

**IMPLICATIONS OF THE DENTAL EDUCATIONAL RESEARCH
INTERVENTION**

CHAPTER 10 RE-PLANNING

10.1 Introduction

The re-planning cycle of Phase III of the study comprises reflection on, and recommendations as a result of the implementation and evaluation phase of the study.

- Reflection will be done in terms of the following:
 - Contribution of the study in providing a solution to the research
 - Achievement of the aim and objectives of the study
 - Strengths and limitations of the study.
- Recommendations will be made, in view of the action learning and -research strategy employed during the study, in terms of the following:
 - Development of a curriculum in relational communication skills
 - Recommended teaching strategy to follow
 - Considerations for implementing a curriculum in relational communication skills in South African dental schools
 - Integrating business principles into the traditional clinically- and technique-orientated dental curriculum
 - The future.

10.2 Reflection

10.2.1 Contribution of the study in providing a solution to the research problem

The “Problem statement” presented in Chapter 3 (section 3.1), stated the necessity of converting the low viability, needs-driven culture characteristic of a medical fund culture, into a high viability, demands-driven culture characterised by the selection of comprehensive dentistry by a trusting and loyal patient. Such conversion should be based on the evidence that customer satisfaction is a fundamental driver of customer loyalty in service markets.

Furthermore, the intervention should have a patient-focused or customer relationship management (CRM)-approach enhancing the dentist-patient relationship. Results of the study (Chapter 8) clearly indicate that students' communication skills improved significantly from training cycle 1 to training cycle 2 (Tables 35 & 36 - Chapter 8, section 8.2.1.2 - 8.2.1.5). The adjusted rubric (Table 33 - Chapter 8, section 8.2.1) was the result of a thorough investigation of the construct validity of the original combined rubric (Table 26 - Chapter 5, section 5.2.2) through a series of factor- and item analyses. The adjusted rubric comprises six dimensions, two of which enhance a patient-centered approach by the dentist towards the patient. The Dimension: "Building the relationship" comprises the skills required to convey warmth, interest, respect, empathy and sensitivity towards the patient. The Dimension: "Understanding the patient's perspective" enable the dentist to focus on the psycho-social dimensions (expectations, emotions, chief complaint and psycho-social issues) of the patient. As a result, both these dimensions of the adjusted rubric will, if properly employed, attract a trusting and loyal patient receptive to proposed treatment.

10.2.2 Achievement of the aim and objectives of the study

The aim of the study (Chapter 1, section 1.2) - to develop, implement and evaluate a curriculum for teaching relational communication skills in dentistry - was achieved.

As far as the achievement of the three objectives of the study are concerned (Chapter 1, section 1.3):

10.2.2.1 Develop a cost-effective curriculum in terms of time and human resources

The complex nature of relational communication skills teaching as well as the necessity for repeating or functionalising these skills makes this a challenging objective. However, two lecturers supported by two SPs, will go a long way in teaching relational communication skills to a class of 60 students divided in groups of four students each, over a period of one year (Table 62, below).

10.2.2.2 Implement the curriculum

The curriculum was effectively implemented as presented in Figure 9 (Chapter 6, section 6.2).

10.2.2.3 Evaluate the curriculum in terms of its relevance and appropriateness

The curriculum was rated as being relevant and appropriate by the students (Tables 52 & 53 - Chapter 8, section 8.2.6.4 & 8.2.6.5). The average scores for male and female students were 4.27 and 4.25 respectively on a scale of 5.

10.2.3 Strengths and limitations of the study

Among the strengths of the study are:

- The large number of participants (n = 67)
- The small sizes of the groups of students (16 groups of four students each and one group of three students)
- The standardised teaching method (rated 4.18 and 4.26 on a scale of 5 by male and female students, respectively)
- The design of the study in a pre- and post-training cycle.

A limitation of the study might be the reliance on subjective responses by the SP and students. However, the researcher is convinced that that by far the majority of responses - both qualitative and quantitative - are genuine and reliable responses by both the SP and students.

