

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

AURAL FEEDBACK IN MICROTEACHING

An investigation into the effects of
audio feedback on a Practical Training
component of Teacher Education.

A Thesis submitted as part fulfilment
of the requirement for the degree of

MASTER OF ARTS

in Education
at Massey University

Christopher W Kinder
December 1989

ABSTRACT

The investigation presented here explores the use of audio feedback in the review stage of a Microteaching exercise.

The investigation involving Year Two Music Teacher Trainees, compared self-evaluation ratings made in response to three feedback conditions; memory, audio, and video; and attempted to explain any difference in ratings by changes in the source of feedback. The three self-ratings were compared to an expert rating of each microlesson to investigate any other effects feedback had on rating. The design of the study also allowed for a comparison to be made between two different teaching conditions, one teaching pupils in a classroom setting, and the other teaching peers in a College setting.

Although questionnaire responses indicated a preference for video feedback, there was actually little change between audio and video ratings. Neither of these ratings were as accurate as the initial memory rating when all three were compared to the expert rating. The video feedback appeared to generate a positive image which resulted in trainees over-rating themselves. Most importantly, there was no significant difference between audio and video ratings.

With regard to differences between teaching condition, the peer-teaching setting appeared to encourage an unrealistic view, with trainees in this group over-rating themselves more than those teaching pupils at school. Questionnaire responses indicated that the group teaching in the school setting tended to regard the Microlesson, although limiting, to be a valuable experience. This group's initial rating was lower than the peer-teaching group, but they were more responsive to changes in feedback.

Despite severe limitations to the generality of the study due to design shortcomings, the findings provide enough material for a general discussion on the differences in mode of feedback. Several issues are raised, including the idea that an audio stimulus generates a higher level response than a visual stimulus. The discussion includes reference to an informal study which was undertaken to explore this notion. (That it is not directly supported by the findings is probably due to design issues which failed to account for the superior status of video in the eyes of inexperienced self-raters, and by the use of a rating scale which was not sensitive to issues of aural and visual perception.)

The discussion takes place within the context of Teacher Education, preparing for a profession which is continually making demands on a teacher's adaptability to change and her ability to reflect on issues regarding the pace and direction of those changes. The feedback stage of a Microteaching cycle is seen as a place where such reflective activity can be encouraged, especially by the use of a variety of modes of feedback, including the activity of listening without visual cues, or in other words, audio feedback.

ACKNOWLEDGEMENTS

The presentation of this thesis has been possible only through the assistance of a number of people and institutions. I would like to thank Graham Parsons, Head of the Music Department at Palmerston North Teachers' College for his support and encouragement, and for his assistance with the implementation of the actual study at the College. Fleur Stark, who acted as co-rater, Keith Paintin of the Computer Studies Department, colleagues in the Music Department, and members of the Library staff are also acknowledged for contributions at different stages of the study. I am grateful also to Barry Slade, principal of St James' School, Palmerston North, for his co-operation in allowing pupils at the school to be involved in the Microteaching exercise.

The inclusion of a followup study was made possible by Ciaran Sugrue of St Patrick's College, Dublin, whose generosity with materials, facilities and advice is warmly appreciated. I am grateful also for study facilities at St Patrick's College, Maynooth, provided by staff of the Computer Studies Department, and by John Weafer, Director of the Centre for Research and Development.

Eric Archer, Graduate Advisor for the Education Department at Massey University is responsible for encouraging me to complete my M.A. with this thesis. For this, and for continuing support and advice, I am very grateful. Thanks also go to Ross St George of Massey University for his encouragement and guidance.

A special word of thanks goes to my wife Regina Murphy, who assisted in the preparation of the MS, and whose constant companionship and support encouraged me through all stages of this thesis.

CONTENTS

| | |
|--|-----|
| Abstract | i |
| Acknowledgements | iii |
| Contents | iv |
| List of tables | vi |
| Terminology | vii |
| | |
| CHAPTER ONE - <u>INTRODUCTION</u> | 1 |
| | |
| CHAPTER TWO - <u>LITERATURE REVIEW</u> | |
| 2.1. HISTORY AND BACKGROUND | 5 |
| 2.2. RESEARCH FINDINGS | 11 |
| 2.3. MICROTEACHING IN SPECIFIC SUBJECT AREAS | 26 |
| 2.4. MICROTEACHING IN MUSIC EDUCATION | 29 |
| 2.5. SUMMARY | 36 |
| | |
| CHAPTER THREE - <u>THE PROBLEM DEFINED</u> | |
| 3.1 INFLUENCES OF THE LITERATURE | 37 |
| 3.2 RESEARCH PROPOSALS | 38 |
| 3.3 RESEARCH DESIGN | 39 |
| | |
| CHAPTER FOUR - <u>METHOD</u> | |
| 4.1. SUBJECTS | 40 |
| 4.2. PROCEDURE | 40 |
| 4.3. EVALUATION INSTRUMENT | 44 |
| 4.4. DATA RECORDING | 45 |
| | |
| CHAPTER FIVE - <u>RESULTS</u> | |
| 5.1. CHANGE IN TRAINEE RATING | 47 |
| 5.2. COMPARISON OF TRAINEE AND EXPERT | 57 |
| 5.3. CHANGE BY ITEM | 64 |
| 5.4. QUESTIONNAIRE RESPONSES | 69 |
| 5.5. DISCUSSION | 75 |
| | |
| CHAPTER SIX - <u>GENERAL DISCUSSION</u> | |
| 6.1 INTRODUCTION | 81 |
| 6.2 THE FOLLOW-UP STUDY | 83 |
| 6.3 MICROTEACHING AND AURAL FEEDBACK | 87 |
| 6.4 THE FUTURE OF MICROTEACHING | 89 |

