

DOCUMENT RESUME

ED 389 443

PS 023 810

AUTHOR Mould, Claire
 TITLE The Influence of Teachers' Learning Stance on the Effectiveness of the Early Learning of Four Year Olds in Schools in England.
 PUB DATE Sep 95
 NOTE 73p.; Paper presented at the Annual European Conference on the Quality of Early Childhood Education (5th, Paris, France, September 7-9, 1995).
 PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
 EDRS PRICE MF01/PC03 Plus Postage.
 DESCRIPTORS *Classroom Techniques; Foreign Countries; Group Dynamics; *Kindergarten; *Learning Modalities; Preschool Education; Teacher Attitudes; *Teacher Effectiveness; Teacher Role; *Teacher Student Relationship; Teaching Styles
 IDENTIFIERS England (Birmingham)

ABSTRACT

This paper provides a critical analysis and evaluation of the relationship between 4-year-old children and teachers in 10 reception (kindergarten) classes at schools in Birmingham, England. It is based on in-class observations and collaborative, action research that focused on the interactions between the children and their teachers, including 300 2-minute observations of children and 250 2-minute observations of teachers. The study found that the greater part of the interactions between teachers and children were brief and informal, and that the children were intuitively active and curious learners. It also found that the highest levels of child involvement were recorded during paired and independent activities, with the lowest levels during directed, whole-class activities. The paper argues that young children's development will be hindered unless teachers adopt an open learning stance, and that teachers must be open to constructive criticism and genuinely prepared to change. An appendix comprising half the paper contains four sets of graphs depicting the statistical results.
 (MDM)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

The Influence of Teachers' Learning Stance on the Effectiveness of the Early Learning of Four Year Olds in Schools in England

Claire Mould

Worcester College of Higher Education

September 1995

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Claire Mould

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

Contents

- I Summary
 - II Introduction
 - III Methodological Outline
 - IV The Children - A Reflective Discussion
 - V The Teachers - A Reflective Discussion
 - VI Statistical Analysis
 - The settings shown to have the highest levels of involvement
 - The settings shown to have the lowest levels of involvement
 - Whole Data Analysis
 - VIII The Way Forward
 - IX Implications of the Study
- References
- Figures
- Appendices

Summary

This paper provides a critical analysis and evaluation of the relationship between four year old children and teachers in effective early learning. It focuses on my fieldwork in Birmingham reception classes, where every child starts full time school at four years old. The study concentrates on the relationship between the teacher and the child throughout the learning process. It stems from the belief that interactions between the adult and child are critically significant in determining the effective nature of the learning experience. The work of Vygotsky (1978), Bruner (1980), Rogers (1957, 1983), Laevers (1994) and Pascal (1994, 1995) forms the basis of the theoretical underpinning. The philosophical base of the research is Froebelian.

The research framework was divided into two separate yet interdependent studies. This paper explains the process and analysis of the data gathered throughout the empirical research. A concluding consideration is given to how this information will be optimised throughout the action research study and beyond. Finally, a proposal that the role of the researcher in the classroom could be extended as a form of In-service training. It is intended that this research will be used as a working document, as part of practitioners professional development and In-service training. This will involve progressive research projects such as the Effective Early learning Research project (Pascal et al 1995).

Introduction

My study stems from the belief that interactions between the adult and child, are critically significant in determining the effective nature of the learning experience (Claydon, 1969). Extending from this conceptual framework, the aim has been to critically analyse, and evaluate, the relationship between four year old children and teachers in effective early learning.

Fieldwork has taken place over a period of three months in ten randomly selected Birmingham reception classes. The sample represents a geographical cross section of urban, suburban and inner city environments. The process and analysis of the data gathered throughout the three months empirical research will be shared throughout this paper. This includes a reflective discussion of the children and the teachers observed. There are a number of broader issues raised that reflect the view of early childhood research and literature, past and present. These are illustrated through the data analysis of the settings shown to have the highest level of involvement, and those shown to have the lowest. A brief review of the analysis stemming from all the data collected will conclude this section.

The potential of the role of the researcher in the classroom has emerged throughout this developmental process. This insight, and others gained through the study, has been fed into the framework of an action research study. The final section of the paper suggests how this research could provide a form of personal, professional development.

Methodological Outline

The attitudinal qualities demonstrated by the teachers were investigated, documented and assessed throughout the fieldwork. This led to an analysis of the significance these have on teaching effectiveness (Laevers, 1992). The tenability of the action research hypotheses depended on the nature of this empirical evidence.

The form of data collected throughout the assessment, draws largely from two prominent early years research projects. The work of Professor Laevers, in the Exe project (Leuven University, Belgium), and Professor Pascal, in the Effective Early Learning Project (Worcester College of Higher Education, Worcester, U.K.).

Two integral factors in the quality and effectiveness of learning facilitation were focused upon. Firstly, the child's level of involvement (Laevers, 1994) during the process of learning. Involvement has become 'The central axis' of the EXE project (Laevers, 1993). The Leuven Involvement Scale for Young Children is one of the outcomes of this work. Research on the reliability of the scale revealed inter scorer correlations from '.90' to '.92' (Laevers, 1991). Involvement proved to be a productive point from which teachers can take innovative initiatives.

An appropriately adapted version of this observation scale was used throughout the fieldwork (300 two minute observations, were recorded using this schedule).

The form of attitudinal qualities demonstrated by the teacher to support and facilitate the child's learning, was the second area of focus. It is claimed (Pascal et al, 1994) that the style of adult interventions is a critical factor in the quality of learning which is experienced by the child. Central prominence is given to the Adult Engagement Observation Schedule throughout the Effective Early Learning Research Project. The empirical study extended independently from this observation schedule (250 two minute observations recorded sensitivity, stimulation and autonomy).

Due to the subjective nature of the concept of quality (D.E.S, 1990. National Commission on Education, 1993. Ball, 1994) it was essential to collect this element of quantitative data. 'Hard' evidence provided the means of assessing the levels of 'child involvement' and 'adult engagement with the child'. The computer statistics package 'FASTAT' (Bjerknes, 1988) was used to record each specific observation onto an in depth statistical data base. A wealth of factual evidence was established through the subsequent statistical correlations.

An over reliance on quantitative forms of data retrieval and 'number crunching' may risk losing the identity of 'the individual'. Each child, each teacher, and each early years setting, is completely unique. In order to gather a genuine and complete form of data, it was necessary that these individual voices were heard. A collaboration of methodological paradigms were consequently employed. The analytical framework (Huberman & Miles, 1994) of the methodology remained essentially qualitative. Relationships and overall patterns were examined through a variety of methods (See Appendix I).

With a view to use the computer software package 'NUDIST' (Non-numerical Unstructured Data Indexing, Searching & Theorising), each specific element of qualitative data gathered was carefully coded. This software is particularly advantageous with regard to coding, memoing and theory building. It was chosen for its strong search and retrieval, and matrix building characteristics. The software's delayed arrival from New Zealand prevented its' usage. The lengthy process of coding did not prove futile. Selectively labelling segments of data, exposed every component. This highlighted both common threads and inconsistent characteristics, leading to further investigation. With this small scale study, manual retrieval of data was time consuming but quite adequate. The data base of codes established will continue to be utilised through future studies.

The production of qualitative and quantitative data through a methodological triangulation approach, enhanced the reliability of the study. To further refine validity it was beneficial to adopt a 'democratic approach' (Pfeffer & Coote, 1991) to quality evaluation. Throughout the fieldwork the most productive

forms of data collected stemmed from the participants who were most actively involved. Those who were enthusiastic about the study received the most from the fieldwork. This raised the issue that the participants must want to develop before development can take place (Claydon, 1969). The significance of this concept flourished throughout the analysis.

Key Points

- * A collaboration of methodological paradigms were needed in order to adequately investigate, document and assess the support and facilitation of the four year olds' learning experiences.
- * The research study was done 'with' the settings not 'to' them.

The Children - A Reflective Discussion

The children in the settings that were shown to have the highest levels of involvement were very confident individuals. The teachers encourage and praise personal contributions. They maintain that the child's learning potential is enhanced through self initiated explorations and investigations. The teachers beliefs echo the words of Froebel, '...all children learn by being active' (Liebschner, J 1993). Alternatively, the settings where the children were shown to have the lowest levels of involvement discouraged individual initiatives.

"The four year olds learn the rules" "They are being trained..."

"If they don't accept our philosophies they can leave"

The teachers in these settings have formally structured plans that comply with the whole school framework. If the children's proposals were acknowledged the allocated pages in a text book or words from the board would not be completed.

" We've got a lot to get through today, there's no time for chit chat"

There is 'no time' in these settings for active learners that may challenge or adapt the nature of the given tasks. Imparting wisdom gives children a liberated voice (Ensing, 1995), something not always appreciated by teachers (Gussin Paley, 1981).

The children's peers mean a lot to the four year olds. Strong bonds are nurtured through the course of a collaborative activity. Genuine collaboration was observed to stem only through natural child initiated interactions. All of the teachers appreciated the importance of friendship groups, few respected these in practice.

The greater part of the interactions between the adult and the child were brief and very formal (From 300 two minute observations: Only 10 incidents of a child and adult talking informally). When the children did come to school with an exciting piece of news, the response was generally insincere and patronising.

"...mmmm, that's nice dear" "Oh did you" "Are you sure?"

" Well I don't think we want to hear about your new shoes now do we"

Throughout the fieldwork, children who had been left feeling deflated, were often observed. Their enthusiastic contribution had been made to seem insignificant and valueless. This negative self concept filtered into their whole approach to learning (Dowling, 1995).

"I'm no good at that" "I can't do that on my own"

"That's too hard for me" "I'm rubbish at that"

The most prominent observation was the children's intuitive need to extend through their own explorations. Even in the settings where this urge was suppressed, the children manipulated every potential exploratory opportunity. Under the guise of 'tidy up time', or during the freedom of the playground, interests that had been initiated, yet stifled within the classroom, were extended. In the settings where explorations were encouraged, the children were seen to follow highly methodical routes of investigation. It was fascinating to observe children's development as they returned to specific interest areas. As the children progressed, their skills developed and were refined to suit their needs. Self confidence was so high that they were eager to commence another activity, utilising and building on acquired skills.

The teacher's contribution throughout such periods was often minimal, but of optimal significance. The appropriate resources were accessible and the children were given the time to extend through their explorations. The final achievement was genuinely celebrated. The role of the teacher, in enhancing the effective nature of the child's learning experience in this way, encompasses Rousseau's four educational maxims (Claydon, 1969). All of the teachers from the settings that received the highest levels of involvement, embraced these declarations.

Key Points

- * Children are intuitively active and curious learners. The highest levels of involvement were observed when the children were extending competently and confidently through their own explorations.
- * The formally structured roles of 'teacher' and 'pupil' are part of the framework of many settings.
- * The role of the teacher in enhancing effective early learning is of optimal significance, it needs handling fragileyly.

The Teachers - A Reflective Discussion

The study highlighted that there are a variety of external and internal concepts that effect the teacher as a person. The components shown to be most consequential in an individuals' approach to teaching were, confidence and conviction, a sense of realism, and a positive approach to change. All of these factors are effected by past experiences, professional and personal.

Every teacher will therefore have a highly unique approach. The teachers' sex is stated to be another important element (Fullan, & Hargreaves, 1994). Unfortunately, the study sample contained only female teachers so no comment can be made on the magnitude of this factor. The only two males encountered throughout the study were both head teachers.

There has been much written recently on what makes a school 'effective' (Mortimore, Sammons, & Hilman, 1995). The common thread that emerges is primarily the need for learning experiences to be meaningful, extending from the child and enhancing their self esteem. This involves careful management. The findings from the study reflect these concepts, specifically the need for the teacher to genuinely extend from the child.

Vygotsky's most influential work (Newman & Holzman 1993) cites the need for the practitioner to create an environment, that will motivate the child confidently toward the outer peripheries of their learning capacities. Throughout the fieldwork, the highest levels of involvement were recorded during activities that had been carefully 'scaffolded' (Bruner, 1980) by the teachers. These teachers were continually observing what the children could do confidently and competently, in order to extend the potential of the learning experience. In contrast, the forms of assessment used by the settings shown to have the lowest levels of involvement, focused completely on 'the product'. There was no recognition of what the children were doing or could do, only what they had done. The child's individual process or personal contribution was not considered (Janssen-Vos, 1992).

Throughout the study the importance of the teachers adopting an open learning stance has become apparent. Knowledge has been shown to be gained from the children, the parents, colleagues and from an outside perspective. The teachers however, must want to develop, they must be aware that this will involve evaluation and change. For adults, as for children, the process must extend from an intrinsic motivation. Unless someone wants to learn, the process will be one of 'negative education' (Claydon, 1969). Rogers (1957) recognises that this process is very challenging, but a challenge worth endeavouring. He persevered, with a view to free curiosity, '...to permit individuals to go charging off in a new direction dictated by their own interests; to unleash the sense to inquiry; to open everything to questioning and exploration' (Rogers 1957, p.304). This is not an aim that would be desired by all the settings observed.

The importance of enhancing the effectiveness of learning experiences through adopting a learning stance, complements work citing the significance of being reflective (Laevers, 1992). In both approaches genuine development can only proceed if the practitioner is honest, open to constructive criticism, and prepared to change. It became significant that the teachers who did not personally want to

use the study as potential tool for development, came from the settings that were shown to have the lowest levels of involvement.

Whatever approach to teaching and learning is adopted it is essential that the child remains at the centre of the process. All of the settings expressed that the children were their main concern. Often this did not refer to individual, rather what they produced. The study illustrates that the settings which did not have the whole child as their first priority were those that were shown to have lower involvement scores. In these settings the focus is on the child's academic future,

"We feel it is essential that the children are given the chance to spend as much time as they can on the National Curriculum"

The essential stage that the children are actually experiencing, is overlooked. When asked what they learn at school, it was the children in these settings that replied,

"I don't know" "To sit quietly"

The vast potential for enjoyment and enlightenment, learning can bring, has been suppressed. It is a concern that throughout the majority of the settings this central principle of teaching no longer prevails.

"We haven't been on trips since the National Curriculum"

"We don't like all this hard work, it gives us a headache"

In a recent article, Jeffery and Woods (1995) discuss the 'teacherable moments that are ends in themselves..'going with the flow'.....'lighting sparks', learning about children'. They conclude by stating 'we are in danger of losing these'.

Pessimistically from a small section of the study, it would be tempting to state that such moments have not only been lost, but also forgotten.

It is necessary to keep returning optimistically to the child, and what we can learn from them. Stern's work on infants and mothers highlights the need for parents to 'adjust their 'dance' to their child's'(Stern, 1977). David et al (1992) suggest that perhaps this sensitivity to the 'dance' is the secret of good practice in teaching. For as Froebel stated, 'All that is ever to be and become lies..in the child' (Kilpatrick, 1916 p.112).

Key Points

- * Each individual's approach to teaching will be highly unique.
- * Development will be hindered unless the teachers' adopt an open learning stance. They should be open to constructive criticism and genuinely prepared to change.
- * The child must remain at the the centre of the learning process.

Statistical Analysis

- The settings that were shown to have the highest levels of involvement

[The involvement scale ranged from 1, where the activity is stereotypic, repetitive and passive, to 5, where the child shows continuous and intense activity]

The two settings that were shown to have the highest levels of involvement had a higher ratio of boys than girls.

'1' represented the code for boys and '2' represented girls. '1.5' therefore represented an equal number of boys and girls. These settings had figures of '1.3' and '1.4'. Throughout the observational assessment the boys were shown to have higher involvement levels than the girls (Fig.1.a).

The settings shown to have the highest level of involvement, spent less time on large group and whole class activities. The highest involvement levels were recorded during 1:1, pair, and independent activities (Fig.1.b). This echoes the work of David, Curtis, and Siraj - Blatchford (1992).

These settings had the highest percentage of undirected sessions (Fig.1.c).

'6' was the code representing directed sessions, '7' represented undirected. '6.5' therefore represented an equal balance between directed and undirected sessions. The settings shown to have the highest level of involvement, had figures above '6.5'. The highest, recorded in the school with the highest level of involvement, was '6.63'. The importance of the teacher letting the 'children breath' (Jeffery & Woods, 1995) was reinforced throughout the fieldwork. Observations made during activities that were not formally structured consistently recorded the highest levels of involvement.

The settings shown to have the highest level of involvement also had the highest levels of Sensitivity, Stimulation and Autonomy.

[The levels of Involvement, Sensitivity, Stimulation and Autonomy are assessed on scale from 1, being the lowest to 5]

A compilation of all the data, for all the settings, across the five visits, illustrates that the average level of involvement was '3.56'. The settings with the highest involvement had an average of over '4', the highest being '4.43' (Fig.1.d).

