rEFLections
July 2013 Vol. 16

Creating a Comprehensible Item Pool for a Student Questionnaire: Challenges and Suggestions

Junko Noguchi
Kanda University of International Studies
Keiko Takahashi
Otemon Gakuin University
Katherine Thornton
Kyoto University of Foreign Studies

Abstract

A survey is one of the most common tools used to elicit students' voices in the process of curriculum development. Even though it is a common tool, it can also be challenging to design question items that elicit the information that researchers are interested in. This challenge is heightened if the topic of the survey is something very abstract such as self-directed learning (SDL). In this paper, we will share how we overcame this challenge during the generation of an item pool for a needs analysis survey about SDL, which was conducted as a part of a systematic evaluation of the current curriculum. The importance of administering multiple pilots and taking creative approaches to data elicitation when designing item pools will be discussed.

1. Introduction

Since its inception in 2001, the Self Access Learning Centre (SALC) at Kanda University of International Studies (KUIS) in Chiba, Japan has promoted SDL through several optional learner training and autonomous learning modules (Noguchi and McCarthy, 2010; Yamaguchi et al., 2012). Learning advisors at KUIS are currently involved in a systematic evaluation of the current curriculum, using an adapted version of Nation and Macalister's (2010) curriculum development framework to guide the process (cf. Thornton, 2012, 2013). One of the major stages of this design process was a needs analysis, which elicited views from learning advisors, teachers, senior management, and students. For an overview of the whole needs analysis project, please see Takahashi et al. (2013).

The focus of this paper is on the research method used to design an item pool for the needs analysis survey employed to gain a better understanding of students' SDL needs and wants. While many examples of methods for collecting information on learners' linguistic and even strategic needs can be found in the literature (Graves, 2000; Long, 2005; Munby, 1978;Richards, 2001), very few institutions have reported on how they have gained an understanding of learners' SDL needs. By this we mean the skills and knowledge, including both cognitive and metacognitive skills, but also affective strategies, required for learners to be successful autonomous learners (Holec, 1981;

Little, 1991; Wenden, 1998). In this paper, we would like to share the process used to generate an item pool for the survey, detailing the challenges we faced and the solutions we developed. Due to space restrictions, we will not discuss the wider needs analysis project in this paper. We hope our description of the survey design process can inform others who may want to develop a similar instrument.

2. Methodology

2.1 *Context*

KUIS is a small university, with around 3,000 students all majoring in foreign languages, and a particular emphasis on fostering learner autonomy. The courses, which are the subject of a long-term curriculum development project, are voluntary courses designed to promote autonomy offered through the SALC to all freshmen students.

This survey formed part of the curriculum project guided by the following research questions:

What are the SDL needs of KUIS Freshmen?
How can the SALC best address them?

2.2 *Participants*

Although we were interested in the needs of freshmen, we decided to use second-year students as our target group, as they have already experienced the freshman year, and may be able to reflect on what they had required to complete it successfully. In order to get voices from different populations of students, the survey was conducted across campus with students from different departments, and with differing levels of familiarity with the self-access centre.

2.3 *The challenge - creating a comprehensible item pool*

Although we felt it important that we consult students directly as part of the needs analysis, through our experience of working with them we were aware of the fact that they had very little awareness of the nature of SDL. How could we administer an instrument designed to discover their needs and wants about SDL if they did not clearly understand what this process entails?

One accepted method in survey design is to base the items on interviews or other data elicited from the target group (Dornyei, 2003). This is the approach we decided to take in this study, using an open-ended written prompt combined with a follow-up interview, in the learners' native language, Japanese, to generate the initial data. This data was then analysed and reworked into a list of statements which comprised the final item pool. By generating data directly from students, and using their own voices in these statements, we hoped to make each item comprehensible to the target group.

The most challenging part of the process was to develop a good preliminary prompt to elicit data for generating the item pool for the survey. This required a lot of brainstorming and piloting of the prompt with students. In developing the prompt, we followed a three-step process:

1. brainstorm and decide a question;

2. pilot the question with several students; and
3. analyse the results and feedback from the pilot to tweak the question.

All the prompts and follow-up interviews, and the final survey itself, were conducted in Japanese, the first language of the students, in order to maximise the respondents' ability to express themselves. For the purposes of this paper, all of this is translated into English. It took three attempts to develop a suitable prompt that would give us the kind of information that we needed. The following section explains this process in more detail.