| | | |
|------------|--|-----|
| APPENDICES | A - Example of a Microlesson | 93 |
| | B - 14 Stanford Teaching Skills | 94 |
| | C - Explanation of Minicourse format | 95 |
| | D - Lesson Plan | 97 |
| | E - Evaluation Form and Explanation | 99 |
| | F - Questionnaire | 102 |
| | G - Direction and Magnitude of Change | 103 |
| | H - Results of Wilcoxon Test | 104 |
| | I - Rank Order of Ratings | 105 |
| | J - Inter-Rater Reliability | 106 |
| | K - Rank Order Correlation of items between feedback mode | 107 |
| | L - Teaching and Questioning Skills (Follow-up) | 108 |
| | M - Evaluation Form (Follow-up) | 109 |
| | N - Background to Follow-Up Study | 110 |

| | |
|-------------------------|-----|
| REFERENCES/BIBLIOGRAPHY | 113 |
|-------------------------|-----|

LIST OF TABLES

| | | |
|------|---|----|
| 4.1 | - Filming Schedule | 42 |
| 5.1 | - College and School Group Summed Ratings | 48 |
| 5.2 | - Graph of Summed Ratings | 49 |
| 5.3 | - Number of Trainees who Changed Ratings | 53 |
| 5.4 | - Direction of changes | 53 |
| 5.5 | - Correlation Coefficients | 56 |
| 5.6 | - Expert Summed Ratings | 58 |
| 5.7 | - Number of trainees whose rating agreed with the expert | 60 |
| 5.8 | - Number of trainees who rated themselves higher than expert | 63 |
| 5.9 | - Number of rating changes by item | 65 |
| 5.10 | - Mean change by item group | 67 |

TERMINOLOGY

Students enrolled in pre-service training for Primary School teaching are referred to as trainees, (in the present study, trainees in their second year)

The School group refers to trainees who taught lessons to pupils (children of age 9 or 10).

The College group refers to trainees who taught lessons to peers (trainees of the same year group).

Feedback refers to any information received by the trainee about past teaching experience. In this study, feedback conditions include immediate recall (no assisted feedback), audio (unguided listening to a soundtrack of a lesson), and video (unguided viewing of a film, with soundtrack, of a lesson). Feedback condition, feedback mode, and type of feedback are interchangeable terms.

Teaching condition refers to the environment (or setting) where the microlesson took place, and therefore the type of pupil involved in the microlesson, either at School or at College. Supervisor refers to the person implementing the music course, and carrying out the present study. Expert rating is the evaluation grade given by the supervisor for each microlesson.

The terms Microlesson and Microteaching exercise refer to the same activity and are used interchangeably. The abbreviation MT is used in places to stand for "Microteaching". The terms Rating scale and Evaluation form are also used interchangeably.

CHAPTER 1. INTRODUCTION

An Education System, like most examples of social organisation, responds to change. For survival, the integral parts of any organised group of human activity are required to continually adapt. Education, with a direct responsibility to children and their parents, is perhaps more vulnerable than other disciplines to pressure from external forces, be they market demands, community requirements, or technological developments.

Teacher Education is a specialised facet of the discipline of Educations. It is a youthful facet, with attention to precisely how best one person can encourage learning by another person being the thrust for only the last century. It has become accepted now that the possession of Knowledge itself is simply not sufficient to make a teacher, certainly not always a 'good' teacher. Teachers' Colleges and University Education Departments specialise in research and educating students of teaching in ways of imparting that Knowledge, of creating suitable learning environments, of enquiry and discovery in the classroom, and in later life.

As a young discipline, Teacher Education is particularly responsive to pressure and change. Schon (1988), in talking about preparing professionals for the demands of practice, suggests that pressure from the community often focuses on

"such issues as the quality of teaching and the in-service education of teachers. Teachers, who often resent becoming targets of blame for the perceived failures of public education, tend nevertheless to advocate their own versions of the need for professional development and renewal. Critics inside and outside the schools have argued in recent years that we must foster and reward development of the craft of teaching" (Schon, 1988, p15).

