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Measuring the implementation of quality innovations in the workplace

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Abstract

This study examines the concerns profiles of 243 workers and middle managers within Telecom Australia who were engaged in implementing two related innovations (a) a major, new service policy called "Fix-it-First-Time" and (b) a change in the role of the front-line managers. Results were considered to be broadly consistent with a developmental and stage model of concerns. However, the importance of concerns for this sample of workers was different from that suggested by previous research. The impact of innovations on colleagues, on clients and on their job security was paramount in this group, reflecting the fact that innovations occurred within a period of major retrenchment and redundancy. Results also confirmed a higher order structuring of concerns which occurs in the workplace and which goes beyond the seven stages to encompass broadly defined personal concerns and impact concerns of the innovation. The implications of these findings are examined briefly in terms of change management.

How individuals respond to change in their organisations and work settings has been the focus of considerable research since the development of a Concerns-Based Adoption Model of change (CBAM) (Hall & Loucks, 1978). Most of the research using this model (in the U.S., Europe and Australia) has been conducted among teachers, therapists and others in the helping professions to show how their concerns affect the implementation of educational innovations (Marsh 1988). The purpose of this exploratory study is to examine the stages of concern in a non-educational context (i.e., commercial and industrial)

Concerns about an innovation are defined as "the composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task " (Hall, George and Rutherford, 1979, p.5). Individuals' concerns have an impact on how they implement innovations. Concerns have been hypothesized to shift over time from concerns that are unrelated to the self, to concerns about self, to concerns about the task to be implemented and finally concerns about the impact the innovation may have on others. Seven stages of concern have been proposed (see Hall & Loucks, 1978; Hall & Hord, 1984) and these are summarised in Table 1.

Table 1 The Seven Stages of Concern

Stage of Concern Definition

- 0. Awareness Little concern about or involvement with the innovation is indicated.
- 1. Informational A general awareness of the innovation and interest in learning more about it is indicated.
- 2. Personal Individual is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation.
- 3. Management Attention is focused on the processes and tasks of using the innovation and the best use of information and resources.
- 4. Consequence Attention focuses on impact of the innovation on students in his/her immediate sphere of influence.
- 5. Collaboration The focus is on coordination and cooperation with others regarding the use of the innovation
- 6. Refocusing The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with more powerful alternatives.

The model suggested that in all populations of innovation users, the concerns range from early concerns about 'self' (stage 1, informational; stage 2, personal) to concerns about the 'task' of

implementing the innovation (stage 3, management) and finally 'impact' (stages 4,5,& 6 - consequence, collaboration and refocusing, respectively). There is evidence from previous studies (e.g. Hall & Rutherford, 1976; Hall, George and Rutherford, 1979) that concerns are developmental over time.

Concerns theory and the related Stages of Concern Questionnaire have now been used for more than fifteen years in U.S. schools (Hall & Hord, 1984) and in a variety of professional development settings. Research in Belgium and Holland (e.g. Janssens, in Vandenberghe & Hall, 1987); Australia (Marsh,1988; Schaafsma, 1989) as well as researchers in the U.K., U.S., Mexico and Nigeria have evaluated the impact of policy, curriculum or technological innovations in educational settings. Its use and adaptation for innovations in industry and commerce has been limited to the field of quality assurance (Forquer & Anderson, 1983).

Bailey and Palsha (1992) used the Stages of Concern Questionnaire with a predominantly female sample of educators and concluded that " a five-stage model, as opposed to the original seven-stage model (of concerns), offered a more parsimonious and psychologically consistent framework for conceptualising needs."(p. 226) This finding raised questions about the finite and generic nature of concerns about an innovation. For example, how many stages are there and to what extent are these a product of sampling or contextual factors?

The validity of stages of concern about change and its potential for use in industry, particularly in human resource management, is an area

of meaningful applied research. For example, in the aftermath of the downsizing eighties (when many organizations reduced staff and restructured operations), the impact of concerns theory on re-building these organisations as 'learning organisations', might be pertinent. There is a need to consider if the model is still relevant today.

The Research Problems

This paper explores the nature of concerns about innovations in an Australian industrial context, namely Telecom Australia, a national telecommunications service. Entrenched work practices, attitudes and values were being changed most dramatically by restructuring and other macro-changes brought on by competition with a new private telecommunications carrier, Optus.

