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**A BASIC AND APPLIED INVESTIGATION INTO THE EFFECT
OF THE RATE OF REINFORCER DELIVERY**

A sub-thesis submitted to the Division of Psychology, School of Life Sciences in the
Faculty of Science of the Australian National University in partial fulfilment of the
requirements for the degree of Master of Clinical Psychology.

by

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This sub-thesis describes original research carried out
by the author in the Division of Psychology of the
Australian National University.

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TABLE OF CONTENTS

Acknowledgements.....	i
Abstract.....	ii
Introduction.....	1
General Experimental Method.....	11
Setting.....	11
Subjects.....	12
Experimental Tasks.....	13
Response Definitions.....	13
Apparatus.....	15
Observations and Data Collection.....	15
Experimental Data Analysis Methods.....	18
Reliability.....	21
Analysis of the TrED Centre's Cumulative Data.....	21
General Experimental Design and Procedure.....	22
Experiment 1	27
Subjects.....	27
Alterations to General Design and Procedure.....	28
Results.....	28
Summary.....	44
Experiment 2.....	46
Subjects.....	46
Alterations to General Design and Procedure.....	47
Results.....	47
Summary.....	61
Summary and Conclusions.....	66
References.....	74
Appendices.....	78

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ABSTRACT

There is some evidence from basic research with animals that increasing the rate of delivering a reinforcer serves to increase response rates. There have been very few applied studies which have investigated rate of delivering a reinforcer independent of other variables, especially with non-discrete or durational target behaviours. Reinforcement remains a central feature of training or intervention programmes with severely developmentally delayed clients. Yet the parameters of a reinforcer and the parameters of the reinforcement process have not been fully investigated.

The purpose of the current research was to investigate the effects of delivering a functionally positive reinforcer at a high and very high rate on discrete and durational target behaviours with two severely developmentally delayed adults.

The present research consisted of two single subject ABACAC within subject reversal design experiments. Trainers presented the onset of the different reinforcer delivery rate conditions in a multiple baseline across two tasks.

Results in the first three conditions of Experiment 1 demonstrated that when initially delivered at an increased rate, verbal praise rate was a functionally positive reinforcer of accurate production rate and time spent in production. When the rate of delivering praise was further increased, this increase was initially associated with a further increase, but a later decrease in target behaviours. All target (production) behaviours became more variable with Client employee 1 and the function of the positive reinforcer did not remain stable when delivered at its highest rate. A correlational analysis of some of the data in the very frequent praise conditions did not support a positive proportional relationship between delivery rate of the reinforcer and either of the target behaviours.

Results during the first three conditions of Experiment 2 also demonstrated that an increased rate of verbal praise was a functionally positive reinforcer of accurate production rate and time in production. When the rate of verbal praise was further increased, this increased rate was associated with maintaining, but not further increasing accurate production rates. Further increasing the rate of verbal praise was

associated with decreases in time spent in production. Only one of the target behaviours became more variable with Client employee 2 when praise was delivered at a very frequent rate. A correlational analysis of some of the data in the very frequent praise conditions offered partial support for a positive proportional relationship between rate of delivering the reinforcer and the target behaviours.

Although reinforcer delivery rate was associated with different specific effects across the two Client employees, the reinforcing function of verbal praise did not remain stable when delivered at different rates across both individuals. It was concluded that it cannot reliably be predicted that a reinforcer delivered at one rate will continue to reinforce at a higher rate across all behaviours. This result is discussed in light of previous related research and the parameters of the reinforcement process.

The specific effects obtained across the two Client employees are discussed with reference to contributing experimental factors and possible functional accounts of the effects. Suggestions for future research are made.