Elena Litvinenko

PhD student

Kazan Federal University

lena2703@inbox.ru

Motivation questionnaire: basic principles and steps

Abstract: The article examines the experience of foreign scientists in the use of motivational surveys. The aim is to describe how motivational questionnaires are carried out in the field of second and foreign language learning. There is an explanation of basic principles and steps to design a questionnaire in order to get valid and reliable data. Then it is showed that the main sides of quantitative data analysis are applied to questionnaire data, followed by results. Finally, it is presented an example of the questionnaire design which has been put into practice with the description that might be helpful to construct a motivational questionnaire.

Key words: motivation, questionnaire, second language, foreign language, validity, reliability

Introduction

This article is considered a deeper understanding of the language learners' motivation, which has an important pedagogical value (Nikitina, Mohd, Cheong, 2016; Wilson, Dewaele, 2010). However, investigating students' motivation in second and foreign language learning is complicated in its nature because there are different ways and tools used by researchers in considering various aspects of this construct (Gordeeva, Sychev, Osin, 2014). One of the popular methods of data collection in second language (L2) or foreign language (FL) research is questionnaires. They are easy to construct, extremely diversified, good to gather a large amount of information quickly and readily to process.

Motivation Questionnaires (MQ) help better understand and explore the conditions of increasing or decreasing student's enthusiasm and motivation in learning a second or foreign language. MQ can include different motivation dimensions, paying attention to Self-Determination Theory, Competence, and Relatedness (Deci, Ryan, 2012). For instance, Dörnyei Z. notes that despite the growing methodological awareness, the design of many MQ in the field of second and foreign language learning does not fully cover the necessary theoretical and, especially, practical knowledge of its adequate processing (Dörnyei, Csizér, 2012). It is possible to find some studies

which start out with exciting research questions but are flawed with a bad design or inadequate analysis (Dörnyei, Taguchi, 2009). Consequently, the main research problem is a lack of empirically based evidence on adequate psychometric properties in terms of the reliability and validity of the questionnaires. Based on the foregoing, the aim of the study is to analyze the experience of implementing motivation research tools for students, learning a second or foreign language and to identify the main principles and steps of the quantitative construction of questionnaires.

The study

There are useful works about questionnaires in different disciplines as psychology, education, sociology, statistics, etc. Unfortunately, there is a limited number of guidance materials about questionnaires in the field of motivation. However, drawing on a review of the literature, we have an attempt to summarize the information how to construct and administer motivational questionnaires and to identify the key principles and steps.

Brown J. D. provides a comprehensive account of motivation research. He uses questionnaires as one of the main data gathering instruments and defines them as "any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers" [Broun, 2001: 6]. He mentions that the results of a questionnaire survey are usually quantitative, but the instrument may contain some open-ended questions as well that a qualitative analysis will require.

Gillham B. publishes a monograph about motivation research methods, which has a readable and entertaining style (Gillham, 2000). He chooses the method questionnaire to infer about the degree of the individual's development more general underlying abilities, skills and second and foreign language proficiency.

Dörnyei Z. and Csizér K. provide a precise definition for a questionnaire such as "a research instrument for measurement purposes to collect reliable and valid data" [Dörnyei, Csizér, 2012: 76]. and he defines three types of MQ data:

1. Factual questions (biographical information: an age, a gender, a race, a residential location, a marital status, a level of education, an occupation, etc.);

2. Behavioural questions (actions, life-style, habits, etc.);

3. Attitudinal questions (attitudes, opinions, beliefs, interests and values).

To fulfill the aim about learners' motivation and to get proper analysis a MQ should contain all three types of data. It is necessary to know that psychometrical questionnaires, assessing the attitudes, beliefs and other personal or mental variables, should include multi-item scales where the

items are formulated very close to each other in order not to produce radically different levels of agreement or disagreement. For a more detailed it is suggested to use:

- the Likert scale;

- semantic differential scales;

- numerical rating scales;

- other closed-ended item types;

- open-ended questions.

