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Sharing Our Stories

Needs assessment methodology: Collecting stories

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The following paper is a collection of "stories" of different ideas on and experiences in conducting needs assessments (NA). Reflecting the variety found in NA methodology and theory, each contributing author touches on a different aspect of NA, from the theoretical to the very specific. Kathleen Brown gives a brief introduction to the collected pieces, while Curtis Kelly provides a broad overview of NA. Keita Kikuchi discusses a specific NA project that was conducted for a university English program. Looking in-depth at one aspect of a particular project, Hajime Umeda offers insight into some of the pitfalls of one of the most commonly used NA instruments, the questionnaire. Closing comments are provided by Kathleen Brown.

当論文は、ニーズ分析を行った際の様々なアイデアや経験を集めたものである。ニーズ分析の研究手法や理論の多様さを反映し、理論的な視点からとても詳細なものまで異なるニーズ分析の側面に触れてゆく。Kathleen Brownが短い導入を行ったあと、Curtis Kellyが幅広い視点からニーズ分析の概観を行う。その上でKeita Kikuchiによるある大学英語プログラムで行われたニーズ分析のプロジェクトに関して触れ、Hajime Umedaがあるニーズ分析プロジェクトを踏まえ、最もよく使われているアンケート手法の落とし穴に関しての考察を行う。最後にKathleen Brownが簡単にまとめを行う。

Introduction (Kathleen Brown)

The impetus for a discussion forum on Needs Assessment (NA) and the resulting paper came from a recognized increase in the amount of discussion and work being done on NA in Japan. Although NA is a vital step in curriculum and program development, it is often the neglected step in a systematic curriculum or program development projects. This is due, no doubt, in part to the still illusive nature of NA, and the perceived difficulties in conducting NA.

In many respects, NA is a collection of "stories", hence the relevance to the 2005 JALT Conference theme. Many questions remain as to whose stories to collect, what stories to collect, and how to collect them. This paper in itself is a collection of some of the many different ways in how this story collection is approached. Curtis Kelly provides a broad overview of the field of NA, including the variety of purposes for conducting a NA, as well as the many different ways that "stories", or data, are collected for a NA. Keita Kikuchi illustrates the multiple source/method approach to NA in his discussion of a specific NA project that was done at a Japanese university. In a rare but valuable look at the practical difficulties in carrying out one specific type of data collection, Hajime Umeda offers insight into some of the pitfalls of one of the most commonly used NA instruments, the questionnaire. In moving from the theoretical to the very specific, the breadth and depth that constitutes NA are evident, providing something of interest to anyone who is interested in or currently working in NA.

Needs assessment (Curtis Kelly)

Needs assessment has a long history in education, one that goes back at least as far as Ralph Tyler's ground-breaking monograph in 1949. Tyler introduced a basic four-step model that set the basic pattern for all curriculum design models to follow. When designing instruction, one must 1) state objectives, 2) select learning experiences, 3) organize learning experiences, and 4) conduct evaluations (Tyler, 1949). It was not until much later when his partner, Taba, came out with a refined model that diagnosis of needs was included as a separate step, but according to Tyler, he thought it was obviously a part of "stating objectives" (M. Wratcher, personal communication, July, 1997).

No matter in what direction adult education planning models evolve, needs assessment will certainly remain a key feature. It is used at all levels: in instructional design, curricular design, and in program planning (Weddel & Van Duzer, 1997). Across the decades, it has been defined in a number of different ways, but the basic idea remains the same. A needs assessment is finding the gap between what is and what ought to be. The gap might exist in the learner as a deficiency state (Kemp, Morrison, & Ross, 1996), or at the organizational or societal level (Nowlen, 1980). The gap can be based on discrepancies between a learner's real level of performance and that of a standard determined by normative or comparative data (Caffarella, 1994; Kemp et al., 1996; McKeachie, 1994), or the gap can be identified through intuition, as with "felt" needs (Cameron, 1988; Nowlen, 1980; Queeny, 1995). In fact, needs assessment is a valuable decision-making tool for program planning and educational improvement.