The historical and economic context for this study was that Telecom Australia has been forced to change from a monopoly through government intervention, competition and through the need to establish 'world's best practices'. In 1993-'94 Telecom Australia made approximately \$1.6 billion in profits. One of the 'costs' was staff. Staffing declined from a peak of 92000 in 1990 to approximately 67000 .

Management's decision to use a Concerns-Based Adoption model to facilitate change during this period of 'rightsizing' also raised many questions. That is, for front-line supervisors and managers, their willingness to listen to the 'concerns' that staff had about implementing innovations was somewhat circumscribed by the fact that they had no direct influence over the very factors that were creating concerns - job insecurity.

In 1993 there were two innovations that were seen as creating immediate concerns for some 'front-line' managers. These were (i) the introduction of a "Fix-it-First-Time" (FIFT) policy for all field staff involved in fixing telephone faults; and (ii) a concomitant change in the role for all front-line managers (some of whom would take a voluntary redundancy package as part of restructuring). One of the authors actively participated in a twelve month action research process with a sample of Telecom managers. To better understand the problems of implementation with the FIFT innovation, the action research team (n=17) decided to collect concerns data from a cross section of field staff located in one large Telecom Region in NSW.

Although a concerns-based model has enjoyed wide acceptance in monitoring educational innovation in professional educational contexts, this study represents the first application of this model to a predominantly male sample of workers and front-line managers in industry. It also provides the basis for developing an Australian data base on the Stages of Concern.

The research questions that shaped this exploratory study were:-

- What are the level of concern for an Australian sample undergoing innovation in the workplace?
- What are the patterns of concerns and might the number of stages be reduced or elaborated?
- Do US norms have validity when used with samples drawn from different work backgrounds?

Method

Subjects for this study comprised 244 employees of Telecom Australia (237 males and 7 females) who were employed in a variety of service related functions in the largest region of New South Wales. Demographic details of the sample are summarised below to illustrate that this sample was representative of workers and front-line managers who are

employed as linesmen in Telecom Australia. That is, they are predominantly male; have a mean age of about 37 years; were split between linesmen (48%), supervisors (43%) and managers (9%); averaged 7.6 years in this position; were involved with at least one other innovation simultaneously; generally saw themselves as reasonably experienced in using the innovation; having had at least two days of training. This sample was drawn from every area of the Region.

Instrument The Stages of Concern (SoC) questionnaire is a thirty-five item, Likert-type instrument that is designed to measure the relative intensity of seven distinct stages of concern. In the design of the questionnaire, each of the seven concerns is probed by means of five statements. Answers range from irrelevant (0), to 'not true of me now' (1-2); 'somewhat true of me now' (3-5) and 'very true of me now' (6-7). Concerns data were collected from participants, by means of a SoC questionnaire, as they exited from a two-day training workshop.

In a technical, workplace environment such as Telecom, there soon emerged a shared perception about the 'jargon' and forms of language used in the questionnaire. Through an action research process and piloting the questionnaire, a team of ten participants gradually modified the statements so that it became 'language we understand.' The collective experiences of staff in this sample noted that all changes were imposed from the top down and the role of individuals was simply to implement changes efficiently. Consequently, the use of a series of 35 statements beginning with the personal pronoun "I", tended to grate.

'Why do the thirty-five items of the Stages of Concern questionnaire have to begin with the word I?' e.g. "I would like to know what other staff are doing in this area." was found to be meaningless in a depot where everybody knew what others were doing anyway and where all staff were ultimately members of social groups or work gangs! One outcome was that feedback on each individual's 'concerns profile', would be done on a group basis to identify 'shared concerns' or similar profiles.

In the Telecom sub-culture and language, the most common usage of people's concerns was usually expressed in terms of "we". As this was explained by one front-line manager, "...among us linies and outside workers, there is a strong sense of mateship...so we talk about us doin (sic) the job." In terms of coping with change, the emphasis on their change management strategies was traditionally focused on both supporting the mates in the work team (usually males) as well as a maintaining a strong sense of solidarity which in this workplace translated as 'not dobbing in your mates' and being distrustful of changes inspired by (overseas) management. There was therefore a healthy scepticism about the value of a questionnaire being able to communicate their 'concerns' to management and the latter doing something about them!

One other outcome from the work of the action research team was the re-labelling of the seven stages of concern to suit their particular organisational context (Table 3)

Table 2 The (revised) Seven Stages of Concern (Schaafsma, 1992)
Stage of Concern
(Revised) Definition and typical questions asked by participants

0. Knowledge Little concern about or involvement with the innovation is indicated.

e.g. What is this change all about? Why change?