Deci E. and Ryan R. give some practical advice to construct the MQ (Deci, Ryan, 2012). First, questionnaire items should be short, exceeding 20 words in simple sentences. Second, a natural language should be used without any abbreviations, colloquialisms, proverbs, jargons or technical terms. Third, authors should avoid some ambiguous words in statements, for example: good, easy, many, sometimes, often, all, none, never, only, just, merely, etc. Fourth, it is better to avoid some negative constructions as well because it can be problematic for the analysis. Some respondents can understand such constructions in a positive way. Fifth, questionnaire items can include 'double-barrelled' questions, asking two (or more) questions in one while expecting a single answer. Then, it is very important to avoid items that are likely to be answered the same way by everyone. In this case, the results will be informative.

Dörnyei Z. gives some recommendations as well (Dörnyei, 2007). He considers that a length of the MQ should include a 4-page limit and no more than 30 minutes to complete it. As for a layout, the attractive instrument should be produced in a proper professional way such as: booklet format, appropriate density and sequence marking. To effectively conduct the MQ, Dörnyei Z. and Taguchi T. suggest 4 stages (Dörnyei, Taguchi, 2009):

1. The constriction of the MQ has the following structure:

- a general recommendation;

- opening questions;

- factual (or 'personal' or 'classification') questions;

- open-ended questions.

2. Piloting research tool(s) include the next stepwise process:

- drawing up an 'item pool';

- initial piloting of the item pool;

- final piloting.

3. Procedures to administer the questionnaire can be:

- by mail;

- by hand;

- group administration;

- Google-Forms.

4. The analysis of the results include:

- missing responses;

- range of the responses;

- reliability analysis;

- post hoc item analysis.

To appropriately measure the MQ, Dörnyei Z. and Csizér K. emphasize that coding questionnaire data should be created into a new data file within a computer program (Dörnyei, Csizér, 2012). Next, the data needs to be keyed in some descriptive and inferential statistical packages (SPSS, Statistica, MATLAB, Gretl, etc.). These packages provide reliability analysis of coefficients in scales. Details on the validation and application of the scale can be found in different research (Williams, Freedman, Deci, 1998; Williams, Deci, 1996). The following publications contain information on the validity and the developing process as well (Deci, Eghrari, Patrick, Leone, 1994; McAuley, Duncan, Tammen, 1987).

There are two key concepts in the measurement theory, referring to the psychometric properties. They are reliability and validity. Dörnyei Z. defines the reliability as "the extent to which scores on the instrument are free from errors of measurement" and validity as "the extent to which a psychometric instrument measures what it has been designed to measure" (Dörnyei, 2007:110). For example, the internal consistency of the questionnaire statements usually defines with the help of the Cronbach Alpha coefficient, which is a figure ranging between 0 and +1, and if the Cronbach Alpha of a scale does not reach .70, this should be unacceptable. It should be noted that the MQ data can be used for a great variety of purposes and it might require different types of summaries and reports of the findings.

Methodology

This article includes theoretical methods, among which there is the analysis of the research subject based on the study of psychological and pedagogical literature; reflective-system analysis of designed questionnaires. We would like to suggest a questionnaire adapted from a published study (Dörnyei, 2007) to illustrate how the variables of questionnaire design have been put into practice. Following further reading suggestions, we ask the study questions that help to analyze the instruments:

1) What are main parts of the motivational questionnaire?

2) What is the Cronbach Alpha coefficient of the scales?

3) What factors influence foreign language learning?

Results and Discussion

Look at the questionnaire below as an example to analyze whether this designed questionnaire includes all basic principles and steps of effective tools to process the obtained data. It was constructed by Dörnyei Zoltan to investigate students' orientations about foreign language learning.

