Research Note

An Introduction to Needs Analysis Methods: Options and Feasibility Issues

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This paper will detail the procedures available and the feasibility of conducting a Needs Analysis (NA) within a university-wide language program. The foundations of NA within the field of Applied Linguistics will be explained, followed by an introduction of the range of data collection methods available in a NA framework. Discussion will cover the importance of data triangulation through such research methods as classroom observations, semi-structured interviews, faculty and student surveys, and textual analysis of curricular materials.

Key Words : Needs Analysis, Program Design, Materials Development, Research Methods

Introduction

Within the field of Second/Foreign Language (SL/FL) instruction, Needs Analysis (NA) is often conceived of as an assortment of inquiry methods both quantitative and qualitative in nature. Normally associated more with curriculum construction in English for Specific Purposes (ESP) courses rather than in standard skills-based or content-based courses employing Communicative Language Teaching (CLT) principles, NA studies are reported in a sub-section of journals within the study of *English for Specific Purposes* (ESP). ESP encompasses a range of subordinate, more specified sub-divisions like English for Academic Purposes (EAP), English for Occupational Purposes (EOP), English for Business Purposes (EBP), and English for Medical Purposes (EMP). Recently, Task-Based teaching principles (c.f., Long, 2005) are increasingly viewed as a fertile ground for employing NA methods. Within such courses, NA serves to identify and isolate the purpose of instruction, shaping curricular development as dependent on what constitutes a rank order of learner needs. Program goals within such an approach are therefore defined by the particular demands requisite to a base of knowledge, skill set, or understood behaviors with a community of practice. Multi-party considerations form the basis for considering whose definition of learner *need(s)* best guides program development, whether this be from the point of view of administrators, curriculum designers, course instructors, present and future learners, or business and community leaders beyond the educational institution.

Contrasting this, Brown (1995) humorously (or ironically) describes non-ESP courses existing within many institutions and at various levels of education as ENOR (*English for No Obvious Reason*) or ENPP (*English for No Particular Purpose*). The argument can be expanded to include the view that having courses written in a codified manner does not automatically result in a curriculum that satisfies the needs of any particular stakeholder at any given point within the instructional period. A curriculum composed of General Purpose Courses relying on textbook selections (created more for mass production than specific targeting of learner needs) could be taken as "curriculum ignored" — in that the needs of students as they are defined by publishing houses and textbook writers (i.e., those not privy to or necessarily concerned with the actual student needs of a particular course) then act as substitutes for more precise, context-specific materials creation and implementation. Textbook writers, regrettably, serve to direct not only the content of class instruction but also by implication the method of instruction, as if all students learn in identical manners from a standard teaching method. Further critiques might be raised as to the level of interest and/or awareness textbook writers have of current theories accounting for SLA processes. Curriculum designers must inform material selection in a manner that best reflects the current state of knowledge, rather than by the newest set of published textbook materials.

Long (2005) lays out the argument for why NA should become more widely practiced stating, “general (language for no purpose) courses at any proficiency level almost always teach too much, e.g., vocabulary, skills, registers or styles some learners do not need, and too little, e.g., omitting lexis and genres that they do. Instead of a one-size-fits-all approach, it is more defensible to view every course as involving specific purposes, the difference in each case being simply the precision with which it is possible to identify current or future uses of the L2” (p. 19). Long, however, cautions the desire to engineer language learning solely to fulfill market demands. Though pragmatic in nature, latching educational goals with business trends conflicts with fundamental tenets of humanist values in education. Departments must consider the role of higher education and whether its purposes are somehow separate and independent from the constraints imposed by external institutions such as recruitment companies. On the other hand, academic and research fields, ultimately, decide the utility of their own agendas, and arguments can be made in favor of practicality. In the end, how tightly curriculum sides with real-world interests, research questions, or humanist values will affect the direction of educational goals set out with NA. The bottom line remains that to simply opt for a particular textbook or textbooks is to ignore the issue of addressing what (and whose) needs rank as most important within any particular educational institution.

The Shape of NA

As a form of applied social research, NA (sometimes called Needs Assessment) is a deliberate, systematic data collection procedure with the purpose of establishing a set of clearly defined needs from which to construct curricular goals that guide and inform materials selection and choice of instructional method(s). Whether at the stage of curriculum creation or emendation, implementation or alteration, a battery of NA procedures allows institutional administrators and program directors a means of gaining insight into the range and importance of stakeholder needs. NA is not always feasible, depending on the nature of the institution. An initial assessment often takes into account whether or not NA will serve the best interests of a particular setting. When such considerations have resulted in a favorable view of the role NA plays in maintaining or transforming program direction, value is then assigned to the sets of needs deemed beneficial for best framing a defensible curricular rubric. Needs can be framed in a variety of manners — such as perceived discrepancies within an existing program, particular knowledge essential for all learners to acquire for career success, or the components for sufficiently satisfying a set of stakeholder expectations. Caution is taken to operationalized needs as such rather than as merely *wants*. NA technically constitutes an information-gathering process employed to inform — and is considered separate from — program implementation.

