a sense of student community and cohesion.
- 5) Assists in developing additional quantitative or qualitative instrumentation.
- 6) Provides practical and workable information for administrators to improve programs and practices.
- 7) Acculturates students to a new campus or new group settings.

By learning about the focus group method, student personnel administrators can play an important role on campuses by substantiating their programming decisions with funded knowledge, grounded in student-focused research.

References

- Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass.
- Barbour, R. S., & Kitzinger, J. (1999). *Developing focus group research: Politics, theory and practice*. London: Sage.
- Baxter Magolda, R. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development*. San Francisco: Jossey-Bass.
- Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus groups in social research*. London: Sage.
- Breen, R. L. (2006). A practical guide to focus-group research. *Journal of Geography in Higher Education*, 30(3), 463–375.

- Carnaghi, J. E. (1992). Focus groups: Teachable and educational moments for all involved. In F. K. Stage (Ed.), *Diverse methods for research and assessment of college students* (pp. 105–121). Alexandria, VA: American College Personnel Association.
- Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.
- Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco: Jossey-Bass.
- Diambra, J. F., McClam, T., Fuss, A., Burton, B., & Fudge, D. L. (2009). Using a focus group to analyze students' perceptions of a service-learning project. *College Student Journal*, 43(1), 114–122.
- Erikson, E. H. (1994). *Identity and the life cycle*. New York: Norton.
- Evans, N. J. (1995). Theories of student development. In S. R. Komives, D. B. Woodard, Jr., and Associates (Eds.), *Student services: A handbook for the profession* (3rd ed.). San Francisco: Jossey-Bass.
- Fern, E. F. (2001). *Advanced focus group research*. Thousand Oaks, CA: Sage.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gregoryk, K., & Eighmy, M. (2009). Interaction among undergraduate students: Does age matter? *College Student Journal*, 43(4), 1125–1136.
- Hassanien, A. (2007). A qualitative student evaluation of group learning in higher education. *Higher Education in Europe*, 32(2/3), 135–150.
- Hollander, J. A. (2004). The social contexts of focus groups. *Journal of Contemporary Ethnography*, 33(5), 602–637.
- Howe, N., & Strauss, W. (2007). *Millennials go to college: Strategies for a new generation on campus* (2nd ed.). Great Falls, VA: LifeCourse Associates.
- Hyde, A., Howlett, E., Brady, D., & Drennan, J. (2005). The focus group method: Insights from focus group interviews on sexual health with adolescents. *Social Science and Medicine*, 61, 2588–2599.
- Josselson, R. (1990). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Kegan, R. (1982). *The evolving self: Problem and process in human development*. Cambridge, MA: Harvard University Press.
- Kicklighter, J. R., Koonce, V. J., Rosenbloom, C. A., & Commander, N. E. (2010). College freshmen perceptions of effective and ineffective aspects of nutrition education. *Journal of American College Health*, 59(2), 98–104.
- Kitzinger, J. (1994). The methodology of focus groups: The importance of interaction between research participants. *Sociology Health and Illness*, 16(1), 103–121.
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British Medical Journal*, 311, 299–302.
- Kitzinger, J., & Barbour, R. S. (1999). Introduction: The challenge and promise of focus groups. In R. S. Barbour & J. Kitzinger (Eds.), *Developing focus group research: Politics, theory and practice* (pp. 36–46). London: Sage.
- Krueger, R. A. (1997). *Analyzing and reporting focus group results*. Thousand Oaks, CA: Sage.
- Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for applied research* (4th ed.). San Francisco: Sage.
- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design* (8th ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Lemons, L. J., & Richmond, D. (1987). A developmental perspective on the sophomore slump. *NASPA Journal*, 24(3), 15–19.
- Liamputtong, P. (2011). *Focus group methodology*. Thousand Oaks, CA: Sage.
- Lincoln, Y. S., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: A sourcebook of new methods* (2nd ed.). London: Sage.
- Mitchell, L. (1999). Combining focus groups and interviews: Telling how it is; Telling how it feels. In R. S. Barbour & J. Kitzinger (Eds.), *Developing focus group research: Politics, theory and practice* (pp. 36–46). London: Sage.
- Morgan, D. L. (1997). *Focus groups as qualitative research*. Thousand Oaks, CA: Sage.
- Morgan, D. L., & Krueger, R. A. (Eds.). (1998). *The focus group kit*. Thousand Oaks, CA: Sage.
- Morgan, M., Gibbs, S., Maxwell, K., & Britten, N. (2002). Hearing children's voices: Methodological issues in conducting focus groups with children aged 7–11 years. *Qualitative Research*, 2(5), 5–20.
- Naylor, S., Stoffel, B., & Van Der Laan, S. (2008). Why isn't our chat reference used more? Findings of focus group discussions with undergraduate students. *Reference & User Services Quarterly*, 47(4), 342–254.
- Quimet, J. A., Bunnage, J. C., Carini, R. M., Kuh, G. D., & Kennedy, J. (2004). Using focus groups, expert advice, and cognitive interviews to establish the validity of a college student survey. *Research in Higher Education*, 45(3), 233–250.
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Pizam, A. (1994). Planning a tourism research investigation. In J. R. Ritchie & C. R. Goeldner (Eds.), *Travel, tourism, and hospitality research: A handbook for managers and researchers*. New York: John Wiley & Sons.
- Raby, R. (2007). Across a great gulf? Conducting research with adolescents. In L. A. Best (Ed.), *Representing youth: Methodological issues in critical youth studies* (pp. 39–59). New York: New York University Press.
- Raby, R. (2010). Public selves, inequality, and interruptions: The creation of meaning in focus groups with teens. *International Journal of Qualitative Methods*, 9(1), 1–15.
- Raines, C. (2003). *Connecting generations: The sourcebook for a new workplace*. Menlo Park, CA: Crisp Publications.
- Rickes, P. C. (2009). Make way for Millennials! How today's students are shaping higher education space. *Planning for Higher Education*, 37(2), 7–17.
- Rodgers, R. F. (1990). Student development. In U. Delworth & G. R. Hanson (Eds.), *Student services: A handbook for the profession* (2nd ed., pp. 117–146). San Francisco: Jossey-Bass.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. Los Angeles, CA: Sage.
- Sanford, N. (1962). The developmental status of the entering freshman. In N. Sanford (Ed.), *The American college*. New York: Wiley & Sons.
- Stewart, D., Shamdasani, P. N., & Rook, D. W. (2007). *Focus groups: Theory and practice* (2nd ed.). Thousand Oaks, CA: Sage.
- Vaughn, S., Schumm, J. S., & Sinagub, J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, CA: Sage.
- Warr, D. J. (2005). "It was fun . . . but we don't usually talk about these things": Analyzing sociable interaction in focus groups. *Qualitative Inquiry*, 11, 200–225.
- Wellington, J. (2010). Supporting students' preparation for the viva: Their pre-conceptions and implications for practice. *Teaching in Higher Education*, 15(1), 71–84.
- Wilkinson, S. (1998). Focus groups in feminist research: Power, interaction, and the co-construction of meaning. *Women's Studies International Forum*, 21(1), 111–125.
- Williams, S. C., Bonnell, A., & Stoffel, B. (2009). Student feedback on federated search use, satisfaction, and web presence: Qualitative findings of focus groups. *Reference & User Services Quarterly*, 49(2), 131–139.

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