2.4 *Designing a suitable prompt*

In the first attempt to collect information about their SDL, we asked students: 1) what was difficult about SDL, and 2) what kind of support they felt they needed for their SDL.

The first version of the prompt was as follows (translated here from the original Japanese):
"Think back on your freshman year at KUIS. What are the things you felt were difficult in your self-directed study? What kind of support would have been helpful?"

We realized from the results of this first prompt that students had little time to do SDL activities since they have many assignments and other commitments. Also, as for support, they gave us more technical suggestions that related more to the administration of the SALC, such as longer opening hours, which could not help us in developing a curriculum. As this question about their actual experience of SDL had not been effective, we decided to ask a more general question about their knowledge of SDL.

Our second pilot specifically asked students about the skills and knowledge that helped them to do SDL effectively.

The actual prompt was as follows (translated here from the original Japanese):
"Think back on your freshman year at KUIS. What kind of skills/knowledge/knowhow would help you to do your self-study (study that you will voluntarily do with or without other students; homework is not included) effectively? Write down as many ideas as you can think of."

As students are naturally often more focused on the linguistic aspects of language learning, this prompt, with its use of the words skills and knowledge, elicited a variety of cognitive strategies students used to learn languages in their spare time, reassuring us that they did have some understanding of the nature of SDL. However, these items, such as reading graded readers, watching movies with English subtitles etc., were too specific for our purposes. If we were to create an item pool from this data we would have needed an exhaustive list of cognitive strategies, such as that from Oxford's SILL (1990), which would result in a lengthy survey. Their responses also didn't feature the metacognitive aspects of learning, such as planning, which we knew to be important in SDL.

It was proving difficult to come up with the appropriate wording which would resonate with

students in order for them to be able to understand what they were being asked to answer. In the third attempt we tried a different tactic. Rather than asking students about their own experience of SDL, which in many cases seemed minimal, we decided to be less personal, and have students describe others whom they see as effective self-directed learners.

The prompt we used was (translated here from the original Japanese):
"Think of students who do their self-directed studies (studying that you voluntarily do; homework is not included) effectively (regardless of their language ability). What kinds of characteristics do they have in common? Write down as many as you can think of. Among the characteristics you listed above, which characteristics do you think you need? Write down the characteristics with the reasons."

This final technique proved very effective. The students' answers included the kind of skills that are commonly defined as SDL in the literature, such as setting goals and using time effectively (see below), and the number of answers increased. This approach seemed to work most appropriately for us to see the students' world.

In analysing the wording of the different prompts, we believe there were several reasons why this less-personal but broader technique was effective. By asking students simply to describe the characteristics of other people, this broad prompt allowed them to stimulate their imagination and write down whatever occurred in their minds without any restriction which may have been caused by using words such as support, skills or knowledge. Additionally, by thinking of others, they did not need to be confined to their own experience but could reach out to all the possible options, including their ideals. Finally, as they were asked to describe actual people they knew, the respondents also had a concrete image upon which to base their answers. It is often easier to see the characteristics and actions of others than of oneself. The lesson we learned from the third trial is the importance of creativity.

Using this prompt, administered in written form then accompanied by a follow-up interview in which each student was asked to expand on or clarify their answers, we collected data until the answers reached the point of saturation (Corbin and Strauss, 2008) and no new answers were emerging. This happened after 11 students had been interviewed. We now had the concepts on which to base our item pool, expressed in the students' own words. The next step was to organise them into individual statements, each expressing a single idea.

3. Coding the data

The second step involved the researchers coding and categorizing the data gathered from the prompt, to make a list of items which could be included in the final survey to find out what aspects of SDL students felt they needed to learn more about.

In the process of analyzing data, the researchers agreed to eliminate the following groups of items because those items were not relevant to our research questions:

1. items which addressed issues which the SALC curriculum has no control over or

remit for, such as those relating to linguistic proficiency (e.g. effective learners have good basic grammar knowledge)

2. items detailing specific cognitive strategies and activities (e.g. effective learners speak to themselves in English, read graded readers). As mentioned above, to include an exhaustive list of these would have produced an impractically long survey
3. items that are not teachable such as personality traits (e.g. effective learners are active, motivated and keen to study)

After excluding the irrelevant items, the three researchers then examined the remaining items individually and developed rough codes for the data using a grounded research approach (Corbin and Strauss, 2008). The codes were refined and agreed upon through discussion, resulting in six overall categories, each with several subcategories, with a total of 23 items in all. Each item represented one single idea. Although we had to change the wording at times, as much as possible we preserved the students' own expressions.