The definition above is restricted to educational contexts, though a vast number of NA and feasibility studies are conducted within the business sector. Long (2005) suggests that though small-scale investigations (i.e., through teacher questionnaires or surveys prior or during an instruction cycle) are routinely conducted, large-scale NA research projects spanning entire programs or departments are infrequent. One reason for this may be in the limited knowledge classroom instructors generally have regarding research methods (though this may be changing with the increase of research methods courses in TESOL masters programs). Institutions like universities that are charged with fulfilling language requirement standards employ trained professionals able to equate curricular goals into classroom practices. In general, a teacher’s effectiveness in the classroom far outweighs her/his knowledge and experience conducting research. As such, it is important for language colleges and specific departments to reconsider the relevance of employing and supporting at least a small sub-set of the instructional staff familiar with common practices employed within both qualitative and quantitative research traditions. Without individuals trained as applied linguists in a variety of data collection/analysis methods, the demands of conducting a full-scale, extended NA would be too great and the costs of contracting such services to outside consultants too large. In response, administrators might wonder what benefit such thinking would necessarily mean for their contexts. In short, why restructure, re-staff or retrain faculty when curricular ends, as presently conceived, are seemingly being met? Even for a curriculum operating without noticeable or even abundant flaws, NA approaches can be used not only to reveal the details of how goals are manifested within the classroom learning experience but also identify previously unseen or ignored issues requiring redress. Providing a routine state of the department report ensures teacher accountability and guarantees to administrators that educational directives being are satisfied.

In a sense, especially for programs in existence, NA is a way of performing routine, in-house diagnostic assessments of whether the stated goals of the institution are being achieved to their expected levels. NA is a research mechanism to ensure quality controls — a methodological, question-based means of uncovering answers to what constitutes the needs of a set of individuals. For instance, Rossett (1982) lays out five categories of questions useful in establishing what constitutes the needs for any particular context: *problems*, *priorities*, *abilities*, *attitudes* and *solutions*. An example of a *problem* would be something such as “in your experience, what are some of the difficulties you struggle with when attending to academic lectures?” For *priorities*, a question might ask faculty members to “rank the skills you believe most useful for success in a particular class you instruct?” At the *abilities* level, one example could be “when implementing program diagnostics for streaming incoming students, how is the issue of proficiency operationalized within the instrument being employed?” *Attitudes* would cover a question such as “what do you feel are the qualities that best reflect successful instructors within the curriculum?” And, finally, *solutions* come relatively late in the NA process, once problems have been accounted for and detailed. An example would be “given the disconnect between the language abilities of learners exiting our institution and upon entrance to your firm, how might you suggest altering our existing curriculum?” Each of these questions has been phrased in such a way as to not only provide an example of each category but also to reflect the range of stakeholders to whom they might be asked (i.e., learners, instructors, assessment specialists, program coordinators/directors, and representatives from outside institutions).

Providing a general description of the institution and its networks and the existent (or expected) horizontal and vertical integration is considered essential near the outset of data collection, as it provides a means of assessing and framing future decisions. When starting a NA within an on-going curriculum, having a clear understanding of the mechanisms and motivations for what gets done and how it is conceptually defined will offer researchers a framework from which to inductively set about ways of organizing the data as it is collected. Imposing an excessive amount of structure upon the research from the outset, however, could result in restricting what could be critical information. As this institutional overview becomes more settled in the researchers’ minds, it is crucial that a working operationalization of what constitutes the learner *need(s)* be formulated. Understanding the need(s) will allow for further description on how best to conceive the proper unit(s) of analysis — whether that be a set of discrete items (e.g., technical vocabulary), a particular skill (e.g., a range of skills commonly employed by “experts” in the field), or a cognitive ability (e.g., being able to judge the quality of a raw material along with its properties). Detailing what the focus of instruction is will guide decisions on what is learnable at any given level, how best to provide an effective learning context, and which materials to incorporate.