10.3 Recommendations

10.3.1 Development of a curriculum in relational communication skills

As was discussed in chapter 7 (section 7.5), the construct validity of the combined rubric (Table 26 - Chapter 5, section 5.2.2; Appendix A), was investigated through a series of factor- and item-analyses. This investigation resulted in an adjusted rubric (Table 33 - Chapter 8, section 8.2.1; Appendix B). As was illustrated in Figure 8 (Chapter 5, section 5.2), outcomes essential for the dentist to be competitive in the emerging South African dental market should be derived from research-based evidence. As a result, the adjusted rubric (Table 33) - as it provides research-based evidence - is recommended for use in determining those specific outcomes and sub-outcomes regarded as essential for a dentist to be competitive in the emerging South African dental market. These outcomes and sub-outcomes are presented in Table 61, below. It is recommended that the curriculum in relational communication skills be derived from these outcomes.

The curriculum should be structured according to the required SAQA format in terms of a purpose, embedded knowledge and assessment criteria and presented to the students as a study guide (Appendix C). Adjustments to the content of the curriculum and teaching strategy, should be made through a process of action learning and - research (Figure 13, below).

Table 61 Essential outcomes for the dentist to be competitive in the emerging South African dental market (derived from Table 33)

Specific outcome	Sub-outcome
1. Opening the interview	<ul style="list-style-type: none"> • Greets the patient • Introduces self • Obtains the patient's name
2. Structuring the interview	<ul style="list-style-type: none"> • Negotiates an agenda for consultation • Encourages patient to give history of chief complaint • Picks up verbal cues (patient's need to contribute information/ask questions; information overload; distress) • Picks up non-verbal cues (patient's need to contribute information/ask questions; information overload; distress) • Progresses from one section to another using transitional statement (includes rationale for next section)
3. Understanding the patient's perspective	<ul style="list-style-type: none"> • Attends to physical comfort (here and throughout interview) • Determines patient's expectations regarding each problem • Encourages expressions of feelings • Uses open questioning technique • Uses closed questioning techniques • Facilitates patient's responses (use of encouragement, silence, repetition, paraphrasing, interpretation) • Listens attentively (no interruptions; time for patient to think before answering) • Clarifies patient's statements which are vague and need amplification • Summarises at end of a specific line of inquiry to verify own interpretation of what patient has said to ensure no important data was omitted • Encourages patient to contribute ideas/suggestions/preferences/beliefs
4. Sharing information	<ul style="list-style-type: none"> • Provides information (procedures; processes; benefits & advantages; value & purpose) • Discusses options • Discusses consequences of no action • Shares own thoughts; ideas/dilemmas/thought processes • Elicits patient's understanding about plans and treatments • Takes patient's lifestyle, beliefs, cultural background and abilities into consideration • Asks about patient's support network for decision-making
5. Reaching an agreement on problems and plans	<ul style="list-style-type: none"> • Attends to timing • Reading, writing, use of computer do not interfere with dialogue/rapport • Confirms patient's problem • Obtains patients' view of need for action (perceived benefits) • Accepts legitimacy of patient's views/beliefs (non-judgmental) • Negotiates mutually acceptable plan (encourages patient to make choices; addresses concerns) • Encourages patient to be involved in implementing plans (to take responsibility and be self-reliant) • Uses easily understood language (avoids or adequately explains jargon) • Contracts with patient regarding next step(s) for patient and dentist • Summarises session briefly
6. Building a relationship	<ul style="list-style-type: none"> • Demonstrates appropriate non-verbal behaviour (for example eye contact, posture & position, movement, facial expression, use of voice) • Demonstrates interest • Demonstrates respect • Communicates warmth • Bonds with the patient • Shows empathy with patient • Deals sensitively with embarrassing and disturbing topics

