

Studies in Blaise 5

Leif Bochis Madsen, Statistics Denmark

Abstract

Statistics Denmark has carried out a couple of studies into the use of Blaise 5 since the last IBUC. The studies comprise a combination of Blaise 5 instruments and CATI Survey Management using our well-established Cati Survey and case management system and a study into using field interviewing on Android-based tablets for our Household Budget Survey. The paper describes the challenges and summarizes our conclusions from the studies.

Introduction

The properties of Blaise 5 questionnaires (separation of layout from logic, the possibility to automate layout, the support of a multitude of collection platforms, etc.) all sound very promising to Statistics Denmark – an institution that has carried out data collection using Blaise for almost 25 years.

The investments, however, in an infrastructure capable of automating the tasks of managing surveys and questionnaires and carrying data to and from the data collection system are considerable. Two studies have therefore been initiated in order to establish a number of preconditions needed to move our interview tasks towards Blaise 5.

Among the questions and preconditions we want to handle are:

- 1) To which extent is it possible to use our current infrastructure?
- 2) How large parts need to be rewritten?
- 3) How well does Blaise 5 web questionnaires work?
- 4) How well does Blaise 5 questionnaires work for CATI interviewers?
- 5) Can we replace Windows based laptops with e.g. Android based tablets for CAPI interviewing?
- 6) How easy is it to change the development from Blaise 4 to Blaise 5?

CATI Study with Blaise 5

The first of our two studies examine the incorporation of Blaise 5 questionnaire instruments in our current CATI Survey Management System. Blaise 5 – obviously – is still an incomplete product lacking support of CATI and therefore we want to examine the possible use of Blaise 4.8 CATI management together with Blaise 5 instruments. An early proof-of-concept experiment briefly after the IBUC/2013 showed that it was possible to combine a Blaise 4.8 CATI instrument with a Blaise 5 instrument, so the purpose of the study is to dig deeper into the practical details of this coexistence. Also: The vast majority of our studies then were dual mode CAPI and CAWI, so we also wanted to establish the facts about how much effort we need to invest in replacing elements of our combined Survey Management System.

CAPI study using Android based tablets

The second study emerged from another basis. The Danish Household Expenditure Survey is managed by Statistics Denmark using an external provider to carry out the interviewing. The external provider has undergone a technological move replacing pc-based CAPI interviewing and they are now carrying out their CAPI interviewing using Android based tablets. Statistics Denmark is responsible for the development of the questionnaire software, but the external provider has put pressure on us in

order to move towards the tablet based solution claiming that our survey is the only one left that is still pc-based. However, we also saw this as an opportunity to study these aspects of Blaise 5 closer.

Organisational changes

In the meantime there has been a fusion between the Interview Service Division of Statistics Denmark and the Interview Services of the Danish National Institute of Social Research bringing all activities – including a CAPI interviewer corps of a nation-wide 250 interviewers – together in a new large division in Statistics Denmark – “DST Survey”. The organisational change was announced late August 2014 taking effect from January 1st, 2015.

These changes have also emphasized the need for evaluations of the software used now and in the future in order to make strategically sound decisions for the new organisation.

The CATI Study

First step was a conversion of a Blaise 4.8 dual mode questionnaire (CATI and CAWI) for the Omnibus Survey into Blaise 5. This part comprised learning the new layout system of Blaise 5 and it definitely requires a large effort to get a thorough understanding of the different components and their interaction. Also, the layout system has evolved throughout the period we have worked with this project as new builds have been released. Therefore, while learning, we have occasionally had the feeling of aiming at a moving target. However, when finally getting a good grasp of it the layout system shows very promising with respect to automation of the creation of quite sophisticated questionnaire layouts.

Second step was making a test sample and publish as CAWI questionnaire. Because the XML files of Blaise 4.8 and Blaise 5 are compatible it was quite easy to prepare for a study. The ETL program (Extract, Transform and Load) included in the recent versions of Blaise 5 also shows promising though it would be a nice feature if more parameters were added in order to fully automate load and extract tasks (but maybe we’ll have to wait for Manipula?). The Web questionnaire also works fine, though with a slower performance than Blaise 4.8.

