

# Guidelines for the evaluation of language-learning software: evidence from a research project

## OPSOMMING

Weens finansiële en tydsbeperkinge word daar toenemende druk op onderwysers en dosente geplaas om ook van ander onderrigmodusse as kontakonderrig gebruik te maak, byvoorbeeld rekenaaronderrig. Die hoofnavorsingsvraag wat gestel word, is hoe die seleksie van toepaslike rekenaarprogramme deur leerlinge, ouers en onderwysers benader moet word. Hierdie vraag word beantwoord deur riglyne te bespreek wat voortvloei uit teorieë van taalonderrig en taalaanleer, die nuwe onderwysbedeling, en instruksionele ontwerp. Op basis hiervan is evalueringsinstrumente opgestel en aangewend om die menings en houdings van drie groepe belanghebbendes te toets oor 'n Duitse taalaanleerprogram vir beginners. Hoewel die program volgens die verpakking al die dinamiese en interaktiewe kenmerke van die jongste generasie rekenaarsagteware vertoon, is dit op verouderde onderrigstyle en -metodes gebaseer is en deurspek is met tegniese foute. Die evaluering beklemtoon die belangrikheid van onderwysersopleiding op die gebied van RGO en bepleit die publikasie van resensies oor sagtewareprogramme in vaktydskrifte.

## 1. Introduction

People interact with the world and each other through language. The more we are able to communicate, the better we are able to understand each other. In South Africa improved communication can lead to a country free of intolerance, misunderstanding and prejudice, which is one of the main objectives of the new system of education.

Multilingualism should, however, not be restricted to only the languages spoken in South Africa, but should also include other languages of the world. Knowing a foreign language or languages creates scores of exciting opportunities. A person knowing one or more foreign languages will for instance have no difficulty in pursuing a diplomatic career, finding employment with export or import companies, qualifying as a translator, etc.

Despite the obvious advantages of multilingualism, the demands made on individuals by the information era (having to be multi-skilled) make the learning of languages other than the mother tongue a difficult venture. Coupled with the emphasis of the present South African Government on science, technology and engineering (cf. Department of Education 1997a:29–30) and the general decline of interest in the human sciences, prospective learners and teachers of languages will necessarily have to rely on resources outside formal education as well.

## 2. The role of language-learning software

It is believed that, due to financial and other constraints, computer software programmes will increasingly serve as supplements to language teaching in the formal school curriculum. These programmes may be extremely useful in giving content to the principle of lifelong learning and may serve as convenient facilitators of adult-learning, especially for those with nine to five schedules.

The selection of an appropriate programme is, however, not a simple task. Once a prospective learner has made the decision to follow the option of computer assisted learning, he/she is faced with the problem of which selection criteria to apply. It is believed that this choice is often made purely on the basis of “what the package says”, and not based on the scientifically proven principles of good pedagogy, language learning and interactive multimedia.

Through a systematic evaluation of the interactive multimedia programme *Think and Talk GERMAN* this article gives an overview of important principles that may be used to guide teachers and learners in the process of selecting language-learning software. It also suggests that a thorough pre-evaluation of software will protect teachers, learners and parents from much frustration, disappointment and injudicious spending of money.

## 3. Important considerations

### 3.1 Pedagogical aspects

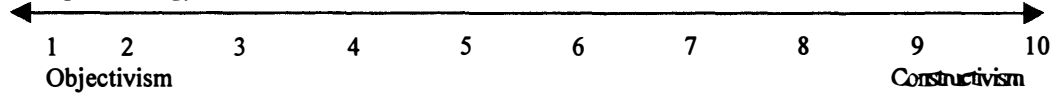
The new system of education and training in South Africa is one that views learning as a continuous process guided by a set of general principles. These principles differ substantially, if not paradoxically, from those of the past system (cf. Department of Education 1997c:6–7; 1997b:29):

Old system of education	New system of education
passive learners	active learners
exam-driven	learners are assessed on an on-going basis
rote-learning	critical thinking, reasoning, reflection and action
syllabus is content-based and broken down into subjects	an integration of knowledge; learning relevant and connected to real-life situations
textbook/worksheet-bound and teacher-centred	learner-centred; teacher is facilitator; teacher constantly uses group work and team work to consolidate the new approach
sees syllabus as rigid and non-negotiable	learning programmes seen as guides that allow teachers to be innovative and creative in designing programmes
teachers responsible for learning; motivation dependent on the personality of teacher	learners take responsibility for their learning; pupils motivated by constant feedback and affirmation of their worth
emphasis on what the teacher hopes to achieve	emphasis on outcomes – what the learner becomes and understands
content placed into rigid time-frames	flexible time-frames allow learners to work at their own pace
curriculum development process not open to public comment	comment and input from the wider community are encouraged
behavioural approach to learning and assessment	cognitive approach to learning and assessment
accumulation of isolated facts and skills	application and use of knowledge integrated with teaching and learning
assessment of isolated knowledge or discrete skills	knowledge, abilities, thinking processes, metacognition and affect assessed
individual learning and products	collaborative learning and products