The average level of sensitivity for all the settings was '4.35'. These settings had an average of over '4.6', the highest actually being '5', (Fig.1.e).

The average level of stimulation for all settings was '3.49'. The settings with the highest level of involvement had an average of over '3.5', the highest being '4.48' (Fig.1.f).

The average level of autonomy for all settings was '2.96'. These settings had an average of over '3.24', the highest being '4.16' (Fig.1.g).

- The settings that were shown to have the lowest levels of involvement

The structure of the sessions in these settings was mainly directed. The average figure recording the nature of the structure was between '6.067' - '6.26'. The majority of high involvement levels were recorded during the infrequent undirected sessions (Fig.2.a). These results reinforce the positive nature of undirected activities. Varied works (Ruddick, & Hopkins, (eds.) 1985. Needam, 1994) reflect the importance of this concept.

The settings that were shown to have the lowest levels of involvement had the highest percentage of large group and whole class sessions. This accommodates the specifications of the 'three wise men' report (Alexander, Rose, & Woodhead, 1992), that recommends a combination of whole class and group work (para.104). Studies have indicated that '...more formal approaches...with the teacher at the front taking the whole class....' (Hymas, C. 1995) are more effective. No such results relate specifically to children under five years old. These findings illustrate that even in the settings that favour large group and class sessions, the highest levels of involvement are recorded during activities that have less people participating (Fig.2.b).

These settings were also shown to have the lowest levels of sensitivity, stimulation and autonomy .

The settings with the lowest levels of involvement had an average involvement level of under '3.1', the lowest being '2.96' (Fig.2.c).

These settings had an average level of sensitivity of under '4.4', the lowest being '3.4' (Fig.2.d).

The settings with the lowest levels of involvement had an average level of stimulation of under '3.2', the lowest being '2.16' (Fig.2.e).

These settings had an average level of autonomy of under '2.64', the lowest being '1.8' (Fig.2.f).

Key Point

* Clear comparisons can be drawn between the settings shown to have the highest levels of involvement, and those shown to have the lowest. These differences highlight a number of significant broader issues.

Whole Data Analysis - A Review of the Five Visits

- **Child Observations** (300 two minute observations in total)

The average involvement levels of each of the five visits range from '3.35' to '3.75'. The settings shown to have the highest levels of involvement maintained an overall higher level. The settings with the lowest overall involvement levels were consistently lower than the average level recorded.

The levels of involvement were constantly higher when there were less people participating in the activity. This was common throughout all the settings. The majority of the children's day was however allocated to participation in group based activities (Figs.3.a.1-v). The members of these groups were frequently chosen by the teacher in accordance with her assessment of the children's ability.

Throughout the fieldwork the majority of the sessions observed were shown to be directed, the average figure being '6.32'. The highest levels of involvement were recorded consistently during the undirected sessions (Figs.3.b.1-v).

The levels of involvement varied throughout the observed interactions. It did however illustrate the lack of spontaneous, informal discussions experienced through the child's day. Throughout 300 two minute observations only ten incidents of a child and adult talking informally were observed. Children were shown to speak to each other informally eighteen times.

The time of day was not shown to be a highly significant factor on the levels of involvement. The only periods where there was a decline in involvement levels was during such activities as formal register times.

Key Points

- * Throughout the period of fieldwork the levels of involvement recorded in each setting remained consistent.
- * The majority of settings favoured an approach that did not enhance the effective nature of the children's learning experiences.

- Adult Observations (250 two minute observations in total)

The average level of sensitivity recorded throughout the five visits ranged from '4.22' - '4.56' (Fig.4.a).

The average level of stimulation ranged from '3.24' - '3.64' (Figs.4.b.i-v).

The average level of autonomy recorded throughout the five visits ranged from '2.82' - '3.28' (Figs.4.c.i-v).

The highest levels sensitivity, stimulation and autonomy were recorded throughout visit one. The highest level of involvement was also recorded during the first visits.

Key Point

* Nias (1995) states that 'care is a big part of the teacher's commitment. It is what brings them into teaching and what keeps them there.'. This was reflected throughout the findings. On every visit, for every school, the level of sensitivity was the highest recorded level. This was followed by the level of stimulation. The level of autonomy was continually lowest.

The Way Forward

The analysis of the research data provides the foundation of a collaborative action research study. Data will be obtained from four experimental groups that participated in the original fieldwork. The empirical observations have proved to be a critical stage in establishing a firm grounding for collaborative extension. The teachers who will be participating, were enthusiastic to utilise it as a tool for professional development.

The teachers appreciated the constructive criticism that stemmed from the data analysis. The nature of this acceptance was enhanced through the genuine and trustworthy relationship that has materialised between researcher and practitioner. The establishment of these sincere interactions begins to authenticate collaboration as an essential component for future progression.

The inter dependable roles of the researcher and teacher have clearly emerged. The data gathered by the researcher, drew the teachers' attention to specific areas in need of development. Even though the researcher can provide the instrument through which they can develop, the actual development must come from the teacher (Rogers, 1957). For this development to reach its optimum, the teacher must 'drop their defences' (Rogers, 1957). They should 'perceive

themselves as a 'learner' (Rogers, 1957), continually reflecting and evaluating the data gathered. Returning to the start of this cycle, the collected data will only be relevant to the teachers' specific needs, if it's focus stems from them initially. A broader study of the setting will have alerted the teachers to this area of focus. This cyclic process reinforces the need for a period of comprehensive research to proceed a more focused and refined collaborative study.

A positive relationship has developed with these teachers over nine months. Meetings have taken place in and outside the classroom, both formally and informally. Goodson (1992) states that 'You can't understand the teacher or the teaching without understanding the person the teacher is.'. These teachers are known very well 'as people'. Communication takes place openly, as critical friends. Through the process of genuinely getting to know each of these teachers their distinct individuality has been accentuated. It was originally intended that a mechanism that assesses and develops the effective nature of teachers' interactions, would be formulated. No single mechanism could adequately assess each of these individuals to optimise their personal and professional development.

The methodological framework of the collaborative action research phase will be consistent throughout the settings. The content however will vary according to the developmental focus of the individual teachers. This period of study will involve the structured analysis of four key stages.

Stage One - Data Collection.

Stage Two - Collaborative Reflection leading To Action Plan

Stage Three - Action Plan Implementation

Stage Four - Reflective Evaluation

Analysis will involve a consideration of the effect this 'action' has had upon the quality of adult - child interactions. The relevance of the attitudinal qualities that exist in the relationship between the facilitator and the learner in the learning process will be examined.

During eighteen months an unparalleled relationship will have been formed. The researcher and the teacher will be developing in unison. The outcome being one of professional development for both. This consequently leads to a more imperative goal, an enhanced effectiveness of the early learning experiences for young children.

Key Points

- * The action research participants were eager to extend the study from a collaborative perspective.
- * Each teacher is an individual and will have highly unique developmental interests and needs. These cannot be facilitated through forms of training aimed at a homogeneous group.

The Implications of the Study

It has become apparent that the role I have assumed throughout this study reflects that of a 'pedagogue' (An example of which can be found in Reggio Emilo, Italy). From this insight, and the analysis and future development of the study, it is proposed that the role of the researcher in the classroom could be extended as a form of In-service training. Teachers spend much valuable time and money attending courses and conferences which only partially match their individual needs and interests. Such gatherings have an important place in overall development. If they offer nothing more, they provide a rare and much needed opportunity for practitioners to interact. They are not though, able to cater for the varied needs of each professional.

It is intended that this research will be used as a form of development that maximises the unique potential of the person behind the professional. Practitioners could utilise this approach, as part of their professional development and In-service training. This will involve progressive research projects such as the Effective Early Learning project.

REFERENCES

- ALEXANDER, R. J. ROSE, J. & C. (1992) *Curriculum Organisation and Classroom Practice in Primary Schools* (London: DES para 104).
- BALL, C. (1994) *Start Right: The Importance of Early Learning* (London: The Royal Society for the Encouragement of Arts, Manufactures and Commerce).
- BROWN, S & CLEAVE, S. (1995) Four year olds in school; Quality matters, *Times Educational Supplement* 3 / 3 / 95.
- BRUNER, J. (1980) *Under Five in Britain* (Oxford Preschool project No.1) (London: Grant McIntyre).
- CLAYDON, F. L. (1969) *Rousseau on Education* Educational Thinkers Series (New York: Macmillan Company).
- CSIKSENTMIHALI, M. (1990) *Flow, the Psychology of Optimal Experience* (New York: Harper Perennial.p.303).
- DAVID, T. CURTIS, A. & SIRAJ-BLATCHFORD, I. (1992) 'Effective Teaching in The Early Years: Fostering Children's Learning in Nurseries and Infant Classes' *An OMEP (UK) Report*.
- DEPARTMENT FOR EDUCATION AND SCIENCE (1990) *Starting With Quality The Rumbold Report of The Committee of Inquiry into Quality of the Educational Experience Offered To 3- and 4- Year Olds* (London: HMSO para.309).
- DOWLING, M. (1995) *Starting School at Four - A Joint Endeavour* (London: Paul Chapman Publishing p.38).
- FULLAN, M. & HARGREAVES, A. in POLLARD, A. & BOURNE, J. (1994) *Teaching and Learning in the Primary School* (London: Routledge p.68).

C. A. Mould

- GOODSON, I. (1992) in POLLARD, A. & BOURNE, J. (1994) *Teaching and Learning in the Primary School* (London: Routledge p.67).
- GUSSIN PALEY, V. (1981) *Wally's Stories Conversations in the Kindergarten* (Cambridge, Massachusetts: Harvard University Press).
- HOLT, J. (1994) How Children Learn and Fail, in Pollard, A & Bourne, J. (1994) *Teaching and Learning in the Primary School* (London: Routledge p.10) .
- HUBERMAN, A. M. & MILES, M. B. (1994) *Qualitative Data Analysis* (London: Sage Publications.p.9).
- HYMAS, C. (1995) Britain gets a minus in maths, *The Sunday Times* 14 /7/95.
- JANSSEN-VOS, F. (1992) 'Quality in the Classroom: The Key Role of the Teacher' A Paper Presented at the European Early Childhood Education Research Association Worcester College of Higher Education. Worcester.
- JEFFERY, B & WOODS, P. (1995) Where Have All The Good Times Gone ? *Times Educational Supplement* 9/6/95.
- KILPATRICK, W.H. (1916) Froebel's Kindergarten Principles Examined, in BRUCE, T. FINDLAY, A. READ, J. SCARBOROUGH, M. (1995) *Recurring Themes in Education*. (London: Paul Chapman Publishing). (p.112) .
- LAEVERS, F (1991) *The Innovative project Experiential Education and the Definition of Quality in Education*, (Studia Paedagogica. Leuvan, Leuvan University Press).
- LAEVERS, F (1992) *Deep Level Learning: An Exemplary Application on the Area of Physical Knowledge*, (Studia Paedagogica. Leuvan, Leuvan University Press).
- LAEVERS, F. (1993) Deep Level learning: an Exemplary Application on the Area of Physical Knowledge in *European Early Childhood Journal Vol.1. No.1. 1993* Worcester. Amber. (pp.53 - 68).
- LAEVERS, F. (1994a) The Innovative project Experiential education and the definition of quality in education, in LAEVERS, F. (Ed.), (1994b) *Defining and Assessing Quality in Early Childhood Education*, Studia Paedagogica. Leuvan, Leuvan University Press.
- LAEVERS, F. (Ed.), (1994b) *Defining and Assessing Quality in Early Childhood Education*, (Studia Paedagogica. Leuvan, Leuvan University Press).
- LIEBSCHNER, J. (1993) Aims of a Good School: The curriculum of Friedrich Froebel. Edited highlights from Froebel's writings, *Early Years Vol.14. No.1. 1993*.
- MORTIMORE, P. SAMMONS, P. & HILMAN, J. (1995) Key Characteristics of Effective Schools: a review of school effectiveness research, *Times Educational Supplement* 17/3/95.
- NATIONAL COMMISSION ON EDUCATION (1993) Learning to Succeed: A Radical Look at Education Today and a Strategy for the Future, *Report of the Paul Hamlyn Foundation* (National Commission on Education. London: Heinemann).
- NEEDAM, J. (1994) in POLLARD, A & BOURNE, J. (1994) *Teaching and Learning in the Primary School* (London: Routledge p.161).
- NEWMAN & HOLZMAN (1993) LEV VYGOTSKY ; REVOLUTIONARY SCIENTIST (London: Routledge p.37).
- NIAS, J (1995) in HARGREAVES, A. & GOODSON, I. (1995) Let us take the Lead, *Times Educational Supplement* 24 / 2 / 95.

C. A. Mould

PASCAL et Al (1995) *Effective Early Learning Research Project: An Action Plan for Change* Worcester College of Higher Education. Worcester.

PFEFFER, N. & COOTE, A. (1991) *Is Quality Good For You? A Critical Review of Quality Assurance in Welfare Services, Social Policy Paper No.5*, (London: Institute for Public Policy Research).

ROGERS, C. (1957) *Personal Thoughts on Teaching and Learning* Merrill - Palmer Quarterly. Vol 3 Summer 1957 pp.241 - 243.in KIRSCHENBAUM, H. & HENDERSON, V. (1992) *The Carl Rogers Reader* (London: Constable p.302, 303,304).

RUDDICK, J. & HOPKINS, D. (eds.) (1985) *Research as a Basis for Teaching: Reading from the work of Lawrence Stenhouse*. (London: Heineman p.97).

STERN, D (1977) *The First Relationship: Infant and Mother* in DAVID. T, CURTIS. A, AND SIRAJ - BLATCHFORD, I. (1992) in *Effective Teaching in The Early Years: Fostering Children's Learning In Nurseries and Infant Classes. An OMEP (UK) Report.*(p.9).

Correspondence about this paper should be addressed to
Claire Mould
Early Years Research Base
Worcester College of Higher Education
Worcester. U.K.
WR2 6AJ

A complete compilation of graphs and bar charts representing statistical analysis of the whole study is available from this address.

Appendices

I **Methods of Qualitative Data Collection**

**Assessment of Effective Early Learning
- An Outline of the Observation Schedules**

II **A Brief Analysis of the Similarities of the Settings Shown to Have the Highest Levels of Involvement**

III **A Brief Analysis of the Similarities of the Settings Shown to Have the Lowest Levels of Involvement**

**A brief review of
Methods of Qualitative Data Collection**

Relationships and overall patterns were examined through a variety of methods. Interviews were conducted with with heads, teachers, parents and children. The largest difficulty with this form of data collection being that the heads and the teachers were unable to accommodate collaboratively agreed schedules. Daily pressures frequently demanded immediate attention. Compromise and respect on both our parts eased this dilemma. The data eventually gathered from these interviews has been abundant in its' contribution to the final analysis. Professional biographies and general information sheets also added an enriched dimension to the overall analysis. Only one teacher, who has now retired, did not return the forms. Photographic analysis has proved to be most intriguing and enlightening. This is an area that will be exploited in the next study.

**Assessment of Effective Early learning
An Outline of the Observation Schedules**

Child Observations

Utilising; Involvement Scales

[Laevers in the EXE project based at Leuven University.Belgium.

Pascal in the Effective Early Learning project at Worcester College.UK.]

Aims to measure the level of a child's 'involvement' in an activity.

Child focused;attempting to measure the processes of learning,rather than to concentrate on outcomes.

Involvement is a quality of human activity;

- *recognised by concentration and persistence.
- *Characterised by motivation,fascination,implication,an openness to stimuli and intensity of experience both at the physical and cognitive level,and a deep satisfaction with strong flow of energy.
- *determined by the exploratory drive and the individual pattern of developmental needs
- *as a result development occurs.

The Leuven Involvement Scale for Young Children (LIS-YC) will be respected.

Consists of two components;

- I. A list with signals or aspects of behaviour characteristic of Involvement;-
Concentration / Energy / Complexity and Creativity / Facial Expression and Posture / Persistence / Precision / Reaction Time / Language / satisfaction.
- II. The five levels of involvement;-
 - 1 - No Activity
 - 2 - A Frequently Interrupted Activity
 - 3 - Mainly Continuous Activity
 - 4 - Continuous Activity with Intense moments
 - 5 - Sustained Intense Activity.

Specific observation focus;-

- *Five visits will be made to each setting;at varied times.
- *Each Target child will be observed three times in a session but not continuously.
- *Each observation will last 2 minutes.
- *Ten children will be observed;Two each session.
- *Observe equal number of both sexes.
- *Each observation will be recorded on Involvement Assessment sheet.

Still Photographs will be taken to illustrate and confirm child's activity focus.