Third step was a simulation of the CATI situation. The questionnaire works, but the testers lacked the short cuts that are available in a Blaise 4.8 DEP instrument for quickly moving through the questionnaire. This is quite an important issue and needs addressing in future releases. Of course, short cuts make less or no sense in a wide range of clients (tablets, smart phones, web browsers), but in running CATI instruments they are quite crucial for the performance of the interviewers.

Fourth step was intended to comprise inclusion of the Blaise 5 instrument into our well-established Blaise 4.8 based CATI Survey Management System. As long as Blaise 5 does not comprise CATI handling it is necessary to incorporate Blaise 5 instruments for our dual mode surveys into another CATI management system. An early proof-of-concept showed it possible to combine a general Blaise 4.8 CATI data model with an external call to a Blaise 5 questionnaire. Because of the lack of short cuts in Blaise 5 and the slightly slower performance of Blaise 5 instruments we have not carried out this part of the study.

We are considering a continuation of the study by running web questionnaires in Blaise 5 while running the CATI version in Blaise 4.8. In the long run it is not convenient to make two versions of the questionnaire but because the recent releases comprise a tool for automatic conversion of source code from Blaise 5 into Blaise 4 – and because CATI instruments need less caretaking of layout issues – it might be a possible solution for a shorter period of time.

The CAPI Study

The study was initiated in May 2014 as a suggestion from our external provider who in the previous year went through a transfer of running all CAPI questionnaires on Windows based laptops into running all on Android based tablets. At the time an Android DEP app had already been announced by Statistics Netherlands, so we assumed that it would be a reasonable schedule to aim for a pilot study in the fourth quarter of 2014 and to go into production from the new year of data collection in the middle of January 2015. If we began trying out the app, there would probably be time for the Blaise team to correct the minor bugs, we could find during the last half of the year.

Unfortunately, the Blaise DEP app for Android was withdrawn about the same time and during the BCLUB meeting in June it was announced that a release could be expected during the summer.

During autumn and winter 2014-2015 there has been several releases of the Blaise 5 package and the Android client – each one taking care of one or more crucial problems with the previous releases. Apparently, with release 5.0.2 it seems now possible to carry out a full study.

Conversion of a large Blaise 4.8 questionnaire into its Blaise 5 equivalent, however, was done quite fast. Only a few days were needed in order to make the needed adjustments to prepare the questionnaire for a Blaise 5 version to start testing. Also, this study was carried out after the other study and we could take advantage of our gained knowledge of the layout system and thus e.g. make use of automatically applied layouts.

A missing feature in Blaise 5 is the lack of support of remarks (though handling of remarks is mentioned in the documentation). Though rarely used for our CATI studies, it is quite crucial for the Household Expenditure Survey that the interviewers may add some comments to the values. The sub-optimal solution for our study has been to change the general “Amount” field type into a combined “Amount and Comment” block type. It works, but we would have preferred a general solution.

While writing these lines we have just initiated a larger scale field study and are eagerly awaiting the outcomes.

Conclusions

Both of the studies are still in their initial phases and therefore our conclusions are quite preliminary.

The development environment has brought numerous improvements, but works much slower than the Blaise 4.8 Control Centre. Also, there is definitely a steep learning curve for learning to use the layout tools.

While testing and developing – especially for the CAPI study – numerous changes have been made to the tools. Some of these changes resulted in incompatibility between the tools. Especially, proper use of the Android client has caused the necessity of simultaneous upgrade of the Blaise 5 installations on server, development computer and client tablet as well as a re-preparation of the instrument in order to make the components work together. However, it is our impression that Blaise 5 steadily matures and maybe soon we will be able to move our CAPI studies towards use of Blaise 5 and tablets.

The initial questions may only be partly answered by now, but we may summarize:

- 1) It is possible to use large parts of our current infrastructure in an initial phase. Reconsideration, however, will be needed when Blaise 5 in the future comprises implementations of CATI and Manipula.
- 2) Without rewriting we should be able to start using Blaise 5 for Web studies – also in an initial phase.
- 3) Blaise 5 web questionnaires work quite well, though performing slightly slower than the Blaise 4.8 counterparts.
- 4) Blaise 5 questionnaires lack short cuts needed for efficiently conducting CATI interviews.
- 5) We may probably be able to replace Windows based laptops with Android based tablets for CAPI interviewing, but we still await practical outcome of our study.
- 6) There is a steep learning curve regarding the layout specification when changing the development from Blaise 4 to Blaise 5. However, the benefits are very promising.

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