Language Orientation Questionnaire

We would like to ask you to help us by answering the following questions concerning foreign language learning. This is not a test so there are no "right" or "wrong" answers and you don't even have to write your name on it. We are interested in your personal opinion. Please give your answers sincerely as only this will guarantee the success of the investigation. Thank you very much for your help.

I. In the following section we would like you to answer some questions by simply giving marks from 1 to 5.

5 = very much, 4 = quite a lot, 3 = so-so,   2 = not really,
1= not at all.

Please put one (and only one) whole number in each box and don't leave out any of them. Thanks.

	German	French	Russian	English	Italian
1.How much do you like these languages?					
2.How much do you think knowing these languages would help you to become a more knowledgeable person?					
3.How important do you think these languages are in the world these days?					
4.How important do you think learning these languages is in order to learn more about the culture and art of its speakers?					
5.How much effort are you prepared to expend in learning these languages?					
6.How much do you think knowing these languages would help you when travelling abroad in the future?					
7.How much do you think knowing these languages would help your future career?					
8.How well does your mother speak these languages?					
9.How well does your father speak these languages?					
10.How much would you like to become similar to the people who speak these languages?					

	France	England	Russia	Germany	USA	Italy
11.How much would you like to travel to these countries?						
12.How rich and developed do you think these countries are?						
13.How important a role do you think these countries play in the world?						
14.How much do you like meeting foreigners from these countries?						
15.How much do you like the films made in these countries? (Write 0 if you don't know them.)						
16.How much do you like the TV programmes made in these countries? (Write 0 if you don't know them.)						
17.How much do you like the people who live in these countries?						
18.How often do you see films/TV programmes made in these countries?						
19.How much do you like the magazines made in these countries? (Write 0 if you don't know them.)						
20.How often do you meet foreigners (e.g. in the street, restaurants, public places) coming from these countries?						
21.How much do you like the pop music of these countries? (Write 0 if you don't know it.)						

Have you put a number in each box? Thank you!

II. Now there are going to be statements some people agree with and some people don't. We would like to know to what extent they describe your own feelings or situation. After each statement you'll find five boxes. Please put an 'X' in the box which best expresses how true the statement is about your feelings or situation. For example, if you like skiing very much, put an 'X' in the last box:

	Not at all true	Not really true	Partly true partly untrue	Mostly true	Absolutely true
22.I am sure I will be able to learn a foreign language well.					
23.I think I am the type who would feel anxious and ill at ease if I had to speak to someone in a foreign language.					
24.People around me tend to think that it is a good thing to know foreign languages.					

25.I don't think that foreign languages are important school subjects.					
26.I often watch satellite programmes on TV.					
27.My parents do not consider foreign languages important school subjects.					
28.Learning foreign languages makes me fear that I will feel less Hungarian because of it.					
29.Learning a foreign language is a difficult task.					

III. Finally, please answer these few personal questions.

30. If you could choose, which foreign languages would you choose to learn next year at school (or work)?   Please, mark three languages of importance.

<div align="center">
1)....................
2)...................
3)...................
</div>

31. Underline which sex you are: boy   girl

32. What foreign language(s) are you learning at school? ....

33. Have you learnt any foreign languages outside school? ....

34. If yes, which ones? ....

35. At what age did you start learning a foreign language? ....

Look again at the questionnaire above. To answer the first stated question, let us describe the general features of the questionnaire, such as a length, a format and main parts. It is possible to say that the questionnaire is satisfied all three types of data such as factual questions, behavioural questions and attitudinal questions. As for a length, the MQ includes 3 pages and its layout is quite attractive and has appropriate density. At the beginning we can see that the MQ is anonymous and it is going to provide us honest answers. It is mentioned the domain of the investigation as well. Aiken L. suggests that it is better to avoid the words like "questionnaire" or "survey" in the instruction part (Aiken, 1997). We do not observe such words in this passage. Consequently, the instructions cover the following points in a correct way: the aim of the study, emphasizing that there are no right or wrong answers, confidentiality, saying "thank you".