Within earlier NA research, needs were simply defined as discrete language components within a Structural syllabus (Dudley-Evans and St. John, 1998). Grammatical and vocabulary items *deemed* essential for language use were designed into materials and instruction. Those needs were often conceived as survival English — as in the earliest research in the 1970s regarding “The Threshold Level” (van Ek, 1976). As a result, functional/notional syllabus design arose, assisted by what Chambers (1980) describes as Target Situation Analysis. West (1994) too looks at communicative variables as an essential means toward defining learning needs. The most notable of these is the Munby Model, which lays out language needs by asking such questions as “what is the nature of the linguistic setting;” “who are the interlocutors within that setting;” “in what manner will the communication occur” (via e-mail, over the phone, face-to-face), and “what genre of discourse is required” (lecture, interview, naturalistic conversation, academic appointment between teacher and student); “what proficiency level is assumed necessary to accomplish the intended communicative act;” and “which communicative act is designated or believed to be the ultimate goal for the learner within that situation and with that particular interlocutor.” Though critics of operationalizing needs as such exist (c.f., Hutchinson and Waters, 1987; West, 1994) there is no question that models like that proposed by Munby placed CLT-based conceptions of language learner needs more front and center in influencing curricular design.

Benesch (2001), citing McDonough (1986), calls into question the legitimacy of many earlier manifestations of needs (e.g., Rhetorical analysis and Genre analysis) as they unquestioningly assumed the need as dictated by conditions outside of the learner. The need was not the learner’s as much as what a distinct situation required of a learner. No concept of learner motivation toward that context was considered. For all its benefits, this, too, was an assumption promoted within the CLT-based Munby model, in that language as a notional/functional method of discourse places primary import on constraints conditioned from the setting and its interlocutors — rather than as learners actively considering the reality of their own place within the situation (e.g., many initial conversations were contrived for learner memorization and entailed dialogue between high-status occupations such as doctors, lawyers and professors). As such, learner needs then were portrayed as situation dependent rather than manifest within the learner themselves; social construction, therefore, had little role in shaping language learning materials and activities, in directing in-class instructional methodologies, or achieving assumed goals of the courses. Course materials required learners to suspend any intrinsic motivations they might have had for learning the language and instead to mimic notions material-developers conceived as relevant. Ignoring learner motivations for learning the target language will still result in a list of *needs*; however, the course materials produced from them might prove ineffective within the classroom. For instance, CLT-centered definitions of need will not necessarily function within a context purportedly working towards a goal of academic preparation, and might in fact work counter to many expectations of the stakeholders. How NA researchers construct a working-definition of need will ultimately shape the data collection process.

One strategy for clarifying which points of view are paramount (i.e., whose needs are most valid) would be to answer as explicitly as possible the question of who constitutes the sample population selected for data collection. Will it include the target group of learners, the course instructors, the program administrators, the institutional staff and deans or college presidents within the institution? Will such stakeholders as parents, community members, and business leaders be consulted? As is immediately apparent from this list of potential stakeholders, another question to be broached early on and prior to any data collection is to define who the consumers of the eventual products (i.e., suggestions or recommendations) of the NA will be. The assumed audience for the NA will direct not only the eventual production of the written form (or spoken in the case of presentations, workshops, and orientations) but also inform which sets of values receive attention. Whether this occurs for the purpose of informing participant learners of their stated collective needs so as to streamline motivation issues or inform materials selection, or happens at the level of introducing change from within and across an existing educational context (e.g., employing methods such as Critical Needs Analysis). Designating the eventual audience clearly informs research decisions and should be kept in mind throughout the data collection and analysis stages.

It is important then — not just at the start of the NA process but throughout — to be conscious of the potential value-laden role researchers assume. To take the stance that what is good for one particular stakeholder (e.g., instructors or future employers) is necessarily (or will necessarily be perceived as) equally beneficial to other stakeholders (e.g., learners or program administrators) ignores fundamental conflicts inherent within conducting NA and following through with implementing suggested alterations. As such, conflict should not necessarily be taken as ultimately negative or fraught with eventual, permanent stakeholder discord; rather, the potential for future conflict should inform researchers as they create a final product proposal that mediates rather than ignores such tensions. To insure that such mediation is considered and accounted for, a thorough appraisal must be undertaken when constituting the research team involved in the data collection and analysis, the evaluation of stakeholder needs, and the proposed plan for future action. The more inclusive this group — with participants across the spectrum of identified stakeholders within the context — the more likely the final product will be received and then implemented.

Curricular resistance is endemic due to the profound effects educational institutions have both within the learning context and on a larger social level (Ornstein and Hunkins, 2009). Proponents of various pedagogical methods vie for influence within a curriculum to ensure their freedom to practice pedagogical methods congruent with their personal teaching philosophies and approaches to second language acquisition. Brown (1995) enumerates the various methods at present or at some time commonly in practice in SL instruction: audiolinguilism, classic approach, task-based, situational, functional, natural way, silent way, direct method, the army method, skills, notional, total physical response, suggestopedia and eclecticism (p.1). It is conceivable that a combination of these various teaching methodologies exists within most language departments. Therefore, the more thought-out the creation of the NA team whose goal it is to account for the various viewpoints of the key participants in the context, the more likely the success of the eventual NA product.