Adult Interaction Style Observation Schedule

[An Observation schedule respecting and utilising;- Laevers / Pascal]

Relevant research has shown that a number of attitudinal qualities facilitate learning;-

- Realness / genuineness (Rogers 1983)
- Acceptance and Trust (Rogers 1983)
- Emphatic Understanding (Rogers 1983)
- High Aspirations of child (Sylva 1994)
- Allowing child time to Listen / Respond.
- Values the child's Contributions.
- Does not force a Response.
- Asks open-ended questions.
- Keeps child Informed.
- Supportive body Language.

In developing the ASOS-ECE Ferre Laevers (1994) identified 3 categories of teacher behaviour which fundamentally reflect these personal qualities of 'engagement' :-

- I.Stimulation Way in which an adult intervenes in the learning process and content of such interventions.
- II.Sensitivity Of adults to the feelings and emotional well being of the child, includes elements of sincerity,empathy,responsiveness and affection.
- III.Autonomy Degree of Freedom which the adult gives the child to experiment,make judgments,chooses activities and expresses ideas.Also handles conflict,rules and behavioural issues.

The Effective Early Learning Project has adapted this schedule.

Based on the belief that the interactions between the educator and the child is a critical factor in the effectiveness of the learning experience the observation have three foci;-

***Stimulation**

- Focus on following actions;-
- Introducing or offering an activity.
 - Giving Information.
 - Intervening in an ongoing activity to stimulate action, thinking or communication.

C. A. Mould
Appendix I

***Sensitivity**

Focus on the adult's responsiveness to a range of children's needs, including;
Respect, Attentiveness, Security, Affection, Praise and Encouragement.

***Autonomy**

Focus on; Degree of child choice.
Opportunities for child to experiment.
Freedom of child to choose/shape activity.
Respect given to child's work, ideas, judgment.
Opportunity for children to negotiate and solve problems / conflicts.
Participation of children in rule making and enforcement.

Monitored on 5 point scale:

Point1 :Non-engaging style.

Point2: some engaging qualities -mainly non engaging.

Point3:Neither engaging of non-engaging.

Point 4:Some evidence of non-engaging,mainly engaging.

Point 5:Totally engaging.

Specific Adult Observation Schedule

*Each setting was visited 5 times.

*The practitioner in the classroom was observed 5 times per session.

*Each observation lasted 2 minutes;The overall observation time per session was 10 minutes.

*The completed observation time recorded was 50 minutes.

*The results were recorded on a specific observation schedule;extended from ASOS-ECE scale.

A Brief Analysis of the Similarities of the Settings¹ that
were Shown to have the Highest Levels of Involvement

The Teachers

Macmillan's declaration that '..the teacher who is worth anything is not driven, neither is he led blindly²', was reflected throughout the fieldwork. The confidence and strength these teachers had in their convictions was frequently apparent. The secure belief in the successful nature of their teaching approach has been established during periods spent 'out of the classroom'. The teachers maintain that observations and experiences in a variety of early years settings have enhanced their overall approach to teaching.

The teachers in the highest involvement settings were both trained specifically to teach early years. They have continued to develop from this firm grounding. In spite of their years of valuable teaching experience, these professionals encouraged and appreciated constructive criticism. They are aware that 'in an era of rapid change, teachers need to be learners too³'. An 'outside' perspective was welcomed as an opportunity for professional development.

The teachers are extremely dedicated. Vast amounts of their own time and money is spent involved in meetings, conferences and fund raising events. Evenings, weekends and holidays are frequently sacrificed. Time was made to build a genuine, unpatronising, awareness of the social background of the children and their families. Gammage stresses that 'Children look through their eyes not ours.⁴'. These teachers were endeavouring to plan through 'the eyes of the children'.

The Children

Throughout the observations the emphasis on the children's needs, interests and feelings remained the fundamental priority. Learning experiences were adapted, extended or ceased in accordance with the children's response.

"Unless the children are enjoying an activity there is no point trying to see it through to the end"

It was obvious in each of these settings, that the children had ownership of their learning experiences. There were no formal register times, the children could pursue their interests without interruption. On entering the classroom specific activities were meticulously selected from the variety of accessible resources. During this time the teacher was available to speak informally to the parents. The children all stated that they enjoyed coming to school, and spoke enthusiastically about their experiences when they got home.

"I'm amazed by what he comes out with, he knows more than me!" [Parent]

C.A.Mould

The Parents, Families and Community

The parents were overwhelmed by their growing awareness of the level of their child's learning capacity. Each of the parents spoken to were highly supportive of the teachers' approach. They were very confident of her abilities.

" They [children] are becoming really 'worldly' She [teacher] is giving them whole learning experiences, not just sitting them down at desks and making them write" Time spent in the classroom at the beginning and end of the day is valued by the parents⁵. Several of these parents, particularly the young single mothers, are intimidated by and suspicious of authorities and institutions. They see the teacher as a friend in whom they can confide. This is highly significant as 50% - 70% of the children in these settings come from single parent families. The vast percentage, over 80%, are unemployed. The teacher is often the only adult they informally communicate with throughout the day.

The settings are located in inner city and urban areas. Over 90% of the families live in council owned property, a high percentage being flats. 70% of the children in the settings with the two highest levels of involvement, come from ethnic backgrounds.

Organisation

Handy stresses that any productive organisation needs 'systems for communicating and arranging things⁶'. These settings are carefully organised. Everyone, at every level, is kept informed through coherent forms of communication. These include daily news sessions, bulletins and whole staff meetings. The staff liaise in an open and understanding way. There is an atmosphere of collaboration and consideration throughout these settings.

Since Completion of The Fieldwork

A review of the data analysis stemming from the study was welcomed. Each of the settings were eager to view the results. They were encouraged by the positive nature of the feedback. Their immediate focus concentrated on how these findings can be used to enhance present practice.

"No matter how good you think you are, you can always improve."

"We're always looking for ways to improve."

"There's always something you can improve on."

"You have to be constantly watching, constantly learning and constantly developing."

All of these settings stated their involvement in the study had been a productive experience.

REFERENCES

- 1 'Setting' is referred to instead of 'school' as some of the observations made were not typical throughout the school.
- 2 Macmillan, M. (1860 - 1931) in Bruce, T. Findlay, A. Read, J. Scarborough, M. (1995) *Recurring Themes in Education*. London: Paul Chapman Publishing. (p.33).
- 3 Barber, M. (1995) 'In this rapid' *Times Educational Supplement* 7 /3 / 95.
- 4 Gammage, P. (1995) Presentation at Early Years conference, Birmingham 30/6/95.
- 5 Woods, D. McMahan, L. & Cranstoun, Y. (1980) state that this 'initial degree of flexibility in starting and finishing times of sessions can...help children to receive a more individual daily welcome to school, offer parents opportunities for exchange of information with parents and reduces an institutionalised beginning and ending to the day' in *Working with Under Fives* London: Grant McIntyre.(p.24). The positive nature of this was reinforced throughout the study.
- 6 Handy, C. & Aitken, R. (1994) in Pollard, A. & Bourne, J. (1994) *Teaching and Learning in the Primary School* London: Routledge (p.239).

A Brief Analysis of the Settings¹ that were
Shown to have the Lowest Levels of Involvement
Research Interest

Three of the four settings shown to have the lowest levels of involvement were not interested in the study. None of them inquired about the development of the data collection. Curiosity only extended as far as trying to gain information about the rest of the study sample. It became apparent that the teachers had agreed to participate simply as a result of the heads' enthusiasm. They did not feel they could refuse. They perceived the study as just another 'external pressure'. This was reminiscent of the work of Fullan and Hargreaves, 'Many staff development initiatives take the form of something that is done to the teachers rather than with them, still less by them².'

The Teachers

The teachers are pressured and confined by external and whole school demands. They are aware that much of the content and the structure of these directed sessions is not appropriate for four year olds. The teachers are reluctant to suggest changes or criticise the established school framework, they feel powerless. They do not have the confidence or the conviction to develop professionally.

The Organisation of the Classroom

Long queues appeared to be a natural part of classroom life. The children wait for the teacher's instruction before commencing an activity. Throughout the process, they frequently require additional information or reassurance. On completion, the children line up once more to ascertain whether their work is of a suitable standard. More time is spent waiting for the teacher than actually participating in activities. Many primary Ofsted inspectors have observed similar classroom episodes³.

Holt expresses that 'One of the most important things teachers can do for any learner is to make the learner feel less and less dependent on them⁴.'. These children are completely reliant on the teacher. The majority do not risk extending through their own interests for fear of being reprimanded. Those that do are soon curtailed. "I only asked you to copy what's on the board, not do all this" These settings all have permanent NNEBs working in the classroom. Their role is not exploited to its full potential.

C.A.Mould

The NNEBs' tasks include, hearing readers, sharpening pencils, preparing 'the snack' and 'assisting' the 'low ability' group when using the structured scheme books. One of the NNEBs is expected to make cups of tea for the rest of the staff and tidy the staff room. They are not encouraged to be involved in the planning stages of children's work.

The Parents, Families and the Community

The geographical spread of these settings is extremely diverse. It encompasses inner city, urban and suburban locations. The socio - economic status of the children varies dramatically. The teachers are completely unaware of the children's personal and social backgrounds. Information had to be looked up, referenced in the population census figures, or simply guessed. Actual knowledge about individual children is minimal. In the setting receiving the lowest involvement levels, the majority of the teachers have been there for twenty years. They claim to 'know' the children because they have taught their parents, older siblings or relations.

"They're a big family all as bad as each other."

"Now I'm looking forward to having [child]'s sister next year. ..[child].. was such a delight."

The parents of these settings are generally dissatisfied with their child's learning experience. Some feel that there is 'too much play', others are concerned about bullying. Another group are resentful that they are excluded from their child's learning and long to be more involved. This represents a small cross section of the grievances expressed. The parents do not believe that talking to the teacher would alleviate any of their concerns.

On Completion Of The Fieldwork

These settings were shown to possess some of the characteristics Reynolds⁵ stated were true of failing schools.

The teachers project their inadequacies on to the children, then blame the children for the failings.

"I don't know how they are expected to learn anything when they turn up half way through the morning tired and hungry, sometimes there's really no point them being here"

They possess numerous fantasies,

"A formal approach has always been most effective here, we know the parents and they know us. I've got children queuing up to come here, I don't need any one who doesn't think how I do"

C.A.Mould

There is a fear of failure, staff are reluctant to take risks,
"It sounds all very good but it just wouldn't work here"
Staff do not know enough about alternative policies, how the school functions,
ways to change,
"You can't keep up with it all there's always something happening"

Despite their failings each of these settings had a healthy ingredient. These could be extended from, leading to future developments if they were so inclined. Sadly, there appeared to be no energy or time available for innovation. Skies⁶ states that 'Deadwood' is usually the result of an infertile, undernourished environment. Reflections of these settings imply a similar conclusion.

REFERENCES

- 1 'Setting' is referred to instead of 'school' as some of the observations made were not typical throughout the school.
- 2 Fullan, M. & Hargreaves, A. in Pollard, A & Bourne, J. (1994) Teaching and Learning in the Primary School London: Routledge (p.10).
- 3 Makin, V. (1995) Many Ofsted Inspectors stated 'Children sit there nicely doing a lot of waiting - it is a terrible waste of time for active learners' Times Educational Supplement 13 / 6 / 95.
- 4 Holt, J (1994) taken from How Children Learn and Fail in Pollard, A & Bourne, J. (1994) Teaching and Learning in the Primary School London: Routledge (p.8).
- 5 Reynolds, D. (1995) 'Some Very Peculiar Practices' Times Educational Supplement 16 / 6 / 95.
- 6 Skies, P (1985) in Pollard, A. & Bourne, J. (1994) Teaching and Learning in the Primary School London: Routledge (p.69).

**The Influence of Teachers' Learning Stance
on the Effectiveness of the Early Learning
of Four Year Olds in Schools in England**

Figures

Claire Mould

Worcester College of Higher Education

September 1995

Figures

1. **Figures Representing Statistics from the Settings Shown to Have the Highest Levels of Involvement**
2. **Figures Representing Statistics from the Settings Shown to Have the Lowest Levels of Involvement**
3. **Figures Representing Statistics from Whole Data Analysis Stemming from Child Observations**
4. **Figures Representing Statistics from Whole Data Analysis Stemming from Adult Observations**

Figures

Fig.1.a.

Illustrating gender related involvement levels
for setting shown to have the highest level of involvement.

Fig.1.b.

Illustrating group related involvement levels
for setting shown to have the highest level of involvement.

Fig.1.c.

Illustrating directed / undirected related involvement levels
for setting shown to have the highest level of involvement.

Fig.1.d.

Illustrating non verbal related involvement levels
for setting shown to have the highest level of involvement.

Fig.1.e.

Illustrating highest levels of involvement.

Fig.1.f.

Illustrating highest level of sensitivity.

Fig.1.g.

Illustrating highest level of stimulation.

Fig.1.h.

Illustrating highest level of autonomy.

GENDER

N of cases	30
Minimum	1.000
Maximum	2.000
Range	1.000
Mean	1.300
Variance	0.217
Standard dev	0.466
Std. error	0.085
Skewness	0.873
Kurtosis	-1.238
Sum	39.000

Fig.1.a.

Illustrating gender related involvement levels for setting shown to have the highest level of involvement

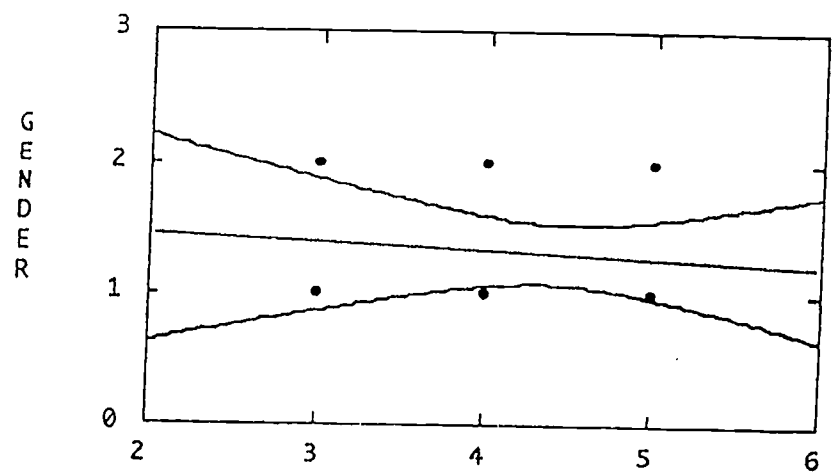
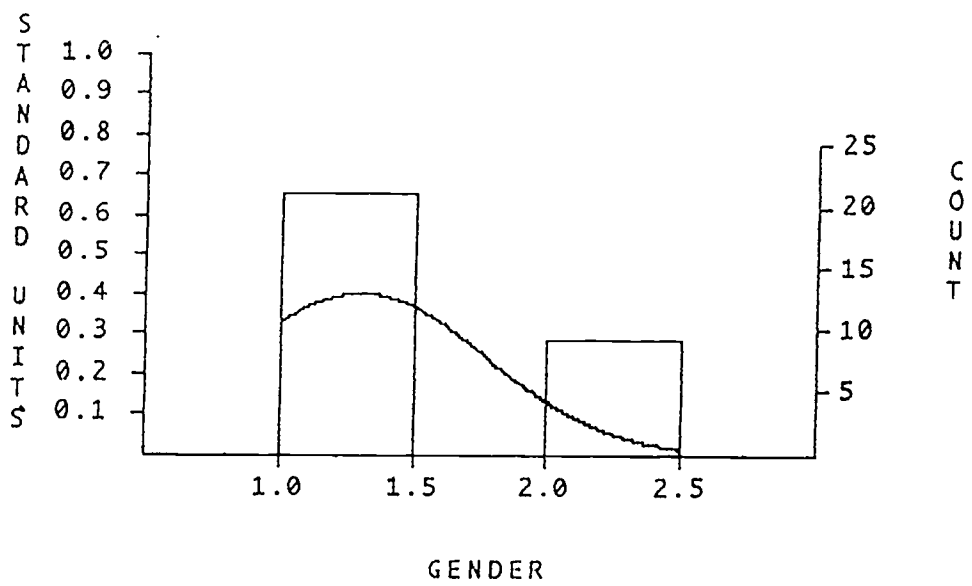


Fig.1.b.

Illustrating group related involvement levels

for setting shown to have the highest level of involvement.