It is interesting to note that the principles of the new system of education coincide to a very large

extent with the pedagogical dimensions determined by software specialists such as Reeves and Hannon (1994:475–487). In each of Reeves and Harmon’s dimensions the old system is represented by the left end-point of the scale, and the new system by the right:

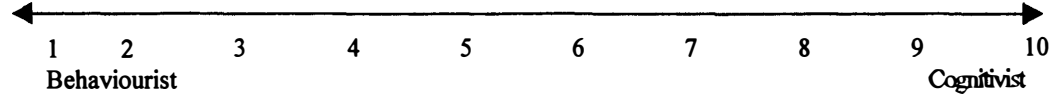
**1. Epistemology**



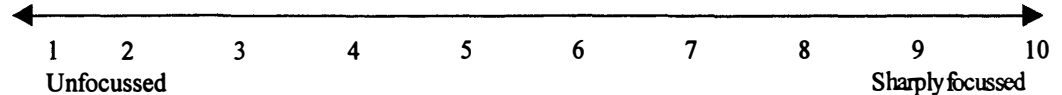
**2. Pedagogical philosophy**



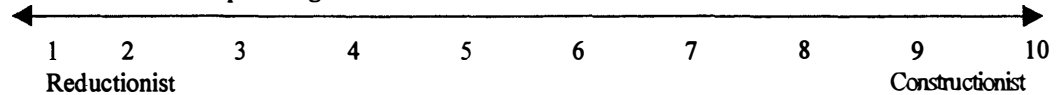
**3. Underlying philosophy**



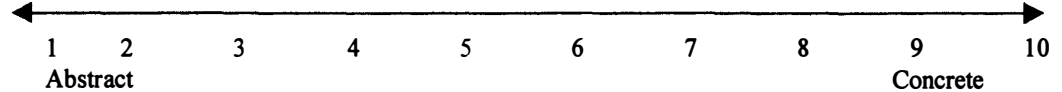
**4. Goal orientation**



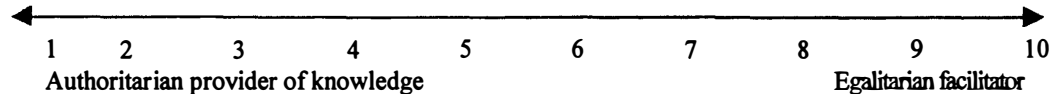
**5. Instructional sequencing**



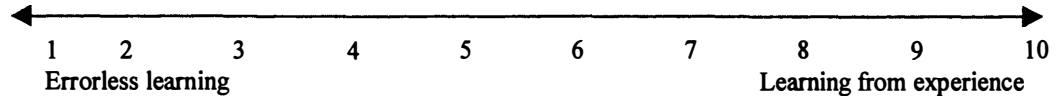
**6. Experiential validity**



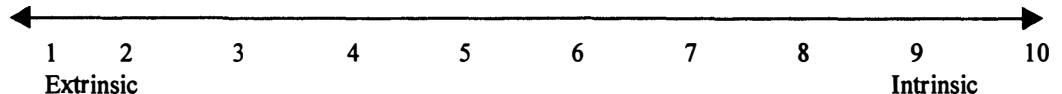
**7. Role of instructor**



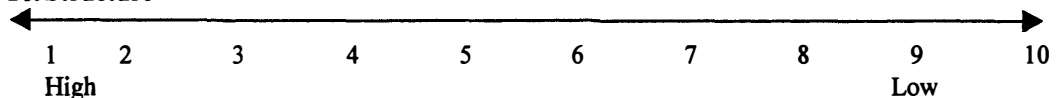
**8. Value of errors**



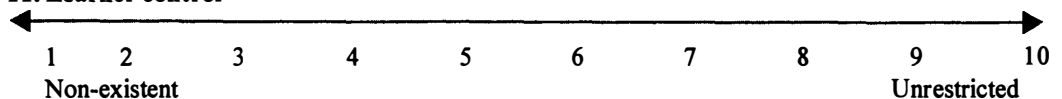
**9. Motivation**



**10. Structure**



**11. Learner control**







<b>type of student</b>	academically gifted	non-analytical; non-academic	any	any who want to handle information rather than interact socially	any	those with individual motivation
<b>learner outcomes</b>	acquisition of conscious grammatical knowledge; conversion of knowledge to use	reproduction of knowledge acquired by habit-formation; behaviourist	communicating freely in the L2 by using hypothesis-testing to determine correctness	full ability to use the L2 in different contexts	using language correctly and appropriately (functionally and stylistically)	diverse outcomes determined on a needs and wants basis

Current language syllabuses have completely abandoned the academic and audiolingual styles in their pure form, in favour of styles focusing on communication in real-life situations. The extent to which grammar is taught and learnt formally often depends on the proficiency level of the learner and the purpose of the learning. If the aim is only to converse orally in a specific language, there would for example be less emphasis on the formal learning of grammar. It is therefore important that proficiency level, purpose and teaching style should be viewed in relation to one another, when evaluating a software programme.

Within the framework of Curriculum 2005 the freedom to learn at one's own pace is regarded as an important principle, and it could be expected that the communicative styles as well as the Mainstream EFL Style will progressively borrow elements from the Learner Autonomy Style. It should also be mentioned that self-determined pace is one of the important user-interface criteria for the evaluation of educational software, and this criterion should therefore be given serious attention when deciding to purchase a software programme.