1. Information A general awareness of the innovation and interest in learning more.

e.g. Where do I get more information on this?

2. Security A concern about personal security & adequacy in this position.

e.g. How will this change affect my future in this organisation?

3. Management A focus on the processes and tasks of using the innovation.

e.g. How can I make this work with so little time and resources?

4. Impact on

clients A focus on the impact the innovation has on customers/clients.

e.g. How will this innovation benefit our customers?

5. Impact on

colleagues The focus is on coordination and cooperation with others.

e.g. How will this innovation affect our staff/ team etc.?

6. Impact on

corporate goals The focus is on exploration of more universal benefits from the innovation, particularly as they relate to organisational vision/goals.

e.g. How will this innovation help to achieve corporate goals?

Analysis The methods of analysis are outlined in the results. Briefly, descriptive statistics including correlations between variables were calculated. An exploratory factor analysis of the 35 items in the modified SoC questionnaire was conducted using principal components analysis with rotation to the varimax criterion (Table 3) in order to identify any general patterns of concern. Factors with eigen values greater than 1.0 were selected. The scores from the seven scales of the modified SoC were also analysed to determine any overlying pattern of relationships between the stages.

Results

Stages of Concern

The highest level of concern for this sample was at Stage 5 (i.e., Impact on colleagues) and the lowest level was for Stage 0 (i.e., Knowledge). The mean values for each stage and the intercorrelations between the stages are listed in Table 3. Overall, the five item scales for the seven stages had low to moderate internal consistency reliability (reflecting the small number of items per scale)¹. The internal consistency coefficients ranged from 0.39 for Stage 6 to 0.8 for Stage 5 and were largely in line with those cited by Bailey and Palsha (1992, p.228), 0.42 to 0.79 but less than those cited in the

manual 0.64 to 0.83 (Hall, George and Rutherford, 1979, p.11).

Table 3. Mean scores for various Stages of Concern (N=244)

Stage of Concern	Mean	Standard Deviation	Internal consistency
0 Knowledge	12.35	4.40	0.40
1 Informational	18.46	7.59	0.59
2 Security	20.98	10.77	
3 Management	16.77	10.70	
4 Impact on Clients	22.66	10.54	
5 Impact on Colleagues	24.07	10.80	
6 Impact on Organisational Goals	14.15	6.39	

1 Coefficient alpha

The highest correlation between stages (see Table 4) was between Stages 1 and 2 (i.e., Informational and Security stages of concern). Stage scores were generally correlated most highly with either their adjacent or alternate (i.e., the next) scales, viz.: Stage 0 was most closely

related to the alternate Stage 2; adjacent Stages 1 and 2 were closely related; Stages 3 was most related with Stage 1; while the adjacent Stages 4 and 5 and Stages 5 and 6 were related. Results were considered to be broadly consistent with a stage model of concerns. However, the importance of concerns for this sample of workers was different from that suggested by previous research. The impact of innovations on colleagues, on clients and on their job security was paramount in this group, reflecting the fact that innovations occurred within a period of major retrenchment and redundancy.

Table 4 Intercorrelations between Stages of Concern (N=244)

(Revised) Stages of Concern	0	1	2	3	4	5	6
0 Knowledge	-374	127	20	-0	12	0	0
1 Informational	-554	939	14	26			
2 Security	-392	200	13				
3 Management	-11	-12	20				
4 Impact on Clients	-4	3	2	5			
5 Impact on Colleagues	-3	1			3		
6 Impact on Organisational Goals	-					3	1

Decimal points omitted

The pattern of intercorrelations produced two overriding factors (eigen values > 1.0) comprising Stages 0-3 and Stages 4-6 (see Table 5). These accounted for over half the total variance and were interpreted as two clusters involving:- I. Personal concerns and II. Impact concerns. Results confirmed a higher order structuring of concerns which occurs in the workplace and which goes beyond the seven stages. A simplified visual description of the grouping of the concerns into

these two factors is indicated in Figure 1.

Table 5 Factor analysis of Stages of Concern (N=244)

Stage of Concern	III	Communality
0 Knowledge	650043	
1 Informational	732169	
2 Security	79-0461	
3 Management	79-1856	
4 Impact on Clients	077461	
5 Impact on Colleagues	-389376	
6 Impact on Organisational Goals	105840	
Eigen value	2.61.4	
% of total variance	37%21%	

Factor Loadings >0.5 are in bold.

