

FREDDIE (FReiburg English Dialect Database for Instruction and E-Learning)

– A multimedia platform for research- and corpus-based learning –

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1. Introduction and summary of the project

In this project, the linguistic corpus FRED (*FReiburg English Dialect corpus*) will be further developed into a multimedia teaching and learning platform called FREDDIE. Funded by IDA (Instructional Development Award 2017, University of Freiburg, Germany, 70 K€ for an 18 month period beginning in October 2016), the project has three central objectives: (1) The FRED interviews will be anonymised and aligned, thus making them available for online open access. (2) A FREDDIE online portal will be created, containing teaching and learning materials as well as analytical tools. (3) The FREDDIE materials will be used, tested and constantly optimised in linguistics classes at different levels (from beginning to advanced undergraduate and Master level). Overall, FREDDIE is intended to serve as a sustainable and at the same time easily updatable resource that can introduce students – both in university classes and self-study – to research- and corpus-based learning by using authentic dialect data.

In two newly conceived linguistics classes (as well as in numerous existing English linguistics classes at the University of Freiburg that can benefit from FREDDIE), students will be introduced to the complex research mechanisms shaping current empirical linguistics. Authentic data will be processed, scrutinised, analysed and visualised, thus providing learners with a broad range of linguistic and methodological skills as well as meta-competencies.

2. Point of departure

FREDDIE was inspired by the FRED corpus – a database with recordings and transcripts totalling 2.5 million words of dialect speakers from different regions in England, Scotland and Wales. The corpus – the largest of its kind worldwide – was compiled under the direction of Professor Bernd Kortmann between 2000 and 2005, funded by two DFG grants (Deutsche Forschungsgemeinschaft, German Research Foundation). In collaboration with Freiburg University Library, FRED is currently being made available online (<https://freidok.uni-freiburg.de/proj/1>). In addition to making this database accessible to international research, FRED now also serves as a basis for developing an interactive multimedia platform for teaching and learning. The corpus provides many opportunities for research-based learning for university students at different levels of undergraduate and graduate programmes in (English) linguistics. This ranges from practice-oriented first-year classes (so-called *Doing Linguistics* classes, where study regulations at the English Department in Freiburg require students to carry out a first research project), via specialized dialectological seminars (introductory and advanced) to optional and compulsory classes in linguistic master's programmes (e.g. in Freiburg's compulsory module *Research Design*) and PhD classes (e.g. for quantitative analyses in statistics classes).

FREDDIE will connect already existing services, as offered by the English Department and the University Library of the University of Freiburg, Germany, with new applications, concepts and programmes funded by IDA. The existing services include FRED-S, a sub-corpus of FRED totalling around 1 million words, which is already available online via FreiDok (<https://freidok.uni-freiburg.de/data/10208>). It is possible to download transcripts from different regions of the British Isles and to browse texts with regard to specific words. To do so, the interactive database can be consulted (<https://fred.ub.uni-freiburg.de/>) or, for more in-depth analyses, the emulation of the concordance programme AntConc (<https://www.freidok.uni-freiburg.de/data/10845>). However, so far analyses of many interviews are restricted to the texts, since large parts of the interviews have not yet been anonymised (and therefore

cannot be published online due to data security regulations). Also, no alignment of the data has been carried out to date. This would facilitate linking texts and sounds. Finally, while FRED theoretically offers many opportunities for teaching and learning, no systematic development of teaching materials and concepts has taken place so far.

3. Aims in the context of IDA funding

In the context of IDA funding, three central aims are pursued:

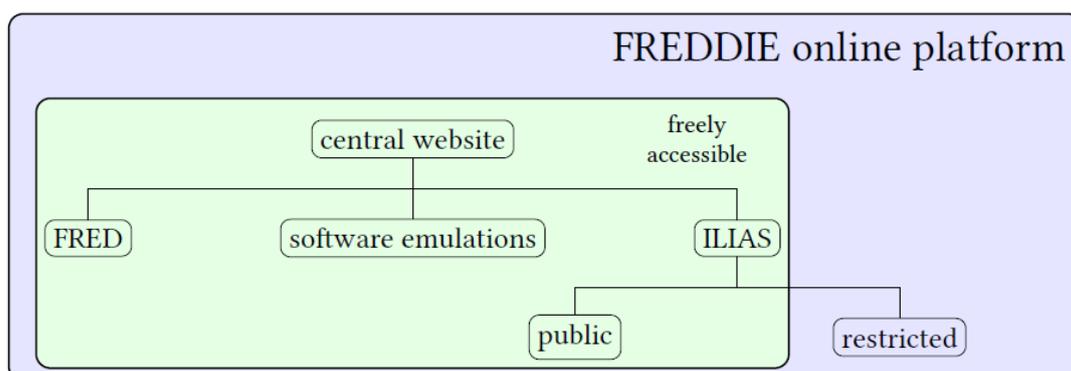
- (1) anonymisation and alignment of the FRED interviews,
- (2) setting up a FREDDIE online platform, providing access to teaching and learning materials plus programmes for linguistic analyses,
- (3) implementation of FREDDIE materials in linguistics classes.