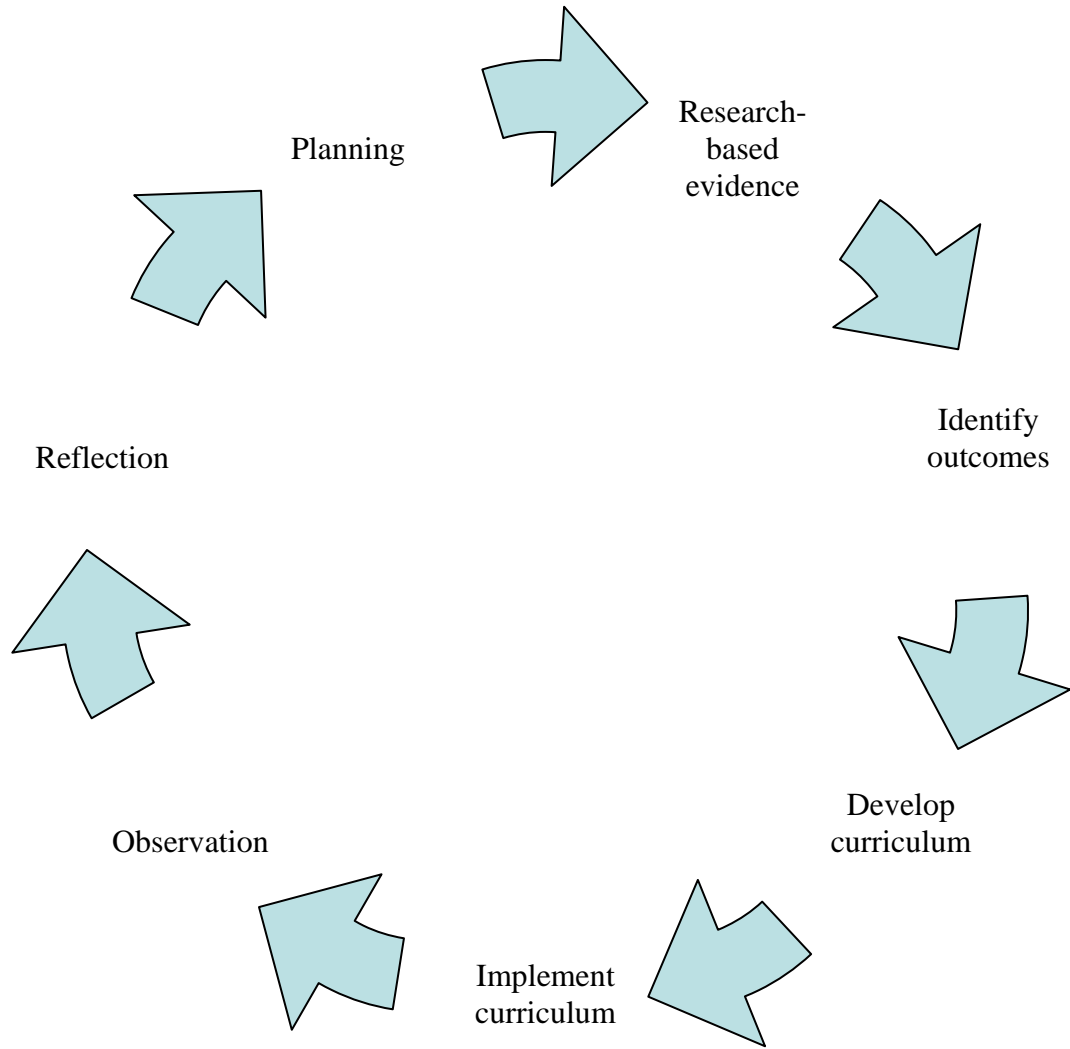


Figure 13 Recommended process of curriculum development in relational communication skills

10.3.2 Recommended teaching strategy

Table 62, below illustrates the teaching strategy recommended to develop undergraduate dental students' relational communication skills. It should comprise the following three strategies (ATF-strategy):

- **A**ffectively stimulate students
- **T**heoretical input
- **F**unctionalisation of relational communication skills.