Total observations: 30

GROUP

N of cases	30
Minimum	8.000
Maximum	11.000
Range	3.000
Mean	8.990
Variance	1.449
Standard dev	1.204
Std. error	0.220
Skewness	0.628
Kurtosis	-1.247
Sum	269.700

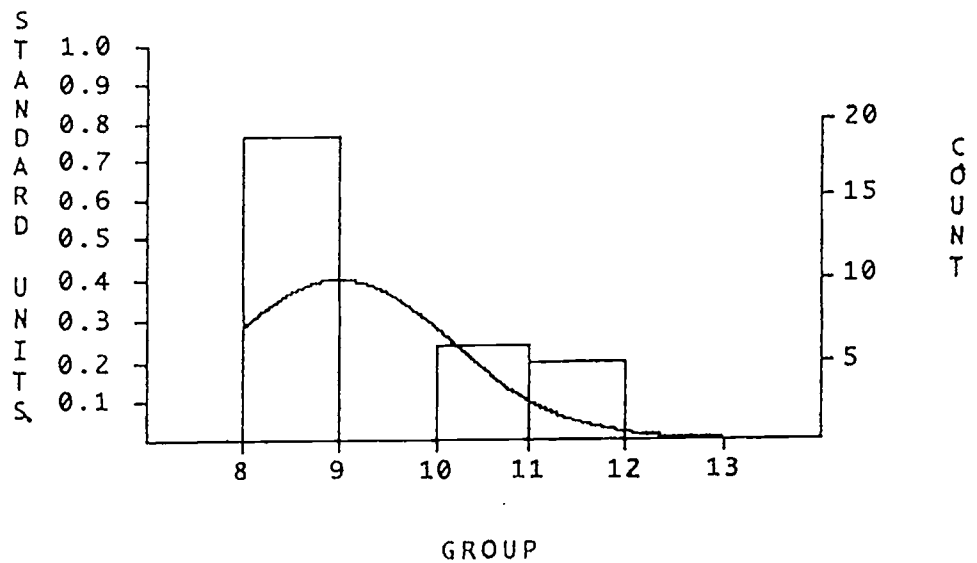
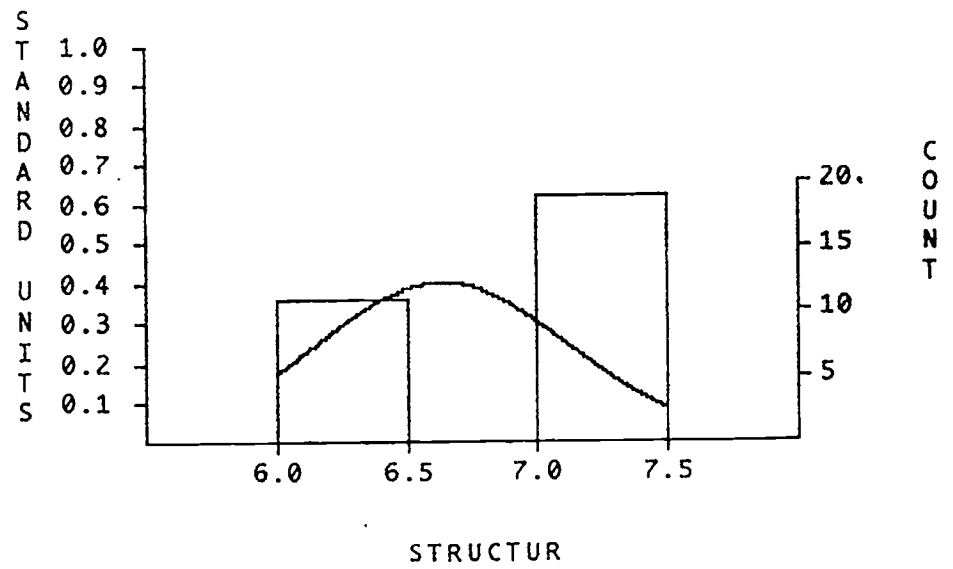


Fig. 1.c.

Illustrating predominance of undirected in the setting shown to have the highest level of involvement.



Total observations: 30

Fig.1.d.

Illustrating highest levels of involvement.

INVOLVE

N of cases	30
Minimum	3.000
Maximum	5.000
Range	2.000
Mean	4.433
Variance	0.530
Standard dev	0.728
Std. error	0.133
Skewness	-0.856
Kurtosis	-0.592
Sum	133.000

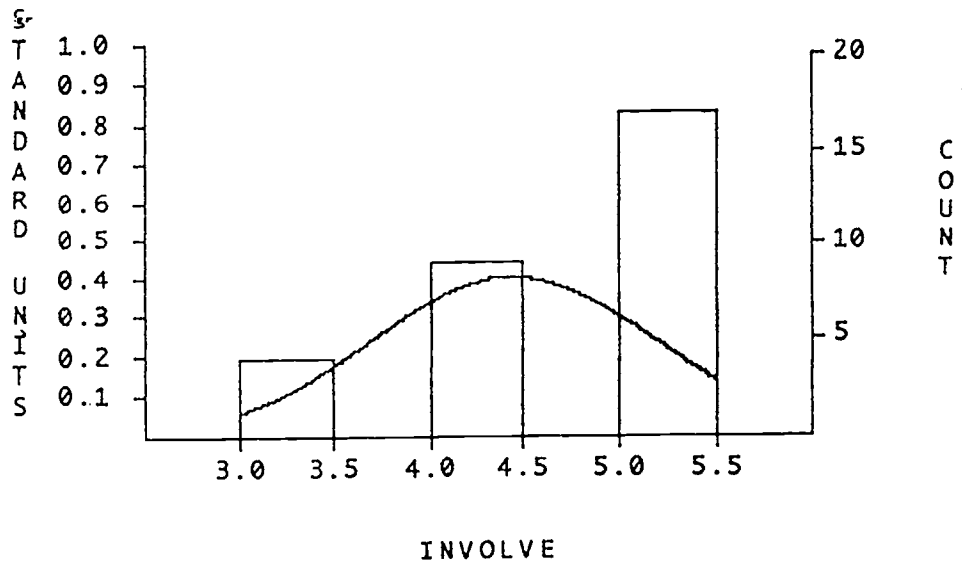
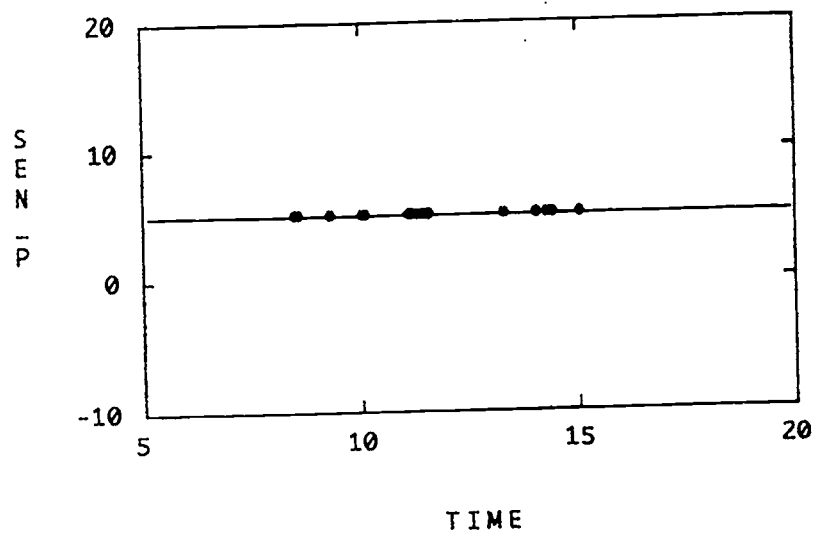


Fig.1.c.

Illustrating highest level of sensitivity.



$$SEN_P=5.000+0.000*TIME$$

Fig. 1.f.

Illustrating highest level of stimulation.

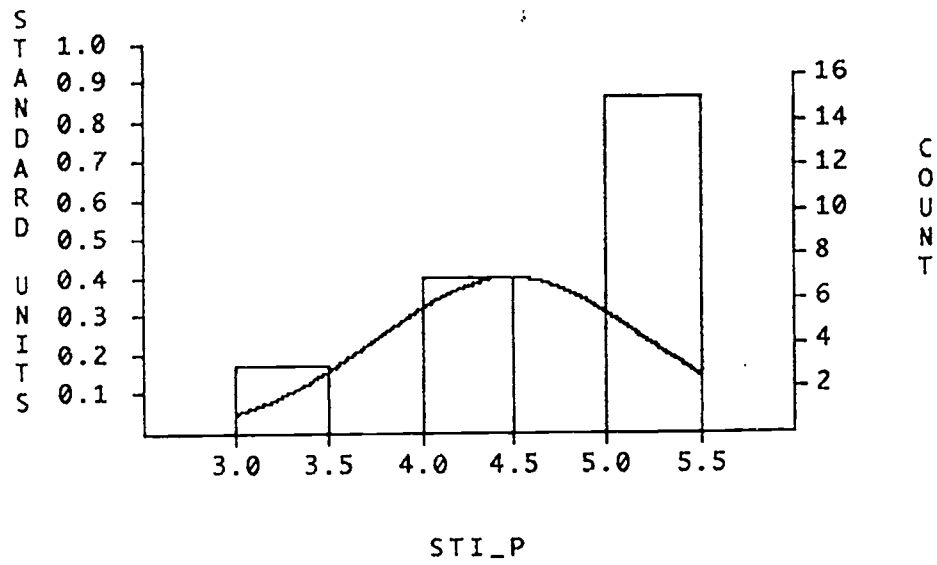
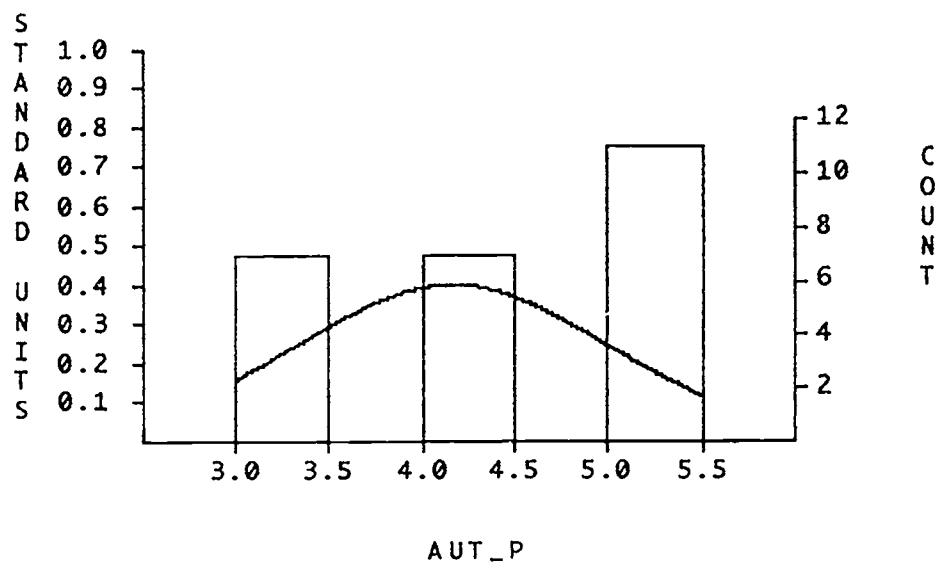


Fig.1.g.

Illustrating highest level of autonomy.



Figures

Fig.2.a.

Illustrating the effect of 'structure' on involvement
for setting shown to have the lowest level of involvement.

Fig.2.b.

Illustrating effect of 'grouping' on involvement levels
for setting shown to have the lowest level of involvement.

Fig.2.c.

Illustrating lowest levels of involvement.

Fig.2.d.

Illustrating lowest level of sensitivity.

Fig.2.e.

Illustrating lowest level of stimulation.

Fig.2.f.

Illustrating lowest level of autonomy.

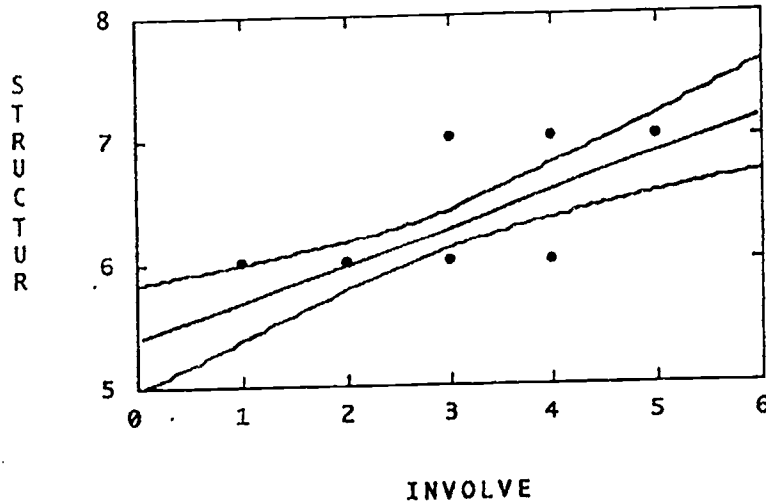
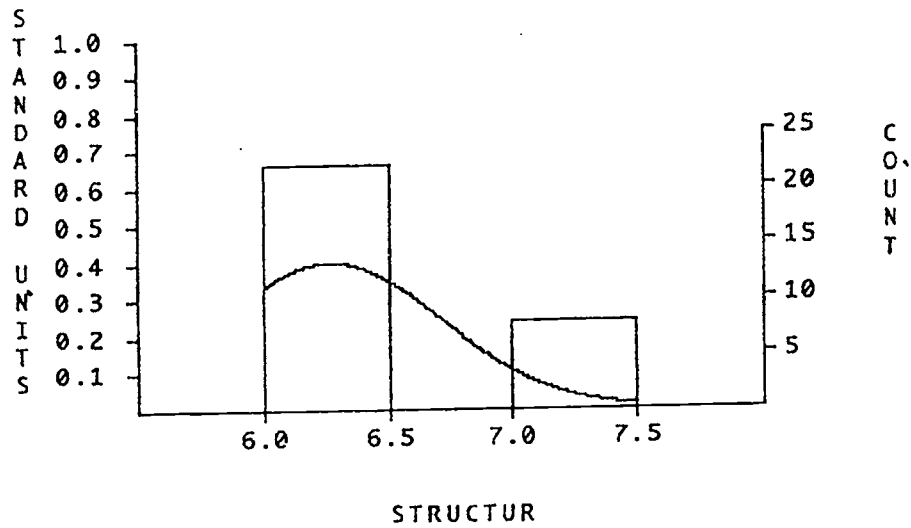
Total observations: 30

Fig.2.a.

Illustrating the effect of 'structure' on involvement for setting shown to have the lowest level of involvement.

STRUCTUR

N of cases	30
Minimum	6.000
Maximum	7.000
Range	1.000
Mean	6.267
Variance	0.202
Standard dev	0.450
Std. error	0.082
Skewness	1.055
Kurtosis	-0.886
Sum	188.000



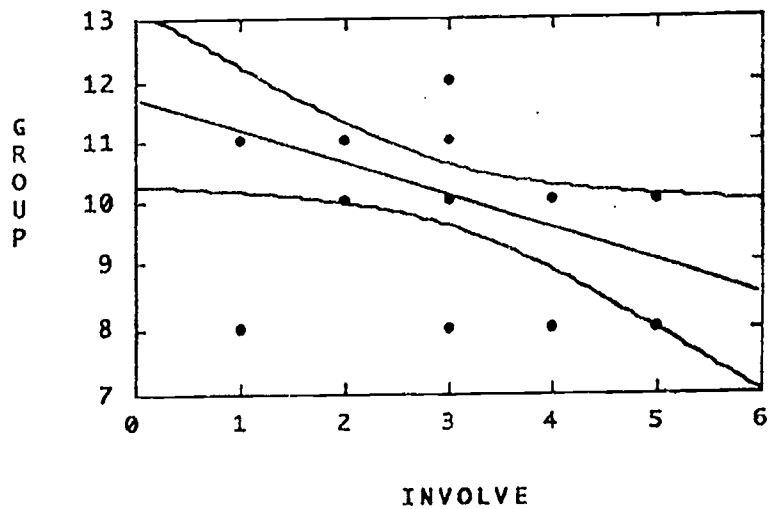
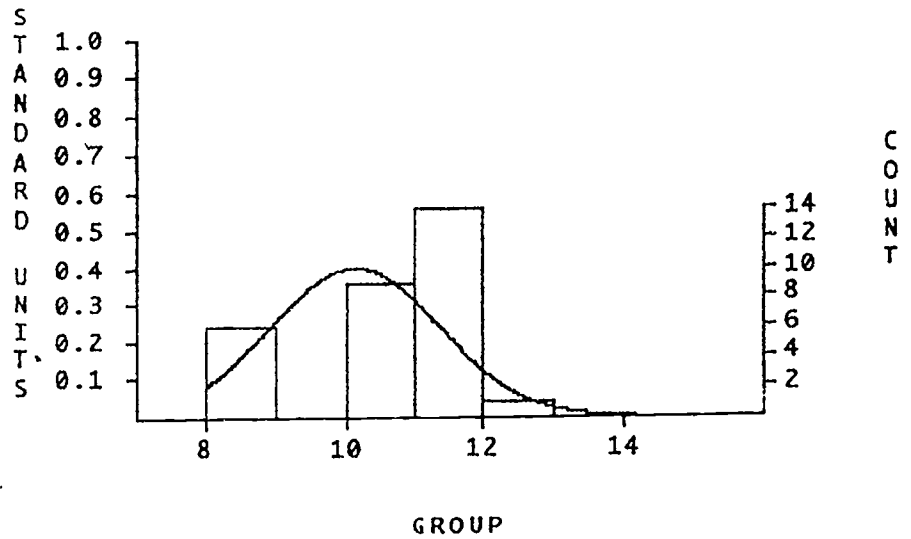
Total observations: 30

GROUP

N of cases	30
Minimum	8.000
Maximum	12.000
Range	4.000
Mean	10.133
Variance	1.430
Standard dev	1.196
Std. error	0.218
Skewness	-0.875
Kurtosis	-0.482
Sum	304.000

Fig.2.b.