### 3.3 Criteria for software evaluation

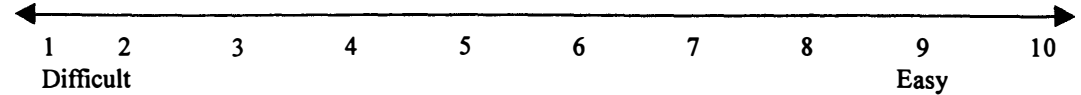
Along with Reeves (1995:3) it is believed that the social relevance of research questions that are largely focused on understanding "how" education works, is weak, and the social relevance of research questions that are largely focused on making education better, is strong. Jordan and Follmann (1993) outline a number of characteristics of good technology programmes, which support this focus.

According to them software programmes should:

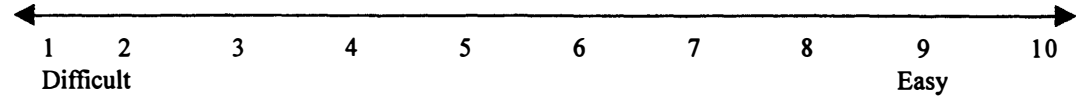
- emphasise co-operative learning models;
- emphasise higher-level problem-solving skills, while also reinforcing basic skills;
- support interaction between students and teachers rather than use computers as "teaching machines" to supplant the teacher;
- create learning environments built around real-world problems;
- be adaptable to a variety of learning styles.

More specifically, educational software programmes should be evaluated according to their **pedagogical dimensions** (as listed in paragraph 3.1 above) and their **user-interface dimensions**, as represented by the following bipolar scales:

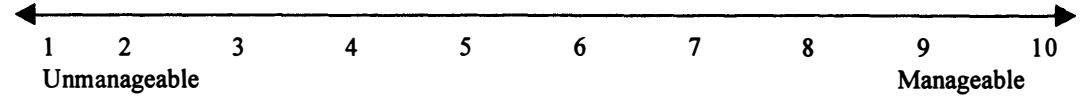
**1. Ease of use**



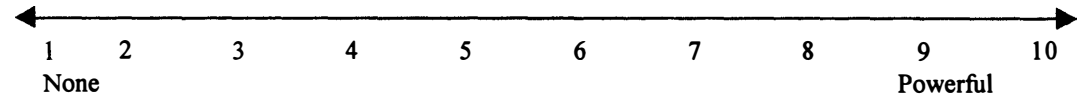
**2. Navigation**



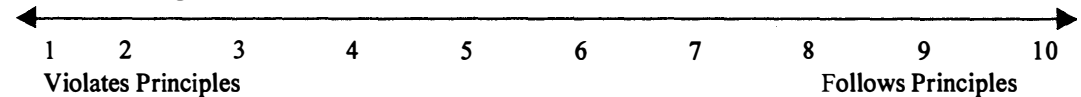
**3. Cognitive Load**



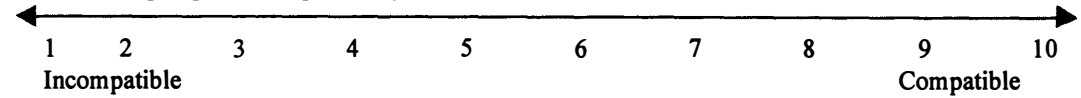
**4. Mapping**



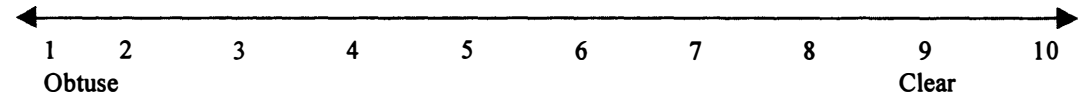
**5. Screen Design**



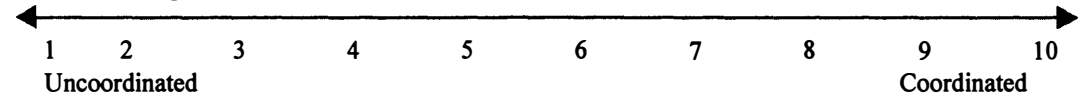
**6. Knowledge Space Compatibility**



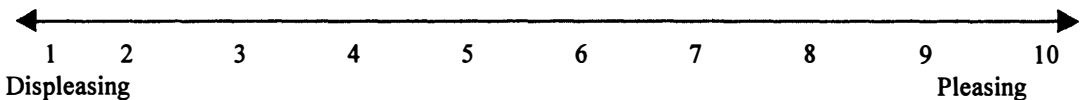
**7. Information Presentation**



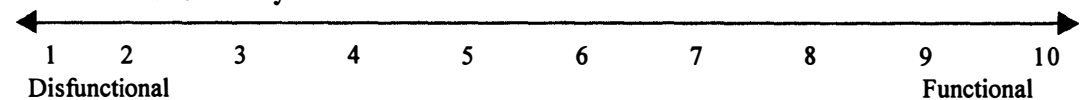
**8. Media Integration**



**9. Aesthetics**



**10. Overall Functionality**



Although aspects of user-interface (such as colour, text layout, screen design, menus and icons, graphics and animation, etc.) contain criteria that are primarily focused on the product (the programme) and not on the effect they have on learning, they are useful in dynamic, summative evaluations in as far as their contributions towards facilitating learning (or discouraging learning) are measurable. The evaluation tools administered in the current evaluation model therefore include questions relating to technological aspects in as far as they might have an impact on learning outcomes.