Needs assessment can be used for at least eight different purposes. These include:

1. Educational function - Needs assessment allows educators to tailor class content to the needs of students (Queeny, 1995; Weddel & Van Duzer, 1997).
2. Curricular function - Needs assessment has always been the basis for curriculum design, even before the concept itself was formalized (Elias & Merrian, 1995).
3. Learning function - Needs Assessment is used to assess learner characteristics so that teaching methods can be made to match (or differ). Learning style inventories are in themselves needs assessment instruments, and any instructor wishing to capitalize on the new discoveries in learning must utilize them.
4. Community or social function - Related to the curricular function, this kind of needs assessment helps determine widespread and urgent educational needs of a community (Knox, 1980). In this case, the needs assessment often deals with a need that does not yet exist, but one that can be predicted through the analysis of trends and social influences.
5. Marketing function - Whereas academic educators tend to view needs assessment as a tool to measure an educational gap, business educators view it as a means of determining market value. Needs assessment in this case is the systematic effort to determine market potential (Freedman, 1987; Weddel & Van Duzer, 1997).
6. Accessibility function - For working adults, accessibility has become an important factor in participation as well, so planners must conduct needs assessments on scheduling possibilities, the ability of potential participants to pay for a program, distance to a learning site, hotel room availability, etc. (Freedman, 1987; Hanson, 1991; Jarvis, 1995; Queeny, 1995).
7. Discrepancy function - This more specialized function of needs assessment attempts to discover discrepancies between the needs of the provider and the receiver. It is used to find out why educational programs do not work even though the discrepancies between real and desired levels of performance in the learners have been successfully identified (Queeny, 1995).
8. Self-awareness function - A little recognized but important benefit of needs assessments conducted with adults is that they can learn about their own strengths and weaknesses. Research on "good learners" has shown that learners who understand their weaknesses and take control of their learning tend to be more successful (Knowles, 1980).

Whereas once, needs assessment served as more or less just a pretest, there are many more options today with a far greater range of complexity. In fact, a number of modern theorists even consider intuition a viable form of needs assessment. There are seven basic methods found in conducting needs assessments, listed here in order of cost and complexity.

1. Intuition - This is the most common method. It might include reading newspaper articles or talking to peers.

Intuitive methods work when a planner has an accurate perception of the clients and a good sense of emerging trends, and has two advantages: no cost and quick response (Nowlen, 1980).

2. Market analysis - This method was developed by industry, and since industry has assumed a greater role in education, is being used increasingly often. The planner uses a scanning approach to collect information on trends, demographics, threats or changes to society, technological gaps, and other features of the environment that will require the training or retraining of workers (Cameron, 1988).

3. Sample classes - This very simple method related to market analysis is to offer a sample course and observe how many and what kinds of students sign up (Nowlen, 1980; Stewart & Cuffman, 1998).

4. Surveys and Self- Assessment - Surveys are the second most common form of needs assessment (Nowlen, 1980; Weddel & Van Duzer, 1997). They can be conducted as a widespread questionnaire, or given to a select segment of the population (see Umeda, this paper). They are cost effective and can yield a fair amount of information on attitudes, opinions, preferences, or perceptions (Caffarella, 1994). Unfortunately, as with other forms of self-assessment, the information is of "bounded rationality" (Cameron, 1988), which means that a survey can only identify the needs that respondents currently perceive, based on what is available and known to them. Worse, most of the self-assessment inventories are really just interest inventories, where again, interests are often mistaken for needs (Cameron, 1988). There is a built-in fallacy in asking someone who needs training to become a subject matter specialist in determining his or her own needs. How can one assess one's own competence in an area that one knows little about?

5. Diagnostic approaches - These methods allow outside experts to identify learning needs and prescribe appropriate treatment. The experts might specialize in employment or working conditions, especially if they have been involved in performance reviews with employees, or they might have expertise on the needs of local adults, such as religious or social workers (Nowlen, 1980).