The questionnaire items are short, exceedingly less 20 words in each statement. It is used the Likert scale format, following the statements with which some people agree or disagree. Paying attention on the second research question, the analysis shows that the overall internal consistency reliability coefficient of the scale (i.e., Cronbach Alpha) goes up from .77 to .82 based on the SPSS

program. There could not be wrong with the items in the questionnaire as they are quite in the same range. It testifies that the questionnaire has the homogeneity of the items, proving appropriate and reliability in one aspect, which is called internal consistency.

The main aim of the MQ is to investigate what factors influenced students' foreign language learning. Several scales are analyzed in the questionnaire, for example, instrumental or integrative factors. Motivated learning behavior is also investigated as an important construct, which is defined as the amount of effort students were willing to invest into foreign language learning" (Dörnyei, Csizér, 2012). The final scale includes five items, scattering around in this version of the questionnaire.

Having discussed three important questions, we see that this Dörnyei's questionnaire constructed in an appropriate way and can be used for the different research in the field of motivation. The example of the questionnaire addresses ways of proceedings toward a better understanding how to construct it in motivation area. Such questionnaires suggest a versatile and highly effective way of data collection.

Conclusions and recommendations

The study allows us to conclude that it is necessary to choose appropriate methodology for designing motivational surveys and effective tools for processing the obtained data. The proposed analysis of the questionnaires' psychometric properties will be informative for researchers and teachers interested in questions related to the motivation of learning a second or foreign language. Developers of future motivation instruments may want to include additional variables that are relevant for their specific educational settings and that have a good potential to improve foreign-language teaching practice.

The results of the study can be used in designing high-quality motivation research instruments for learning a second or foreign language by students and building better and more effective pedagogical strategies in the methodology of teaching a foreign language, considering the current conditions of the world which dynamically develops.

References

1. **Gordeeva T. O., Sychev O. A. & Osin E. H**. (2014). Questionnaire «Scales of academic motivation». *The Journal of Psychology*, *35*(4), 96-107.

2. **Dörnyei, Z. (2007).** Research methods in applied linguistics. Oxford university press.

3. **Dörnyei Z. & Csizér K.** (2012). How to design and analyze surveys in second language acquisition research. *Research methods in second language acquisition: A practical guide*, 74-94.

4. **Dörnyei Z. & Taguchi T.** (2009). Questionnaires in second language research: Construction, administration, and processing. *Routledge*.

5. **Nikitina L., Mohd D. Z. & Cheong S. L.** (2016). Construction and validation of a questionnaire on language learning motivation. *Zbornik Instituta za pedagoska istrazivanja*, *48*(2), 284-300.

6. **Wilson R. & Dewaele J. M.** (2010). The use of web questionnaires in second language acquisition and bilingualism research. *Second Language Research*, *26*(1), 103-123.

7. **Brown, J. D.** (2001). Using surveys in language programs. Cambridge, UK: *Cambridge University Press.*

8. **Gillham, B.** (2000). Developing a questionnaire. London: *Continuum.*

9. **Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R.** (1994). Facilitating internalization: The self-determination theory perspective. *Journal of personality*, 62(1), 119-142.

10. **McAuley, E., Duncan, T., & Tammen, V. V.** (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research quarterly for exercise and sport*, 60(1), 48-58.

11. **Deci, E. L., & Ryan, R. M.** (2012). Self-determination theory.

12. **Williams, G. C., Freedman, Z. R., & Deci, E. L.** (1998). Supporting autonomy to motivate patients with diabetes for glucose control. *Diabetes care*, 21(10), 1644-1651.

13. **Williams, G. C., & Deci, E. L.** (1996). Internalization of biopsychosocial values by medical students: a test of self-determination theory. *Journal of personality and social psychology*, 70(4), 767.

14. **Aiken, L. R.** (1997). Questionnaires and inventories: *Surveying opinions and assessing personality*. Wiley.