The six categories, which emerged from the coding process, resulted in the following statements (here translated into English):

Goal Setting	How to set clear learning goals
	How to design a plan to achieve the goals l've set
	Imagining my future
	How to carry out the plan that l've made
Time Management	How to balance learning and relaxation
	How to reduce the amount of wasted time
	How to use my free time/commuting time for studying
	How to understand deadlines and set priorities for thing I need to do
	How to get in the habit of studying at a regular time
Affective Factors	To have the confidence to not be scared of speaking English
	How to actively tackle difficult things
	How to be able to continue learning English
Resources	Asking teachers about way to learn
	How to find opportunities to talk with exchange students
	Communicating with ELI teachers actively
	How to have conversations with teachers on my own initiative
	How to use the SALC in a way which suit my goal
	Getting advice from teachers at the Writing Centre
Learning Activities	How to learn English in lot of different ways (not just sitting at a desk)
	How to connect my interests with learning English
	How to in corporate learning into my everyday life (by listening to music or watching movies etc)
	Finding the ways to learn that suit me
Learning Environment	Finding an environment where I can concentrate on studying alone

This item pool was then used to design the final survey, which was administered with just under 240 second-year students across the university departments. While that administration and its findings are not the subject of this paper, a copy of the survey can be found in the appendix. The use of four distinct categories rather than a Likert scale proved to be a limitation in the analysis stage of the project, and for this reason we would advise against replication studies using the exact same survey design.

4. Conclusion: Implications for survey design

Creating a survey is a notoriously complicated process, and although we were prepared for it to take some time, we were surprised at quite how time-consuming it was to produce a pool of items which we were confident would represent students' current knowledge of SDL skills, expressed in language that they could understand. As we have explained, the fact that the topic was one of which students themselves do not necessarily have a clear understanding, made it considerably more challenging. What was effective for our case was not only changing the wording (from "skills" to "characteristics"), but also changing the focus of the question from asking the participants to think about their own experiences of SDL to asking their perceptions of those who are good at SDL. This shift from the first person to the third person seemed to free up students to respond more broadly with a concrete image, that of other students, to describe.

The time spent developing an item pool using students' own voices, based on a prompt, which was itself the result of several pilots, with follow-up interviews, meant that the final survey was comprehensible to students and elicited useful data for our needs analysis. In particular, we would recommend anyone faced with a similar situation to pay sufficient attention to the construction and piloting phases, which proved invaluable in our study. We hope our description of the survey design process can inform others who may want to develop a similar instrument eliciting information from learners on concepts of which they may not have a detailed conscious understanding or the metalanguage required to express that understanding.

References

Corbin, J. & Strauss, A. (2008). *Basics of qualitative research: Grounded theory procedures and techniques* (3rd ed.). Newbury Park, CA: Sage Publications.

Dörnyei, Z. (2003). *Surveys in second language research: Construction, administration, and processing.* Mahwah, NJ: Lawrence Erlbaum.

Graves, K. (2000). *Designing language courses: A guide for teachers.* Boston, MA: Heinle & Heinle.

Holec, H. (1981). *Autonomy and foreign language learning.* Oxford, England: Pergamon.

Little, D. (1991). *Learner autonomy 1: Definitions, issues and problems.* Dublin, Ireland: Authentik.

Long, M. H. (2005). Methodological issues in learner needs analysis. In M. H. Long (Ed.), *Second language needs analysis* (pp.19-76). Cambridge, England: Cambridge University Press.

Munby, J. (1978). *Communicative syllabus design.* Cambridge, England: Cambridge University Press.

Nation, I. S. P., & Macalister, J. (2010). *Language curriculum design.* London, England: Routledge.

Noguchi, J., & McCarthy, T. (Eds.). (2010). Proceedings from JALT 2009: *Reflective Self-study: Fostering Learner Autonomy*. Tokyo, Japan: JALT.