Figure 1. Two-factor representation of the Stages of Concern Specific Concerns

The next phase of the analysis focused on the responses to the 35 specific statements in the SoC questionnaire. There was a wide variation in the responses to specific items in the SoC questionnaire as is illustrated in Table 6.

In addition to examining the relationship between the original stages of concern, it was considered important to analyse whether there were any underlying patterns of concerns in the responses to individual questions. Factor analysis of the responses to the 35 items yielded a nine factor solution accounting for almost 59% of the total variance and which supported the grouping of the items into their stages but also a re-ordering of concerns. Details of the 35 by 35 matrix of correlations are available from the authors upon request. Stages 2, 5, 3, 4 and 0 were clearly supported by this exploratory factor analysis. There was no support for Stages 1 and 6. The abbreviated results of

the analysis for items loading greater than 0.4 on any factor are summarised in Table 7.

Table 6 Stated concerns about the innovation(s)
 Item No. Items and Stages of Concern Mean Std Dev

3STAGE 0 : Knowledge Concerns

I don't know how the innovation can help us here

2.0

1.7

12 Having to implement the innovation, does not really affect me now 2.6

2.1

21 I don't know what I am supposed to be doing with the innovation 2.41.9

23 I don't know how this innovation will benefit our customers 3.42.3

30 At this time I know very little about implementing the innovation 1.7

1.7

6 STAGE 1: Informational Concerns

I have a very limited knowledge about the innovation at this time

2.8

1.9

14 I would like to discuss with other staff members the way we will use the innovation 4.12.1

15 I would like to find out more about how I'm going to make the innovation work with limited resources here 4.32.9

26 I would like to find out more about how the innovation will prepare us for competition 4.22.2

35 I would like to know how the innovation is better than what we did before. 3.02.2

7

STAGE 2 : Security Concerns

I am more concerned to know what the innovation will have on my job security in this organisation.

4.0

2.4

13 I am concerned how using the innovation will affect my future job prospects in Telecom 4.22.3

17 I am concerned about my future if the innovation is successfully implemented here 3.82.2

28 I am concerned about how the innovation will affect my work load and changes in my work practices 4.12.2

33 I would like to know how my job will change when I am using the innovation more effectively 4.72.0

4 STAGE 3: Management Concerns

I am concerned about not having enough time to organise myself each day

1.9

1.7

8 I am concerned about conflict between my interests and my

responsibilities3.62.2

16I am concerned about my inability to manage all the innovation
requires4.42.2

25I am concerned about time spent working with non-academic problems
related to this innovation3.72.1

34Coordination of tasks and people is taking too much of my time3.02.2

1STAGE 4: Impact on Clients/Customers

I am concerned about customers attitudes toward the innovation
4.4

2.0

11I am more concerned about how our customers will benefit from us
using the innovation4.52.2

19I am concerned about finding out if the results of the innovation are
of any benefit to our customers in Telecom.3.92.1

24I believe our customers will get better service by us using the
innovation 5.81.5

32I would like to use feedback from local staff to change the
innovation practices to suit the needs of our customers.3.82.0

5STAGE 5: Impact on Colleagues

I would like to help other staff to improve their use of the
innovation.

4.7

2.1

10I would like to develop working relationships with staff within the
Region in improving the innovation.4.91.8

18I would like to share with other staff in the area the successes and
failures we have had with this innovation.4.62.1

27I would like to work with others to improve how we use the
innovation.4.81.8

29I would like to know what other staff are doing with the innovation
4.81.9

2STAGE 6: Impact on Organisation's Goals

I now know of some other approaches that might improve how the
innovation is used in Telecom.

3.6

2.0

9I am concerned about revising my use of the innovation2.92.2

20I would like to change the whole approach of implementing the
innovation.2.92.0

22I would like to change our use of the innovation based on feedback
received.2.21.9

31I believe we should now make some major changes to the innovation
2.22.1

Table 7 Item loading greater than 0.4 on any factor

Item No.

33

28

17

7

13

18

27

10

5

29

32

16

8

25

15

9

34

20

9

6

35

19

1

32

16

23

30

2

20

34

14

22

21
14

11
25
12

Factor I - STAGE 2

0.82I would like to know how my job will change when I am using it more effectively.