Table 62 Recommended teaching strategy as a result of action learning and -research (ATF-strategy)

Semester	Teaching strategy	Objective/ rationale	Session	Teaching method	Teaching principles
1	Phase 1: Affectively stimulate students	Allow students to “experience the experience”	1	<ul style="list-style-type: none"> Students to be divided in small groups of four students Each student role-plays an interview with peer* by means of a clinical case study. 	<ul style="list-style-type: none"> Groups of four students each A systematic teaching approach (see teaching method) The focus should be more on experiential learning by students than didactic teaching by lecturer Role-play with peers should be followed by role-play with a SP (see teaching method) Video-recordings of students’ interviews with peers & SP Transparent assessment by means of an assessment rubric and video feedback A credible SP
	Phase 2: Theoretical input	Discuss rationale, evidence, cognitive aspects and communication skills required	2	<ul style="list-style-type: none"> One-hour orientation lecture explaining the rationale and evidence from literature supporting communication skills training and teaching. Each student issued with a copy of study guide Video demonstration of ideal interview (7 minutes) Discussing the rubric as assessment instrument ensuring transparency. 	
	Phase 3: Functionalisation of relational communication skills	Opportunity to practice the skills through experiential learning	3	Each student practices role-play of steps 1-3 of interview with <i>peers</i> enhanced by video recording and -feedback.	
			4	Each student practices role-play of steps 4-6 of interview with <i>peers</i> enhanced by video recording and -feedback.	
2			5 - 8	Each student practices role-play of steps 1- 6 of interview with <i>SP</i> enhanced by video recording and -feedback. Rubric employed as assessment instrument.	

The abovementioned recommended teaching approach is based on (i) evidence derived from the literature and (ii) action learning and -research experience gained during the study. Specific teaching principles and -methods should be employed in order to achieve optimal educational benefits. The literature refers to the lack of an experiential teaching approach in dental schools (Chapter 4, sections 4.15 & 4.16). Research suggests that effective teaching in interpersonal communication skills should be continuous and should gradually increase in complexity as students progress through the curriculum (93). Teaching in pre-clinical and clinical settings should be complementary. Many U.S. and Canadian dental schools failed to provide students with gradual exposure to communication, building from basic principles to complex concepts such as patient education/consultation and managing difficult patients (93). Without the foundation of communication theory as well as skills presented in earlier years, it seems unlikely that students could truly grasp such complex material. A notable finding in these schools is that students' interviews with simulated patients and other active learning methods are used less in dental curricula than in medical schools (93). This study will hopefully initiate a change to this culture in South African dental schools.

During active learning a student interactively participates in learning activities. Active practice is necessary to learn communication skills (93). One of the advantages in applying this methodology with simulated patients is that the simulated patient can give feedback from the patient's point of view. Vannette *et al.*, (136) found that simulated patients' feedback out-performed that of academic staff in effecting changes in students' interviewing skills. Since the purpose of education is to provide students with appropriate skills, the lecture-only approach used in many schools is not sufficient.

Table 56 (Chapter 8, section 8.3) provides a summary of students' feedback to the question: "What are the most important things you have learned from the lectures?" Students' feedback confirms their acceptance of the rationale and evidence supporting communication skills teaching and they are prepared to deal with it in a practical way. Students' inputs with regard to communication skills teaching are essential - especially as the project will be repeated within an action learning and -research paradigm. From these inputs it was clear that students required more practice as well as interactions with different patients (not only with the SP).

In view of the above and given the complex nature of relational communication skills teaching, the general lack of awareness of the unique nature of relational communication skills in clinical settings and the fact that behavioral change which is lasting requires numerous opportunities to practice and to undergo continual reinforcement, the researcher became convinced that students should first be affectively stimulated (for example to experience the experience) before introduced to the theoretical part of communication skills teaching. Following the theoretical input, students should have numerous opportunities to practise newly acquired communication skills.