It is in such an eager atmosphere of responsibility and professional development that the growth of Teacher Education flourishes. Issues such as, for example, the open-plan classroom, the teacher as "reflective

professional", microteaching, discovery learning exemplify the variety of concerns which challenge teachers and Teacher Educators.

When "Microteaching" was first introduced at a University Education Department, it emerged as a response to a challenge, in this case from within the profession - student teachers were disillusioned with the relevance of their methods course. (Allen and Ryan, 1969). And as Microteaching developed in various countries and in varied teaching conditions, it both responded to, and in turn, challenged, the principles and practices of the teaching profession.

"Teacher trainers who had become dissatisfied with previous approaches to the practical training of teachers regarded microteaching as a breath of fresh air in the clouded area of effective teaching. With the introduction of microteaching with its associated emphasis on teaching behaviour, educationalists began to examine other wider perspectives in education. As a result, there developed movements advocating the total reform and restructuring of teacher education itself" (Hargie and Maidment, 1979, p111).

The initial development and subsequent growth of Microteaching provides an example of what Schon was referring to as the "development of the craft of teaching" (Schon 1988). In its 25 year development, Microteaching has been analysed and adjusted by many sources and for many reasons, being accepted by some and discarded by others. Allen and Ryan anticipated this in the early days at Stanford, a primary locus of MT development, when they warned that;

"Microteaching currently has the same promise, and the same danger, that newly devised research and training techniques have always had; the promise of opening up entirely new avenues, perspectives and alternatives to human exploration; the danger of locking in too early on a first alternative which arose purely out of chance and convenience" (Allen and Ryan, 1969, preface iii).

For some, the behaviour modification model of Microteaching proved to be either unworkable or unwanted in the Teacher Education process. They "locked in too early". For others, the flexibility of Microteaching was seen as an advantage, and adaptations were made to suit various needs and requirements. This has resulted in a refinement of the Microteaching

principle into various conceptual models (see Chapter 2), an indication of Microteaching both responding to, and being responsible for, changes in educational thinking.

One such conceptual model has focused on the need for teachers to be sensitive to the changing needs of pupils, and to be flexible in their own teaching strategies. Such a "reflective" model of Microteaching echoes the ideas of Schon, who when writing about "Educating the Reflective Practitioner", talks of the professional engaged in a "kind of improvisation, inventing and testing in the situation strategies of her own devising" (Schon, 1988, p5). The way that Microteaching can encourage such a perspective forms the basis of the discussion in Chapter 6 of this paper.

The initial developers suggested early in its development that:

"Microteaching as a teacher training technique must proceed via a careful investigation of the contribution of each of its components". (Allen and Ryan, 1969, p15)

It is therefore the aim of this study to discuss how a manipulation of the components of the Microteaching process can best encourage the growth of reflection. In particular, the feedback component of the process is under review, with both the main study and the follow-up study contrasting the use of audio feedback with video feedback. (Chapters 4,5 and 6).

The development of video recording and playback has undoubtedly had a strong influence on the growth and acceptance of Microteaching, which is itself evidence of the level of response which the Teaching profession makes to technological developments outside the school. That video has dominated and influenced the growth of Microteaching is a reality ignored by many writers. Of central importance in this paper is the thesis that audio tape can also be effective in providing feedback, for general classroom situations and especially for music teaching. In fact, the suggestion is made that the absence of visual cues or images allows for and indeed encourages a degree of concentration and attention at a deeper

level, listening resulting in a more thoughtful response, and providing a greater opportunity for the growth of reflective thinking.

Chapter 2 describes the evolution of Microteaching, and reviews some of the literature contributed since 1968, the year that the MT programme at Stanford was first introduced. It also briefly outlines the development of Music Education and the training of music teachers. Finally, it combines these two topics and discusses the place of Microteaching in the training of Music Teachers.

Chapter 3 discusses the influences the literature has had on the present thesis and outlines the hypotheses which shape the design of the research.

Chapter 4 explains the procedure adopted for the main investigative study, backgrounding the subjects and recording instruments used. As well as contrasting modes of feedback, the study was able to contrast two teaching conditions (teaching pupils and teaching peers), a comparison made possible by design factors, but one secondary to the main thesis.

Chapter 5 reports the results of the study, and analyses data collected from the evaluation forms and questionnaires completed by the subjects. The results are integrated in a general discussion of the findings, with reference to the earlier literature review.

Chapter 6 continues the discussion, and reports the findings of an informal follow-up study, undertaken to explore a notion of reflective Microteaching which emerged from the main study. The chapter then synthesises findings from both studies and with reference to material from a related discipline, the psychology of hearing, draws some conclusions. The focus of the discussion is returned back through issues of listening, of feedback, and then of Microteaching, to the more general implications for Teacher Education.