Illustrating effect of 'grouping' on involvement levels
for setting shown to have the lowest level of involvement.



Total observations: 30

INVOLVE

N of cases	30
Minimum	1.000
Maximum	5.000
Range	4.000
Mean	2.967
Variance	1.206
Standard dev	1.098
Std. error	0.200
Skewness	0.384
Kurtosis	-0.333
Sum	89.000

Fig.2.c.

Illustrating lowest levels of involvement.

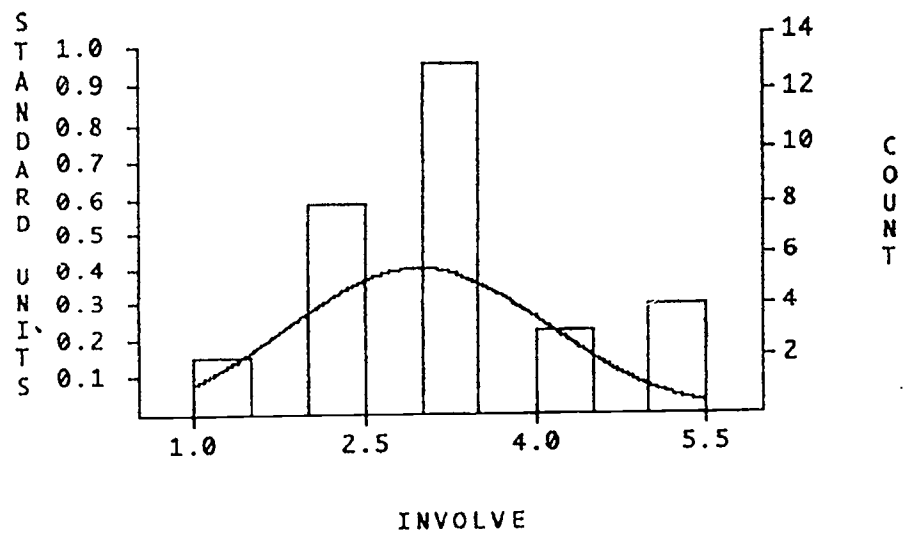


Fig.2.d.

Illustrating lowest level of sensitivity.

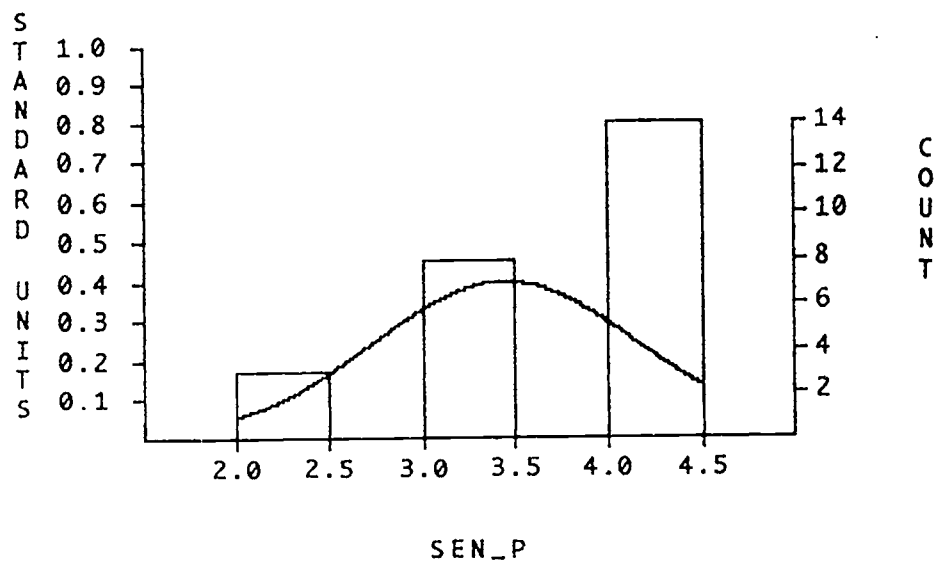


Fig.2.e.

Illustrating lowest level of stimulation.

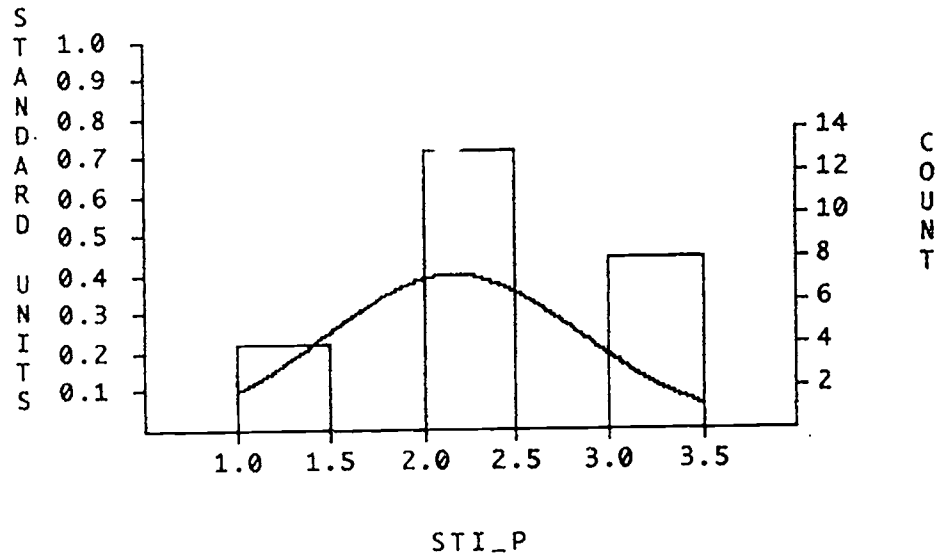
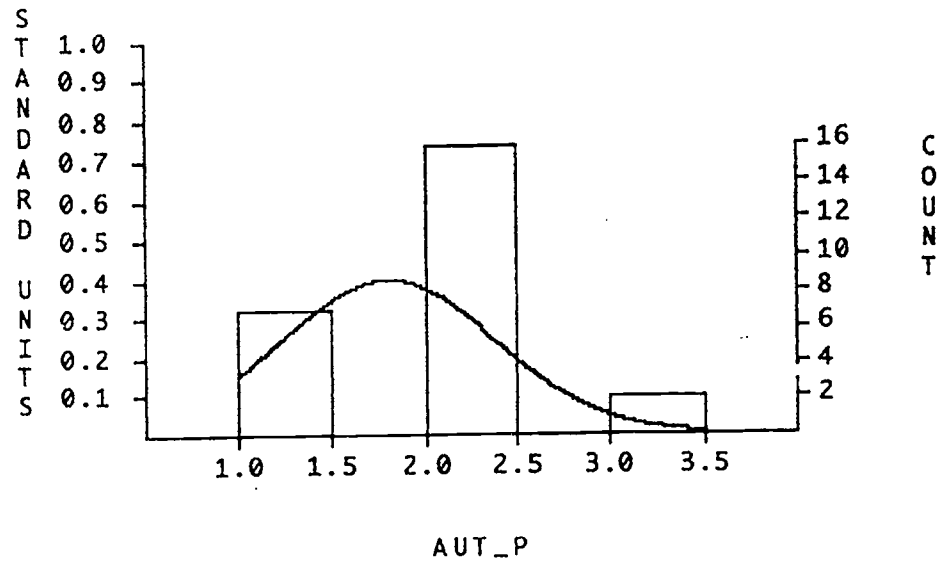


Fig.2.f.

Illustrating lowest level of autonomy.



Figures

Fig.3.a(i - v).

Five graphs illustrating the effect of 'grouping' on involvement levels throughout the five visits.

Fig.3.b.

Five graphs and bar charts representing the effect of directed / undirected sessions on the levels of involvement over the five visits.

Fig.3.a(i - v).

Illustrating the effect of 'grouping' on involvement levels throughout the five visits.

[Coding: 8 = Independent, 8.5 = 1:1, 9 = Pair, 10 = Group, 11 = Whole Class, 12 = Whole School]

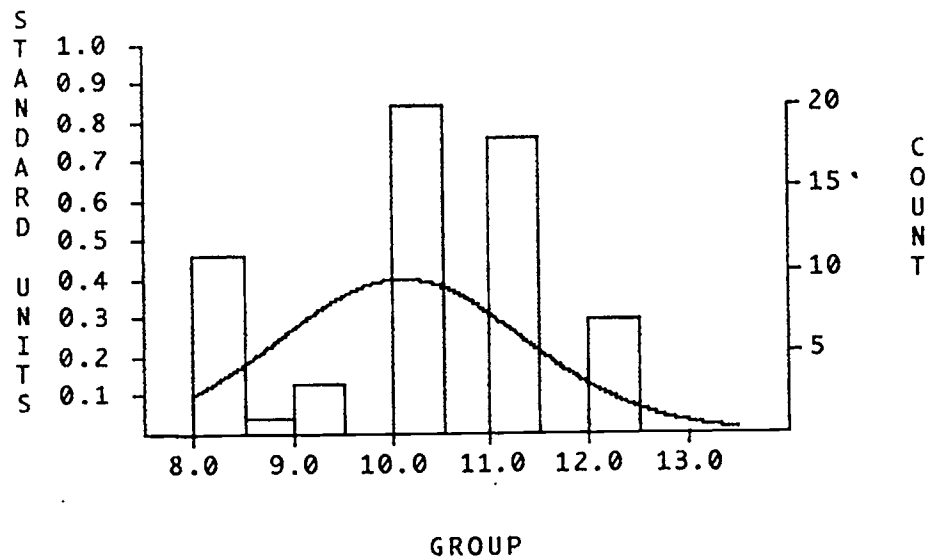


Fig.3.ai

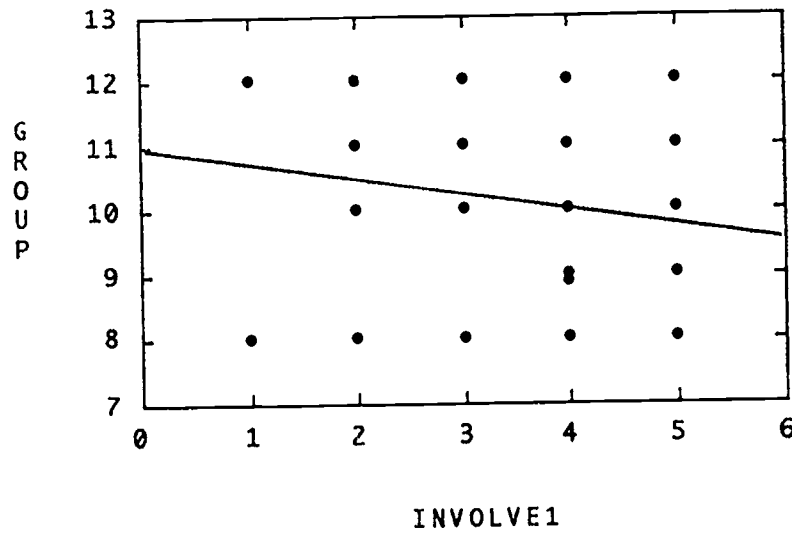


Fig.3.all

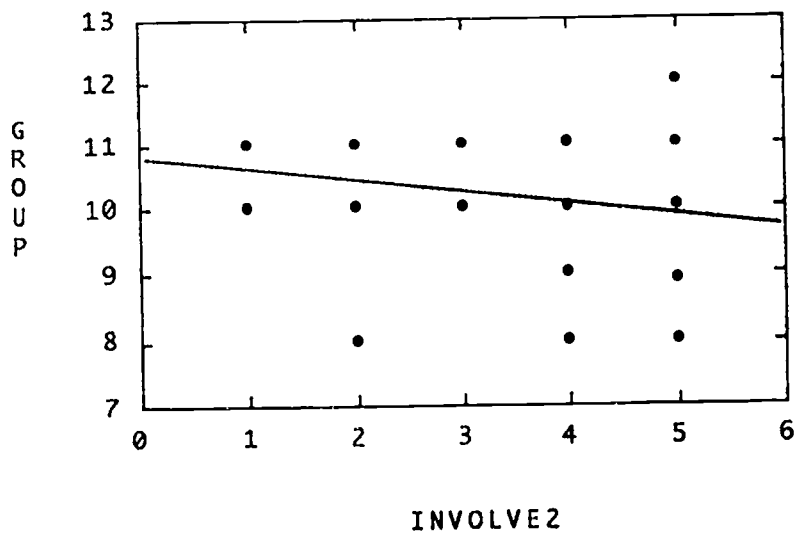
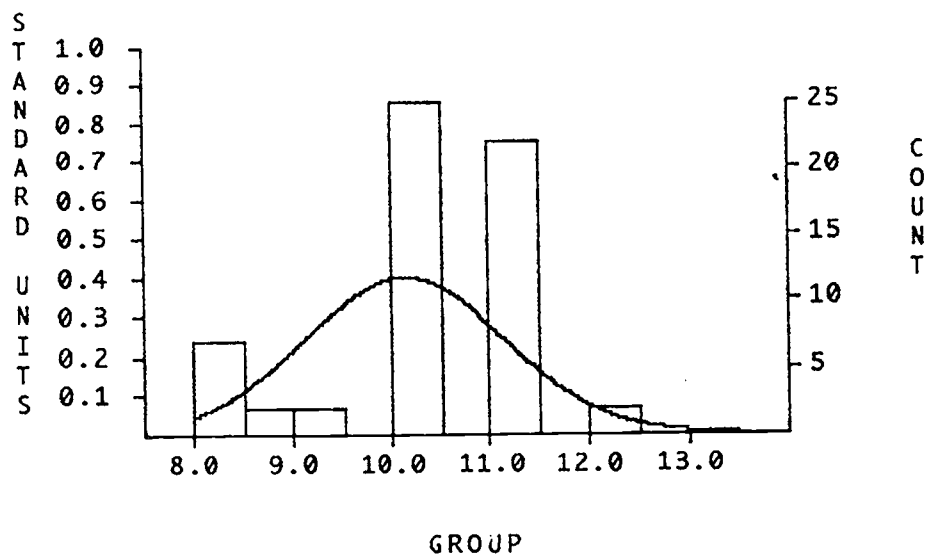


