Summary

This dissertation deals with the construction and evaluation of a self-instruction programme for a basic training in professional counselling skills. For this training a new training mode was developed, in which students follow parts of the programme independently. This training mode was developed in a project at the Department of Psychology at the University of Groningen thanks to a grant of the national authorities aimed at enhancing the quality and flow of education. The learning effects of the self-instruction training were compared to those of a training that was carried out under supervision. In addition, the influences of personality and learning style on learning effectiveness of each of the training modes were investigated.

The construction of the self-instruction programme for training in basic counselling skills.

The self-instruction programme was based on the existing, supervised training in counselling skills. This training used principles from the social learning theory (Bandura, 1977, 1986). It was constructed according to the cumulative microtrainingsmethod (Ivey, 1971; Ivey & Authier, 1978; Lang & Van der Molen, 1992). Examples of counselling skills that were learnt during the training are Asking Open Questions, Reflecting Feelings and Summarising.

Acquiring a skill took place by studying theory, watching video examples and practising.

Although direct personal interaction with a supervisor doesn't always seem necessary for an effective learning process (Curran, 1997), it is unlikely that every unit of a training in counselling skills can take place in self-instruction. Earlier studies showed that, generally, a combination of self-instruction with supervised education is most effective (McNeil & Nelson, 1991). For this reason careful study was carried out in order to decide for which aspects self-instruction was or was not appropriate. This resulted in the development of self-instruction modules for units like studying theory, modelling and practising in simple exercises. In role-playing, the direct feedback of a supervisor was considered important. Therefore it was decided to maintain supervision in this training unit. By reducing the size of the training groups in the self-instruction mode, it was possible to provide even more supervision than in the existing training mode. An extensive justification of the decisions that were made when constructing the
self-instruction programme is described in Chapter 2. The self-instruction programme was developed and evaluated in two phases: first a written workbook was developed and based on this programme the computer application GEVAT (Counselling Skills Training) was developed.

Both training modes consisted of eight sessions of approximately three hours. In preparation to the training students studied literature on counselling. To ensure that students actually had the required knowledge at their disposal, they were tested on knowledge of subject matter and were expected to pass this test. After the test, students followed the self-instruction training in groups of three to six persons. Every meeting was led by one of the students. In the first self-instruction-training mode, the paper version, students went through the programme using the workbook and videotapes. The leader of the group directed the learning processes according to guidelines on procedures and feedback. In the computer version of this training mode, this task was largely taken over by the computer programme. Students mostly went through the computer units in pairs or trios. During the first self-instruction training students voiced a need for more supervision; therefore it was decided to provide some extra supervision in the second self-instruction mode during role-plays and to reserve some extra moments for consulting the supervisor about questions and problems. An extensive description of both training modes is provided in Chapter 2.

Main questions in this investigation

The first question in this investigation was whether the training in counselling skills was effective when provided in a self-instruction mode (see Chapter 3). In addition, it was investigated whether students learned as much by self-instruction as they did under supervision. The second question was whether personality and/or learning style influence the learning effects of the training and whether this influence was different for the various training modes.

Method

The investigation was carried out under a total of 382 second-year undergraduates of Psychology at the University of Groningen, who followed the basic training in counselling skills. This training was a compulsory doctoral module and participation in the investigation was an obligatory part of the course. In 1997/1998 193 students followed the training. Of this sample 97 students took the training under supervision and 96 students followed the self-
instruction training guided by the workbook. In 1998/1999 189 students took part in the training with the computer application GEVAT. The students' counselling skills were assessed before and after the training. Two kinds of behavioural tests were used, namely video and role-playing tests (see Chapter 3). The video test consisted of 30 video vignettes. Students had to react as a counsellor, using a specific counselling skill. The aim of the role-playing test was to have students show their counselling skills in a counselling session with a trained actor, who acted as a client using a standardised script. Of both test modes two versions were constructed, which were balanced over students and conditions. Test versions were assigned at random. Furthermore students completed a personality questionnaire and a learning style inventory before the training, namely the Five-Factor Personality Inventory (FFPI, Hendriks, 1997) and the Inventory Learning Styles (ILS, Vermunt, 1992; see also Chapter 4).

The effectiveness of self-instruction and training under supervision

The first main question in this investigation concerned the effectiveness of the self-instruction training in counselling skills. The results showed that both self-instruction modes were effective. The learning effects were very strong. In addition self-instruction proved to be at least as effective as supervised training. This corresponds with previous findings, in which self-instruction was combined with traditional forms of education (Chaparro & Halcomb, 1990; McNeil & Nelson, 1991). An important finding of this investigation is therefore that it is possible to apply supervision more efficiently than in the existing training: although in the self-instruction mode supervision was even more intensive during role-playing, supervision altogether was reduced to 50%. Despite this reduction, learning effects were at least as strong as those of the supervised training. It can be concluded that with regard to enhancing the quality and flow of education a first positive result is achieved. The results of this investigation suggest that it is justified to offer students the possibility to go through parts of the training independently on a self chosen time and place. However, the positive training effects of self-instruction do not mean that supervision can be reduced further without negative consequences: the decision for supervision during role-playing was made very consciously. It was precisely this specific combination of self-instruction and supervision that yielded these positive effects. Because the question arises whether both training modes are equally effective for every person, the influence of personality and learning style on the learning effects of each of the training
modes was investigated. However, before this study was carried out, the relationship between personality and learning style was investigated (see Chapter 4).