## **4. The evaluation**

### **4.1 Constructing the evaluation tools**

Taking into account considerations such as the nature of the programme content (L2-learning), the mode or medium of instruction (computer-based), the researcher's personal views towards relevant research, temporal-spatial restrictions, etc., the research was constructed by firstly formulating broad research questions. These generic questions were then translated into more specific questions directed at different categories of respondents, namely users on the one hand, and experts on respectively IMM technology and second language teaching and learning on the other. A combination of a questionnaire and an interview protocol (Appendix A) as well as expert review checklists (Appendices B and C) were selected and constructed as measuring instruments for providing answers to specific research questions.

The following broad research questions were formulated:

- What knowledge was learnt by the students?
- What skills (practical, technological, interpersonal, etc.) were developed by students?
- What were the students' reactions to the interactive multimedia?
- How effective was the teaching style in terms of the intended outcomes (L2-learning)?
- How effective were the teaching techniques/methods used in the programme?
- How effective was the teaching mode/medium (computer-based instruction)?

Considering that the researcher was intent on conducting socially responsible, qualitative research, the selection of instruments such as interview protocols and expert checklists could be justified (cf. Reeves 1994).

Interview protocols used with younger learners have the advantage that the interviewer can explain questions not understood, that respondents can be prompted to motivate an answer, and that subtle affective reactions may be captured. This instrument has the further advantage of combining the features of a questionnaire and an anecdotal record form. It may, however, have the disadvantage of guiding responses to support the personal views of the evaluator. Furthermore it is a time-consuming instrument and may be too costly if used with a large sample.

Expert review lists have the advantage of eliciting informed opinions on specific aspects of the programme and the effects the operation of these aspects have on learning. The disadvantage might be the availability of such experts and their willingness to conduct in-depth reviews without remuneration.

The following evaluation matrix represents the planning of the research in terms of goals and methods (see Trochim 1997 on the planning-evaluation cycle). The cells representing evaluation tools that are regarded as appropriate to a particular research question, are greyed, and those selected for the current research, are ticked.

Evaluation Questions	Data Collection Instruments							
	Anecdotal record Form	Expert review Checklist	Focus group protocol	Formative review log	Implementation log	Interview protocol	Questionnaire	User interface rating form
What knowledge was learnt by students						✓		
What skills were developed by students?						✓		
What were the students' reactions to the IMM?						✓		
How effective was the teaching style		✓				✓		
How effective were the teaching techniques		✓				✓		
How effective was the teaching mode		✓				✓		

As far as respondents are concerned five pupils with German as a school subject in Grade 8 were approached. They were individually set to the task of running the programme and interacting in ways appropriate to their linguistic competence and computer skills. Afterwards the evaluator conducted a structured interview and noted all responses in detail (see Appendix A: *Interview protocol*). Two subject specialists, one in **instructional technology** and the other in **L2-learning and teaching** (with a sound knowledge of German) were requested to evaluate the programme and to fill in different evaluation forms (see Appendix B: *Review form for IMM*; and Appendix C: *Review form for L2-teaching and learning*).

As mentioned above, it was realised that the size of the sample might reflect negatively on the generalisability of the results. One of the reasons why it was difficult to obtain a larger sample, was that none of the schools approached had computer laboratories that met the system requirements of the programme, namely computers with at least a 133-MHz 486DX CPU, 8-MB RAM, hard disk drive, CD-ROM drive, 256-colour SVGA, sound card and speakers, Windows 3.x or Windows 95, and a microphone.

It was, however, decided to proceed despite the limitations imposed by the size of the sample, because of the fact that the evaluation was intended to be qualitative, rather than quantitative. Moreover, the population of the sample ultimately obtained, was reasonably homogeneous and at least some generalisations could be made. An additional factor that warranted the research despite the limitations, was that individual assessment allowed direct observation by the evaluator. This further enhanced the qualitative dimension of the research.

#### 4.2 Administering the instruments

Before moving from the planning to the evaluation phase of the research (cf. Trochim 1997) the evaluator took on the role of an IMM expert, and did an in-depth formative evaluation to gain insight in possible problems that respondents (especially the students) might encounter, and of the overall operation of the programme. No major problems were therefore encountered while the summative evaluation was in progress. At the same time the L2-learning and teaching expert was requested to complete the expert review list on aspects of the subject content and teaching style.

With the expert responses at hand, a holistic and truly summative evaluation could be done on the basis of live observation and interview responses.

## **5. Results**

Among the findings of the research, based on the experts' reviews and the learners' responses, were the following:

- **What knowledge was learnt by the students?**

It was particularly the responses to questions 16, 18 and 20 of the interview protocol that provided information to answer this question. The responses to question 16 indicated that most of what was learnt from the programme was not regarded as immediately and directly related to the objectives of the learners, namely to perform better in German as a school subject. The general perception was – translated into linguistic terms – that the programme overemphasises simple copula constructions in declarative sentences. Vocabulary expansion was found to be too limited.