From Purpose to Process

Witkin and Altschuld (1995) lay out a multi-phase overview of steps in the NA process, beginning with an exploratory phase in which needs themselves are operationalized. What is a *need*, as opposed to a *want* or an *interest*? Who is best able to account for and speak regarding relevant needs? How best can the stated needs be disentangled from wants or from deep-seated beliefs regarding proper methods? In reality, are the needs expressed during the data collection process the actual needs (e.g., are students the best source of knowing what they should be taught for any given course)? How best can innovations be introduced into existing designs commonly considered successful within the institutions? What commonalities can be expressed from potentially conflicting stakeholder needs? In the end, whose needs are to be ranked higher than those of others is an important question. In essence, whose needs carry the greatest weight in terms of loss suffered from not being fulfilled (e.g., are the needs of program staff equal to those of business leaders hiring future graduates of the institution)? Another aspect of the first phase is setting the boundaries for the types and amount of data, and identifying any major issues of practical concern relating to conducting such a research agenda within a particular setting (e.g., gaining official sanction from administrative authorities and other logistical issues). Within phase one itself, phase two must also be conceived — that being the *data gathering* process, which itself includes an analysis component. Then, the final phase is *utilization* — in which findings meet with plans for future action. Even the most well-thought-out of NAs will still encounter difficulties when implemented, as participants not consulted during data collection (e.g., in-coming students, new faculty hires, changes in administration and staff) will require orientation to the proposed change(s).

The methods employed within the data-collection phase of any NA are a combination of both qualitative and quantitative, and, simply put, there is no single way of conducting one. A cursory examination of the procedures available to NA researchers in Brown (1995) is displayed in Figure 1.

Combine this with the various procedures offered by Long (2005) (see Figure 2) and it becomes evident how complex the process of data gathering can become for language teaching professionals, let alone practiced researchers in the field of applied linguistics.

Figure 1: Brown (1995) Data Collection Methods

advisory meetings	diagnostic testing
achievement testing	diary studies
behavior observation	self-rating
inventories	case studies
group interviews	individual interviews
letter writing	judgmental rating
interest group meetings	proficiency testing
opinion surveys	review meetings
bio-data surveys	

Figure 2: Long (2005) Data Collection Methods

non-expert intuitions	participant observation
expert practitioner intuitions	non-participant observation
unstructured interviews	classroom observation
structured interviews	diaries, journals, and logs
interview schedules	role-plays, simulations
surveys and questionnaires	content analysis
language audits	discourse analysis
ethnographic methods	analysis of discourse
register/rhetorical analysis	genre analysis
computer-aided corpus analysis	task-based, criterion-referenced performance testing

Analysis Framework

The amount of data produced from the various methods available will create analytic issues. The choice of an analytic framework employed to discriminate and rank data by its value is not predetermined, but without an understanding of the eventual analytic tool used to assess the data, difficulties will arise. A review of the analysis methods proposed by Brown (1995) and Benesch (2001) include the following: Target Situation analysis, Present Situation analysis, Pedagogic Needs analysis, Deficiency analysis, Strategy analysis, Learning Needs analysis, Means analysis, Register analysis, Rhetorical analysis, Discourse analysis, Genre analysis, Critical Needs analysis, and Rights analysis.

To assist future researchers, the following checklist of steps should be kept in mind when starting a NA.

1. present overview of research context
2. decide upon data-collection methods and procedures
3. match methods with participants with a pragmatic view toward data
4. detail the variety of stakeholders and *needs*
   - operationalize *need* for stakeholders within the context
   - potentially assess hierarchy of *needs*
   - apply inductive approaches to data analysis
   - define operationalized *needs* as they are reflected within data
   - uncover limitations within context that hinder need fulfillment
5. supply direction for implementing change to rectify discrepancy
   - design cyclical program evaluation/diagnostic measures
   - continue to gather data for future curriculum assessment
   - set a time-frame for future NA cycles

Concluding Remarks

One-shot NA appear throughout the research — either at the genesis of program development or well into a program's life when used to address apparent shortcomings in the educational product. To spend the time and energy designing the study (matching methods with participants), then analyzing the data, only to produce suggestions for change but without diagnostic methods in place as monitoring tools to ensure change does occur (and in the manner suggested) is shortsighted. But then to stop collecting data with those same needs in mind or to narrowly conceive the idea that needs are static, unchanging entities continuing from semester to semester, year to year, decade to decade is to ignore what is probably the most fundamental argument for conducting a NA at the institutional level in the first place: to ensure the best means of instruction accountable to the needs of a designated group or groups at any given time. To do that requires continual research. An initial one-off NA provides only a temporary understanding of the nature of the water in a stream in one location and at one point in time. At another point and another time, differences may readily become observable. An institution able to continually monitor the water will better fare in achieving educational goals on a continual basis.

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