Previous research indicated that, for many dental schools in the United Kingdom and the United States, communication skills training involved didactic teaching practices and few opportunities for in-vivo practices (93); (94). However, this study confirms that skills, attitudes and knowledge can be discussed, lectured and practised in the classroom, but communication skills develop with practice, feedback and repetitive performance (Table 57 - Chapter 8, section 8.3) (129).

The ATF-teaching strategy is an attempt to ensure the attainment of educational benefits which are a function of students' perceptions of their learning experiences as relevant, pleasant and adding value to their training.

These teaching principles and -methods include the following:

- Active learning through role-play with peers* followed by role-play with SP
- Performance-orientated assessment by means of an assessment rubric
- Effective demonstration of an interview in digestible chunks
- Small groups of four students each
- Constructive feedback
- Supportive learning atmosphere
- Video-recordings and -feedback of students' interviews
- Reflective self-assessment
- Repetitive practice.

* Interviews with peers have advantages as well as disadvantages. It is the ideal way to “break the ice” initially. Students feel more relaxed and not too intimidated by being video-recorded. Initial skepticism of relational communication skills teaching could be due to a lack of knowledge about the specific components thereof. However, the disadvantage of peer-interviewing is that peers know each other too well and as a result find it difficult to experience the peer as a “real” patient.

These teaching principles and -methods are supported by evidence from the literature (6; 23; 76; 93).

Students' confidence to interact in a relaxed way with the “patient” was enhanced by role-playing a structured interview (Table 58 - Chapter 8, section 8.4). It is anticipated that the recommended ATF-teaching strategy will ensure a smooth transition to students' interviews with real patients during their clinical years.

10.3.3 Considerations for implementing a curriculum in relational communication skills in South African dental schools

The future South African dentist must possess the necessary skills to deal with patients' changing expectations and socio-economic realities. The future South African dentist must have the ability not only to treat dental diseases, but also to interact with a human being carrying high expectations, hopes, biases and an increasing array of information. In today's environment, relational communication skills are equally as important as clinical skills (2) (Table 2 - Chapter 1, section 1.1).

As far as the future with regard to relational communication skills teaching in South African dental schools is concerned, the following suggestions should be considered:

- Dental schools should be encouraged to embrace the concept of relational communication skills training and to find adequate time and resources in order to do justice to a module in relational communications skills. (This could be achieved by using the pressure from dental professional bodies and institutions).
- Communication skills teaching should become part of the curriculum of each dental school in SA and should be based on the most recent research literature (6).
- A strong argument in favour of a formal curriculum in communication skills is that such skills actually improve learners' clinical performance. The prospect of improved clinical performance would interest doubters who otherwise view communication skills as an add-on extra of little clinical benefit (74).
- Without the active backing of deans of the institutions and managers of programmes, worthwhile change will not be achieved.

- Dental schools are moving from a traditional- to a problem-based curriculum, which offers considerable overlap with communication skills training methods and provides an ideal opportunity to include a curriculum in relational communication skills.
- Communication needs to be an integral part of the dental curriculum instead of being divorced from “real dentistry” and taught in a separate, self-contained course. It is essential to integrate all four areas of comprehensive dental practice which together determine clinical competence of a student, namely, knowledge, communication skills, problem solving and physical examination (74).
- It should be formally structured and organised and presented in a helical rather than a linear approach. Neither a once-off module nor sequential modules are adequate. Students should be allowed to revisit areas previously covered (74).
- Communication skills teaching should focus on all six dimensions of the dentist-patient interview (Table 33 - Chapter 8, section 8.2.1). Active practice with simulated patients is essential to learn communication skills (93).
- Communication skills teaching should be presented in the earlier years of the curriculum.
- The effectiveness of a communication skills teaching programme should be evaluated through educational research.
- Students need to gain gradual experience of the dentist-patient interview: first with peers followed by SPs before they are faced with real patients. In addition a transition from basic principles to complex concepts such as patient education/consultation is necessary (93).
- Assessment often drives a student’s learning. Unless a subject is assessed, students may not perceive it as an essential requirement for clinical practice but rather as a “soft” subject of secondary importance (74). This makes the development of an assessment rubric, as was employed during this study, essential.