6. Performance analysis - This method is used mainly in business to correct a specific performance problem. A related method is job and task analysis. The duties, tasks and activities that make up a particular job are analyzed (Cameron, 1988).

7. Interviews or group sessions - Interviews can be conducted with people in groups or individually, in person, or by phone (Caffarella, 1994; Jurich, Casper, & Hull, 2001; Nowlen, 1980; Roll-Pettersson, 2001; Weddel & Van Duzer, 1997). Group facilitating techniques can also be utilized, such as brainstorming, nominal group techniques, focus groups, and so on. In some ways, the methods are similar to those listed above, except that they have more rigor, especially when qualitative research techniques are employed.

An example of a needs assessment study using multiple methods/sources (Keita Kikuchi)

Although NA is claimed to be a critical part of the process of curriculum planning in second language learning (Brown, 1995; Richards, 2001), there are not so many published studies on this topic. In 1994, in his overview of needs analysis studies, West (1994) stated that only a handful of needs analysis studies have come out over the last 25 years. In the past decade, however, there has been an increase in such studies. For instance, there have been quite a few articles concerning the identification of students' needs in English programs in Japanese university classrooms (e.g., Busch, Elsea, Gruba, & Johnson, 1992; Hayasaka, 1995; Kikuchi, 2005; Kumazawa, 2003; Kusanagi & Kumazawa, 2004; Kuwabara, Nakanishi, & Komai, 2005; Nishihori, 1994; Tachiki, Ogane, & Perttila, 2002; Yonesaka, 1994).

Most of these studies, however, only use one method and one data source. Except for Busch, et al. (1992) and Kikuchi (2005) which employed both teacher and student questionnaires, all other studies were based solely on student self-reports. In his book on curriculum development, Brown (1995) states:

> . . . multiple sources of information should be used in a needs analysis — although the specific combination appropriate for a given situation must be decided on the site by the needs analysts themselves (probably after input from program administration, faculty, and perhaps students). (p. 52)

Kikuchi (2004) argues that if possible, it is important to use different research methods and sources to analyze needs. Although there have been a number of studies in Japan using student questionnaires to obtain student information, such data has limited depth. How cognizant are most 18 or 19-year-old learners of their own learning needs? How willing are they to state their views openly? In light of such questions, authors such as West (1994), Brown (1995), and Long (2005), as well as Witkin and Asltschuld (1995) have emphasized the importance of triangulating data from many sources using multiple methods.

Kikuchi (2001) is an example of a needs assessment (NA) study conducted for the English Department at a private 4-year university in the Tokyo area. In the following section, the main findings are summarized and the strengths of the use of multiple methods are discussed. Since the space is limited, the details of this study are not included. More detailed information on this study can be found in Kikuchi (2001, 2004) and Kikuchi, Ernst, and Strong (2004).

Contrasts between students and teachers on the perception of learning needs

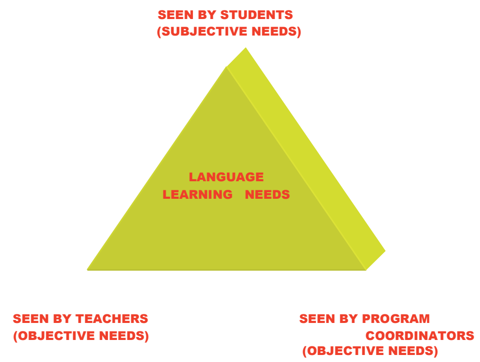
In this study, six categories of questions were asked concerning learner (a) target tasks, (b) problems, (c) preferences, (d) abilities, (e) attitudes, and (f) solutions. Responses were collected from three sources: students, teachers, and program coordinators. These methods were used: semi-structured interviews, open-ended and closed-response questionnaires, and observations.