Concerning the application of knowledge and skills to real-world contexts, two of the respondents were of the opinion that working through the programme before a visit to a German-speaking country could be useful. Including scenes like a visit to the supermarket or a meal in a restaurant could, however, have been more useful than conversing about different brands of motor cars, and their stereotyped association with the (original) country of manufacture.

The more academically oriented student in the group of respondents desired more structured information on aspects such as the nominal three class system in German. Although, in this regard, her learning objectives differed from those of the other respondents, a new-generation language-learning programme should be able to accommodate different learning styles, different levels of proficiency and different interests. Individualisation is regarded as one of the advantages that computer software programmes of an instructional nature have above the conventional teaching-mode in a classroom situation, and this inherent advantage should be exploited.

- **What skills were developed by students?**

The students (three of the five) who had had little previous interaction with computers, were of the opinion that they had gained general computer-using competence while interacting with the programme, and that exploring different aspects of the programme had helped them to understand the basic organising principles of computer software programmes.

The guidance on native pronunciation given by the programme, and the unrestricted opportunities provided (to record and play back your linguistic attempts) in order to improve pronunciation skills, were regarded as the most useful feature. All the respondents thought that they would benefit from access to the programme before their oral exams. The gauge on the screen indicating whether a particular pronunciation approximated native pronunciation or still had a tourist quality, was perceived by the students as an excellent motivating device. The IMM expert did, however, not find this instrument as accurate as expected.

The optional exercises were regarded as useful by four of the five respondents. They supported their view by saying that self-assessment provides a learner with a realistic image of his/her proficiency-level. The fact that the learner is permitted to answer the same question as many times as preferred, seems to build self-confidence, and has a drill and practice value.

- **What were the students' reactions to the programme?**

Only one of the students (an academically oriented girl), showed appreciation for the programme, and expressed a desire to continue working as long as she was allowed. The other four found the programme uninspiring (“boring”) to different degrees. According to one of them there was “nothing really worth exploring” and the programme was “not really fun”. They would have preferred choices

in terms of real-world applications that interested them personally. Appropriate linguistic behaviour when meeting new people, talking about cars, reading and telling time, calculating, etc., was regarded as “useful”, but not interesting.

It was therefore only the academically oriented and intellectually gifted respondent who expressed eagerness to obtain a copy of the programme for her own use. All the others were of the opinion that the school should purchase the programme and allow pupils to work with it during lesson time or in preparation of tests and exams.

Most of the aspects of the instructional design that seemed to induce a somewhat apathetic attitude, were user-interface related. At first glance the instructional design is sound and adheres to accepted principles. The screen layout is appealing and all the key features expected of Windows 95 generation software seem to be present: navigation buttons, graphics, clear and easily accessible menus, audio features such as a voice recording and playback facility, a bar showing progress in a scene and another indicating how much time is left to record a given phrase, the possibility to exit at any time, etc.

However, during interaction many of the impressive features seem to lose their appeal. Text in the text box at the bottom of the screen is sometimes broken inappropriately at the end of a line, e.g. after the *ä* in *Fräulein*, or before the last dot and the closing bracket of a parenthesised elliptic phrase. The sound quality of the dialogue is also unsatisfactory, as the first sound or syllable of a spoken phrase is often cut off.

The most disturbing aspects of the programme are the obvious programming errors in the exercises. In more than half of the exercises (scenes 1, 4, 6, 7, 9 and 10) the screen does not open with the questions, but with the answer sheet that is intended to form part of the feedback and control. Moreover, these screens are completely inactive and the exercises themselves cannot be accessed in any way. There is nothing as demotivating as a programme that creates expectations which it fails to live up to.

Although the use of colour and graphics were evaluated by both learners and experts as pleasing, and not distracting, the animation and integration of multimedia were criticised. A picture will for instance remain unchanged in a scene while the conversation moves away to another topic. In one scene the sound of a motorcycle is heard, and the word “Motorrad” is pronounced, but the image of a car shows in the graphics frame. This practice is intolerable as the use of different media types should support, augment and motivate; and not be add-ons with a coincidental illustrative value.

### • **How effective was the teaching style in terms of the intended outcomes (L2-learning)?**

The audiolingual style, which became popular in the sixties, seems to dominate the programme. This hypothesis is supported by the fact that all the different scenes of the *Listen and Understand* menu (the opening menu of the course) commence with portions of speech by native speakers, combined with strong emphasis on verbal repetition of words and sentences. The audiolingual style is supplemented by elements of the two communicative styles mentioned earlier. The result is that although real-life scenes are simulated, the prompted responses are “conditioned” (i.e. behaviourist). The learner is primarily conditioned how to “behave” in specific stereotyped situations. The application of this style has an artificial effect, as questions with fully predictable answers are frequently asked, e.g. (Professor to his secretary): “Are you Japanese”?, while he is fully aware that she is German, and she knows that he knows it!