- Teaching of relational communication skills is labour-intensive and requires one facilitator for every four learners. As a result, facilitator training must be considered in addition to relational communication skills teaching for students. Furthermore, good communication skills teaching is an ongoing process. As the resource implications of such a curriculum and teaching programme are significant, development of the curriculum must take into account the existing limited human-, time- and financial resources and attempt to remedy the situation accordingly (137).
- In order to ensure optimal learning and educational benefits, the curriculum should be implemented in a safe, supportive and encouraging environment (74). The facilitator and SP will play a significant role in this regard!

10.3.4 Integrating business principles into the traditional clinically- and technique-orientated dental curriculum

Given the business-like nature of a private dental practice, training in relational communication skills will empower the dentist to achieve personal, professional and financial success based on sound business, financial and marketing principles. However, dental students should realise *early* in their careers - in dental school - the importance of developing and mastering sound relational communication skills with patients. If students are not taught proper relational communication skills in dental school, they may develop incorrect habits and pay for their mistakes later in their professional careers (1).

The dentist's attitude is most important when communicating with patients and therefore should dental students' clinical mindset be reinforced with "softer" skills such as:

- Building strong relationships with patients through communication skills.
- Discovering a patient's "story" in terms of his/her expectations, psychosocial concerns and emotions.
- Skills in presenting clear and effective treatment plans that will enhance a demand for comprehensive dentistry.
- Integrating business-, management- and leadership skills, into the traditional clinically- and technique-orientated dental curriculum.

A competitive dentist (for example one with a competitive edge) is perceived by the patient to be *different and unique* in his/her relationship with the patient. As was illustrated in Chapter 4 (section 4.3), customer satisfaction is a prerequisite for customer loyalty. As a result, curricular outcomes of the traditional clinically- and technique-orientated dental curriculum must include business principles such as customer relationship management (CRM), competitiveness and differentiation. The greater the patient's satisfaction and as a result his/her loyalty towards that dentist, the greater the likelihood that the patient will be retained (32).

10.3.5 The future

As far as the future is concerned, the following must needs be mentioned: in order to meet the increasingly competitive dental market in SA, a course in relational communication skills teaching should provide experience which will (138):

- Develop increased awareness, sensitivity and perceptions of oneself and others.
- Enhance skills and attitudes conducive to good human relations and awareness of the importance of those factors to the South African dentist of the 21st century.

- Develop investigative skills and attitudes which will help the dentist to identify problems of managing human resources in both a dental practice and the community at large.
- Provide an opportunity for students to relate to the problem at hand and to learn from each other through active participation in small group sessions.

10.4 Conclusion

South African dentists will need to be able to increase the number of patients who have a demand for comprehensive dentistry in order to ensure a viable career in dentistry. Consequently, the dentist must be equipped with relational communication skills that will attract a loyal, dentally educated patient. Furthermore, the future South African dentist must be equipped with skills both to elicit and to listen to patients' "stories" (for example their expectations, psychosocial issues and emotions). Finally, the future South African dentist must be able to effectively and clearly present comprehensive treatment plans.

The emerging South African dental market necessitates more effective dentist-patient interactions that will result in improved outcomes in terms of patient- and dentist satisfaction, patient loyalty and -retention and compliance with proposed treatment plans. More effective dentist-patient interactions in terms of accuracy, efficiency, respect, trust, warmth and empathy will result in collaboration and reduced conflicts and complaints between dentist and patient.

As educators, our job does not stop with developing curricula comprising a purpose statement, embedded knowledge, assessment criteria or teaching strategies. We must rather look at the context and culture in which we teach, and make adjustments to that context if we are to be successful. As education researchers, we need to focus more attention on understanding and developing methods for intervention in the all important "hidden curriculum."

The latter may be defined as “commonly held understandings, customs, rituals and all other aspects so often taken-for-granted” (139).

As educators, it is our duty to intervene in the life-space that we call dental education.