Among the different methods used in this study, qualitative techniques were considered to be quite valuable in obtaining an insight into possible learner needs from the three different parties mentioned above. Usually, quantitative techniques, such as the implementation of a Likert scale in a questionnaire, help in collecting the data rather quickly, but it was learned in this study that combining both qualitative and quantitative methods can be very useful. As done in this study, researchers may be able to ask informants directly in one-to-one interviews so that they can start to have a good idea of the issue to be researched before they make a questionnaire. Using both open-ended and close-ended response questionnaires can help researchers to understand the complexity of the learners' needs. As in Kikuchi (2001), using both open-ended and close-ended response questionnaires can help researchers to understand the complexity of the learners' needs. Statistics alone may seem to give us clear-cut images of learners' needs, but they certainly give only a partial image of the fuller picture.

Also, as seen in Figure 1 below, language learning needs are perceived to be different depending on the source. In this study, for example, in terms of target tasks, students shared their idea of a 'dream job' while teachers and program coordinators shared the rather realistic view that many students might not need English communication skills in their daily lives after they graduate.

Objective needs have often been studied by investigating the teachers' views, while subjective needs have typically been discovered by looking at learners' views (Robinson, 1991). Objective needs include different kinds of information about learners' necessities, that is, what they have to be able to do using the target language, as well as deficiencies, what learners do not know or cannot do in the present situation (Hutchinson & Waters, 1987). Learners may have personal aims regardless of the requirements of their jobs or studies. It is rather difficult to obtain a clear conception of learners' needs, especially subjective needs, because subjective needs are often linked to affective and cognitive variables, such as learners' attitudes and personalities. However, these subjective needs should not be dismissed or neglected when working to build a sound curriculum.

Figure 1: Triangulation of language learning needs



Conclusion

Ideally, various resources should be consulted in order to understand learners' needs. Incorporating teachers, program coordinators, learners, and others who are actually using English at their workplaces, we can probably get the "big picture" of language learning needs. In addition, multiple methods are needed to collect data for needs assessment studies. As has been discussed in this paper, a combination of interviews and questionnaires can be useful in collecting learners' and others real "stories".

Difficulties in implementing a questionnaire instrument for data collection: A researcher's story (Hajime Umeda)

Introduction

Academics can encounter various kinds of obstacles/challenges while conducting research. Especially when a questionnaire is involved, a researcher should consider how to deliver it to the subjects and how to retrieve it from them effectively. This paper is a description of the struggle the researcher (author) encountered in using the questionnaire format as an instrument for data collection.

The purpose of the questionnaire was two fold: (1) to help determine the extent to which university graduates use English in their workplaces, and (2) if so, in what manner they do so. Japanese university students are frequently urged to improve their English proficiency while they study in order to help them find good jobs after they graduate. As a matter of course, the human resource staff in many companies expect prospective employees to have some knowledge of English. This trend, however, may not be applicable to all Japanese university students who are about to be employed.

A questionnaire was sent to Suzuka International University (SIU) alumni who graduated between 1998 and 2003. The roster of these graduates was obtained from the alumni association office at the university. The graduates were asked (a) if they have opportunities to use English at work, (b) if so, on what occasions, (c) frequency of their English use, (d) which of the four language skills (listening, speaking, reading, and writing) they think is most important, and (e) if they believe that the English education offered to them by SIU has been useful in their daily lives. The response type used in the questionnaire was primarily multiple-choice. Respondents, however, could write their own answers freely where they saw no appropriate choice or wanted to expand on their answers.

The questionnaire was distributed by post to 1,353 SIU Japanese alumni in the summer of 2004. Return envelopes were enclosed so that the respondents could send the completed questionnaire to the researcher by post. Subjects were also given the option of using a Common Gateway Interface (CGI) formatted questionnaire which was available on the author's homepage. The URL of the CGI formatted questionnaire was indicated in the questionnaire sheet mailed to the alumni.

Difficulties

Both in the preparation and collection of the questionnaire, several unanticipated problems arose. Listed below are some of the difficulties encountered with the preparation and collection of the questionnaire instrument.