With regard to (1), the anonymisation and alignment of the data will be carried out by using PRAAT. Processing the data in this way will considerably extend the range of possible applications of FRED for teaching. For example, through alignment, recordings can be equipped with subtitles. This is not only useful for interviews with bad sound quality and/or with speakers hard to understand, but also facilitates jumping directly to specific sections of a recording (using an interactive list of subtitles – a feature, for example, provided by the software Camtasia). These two advantages of alignment by themselves already help increase the value of FRED for teaching significantly, as the alignment makes it much easier and more convenient to present extracts of “real” data for illustration purposes in class.

Both the (2) creation and (3) implementation of the FREDDIE online platform will further broaden the range of opportunities of using FRED as a tool in teaching. After completion in March 2018, FREDDIE will consist of the following modules:

- (a) FRED (FreiDok plus), the corpus with transcripts and (aligned) audio files
- (b) emulations of Shiny (for statistics and visualisation apps – separate server/ virtual machine, provided by the University IT Services) and AntConc (corpus analyses – IT Services and University Library)
- (c) general teaching and learning materials, tutorials for self-study, scripts for analysis, etc. (ILIAS – public area). ILIAS is the central e-Learning platform of Freiburg University (<https://ilias.uni-freiburg.de>). It provides the opportunity to upload course materials and supports cooperative learning through virtual learning groups
- (d) specific tests, wikis etc., assigned to particular courses (ILIAS – restricted area)
- (e) a central website illustrating the overall concept and hyperlinking the individual modules (this will be www.freddie-dialects.org)

Except for (d), all materials will be publicly accessible online (see figure).



On the basis of these teaching materials and applications, students can experience a research process step by step. In the following, an example of a phonetic/phonological analysis will be discussed where researchers first have to transcribe recordings in order to measure and analyse acoustic parameters. Such a simulation – as an illustration of the “Instruction” component of FREDDIE – may look as follows:

In a first step, each student produces a rough orthographic transcript of a short interview extract from FRED (about 90 seconds). These miniature transcripts are handed in via ILIAS (restricted area) and revised by means of peer feedback by the students, before the quality of the final version is checked by the lecturer. For this check, the lecturer can also consult the already existing FRED transcripts. This exercise thus does not aim at using students as unpaid workers transcribing for FRED, but it offers a didactic service for the learners. The rough transcripts are then aligned in a much more fine-grained way. (This service is provided online, free of charge, by the University of Pennsylvania.) The results of this automatic processing step are critically discussed and analysed by the students (e.g. using an ILIAS wiki). If necessary, manual corrections are inserted. For each interview extract that has passed through all these stages, the lecturer provides access to the alignment of the full interview. Subsequently, students can carry out analytical measurements and directly visualise their findings using the software (scripts) available at the FREDDIE online platform. In a final step, a term paper is written based on these data.

In addition to teaching materials, it is planned to provide a comprehensive collection of materials for self-study in text and video (tutorial) format (as part of the “e-Learning” component of FREDDIE). Students worldwide can thus make use of the opportunities and functions of FREDDIE in an autonomously organised manner. Among these functions are the already existing emulation of AntConc (for carrying out corpus analyses directly on the website without having to install the programme) as well as (in the near future) Shiny. Shiny is an open access software enabling students to make use of the statistics software R without much previous knowledge. Students will thus have the opportunity to upload their data on the FREDDIE website, and afterwards carry out basic statistical tests and create diagrams with just a few clicks.

4. Innovative aspects, sustainability and transfer potential

Accessible as a comprehensive e-Learning platform, FREDDIE will provide hands-on experience with linguistic research by means of (a) authentic data and (b) state-of-the-art programmes for statistical analysis and visualisation techniques. The project was developed with sustainability as a major goal. The linguistics classes conceived for FREDDIE focus on methods rather than on particular topics. They are thus independent of specific lecturers and expected to remain up-to-date (with minimal modifications) in the years to come. Most importantly, everything set up in the context of the project – the online platform itself, teaching materials, tutorial videos, and applications – will continue to be available worldwide after the end of IDA funding. FREDDIE does not only offer new opportunities for teaching linguistics; the data may, for example, also be interesting for historical (e.g. social history) and literary research (e.g. narratology) and can be adapted accordingly. Additionally, FREDDIE may be used in higher grades of grammar schools. Due to the online access, the materials can generally be consulted in institutions of (higher) education around the world.

The FREDDIE approach will introduce students of (English) linguistics worldwide to research-based learning in a novel manner: first by way of instruction in taught classes, but soon also autonomously. At a more general level, FREDDIE will help students to acquire competences and skills in a core area of the Digital Humanities.