Fig. 3. a111

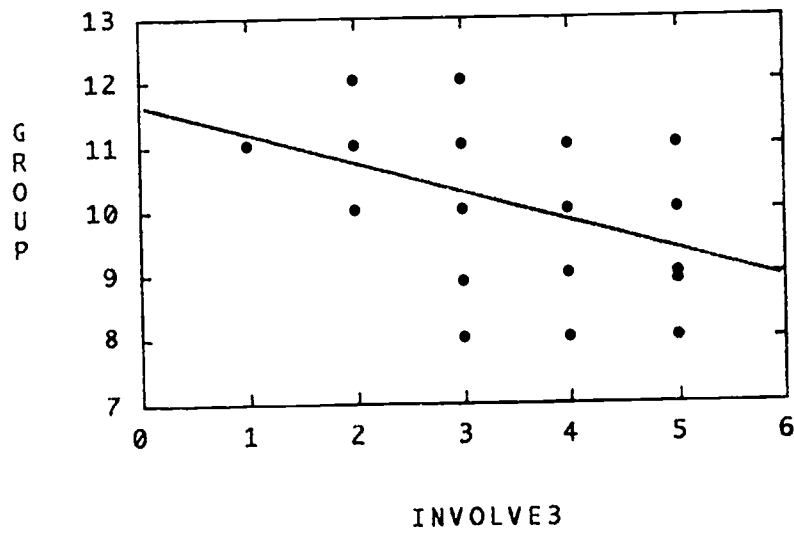
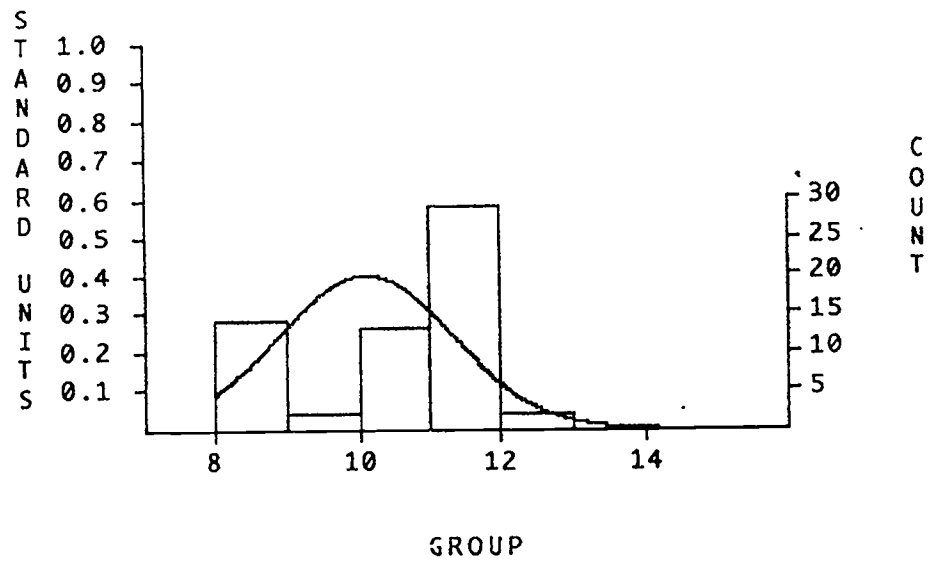


Fig.3.aiv

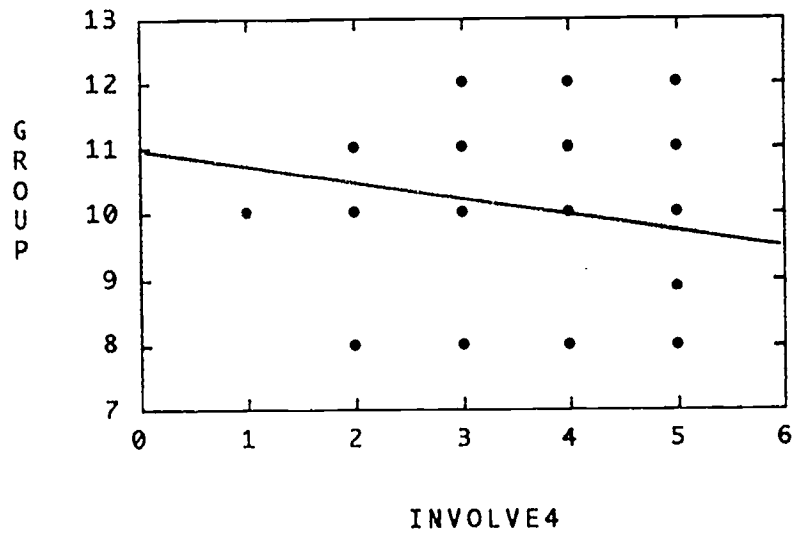
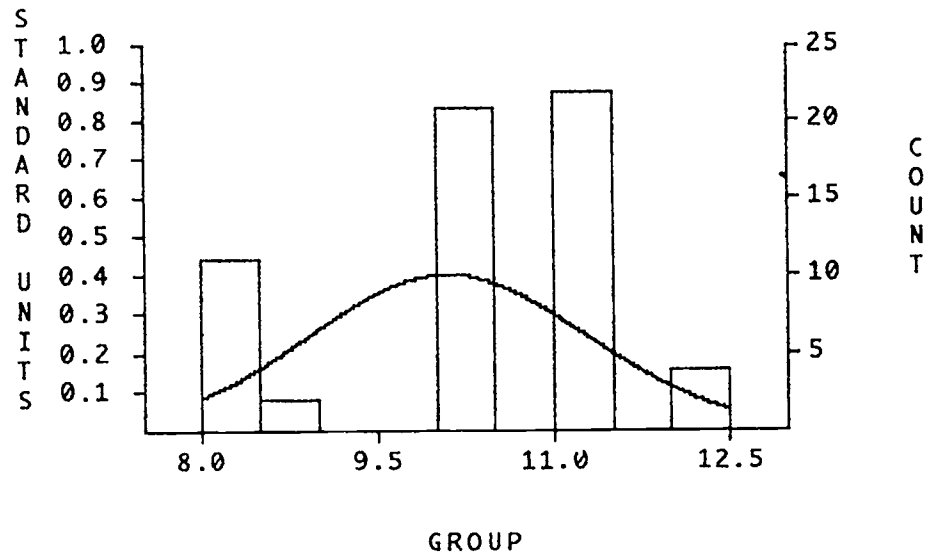


Fig.3.av

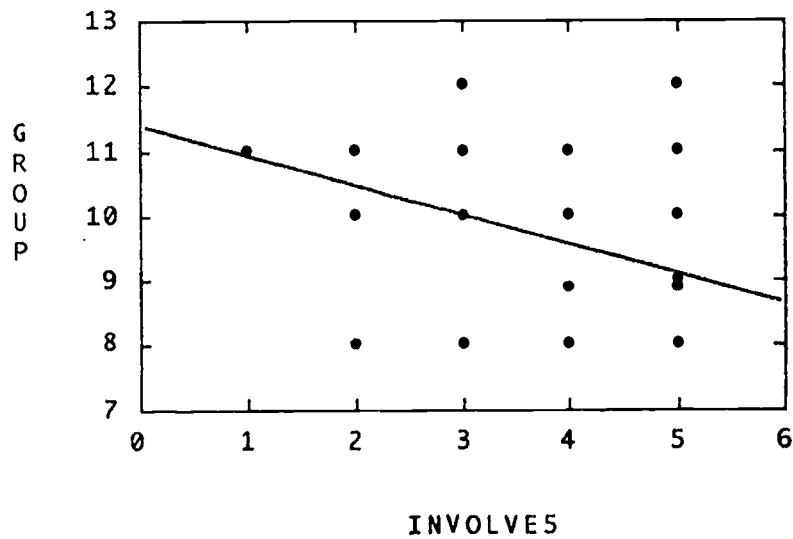
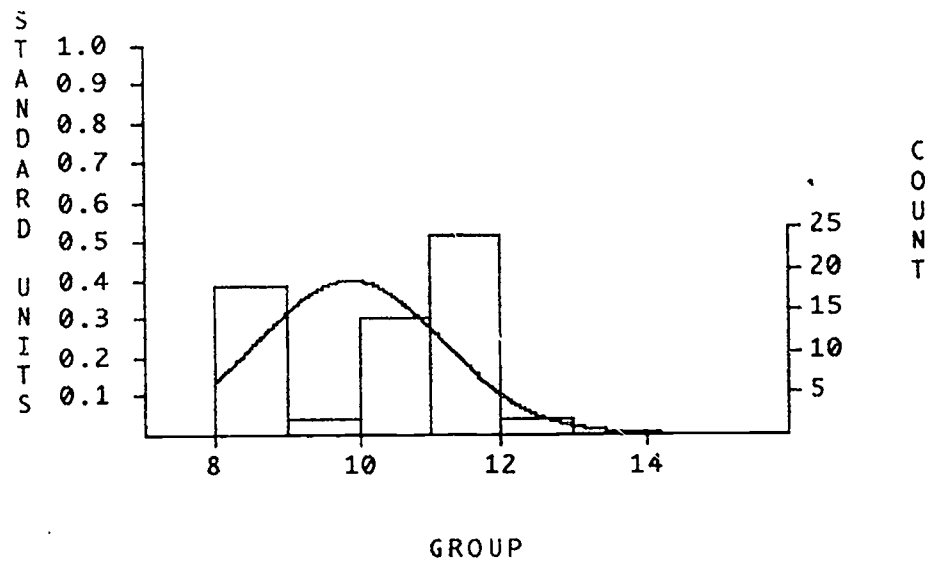


Fig.3.b(1 - v).

Five graphs and bar charts representing the effect of directed / undirected sessions on the levels of involvement over the five visits.

[Coding; 6 = Directed Activities, 7 = Undirected Activities]

Fig.3.b1

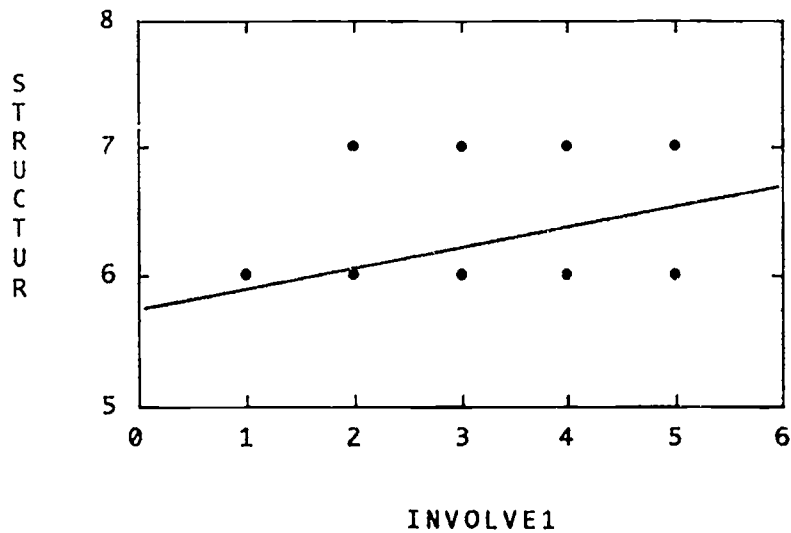
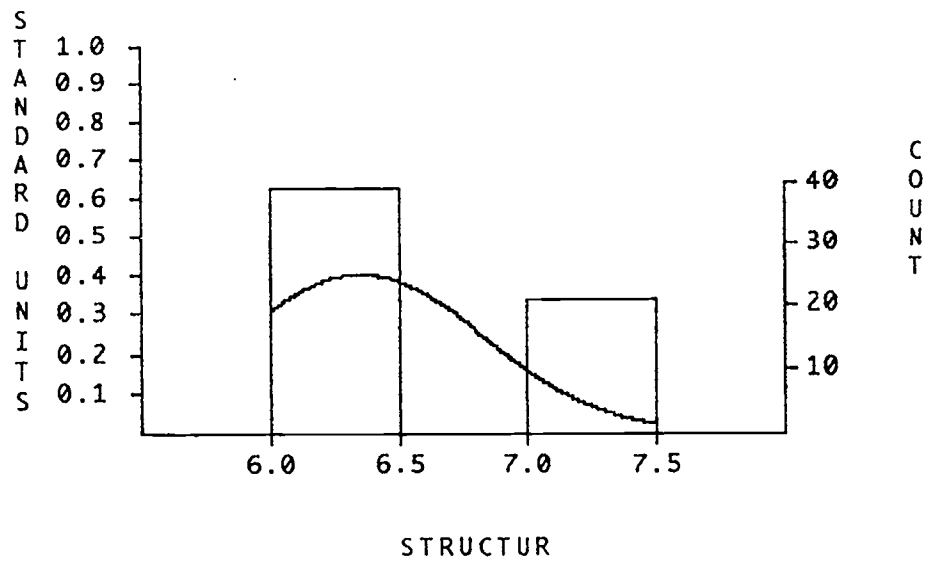


Fig.3.b11

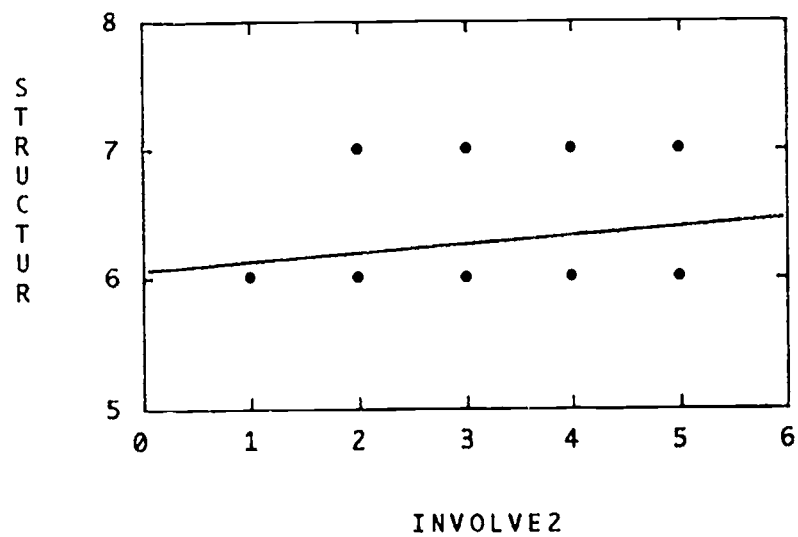
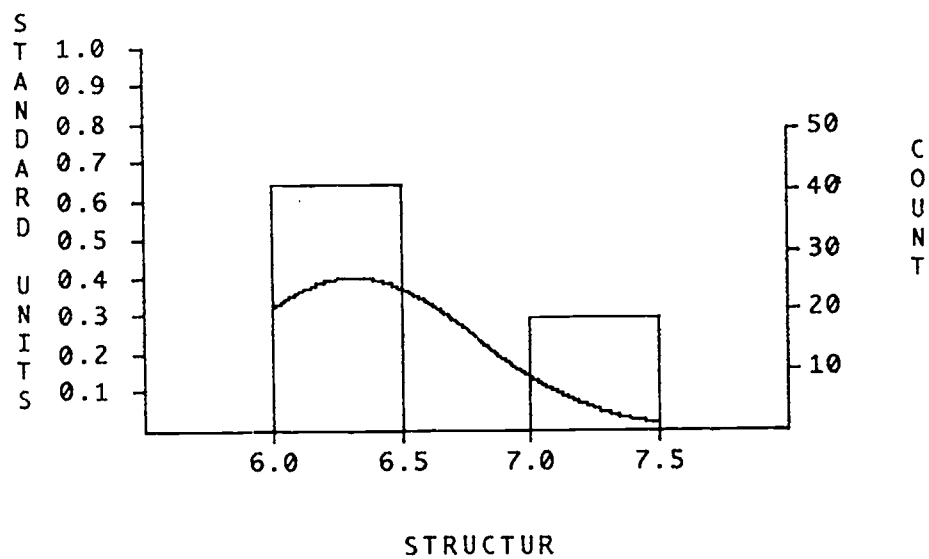


Fig.3.biii

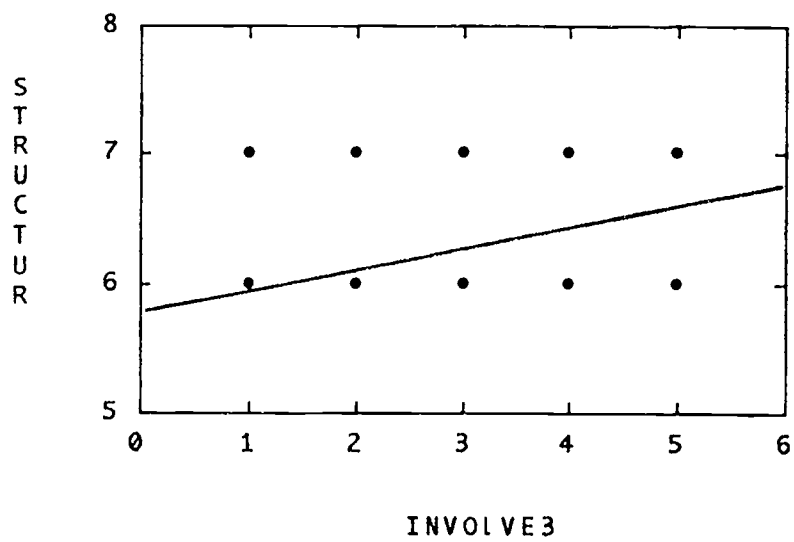
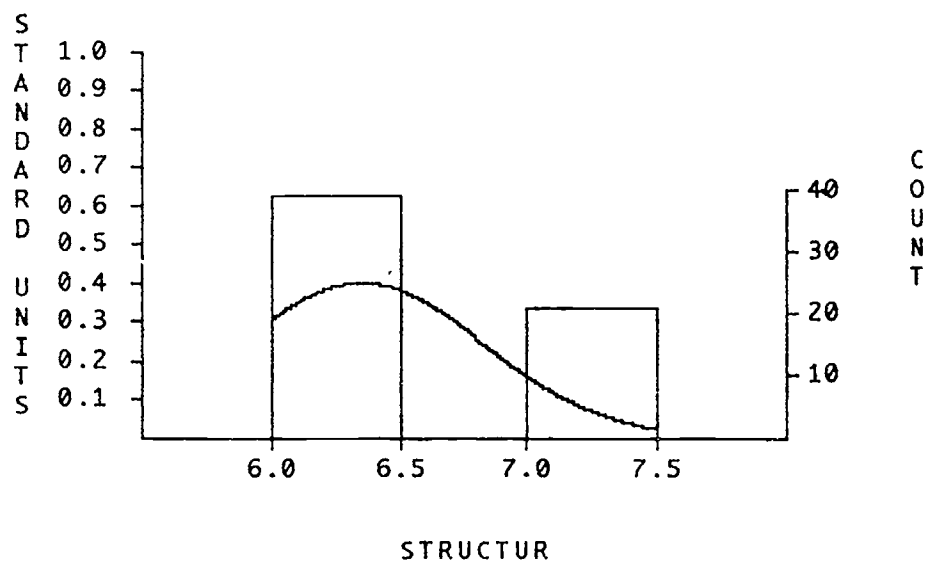


