

CHAPTER 5

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In the paradigm of OBE the role of the lecturer has changed from a deliverer of content (lecturer-centred) to a facilitator of learning that helps the learners (learner-centred) to master the critical and specific outcomes in this study unit for Toothmorphology. This new role of the lecturer in dentistry includes a variety of functions (Chapter 2, p. 19) during the teaching and learning process to help the learners to be successful during learning of new knowledge, skills and attitudes.

This study has implemented the principles of the Whole Brain Teaching and Learning Model to propagate meaningful learning by accommodating and developing thinking style diversity. Profiling this group of learners stimulated awareness of diverse thinking styles to the learning facilitator. The mean profile score of the group indicates that there is a statistically significant strong to a very strong preference for all four brain dominant modes of the Whole Brain Model, and consequently preferences for learning activities that include all four thinking modes.

These findings have challenged the facilitator to adapt his own thinking style preference during learning in order to accommodate and develop a group of learners with diverse thinking styles. Creative and innovative learning materials and activities, planned and implemented via the Whole Brain Model, were used to facilitate learners to master the critical and specific outcomes of learning in the study unit for Toothmorphology. Different learning materials, methods and techniques were not only used for the purpose of diversity but were planned and delivered with a specific strategy to minimize learning avoidances and to develop whole brain thinking.

During the study the facilitator of learning made use of action research to evaluate and adapt implemented learning activities continuously and to minimize

learning avoidances with a view to fostering meaningful learning by a diverse group of learners.

The results of this study indicate a significant improvement of learners' retention, participation and attitudes toward the content and learning as well as to group interaction and problem solving.

5.2 Conclusion

In the new paradigm of education and training in South Africa learning facilitators help learners to maximize their potential through well planned, specifically intended and flexible learning activities where the focus is on learning rather than delivery of knowledge. To learn learners need to think, and thinking is facilitated by the learning activities that are used to engage learners with the content. The Whole Brain Model helps facilitators of learning to understand the concept of thinking diversity and how to accommodate and develop whole brain thinking during learning. Studies by Bunderson (adapted from De Boer et al., 2001) of the model have proved it to be reliable and valid when analyzing thinking style preferences, thus delivering accurate quantitative information for use when planning learning activities. Herrmann (1996) states that:

The whole brain concept, once understood, becomes irresistible.

In the new paradigm it cannot be assumed that all learners' potential will be maximized when learning facilitators use single educational technologies, such as problem solving or cooperative learning as a basis for all learning activities. It is the responsibility of the educator and trainer to be innovative and creative in his or her educational practice in order to accommodate and develop diverse thinking and thereby enhancing the quality of learning. The Whole Brain Teaching and Learning Model helps to plan and deliver diverse learning activities with the specific intention of facilitating meaningful learning with all learners in a group. Having a strong preference for a specific style of thinking is no indication

of competence for that style and the facilitator should use learning opportunities to train, motivate and let learners practise whole brain thinking to develop all thinking styles fully.

This dissertation underscores awareness of thinking style diversity of learners in the learning environment and introduces the positive results of using the Whole Brain Model to accommodate and develop learners' learning for enhancing the quality of learning.

5.3 Recommendations of this study

5.3.1 Recommendations for teaching and learning in Dentistry

- ◆ Facilitators of learning in dentistry can use the principles of the Whole Brain Concept to enhance the awareness of thinking style diversity in the learning environment.
- ◆ Lecturers facilitating learning in different modules of the dentistry curriculum can integrate and use the principles of the Whole Brain Teaching and Learning Model into their teaching practice.
- ◆ The Whole Brain Teaching and Learning Model can be used to accommodate and develop whole brain thinking and learning in order to stimulate the full development of the individual learners' potential.
- ◆ This study recommends the use of the Whole Brain Teaching and Learning Model by facilitators of learning in dentistry to help them deliver learning interventions with a more strategic educational purpose.

5.3.2 Recommendations for further research

- ◆ It is recommended that this group of learners are re-tested after a period of time to determine the retention of learning in this study unit.
- ◆ Further research is recommended to determine if this group of learners' thinking styles will have changed over time during their studies.

- ◆ Further research is proposed to correlate the learners' thinking style preferences with their performances in different modules of dentistry as well as their final examination results results appears twice.
- ◆ This study proposes measurement of thinking style preferences of all academic staff in the dental school to raise the awareness of diversity and to investigate a group profile of dental academics.
- ◆ A study is proposed to investigate the thinking style diversity of dentists in private practice as well as dentists working in the public sector (oral health clinics). Group profiles and correlation of the two groups could be investigated.