Due to the dominant teaching style of the programme, the L2 expert found the title, *Think and Talk*, misleading. Although talking is the communicative skill that receives the strongest emphasis, thinking is restricted to a rather linear form. Higher-order cognitive processes are not stimulated at all (cf. Oppenheimer 1997 on the danger that computers may dampen creative thinking if children are only exposed to programmes that promote behaviourist types of responses).

- **How effective were the teaching techniques/methods used in the IMM programme?**

Although *Think and Talk GERMAN* is predominantly embedded in the audiolingual style, not only the teaching techniques of this style are employed. Apart from the expected structure drills and simple dialogues, also techniques such as information gaps (thinking), reading, multiple choice questions, writing (filling in simple content-based answers), and listening comprehension are applied.

The bilingual, reversible dictionary, complete with part of speech indicated for each lemma, is useful for the beginner. Unfortunately unknown or newly introduced words or phrases in scenes are not directly hyperlinked to the dictionary. The learner is expected to conduct deliberate dictionary searches whenever an unknown word (not explained by the context or graphics) occurs. This operation also requires from the learner to exit the scene, open the dictionary and search for the item. The dictionary is therefore no different from paper dictionaries in that the communication process must be interrupted deliberately (the “switch off switch on syndrome”).

- **How effective was the teaching medium?**

In my personal opinion computerised language-teaching and learning can never be self-contained and self-sufficient, the reason being that the learning object and the medium of instruction coincide. A teacher as facilitator is therefore indispensable. Despite the fact that the package of the *Think and Talk GERMAN* programme claims it to be “The world’s most successful self-teaching course” and that it is “the easiest, fastest way to start speaking German” an experiment with a true beginner, a gifted Grade 6 pupil (not included in the sample of five) without any previous contact with German, showed that this claim was somewhat idealistic. A total absence of competence in the target language, its structure and pronunciation necessitated some mediation by a human tutor. Once the evaluator, who switched roles to become instructor, started guiding her through the scenes and filled in the “gaps”, she was enabled to complete a scene and to start learning.

## **6. Interpretation and recommendations**

Berlitz’s *Think and Talk GERMAN* certainly catches the attention of the software shop browser who makes decisions on the basis of “what the box says”. Form was, however, developed at the cost of content and function. In order to improve its quality, the subject expert(s) responsible for the content should strongly contemplate a shift towards more recent, internationally accepted models of teaching. The instructional designers will also have to improve the technical quality and rectify all programming errors.

Based on the outcomes of the present research, the general advice to administrators and teachers is as follows: Firstly, define the relationship of the programme to existing curricula to determine whether it could be used as an in-class tutor (cf. Burnett 1995:1). If the fit between curriculum and programme is poor, buying it as a remedial or drill and practice instrument could still be considered, especially if the institution has a language laboratory furnished with computers linked to a local area network. Although some of the important interaction is lost, the programme can be operated without a microphone connected to the computer. Learners (or the entire group) may for instance be allowed to use the programme to expand their vocabulary, practice pronunciation or do miscellaneous language exercises. Buying software programmes for enrichment or for remedial purposes only, will, however, strongly depend on the financial investment the decision-makers are prepared to make.

Parents are advised to purchase the programme only if their child is motivated to improve his/her proficiency beyond what is directly assessed in school.

Adult learners should firstly determine their goals and the anticipated outcomes before buying *Think and Talk GERMAN*. If what the adult desires is a basic speaking proficiency, the programme

may be considered together with others available in the same category. If, however, the aim is to learn German for understanding textbooks or have recourse to German literature, it is perhaps not a wise buy.

In conclusion: one of the emerging tasks of the language teacher is to inform his/her students about the features they should consider when buying language-learning software, and to warn them not to be lured into buying a programme only on the basis of an interesting user-interface. The underlying assumption is then that teachers are equipped with sufficient knowledge of the critical features of educational software to make recommendations of this nature. Isn't it high time that we see more reviews of computer software in professional journals?

## References

- Burnett, Gary. 1995. Technology as a Tool for Urban Classrooms. <http://eric-web.tc.columbia.edu/digests/dig95.html>
- Cook, V. 1996. *Second language learning and language teaching*. Second edition. London: Arnold.
- Department of Education. 1997a. A Programme for the Transformation of Higher Education. *Government Gazette*. 366(18207). Pretoria: State Printer.
- Department of Education. 1997b. *Outcomes Based Education in South Africa. Background information for Educators*. Pretoria.
- Department of Education. 1997c. *Curriculum 2005. Lifelong learning for the 21<sup>st</sup> century*. Pretoria.
- Jordan, W. & Follmann, J.M. (Eds.). 1993. *Using technology to improve teaching and learning. Hot topics: Usable research*. Victoria, BC, Canada: British Columbia Ministry of Attorney-General; Greensboro, NC: Southeastern Regional Vision for Education.
- Oppenheimer, T. 1997. The Computer Delusion. <http://www.TheAtlantic.com/issues/978jul/computer.htm>
- Reeves, T. 1994. Evaluations Tools. <http://mime1.marc.gatech.edu/MMTools/evaluation.html>
- Reeves, T.C. & Harmon, W. 1994. Systematic Evaluation Procedures for Interactive Multimedia for Education and Training. In: Reisman, S. (Ed.), *Multimedia Computing: Preparing for the 21<sup>st</sup> Century*. Harrisburg: PA: Ida Group.
- Reeves, T. 1995. Questioning the questions of instructional technology research. Invited Peter Dean Lecture presented for the Division of Learning and Performance Environments (DLPE) at the 1995 National Convention of the Association for Educational Communications and Technology (AECT), Anaheim CA, USA. February 8–12, 1995. <http://www.gsu.deu/~wwitr/docs/dean/index.html>
- Trochim, W.M.K. 1997. Knowledge base: An online research textbook. Cornell University: <http://trochim.human.cornell.edu.kb/kbhome.htm>