Fig. 3. biv

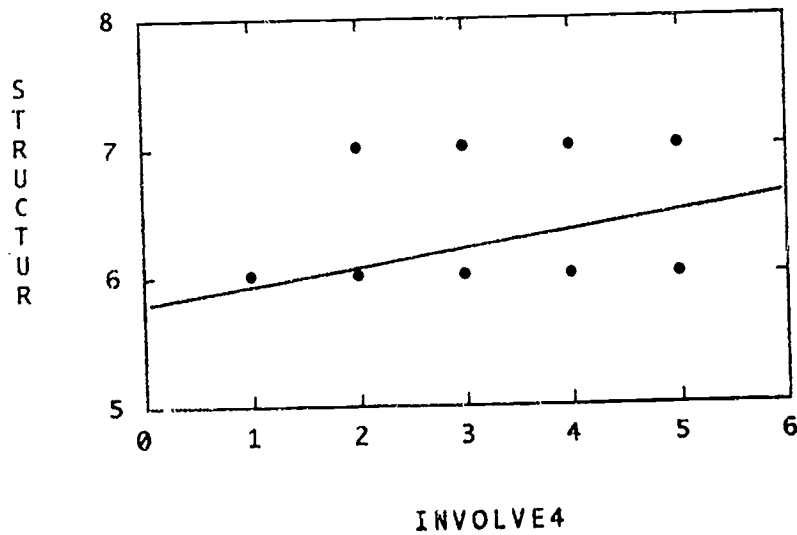
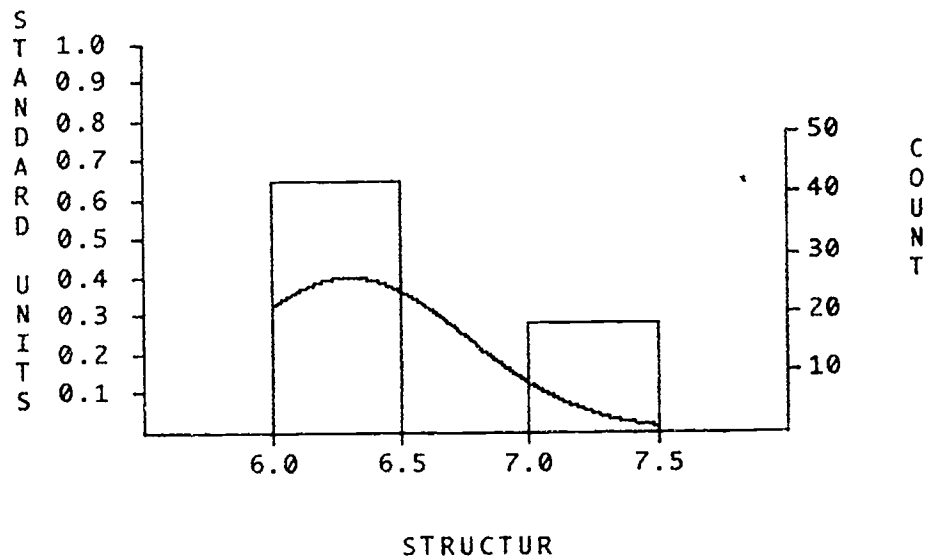
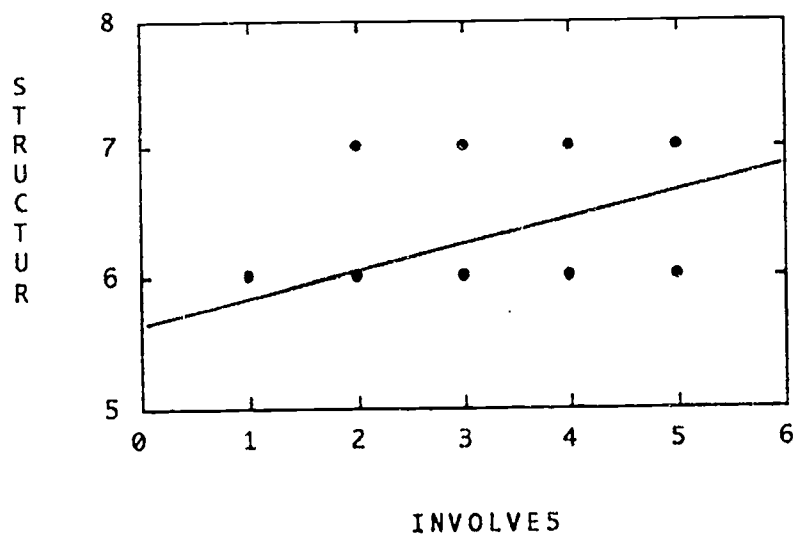
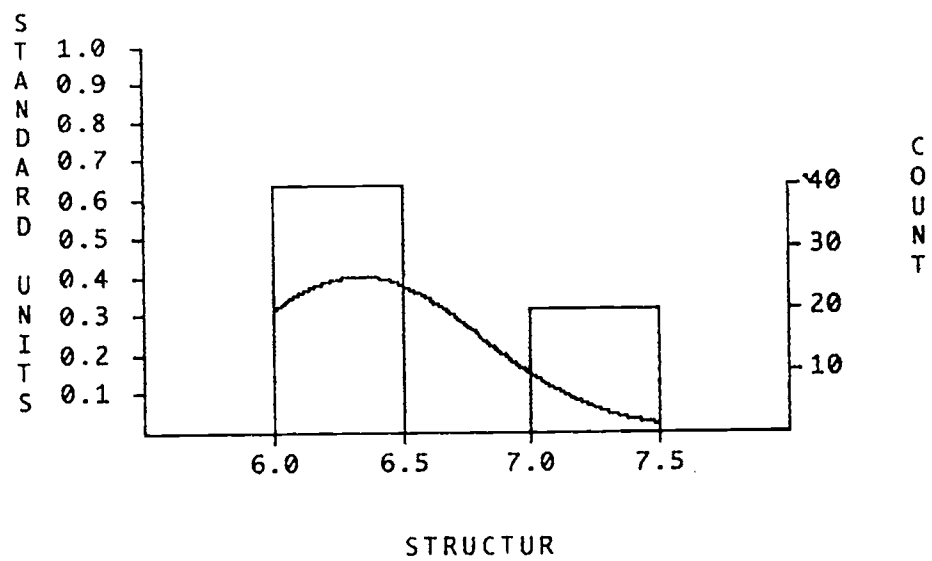


Fig. 3. bv



Figures

Fig.4.a.(i-v)

Five graphs illustrating levels of sensitivity over the five visits.

Fig.4.b(i - v)

Five graphs illustrating levels of stimulation over the five visits.

Fig.4.c(i - v)

Five graph illustrating levels of autonomy over the five visits.

Fig.4.a.(i-v)

Five graphs illustrating levels of sensitivity over the five visits.

Fig.4.ai

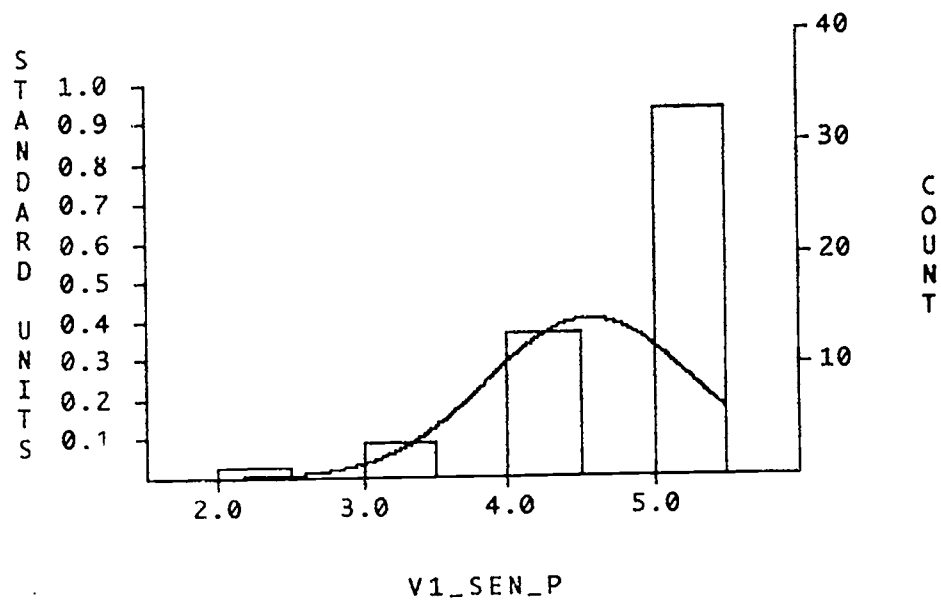


Fig.4.iii

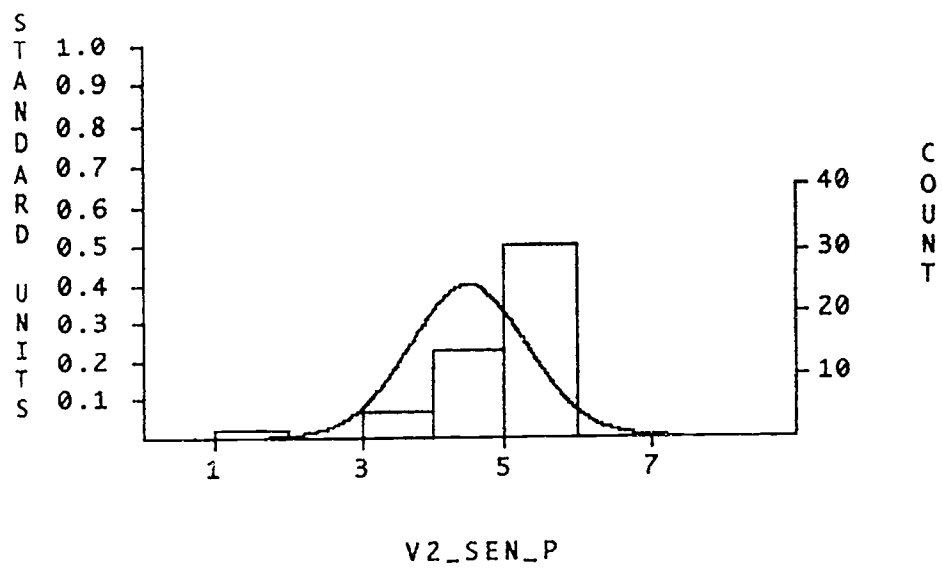


Fig.4.iii

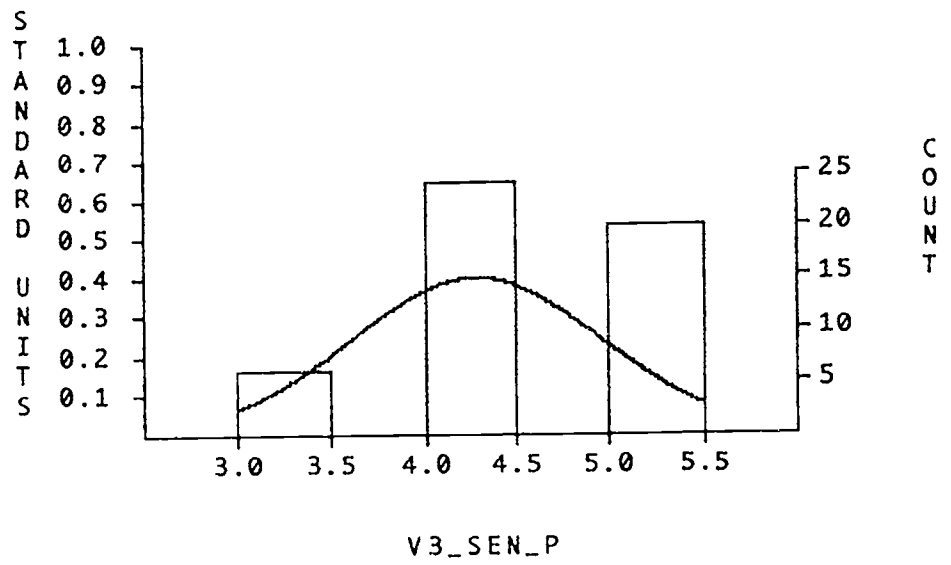


Fig.4.aiv

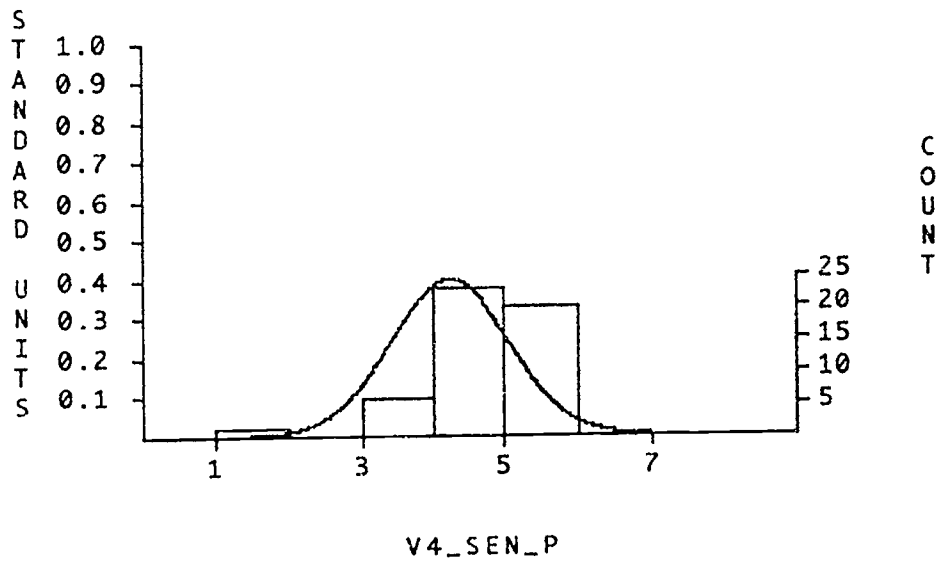


Fig.4.av

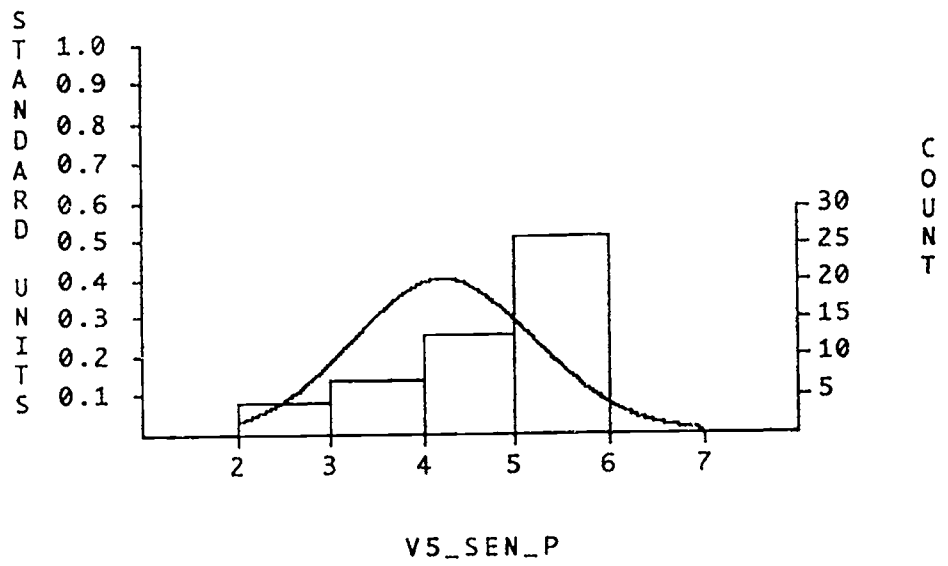


Fig.4.b(i - v)

Five graphs illustrating levels of stimulation over the five visits.