The relationship between personality and learning style

The hypotheses regarding the relationship between personality and learning style were especially focussed on the relationship between Autonomy and learning style. It was expected that the meaning directed learning style (see Scheme 1) would relate positively to Autonomy and that the reproduction directed and the undirected learning style on the other hand would relate negatively to Autonomy. Furthermore it was hypothesised that learning style would relate to Conscientiousness: it was expected that the reproduction directed learning style would relate positively to Conscientiousness and the undirected learning style negatively. Indeed, the results offered support for most of the expectations regarding the relation between Autonomy and (components of) learning style. Furthermore, in Study 1 the hypotheses regarding the relation between Conscientiousness and (components of) learning style were also supported. The results of this investigation suggest that personality explains part of learning style. However, the empirical support is not that strong as to take personality and learning style as two terms for the

<table>
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<tr>
<th>Learning styles</th>
<th>Explanation of the learning styles</th>
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<td>Meaning directed</td>
<td>Searches for associations in the learning materials, tries to find main lines and to build a total picture of the subject matter; tries to approach learning materials in a critical manner by asking questions and forming own opinions and conclusions (in-depth processing); determines him/herself how to learn and what is important (self-regulation); views learning as building knowledge and insights and studies out of personal interests;</td>
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<tr>
<td>Reproduction directed</td>
<td>Underlines or marks in study texts what he/she has to know and learns these by heart, memorises and rehearses a lot, processes materials stepwise and in detail (stepwise processing); lets him/herself be directed externally, that is by the regulation sources supplied by the instruction, such as directions for studying in the text or suggestions from the teacher; perceives studying as absorbing knowledge; is often oriented at testing own capabilities and passing exams;</td>
</tr>
<tr>
<td>Application directed</td>
<td>Tries to concretise what he/she learns, mainly pays attention to those parts of the subject matter that have practical relevance; perceives studying as learning to use the knowledge that he/she acquires and directed towards his/her future profession;</td>
</tr>
<tr>
<td>Undirected</td>
<td>Finds it hard to steer his/her own learning, but also has troubles to benefit from external regulation.(undirected regulation strategy); is of opinion that instruction needs to be stimulating and likes working together with peers; is insecure with regard to the study: doesn't know whether he/she is able to finish the study programme and wonders whether he/she has chosen the right study programme.</td>
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same concept. Learning style is more than just personality, which is also obvious from the high percentages unexplained variance. In view of the results concerning the relationship between personality and learning style it was considered interesting not only to investigate the influence of these variables on learning effects, but also to investigate whether learning style mediated the influence of personality on learning effect. However, there appeared to be no or almost no support for a mediating role of learning style.

The influence of personality and learning style on training effectiveness
The second main question of this investigation was whether personality and learning style influenced the effect of the training and whether this influence was different for each of the training modes. The results showed that only Extroversion moderated the effectiveness of the training modes: if persons scored higher on Extroversion, the effectiveness of the self-instruction mode was stronger, whereas Extroversion had a negative influence on the effectiveness of the supervised training. The other personality factors did not affect the learning effectiveness of each of the training modes differently. In addition to the interaction just mentioned, some main effects were found: if persons scored higher on Agreeableness and Conscientiousness, they learned more from the training. In contrast, the learning effects were smaller when persons scored higher on Emotional Stability and Autonomy. However, the influences were not very strong.

Considering learning style, hardly any interactions were found with training mode, as was the case with personality. Only for persons who scored low on the meaning directed learning style self-instruction proved to be more effective than supervised training. Furthermore, some main effects were found. The meaning directed learning style and its accompanying components, in-depth processing and internal regulation had negative influences on learning effects. The reproduction directed learning style and intake of knowledge had positive influences on learning effectiveness. The undirected learning style had a negative influence on learning effectiveness (see Chapter 5). However, the influences of learning styles and its accompanying components were not very strong either.

The results suggest that persons, who are intellectually independent or direct their learning processes themselves (i.e. internally), benefited less from the training in counselling skills. It is conceivable that this is related to the nature of instruction. In contrast with most education that is offered at university, the training is not so much directed at studying subject
matter, but at the active acquisition of counselling skills. The learning method, that is applied, requires more adjustment from students than traditional modes of academic education (lectures, studying subject matter). Possibly too much own initiative is counterproductive in this case.

**Conclusions and practical recommendations**

The results of this investigation show that in self-instruction at least as strong learning effects can be realised as in supervised training. Therefore, an important conclusion is that it was possible to reach the same learning effects with only 50% of the original amount of supervision. The computer application GEVAT proved to be an effective method to train students in counselling skills. In addition, there appeared to be hardly any differences in the effects of each of the training modes for persons who differ in personality and learning style.

**Recommendations for future research**

The results in Chapter 5 showed that certain personality and learning style characteristics, which are considered essential for theoretical education, for example Autonomy, in-depth processing and internal regulation, correlated negatively with learning effectiveness in the current investigation. Reflecting on the contents of instruction, it was concluded that the nature of the current training probably deviates from common academic education. This implies that the effectiveness of a learning style might be related to the nature of education, in other words, it might be possible that flexible application of learning styles and being able to make an adequate judgement of which situation requires which learning style, results in better learning effects than maintenance of the same learning approach. Future research might therefore focus on the question whether it is possible to influence or change learning style and whether flexible use of learning styles ultimately leads to better learning results than consistently using one learning style. In view of the results in Chapter 4 however, learning style does not seem to be changeable unlimitedly. Since the influence of learning style apparently is detached from that of personality on learning effectiveness (see Chapter 5), it is interesting to investigate in the future whether learning style can be changed in such a way that this results in enhancement of learning effects. Furthermore, it might be interesting to investigate the influence of other variables than learning style and personality on learning effects, for example motivation.