0.68I am concerned about how this innovation will affect my work load and work practices

0.64I am concerned about my future if the innovation is successfully implemented here.

0.63I am more concerned about what effect the innovation will have on my job security in this organisation

0.61I am concerned how using this innovation will affect my future job prospects.

Factor II - STAGE 5

0.82I would like to share with other staff in the area the successes and failures we have had with it.

0.75I would like to work with others to improve how we use the innovation.

0.75I would like to develop working relationships with staff within the Region in improving it

0.65I would like to help other staff to improve their use of the innovation procedures.

0.55I would like to know what other staff are doing with this innovation.

0.50I would like to excite my staff about their part in this approach

Factor III - STAGE 3

0.78I am concerned about my inability to manage all the innovation requires

0.68I am concerned about conflict between my interests and my responsibilities

0.64I am concerned about time spent working with non-professional problems related to this

0.63I would like to know what resources are available if we decide to adopt this innovation

0.53I am concerned about revising my use of the innovation

0.45Coordination of tasks and people is taking too much of my time

Factor IV - STAGE 6

0.78I would like to revise the innovation's instructional approach

0.62I am concerned about modifying things in this area

0.44I have a very limited knowledge about the innovation
0.43I would like to know how this innovation is better than what we
have now

Factor V - STAGE 4

0.72I am concerned about evaluating my impact on the customers in side
& outside
0.63I am concerned about how the innovation affects customers
0.45I would like to use feedback from customers to change the program
0.42I would like to know what the use of the innovation will require in
the immediate future

Factor VI - STAGE 0

0.79I am not concerned about this innovation
0.60I don't even know what the innovation is

Factor VII -

0.78I would like to determine how to supplement, enhance or replace the
innovation
0.44I would like to use feedback from staff to change the program
0.41Coordination of tasks and people is taking too much of my time
0.40I would like to discuss the possibility of using the innovation

Factor VIII -

0.71I would like to modify our use of the innovation based on the
experience of others.
0.53At this time I am not interested in learning about this innovation
-0.43I would like to discuss the possibility of using the innovation
with other staff

Factor IX -

0.64I am concerned about the attitudes of customers toward this
innovation
0.57I would like to know the effect of the reorganisation on my
professional status
0.56I am completely occupied with other things

The following items failed to load > 0.4 on any factor: Item 4 - I am
concerned about not having enough time to organise myself each day and
Item 2 - I now know of some other approaches that might work better.

Discussion and Conclusions

This research, unlike earlier studies on stages of concern about an
innovation, focused on innovation implementation during a period of
rapid technological change and considerable economic insecurity. It is
therefore not unexpected that the predominant factor should be the
personal stage of concern which in this context was summed up in

follow-up interviews as " a lack of job security". Recognising the significance of this concern as a potential cause for ineffective implementation, is perhaps the first step in change management. According to the original Concerns-Based Adoption theory, these 'personal' concerns need to be resolved before individuals can effectively address the concerns associated with doing the task and their on customers.

The importance of security concerns was highlighted by this more detailed analysis of item responses, together with concerns about the impact on colleagues and management of the innovation. When placed in the context of time (1992-1993) and place, the significance of these findings becomes more meaningful. That is, during a time of major recession in Australia, when unemployment levels peaked nationally at 11.2%, it is not surprising to find personal/security concerns among these staff at very high levels. Similarly, concerns about the impact of these innovations on the dwindling numbers of colleagues, represents the phenomenon of shared concerns among the 'survivors' in the organization. The implications of this finding for the so-called 'leaner and meaner' organisations is now becoming apparent. Low levels of morale and commitment to further changes may well be an outcome of concerns about teams and networks having been 'restructured' out of existence. The process of re-building social networks for new change management initiatives needs to be planned as part of the total change management process.

The next step of this analysis is to critique the whole apparatus of 'measuring concerns' as a technique for 'facilitating continuous improvement'. A postmodernist deconstruction of Total Quality Management (TQM) recently undertaken by Steingard and Fitzgibbons (1993), might be the next logical step to consider. Such a step assumes that management in Telecom are willing to discard the dominant paradigm and question some of the underlying assumptions on which their models of change have been constructed recently. (A recent management decision led to the discontinuation of a Telecom management development model (Mink et al) that had used this Concerns-based methodology).