In the stage of research preparation

1) Individual Information Protection Law

The researcher was allowed to refer to the SIU alumni roster to distribute the questionnaire to each subject. Because the researcher works at SIU, the alumni association office gave permission to use it for the purpose of academic research. However, if the same request had been made to another academic institution, the request would probably have been rejected due to the Individual Information Protection Law enacted in April 2005.

2) Lack of Access to E-mail Addresses

Since e-mail addresses were not available in the alumni roster, the researcher distributed the questionnaire sheets by post. At this point, there was anxious about the possibility that the return ratio would be lower than an e-mail distribution of the same questionnaire.

3) Questionnaire Submission Methods

There were two ways for the subjects to submit the questionnaire sheets with answers: (a) by use of return envelopes, and (b) on the Internet. Although the researcher would have preferred using e-mail alone, this method could not be realized as is discussed in number 2 above.

In the stage of collecting answers

1) Small number of returns

Only 89 subjects of 1,353 returned their questionnaire sheets with answers. This is approximately 6.6% of the total number of the subjects. This return ratio was lower than what the researcher had expected before releasing the questionnaire sheets to the subjects. Probable reasons include the following:

a. The researcher did not put return postage on the return envelopes. What was written in the explanation in the questionnaire sheet was that if each subject first put the postage on the return envelope and sent it back to the researcher, return the postage would be provided to the subject afterwards.

b. Quite a few copies of the questionnaire were probably sent to parents' domiciles where many of the alumni do not currently live.

c. Because no e-mail addresses were available, especially those of cell phones, the researcher could not send the questionnaire to each subject on the Internet.

d. The CGI formatted questionnaire could not be answered via cell phone.

Surprises

Twenty-three out of the 58 by-post correspondents did not indicate "sama" or "sensei" after the researcher's name on the return envelopes. Because the return envelopes were self-addressed, the title was not originally included after the researcher's name. In Japanese, it is common sense (or, the researcher believes it is common sense) that correspondents should put "sama" or "sensei" after the name of the addressee on a return envelope. This could imply that the subjects may have had little experience corresponding/writing by post and that for a young adult group, questionnaires mailed by post may not be the most effective way to elicit responses.

Conclusion

Although one of the most commonly used instruments in needs analysis, it is indeed difficult to ensure a high return rate on questionnaires that are distributed and collected off-site, as opposed to questionnaires that are given in a classroom setting or to on-site staff. When conducting research that involves a survey format, the current legal and social conditions in Japan can cause problems that may lead to diminished returns, which will ultimately compromise the results of the survey. Other methods of response and return, such as using electronic means or via telephone may be more effective than post collection methods, but obtaining the contact information to facilitate such distribution can be difficult in and of itself.

As a precursor to survey development, on-site interviews and observations are often cited as a valuable means of collecting data, although for their own reasons are often equally difficult to implement. As discussed throughout this paper, one single method is neither sufficient nor recommended for collection of data for a needs assessment. The issue of how to reach a large survey audience and end up with a successful return rate is a problem that faces anyone doing survey research in the field. It is hoped that by discussing some of the problems faced in this particular study, further ideas can be developed as to how better address the issue of large-scale survey data collection.

In Closing

The pieces above illustrate the variety of ways that one can approach the field of NA, both from a theoretical and a pragmatic viewpoint. The discussion that ensued from the issues raised in these pieces touched upon the many difficulties in conducting a successful NA, be it at the classroom, curricular, or institutional level. One of the most salient points in NA is the issue of accountability, regardless of the size or scope of the NA. Needs Assessments provide the justification for the decisions and choices that are made in any situation where a variety of opinions, wants, and needs exists. It is clear that there is often no one way to proceed, and that there is often no one right way to put together a curriculum or a program. What NA can offer to this process is the opportunity to collect data, or stories, that most accurately reflect the thoughts of those invested in a project. As more work is done on NA in Japan and in educational institutions around the globe, discussions such as this one can continue and become a prominent feature in language conferences such as the JALT Conference.

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Keita Kikuchi teaches at Waseda University. After obtaining an M.A. in ESL from the University of Hawai'i at Manoa, he has taught English, first in Singapore and now in Japan.

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