## APPENDIX A

### EVALUATION INTERVIEW PROTOCOL

**Interviewer:** ..... **Date:** .....

**Name of programme:** .....

**Personal details of interviewee**

- **Name:** .....
- **Highest qualification:** .....

- **Current proficiency level in the target language (please circle your choice):**  
beginner/intermediate level learner/advanced learner
- **Experience in the use of computers**  
no experience/little experience/substantial experience

1. What did you expect to learn from the programme on the basis of what is offered on the package?
2. Was this expectation fulfilled?
3. Did you enjoy responding from the start of the programme, or would you have preferred more information first, and time to listen or read before being asked to respond?
4. Was the programme interesting?
5. Was the programme fun?
6. Did you quit/feel like quitting at some stage? When?
7. Does the programme give enough cues on what to do next?
8. Was it clear from the start what each icon meant or what it could do?
9. Did you like the way the screen is organised?
10. Did you feel attracted to or put off by the graphics (pictures) and animation?
11. Could you work through the programme in one session?
12. Did you know exactly when you had to respond by pronouncing a word, answering a question, etc.?
13. Was enough help provided if you did not know an answer or if you did not know what to do?
14. Could you decide for yourself what you wanted to do next, or did the programme force you to follow a certain route?
15. Could you continue at your own pace or was the pace either too slow or too fast?
16. Do you think that the programme is useful in terms of your purposes for learning the language?
17. Would you like to have the programme for yourself? Why (not)?
18. Do you think that one can learn faster by using this programme than by attending classes given by a teacher?
19. Do you think the programme is good for exercising and practicing things you have already learnt?
20. Did the program make you think, or did it straightforwardly ask you to do things?
21. Was enough feedback given on how you performed?
22. Did you learn more about using computer software programmes?

**APPENDIX B**

**EXPERT REVIEW CHECK LIST FOR INTERACTIVE MULTIMEDIA**

**NAME OF PROGRAMME:** .....

**REVIEWER:** ..... **DUE:** 16 February 1998

Please circle your rating and write comments on each aspect of the interactive multimedia (IMM) package. 1 represents the lowest and most negative impression on the scale, 3 represents an adequate impression, and 5 represents the highest and most positive impression. Choose N/A if the item is not appropriate or not applicable to this course. Use additional paper for comments.

**AREA 1 – PROGRAMME FUNCTIONALITY REVIEW**

- |   |     |   |   |   |   |   |
|---|-----|---|---|---|---|---|
| 1. The installation was trouble-free.                                       | N/A | 1 | 2 | 3 | 4 | 5 |
| 2. The programme operated flawlessly.                                       | N/A | 1 | 2 | 3 | 4 | 5 |
| 3. The hardware specifications are compatible with those of most home PC's. | N/A | 1 | 2 | 3 | 4 | 5 |

**Comments**

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 .....

**AREA 2 – INSTRUCTIONAL DESIGN REVIEW**

- |  |     |   |   |   |   |   |
|--|-----|---|---|---|---|---|
| 4. The programme provides learners with a clear knowledge of the program objectives. | N/A | 1 | 2 | 3 | 4 | 5 |
| 5. The instructions are clear and unambiguous.                                       | N/A | 1 | 2 | 3 | 4 | 5 |
| 6. The instructional design is based on sound learning theory and principles.        | N/A | 1 | 2 | 3 | 4 | 5 |
| 7. The pace is appropriate.  | N/A | 1 | 2 | 3 | 4 | 5 |
| 8. The difficulty level can be adjusted to the level of the learner.                 | N/A | 1 | 2 | 3 | 4 | 5 |
| 9. Prompts, error messages, navigation keys, etc. are consistent.                    | N/A | 1 | 2 | 3 | 4 | 5 |
| 10. Multimedia is functionally integrated.   | N/A | 1 | 2 | 3 | 4 | 5 |

**Comments**

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 .....