A further issue is the question of the relevance of the U.S. norms underpinning the scoring of the SoC questionnaire. Factors and item loadings on each factor identified showed that there is not always a direct match with the original seven stages. There is some similarity in the data on four of the stages of concern dealing with : Stage 2 (personal or 'security' concerns); Stage 5 (Impact on colleagues concerns); Stage 3 (Management concerns); and Stage 4 (Impact on clients) concerns.

One implication that emerged from this study was the uncritical acceptance by management of overseas change models (and techniques) without considering the need for research and development of the instruments for Australian conditions. Cultural borrowing of change

management models (developed during the 1970's) are inappropriate for today's Australian organisations. Similarly, managing Telecom with an espoused open systems model (see Telecom Manager's Planning Guide, 1991) cannot work in a changing reality where senior management persist in restructuring front-line managers as expendable appendages to the machine of 'continuous improvement' for the goal of 'customer service'. Concerns of staff, as this paper has pointed out, also need to be considered in context.

The available evidence therefore supports a re-ordering of the stages, possibly along the lines shown in Figure 2. The grouping of concerns was largely upheld and it is recommended that further research with varying occupational groups is conducted within this model of seven stages of concern. The results of this study confirmed previous findings of low internal consistency of the groupings and eventually some re-ordering of items in the SoC may be necessary. Although this study primarily reported the analysis of the statistical data, it is worth pointing out again that the original questions and issues were raised by the front-line managers who were involved in an action research process. Active participation and involvement by management in the research process ensures its relevance to the context.

Any variation in results may be due to the fact that this Australian sample differs markedly from earlier studies done within professional settings, such as the care givers for children in the U.S. sample used by Bailey and Palsha (1992). Other differences with that study can be described in terms of (i) gender - this sample was predominantly male, theirs predominantly female; (ii) type of innovation - this was mainly technical/ practical outdoor, theirs was care giving to children. In summary, this exploratory study reinforces the need for more research into the widespread use of 'change management tools and techniques' that were developed in a different time and place when the underlying assumptions about change management may well have been quite different to today's changing organisation.

One outcome from this study is a possible re-ordering of the Stages of Concern as suggested in Figure 2. From a change management perspective, such a developmental sequence suggests that a commitment to real (and widespread changes) in organisations may be contingent upon the way these concerns are addressed in future. That is, as organisations develop more temporary systems and move towards new 'networking' blue-prints for change, the change manager may well be expected to intervene to address these kinds of concerns - as part of any change process.

Figure 2. A possible re-ordering of Stages of Concern

This paper has provided one set of data that may lead to several conclusions when these are interpreted in context. First, the Stages of Concern questionnaire may need to be adapted significantly for use in commercial and industrial contexts. Second, the stages of concern about an innovation in a work setting can be ordered in a new developmental sequence. Third, the available evidence suggested that a four stage model may be more appropriate for use in Australian industry. Finally, the differences in the samples from both studies suggest that cultural and contextual factors may account for some of the differences in concerns being expressed - particularly during a time of rapid economic change.

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Table 2 Demographic Data

Demographic Variable Categories (%)

Gender Males: 97% Females: 3%

Age 20-29(10%); 30-39 (44%); 40-49 (33%); 50-59 (9%) 60+ (4%)

Position in Telecom *C03*(48%); C04 (27%); C05(8%); C06 (8%) Manager (9%)

Years of Experience in Telecom 1-5(61%); 6-10(23%); 11-15(8%); 16-20(5%); 21+(2%)

Involvement with other innovations 0 (1%); 1 (52%) ; 2 (18%) ; 3 (14%) ; > 4 (15%)

Self-description as Innovation user non-user; novice; intermediate; old hand; ex-user

(5%) (28%) (49%) (11%) (7%)

Days of training for this innovation 0 (7%) ; 1 (39%); 2 (48%) ; 3-7 (5-7%); > 8 (2%)

Locations in Region **1(18%) ; 2 (11%); 3 (18%) ; 4 (13%); 5 (13%); 6(15%) ; 7 (12%)

* Positions e.g. Communication Officer Level 3, 4, 5 or 6; Manager Levels 1 & 2.

** Locations in N.S.W.: 1=Wollongong-South Coast; 2=Canberra &

Goulburn; 3= Bathurst-Orange-Mitchell; 4= Riverina-Murray; 5= Campbelltown; 6= Burwood & Regional Office; 7= Albury area.