Fig.4.bi

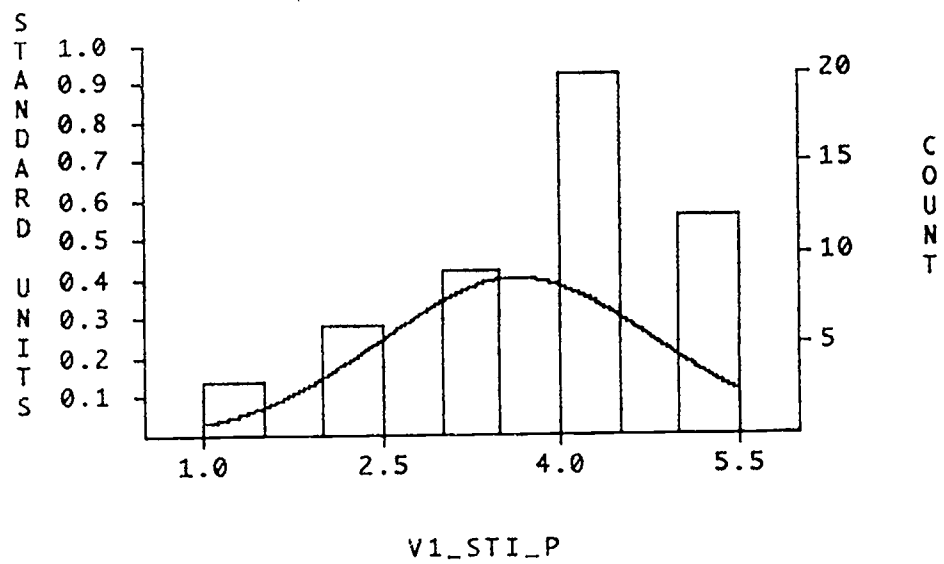


Fig.4.bii

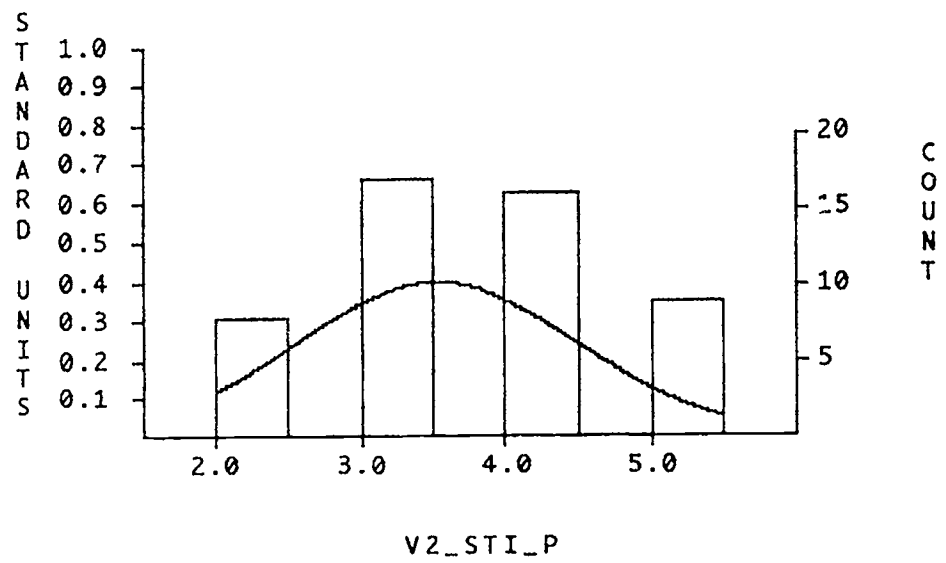


Fig.4.biii

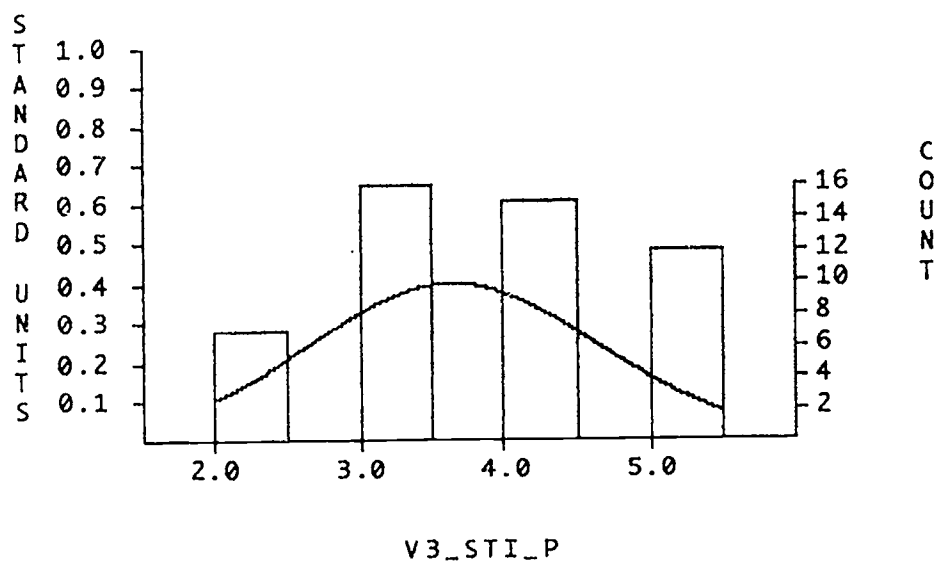


Fig.4.biv

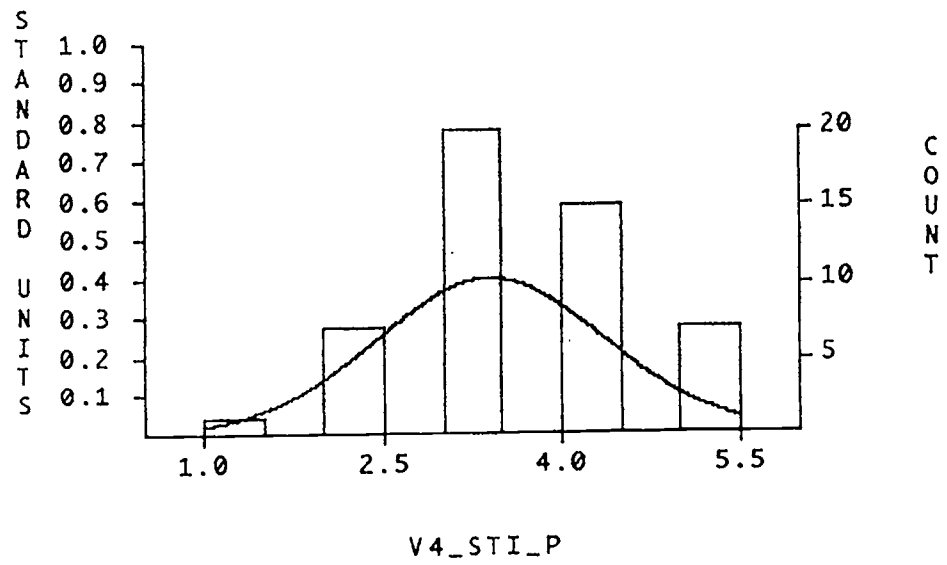


Fig.4.bv

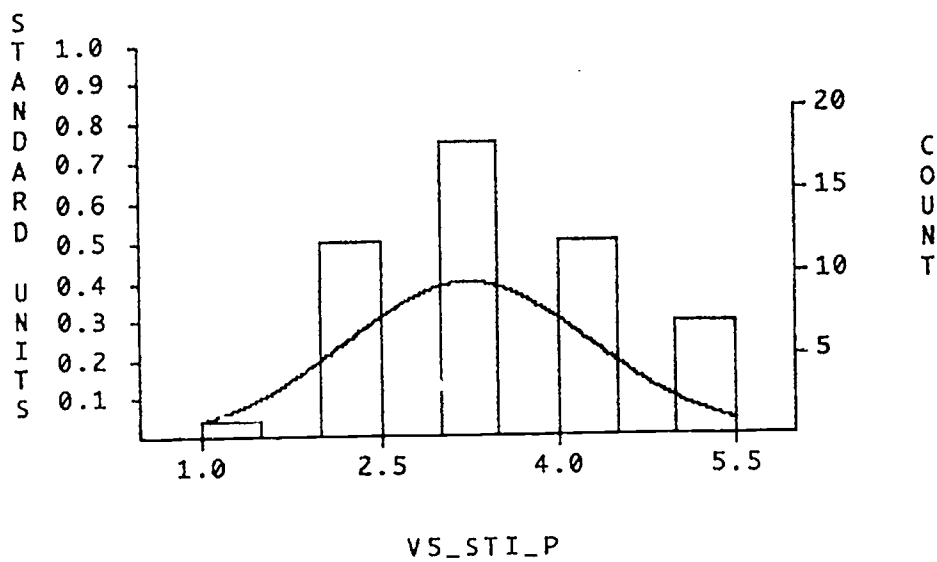


Fig.4.c(i - v)

Five graph illustrating levels of autonomy over the five visits.

Fig.4.ci

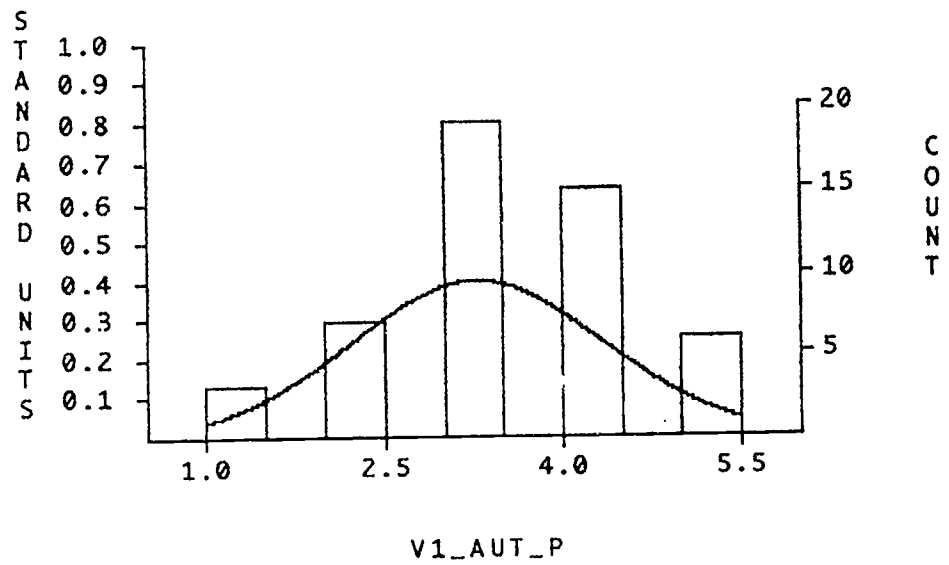


Fig.4.cii

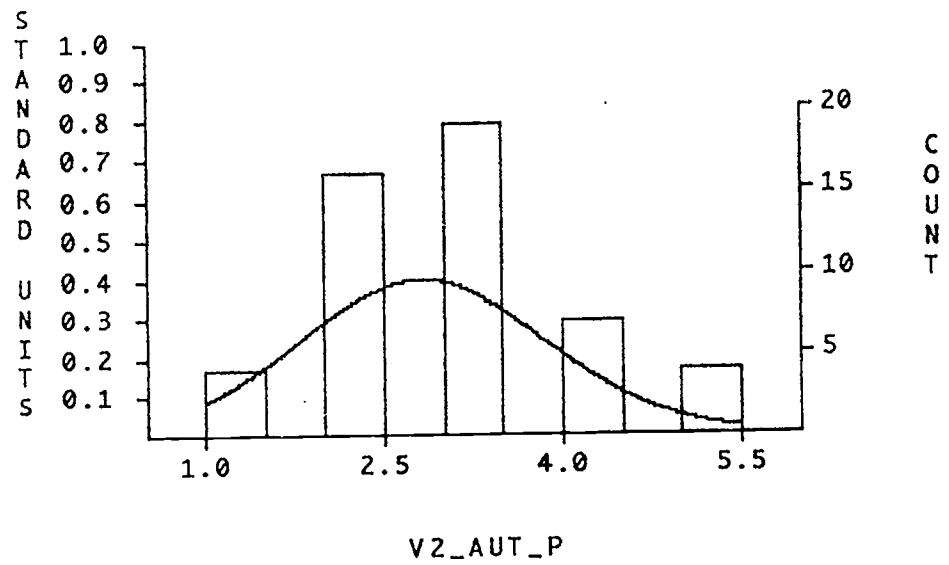


Fig.4.ciii

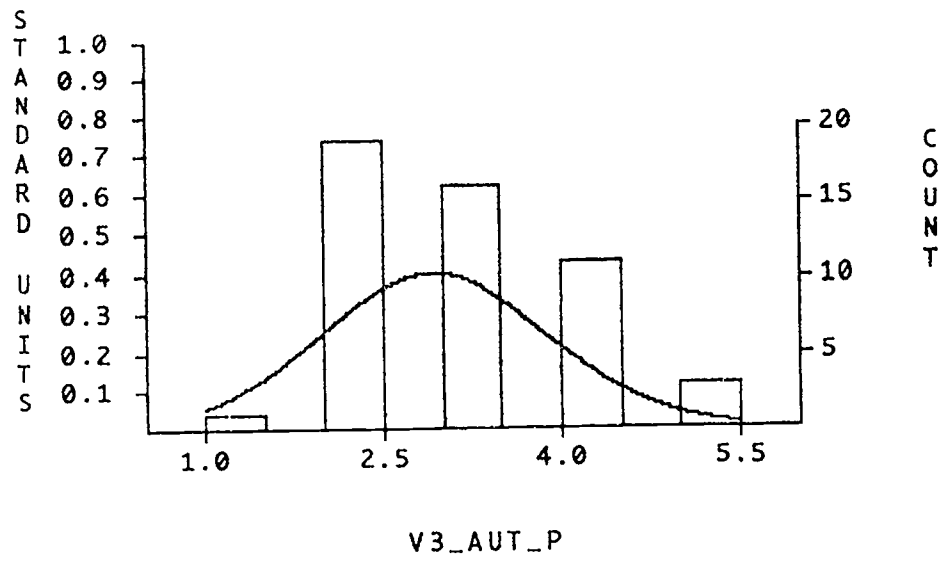


Fig.4.civ

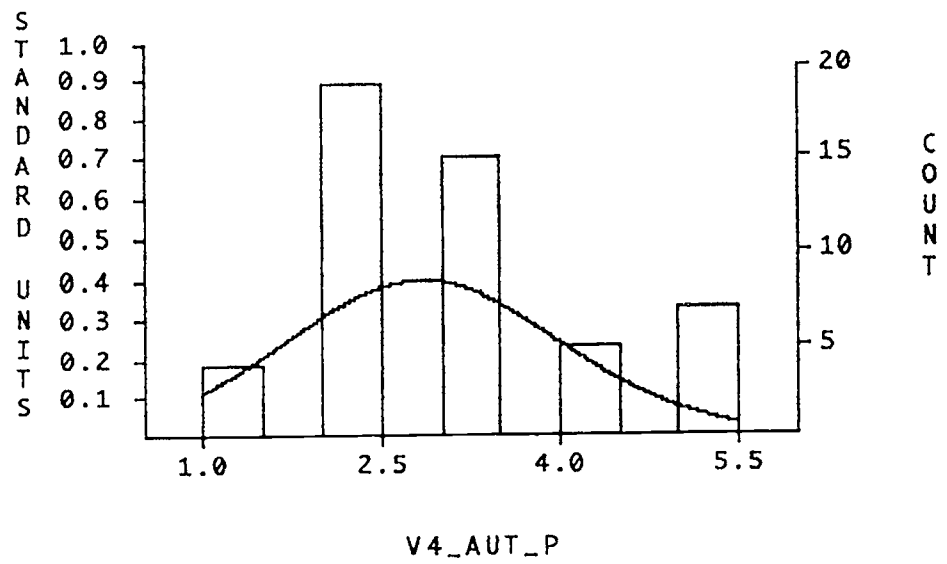


Fig.4.cv