**AREA 3 – AESTHETIC DESIGN REVIEW**

11. The screen design follows sound principles.	N/A	1	2	3	4	5
12. Text and graphics are appropriately spaced.	N/A	1	2	3	4	5
13. Colour is appropriately used.	N/A	1	2	3	4	5
14. Screen displays are easy to understand.	N/A	1	2	3	4	5
15. Icons are clear and unambiguous.	N/A	1	2	3	4	5

**Comments**

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**AREA 4 – PEDAGOGICAL REVIEW**

16. The learner is constantly encouraged.	N/A	1	2	3	4	5
17. The curiosity of the learner is aroused.	N/A	1	2	3	4	5
18. It is fun to run the programme.	N/A	1	2	3	4	5
19. Interaction is constructive rather than behaviourist.	N/A	1	2	3	4	5
20. The programme simulates real-world contexts.	N/A	1	2	3	4	5
21. Individual differences between learners are taken into account.	N/A	1	2	3	4	5
22. The programme is free from stereotypes.	N/A	1	2	3	4	5

**Comments**

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**AREA 5 – INTERFACE AND INTERACTIVITY REVIEW**

23. The programme contains sufficient opportunities to make choices.	N/A	1	2	3	4	5
24. The form of tools for interaction clearly reflect their function (iconicity).	N/A	1	2	3	4	5
25. There are enough controls to fulfil specific needs, such as exiting at any time, going to specific menus, previous screens, etc.	N/A	1	2	3	4	5
26. Cues are provided to indicate that a segment of information has been chosen or completed.	N/A	1	2	3	4	5
27. Visual effects are used to provide users with a cue that a particular action is taking place (zooms, fades, etc.).	N/A	1	2	3	4	5
28. The feedback is clear and useful.	N/A	1	2	3	4	5
29. The user is prompted if input is expected.	N/A	1	2	3	4	5
30. The user always knows where he/she is in the programme.	N/A	1	2	3	4	5

**Comments**

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**APPENDIX C**

**EXPERT REVIEW LIST : L2-LEARNING**

**NAME OF PROGRAMME:** .....

**REVIEWER:** ..... **DUE:** 16 February 1998

Please answer the following questions regarding the field of teaching covered by the interactive multimedia programme. Read the instructions clearly as some questions require only one answer while others require more.

**QUESTION 1 – TEACHING STYLE**

The teaching style of the programme is predominantly (tick only one answer)

a) audiolingual	
b) information communicative	
c) learner autonomy	
d) social communicative	
e) mainstream EFL (eclectic)	

**QUESTION 2 – TEACHING TECHNIQUES**

The following teaching techniques are used (tick all the appropriate answers):

a) grammatical explanation	
b) unstructured dialogues	
c) information gap	
d) presentation	
e) spontaneous production	
f) translation	
g) structure drills	
h) role-play	
i) suggestopedia	
j) self-directed learning	

**QUESTION 3 – TEACHING GOALS**

The immediate goals of the programme are (do not tick more than two boxes):

a) learning as an academic subject	
b) getting learners to 'behave' correctly in appropriate situations	
c) getting learners to comprehend information in the L2	
d) develop the potential of each learner	
e) communicative ability	
f) getting learners to interact with other people in the L2	
g) getting learners to know the structure and to use the L2	

#### QUESTION 4 – TYPE OF STUDENT

The programme will be useful for non-mother tongue (you may tick more than one box)

a) young children	<input type="checkbox"/>
b) senior primary school learners	<input type="checkbox"/>
c) secondary school learners	<input type="checkbox"/>
d) adults	<input type="checkbox"/>

#### QUESTION 5 – LEARNING GOALS

It is assumed that the following knowledge/skills/competence will be acquired by repeated use of the programme (you may tick more than one box):

a) conscious grammatical knowledge	<input type="checkbox"/>
b) ability to behave appropriately in specific situations	<input type="checkbox"/>
c) developing a better understanding of yourself	<input type="checkbox"/>
d) gaining usage competence	<input type="checkbox"/>
e) understanding and use of the L2	<input type="checkbox"/>
f) ability to interact in the L2 with other speakers	<input type="checkbox"/>

#### QUESTION 6 – FOCAL AREA

The programme focuses on (tick only one)

a) the oral medium	<input type="checkbox"/>
b) the written medium	<input type="checkbox"/>

#### QUESTION 7 – WEAKNESSES

The weaknesses of the programme are: (you may tick more than one box)

a) An incorrect form of grammar is acquired.	<input type="checkbox"/>
b) The learning process is too controlled.	<input type="checkbox"/>
c) The programme is centered around habit-formation.	<input type="checkbox"/>
d) Little scope for learner variation.	<input type="checkbox"/>
e) Discrepancy between style and medium.	<input type="checkbox"/>
f) Focuses on communication with L1 speakers.	<input type="checkbox"/>
g) Does not promote cooperative learning.	<input type="checkbox"/>
h) There is an over-emphasis on the oral form of the language.	<input type="checkbox"/>
i) The program does not leave enough scope for linguistic creativity.	<input type="checkbox"/>
j) Not enough attention is paid to vocabulary acquisition.	<input type="checkbox"/>
k) Difficulties in generalising to other situations.	<input type="checkbox"/>
l) Focuses on communication with L2 speakers.	<input type="checkbox"/>
m) Inadequate focus on grammar.	<input type="checkbox"/>

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*Adelia Carstens het in 1990 aan Unisa gepromoveer met 'n proefskrif getitel "Die komposisionaaliteitsbeginsel en die grammatika van Afrikaans". Sy is tans professor in Afrikaanse Taalkunde aan die Universiteit van Pretoria. Haar spesialiteitsrigtings is semantiek, leksikografie en terminologie. Tans is sy betrokke by die maak van 'n viertalige Chemiewoordeboek.*