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Boston, MA: Heinle & Heinle.

Richards, J. (2001). *Curriculum development in language teaching*. Cambridge, England: Cambridge University Press.

Takahashi, K., Mynard, J., Noguchi, J., Sakai, A., Thornton, K., & Yamaguchi, A. (2013). Needs analysis: Investigating students' self-directed learning needs using multiple data soures. *Studies in Self-Access Learning Journal*, *4*(3), 208-218.

Thornton, K. (2012). Evaluating a curriculum for self-directed learning: A systematic approach. *Independence*, *55*, 8–11.

Thornton, K. (2013). A framework for curriculum reform: Re-designing a curriculum for self-directed language learning. *Studies in Self-Access Learning Journal*, *4*(2), 142-153.

Wenden, A. (1998). *Learner strategies for learner autonomy*. London, England: Prentice Hall.

Yamaguchi, A., Hasegawa, Y., Kato, S., Lammons, E., McCarthy, T., Morrison, B. R., Mynard, J., Navarro, D., Takahashi, K. & Thornton, K. (2012). Creative tools that facilitate the advising process. In C. Ludwig & J. Mynard (Eds.), *Autonomy in language learning: Advising in action* (pp. 137-153). Canterbury, England: IATEFL.

Authors:

Junko Noguchi taught at a public high school in Chiba, Japan after getting her M.A. in TESOL from Soka University of America, and is currently working as a learning advisor at Kanda University of International Studies. She is also a Ph.D. candidate at Temple University, Japan. Her research interests include articulatory phonology, self-directed learning and metacognition.
junko-n@kanda.kuis.ac.jp

Katherine Thornton is a learning advisor and the Program Director of E-CO (English Café at Otemon), a self-access centre at Otemon Gakuin University, Osaka, Japan. After gaining an MA in TESOL from the University of Leeds, UK, she has worked as a learning advisor for six years, previously at Kanda University of International Studies. She is also the current president of the Japan Association of Self-Access Learning (JASAL). Her research interests include self-directed learning, curriculum development and learner beliefs.
thornton.katherine@gmail.com

Keiko Takahashi holds an MA in TESOL from Monterey Institute of International Studies, California, USA. She is currently working as a learning advisor at Kyoto University of Foreign Studies. Her research interests are individualized learning, learner development and language learning advising and coaching skill training.
ke_takah@kufs.ac.jp

Appendix: Finalized questionnaire

Think back on your freshman year at KUIS. For the 22 items listed below, think about whether you would have liked the opportunity to leam about the following thing in your first year, and choose the most suitable response from the four options given. (If you don't have experience of a Freshman year at KUIS (for example if you transfered from another university) please answer by thinking about your experience this semester at KUIS.)

Answer Options	**Yes, I couldn't do this, so I would have like the opportunity to learn about it.**	**Yes, I was able to do this to a certain extent, but I would have liked the opportunity to learn more about it.**	**No, I was able to do this to a certain extent, so I don't think it's necessary to learn about it.**	**No, I could already do this so I don't think it's necessary to learn about it.**
Getting advice from teachers at the Writing Centre				
How to connect my interests with learning English				
Imagining my future				
Communicating with ELI teachers actively				
How to use the SALC in a way which suit my goal				
How to actively tackle difficult things				
How to find opportunities to talk with exchange students				
Asking teachers about way to learn				
How to have conversations with teachers on my own initiative				
How to get in the habit of studying at a regular time				
To have the confidence to not be scared of speaking English				
How to be able to continue learning English				

Answer Options	Yes, I couldn't do this, so I would have like the opportunity to learn about it.	Yes, I was able to do this to a certain extent, but I would have liked the opportunity to learn more about it.	No, I was able to do this to a certain extent, so I don't think it's necessary to learn about it	No, I could already do this so I don't think it's necessary to learn about it.
Finding the ways to learn that suit me				
How to set clear learning goals				
How to design a plan to achieve the goals l've set				
How to carry out the plan that l've made				
How to learn English in lot of different ways (not just sitting at a desk)				
How to use my free time/ commuting time for studying				
How to balance learning and relaxation				
How to understand deadlines and set priorities for thing I need to do				
How to in corporate learning into my everyday life (by listening to music or watching movies etc)				
Finding an environment where I can concentrate on studying alone				