Role of Demographic and Professional Competency Factors in the Development of Change Management Competency Profile of School Heads in the Province of Punjab, Pakistan

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Abstract

The present study purports a change management competency profile of school heads based on ADKAR model with reference to the demographic and professional competency factors. The enhancement of Change Management (CM) competencies of an individual is creditably connected with demographic and professional competency factors of a school. This change model originally consisted of five outcome (Awareness, Desire, Knowledge, Ability, and Reinforcement) and sub-competency factors. To contextualize an overseas model, exploratory factor analysis was performed to develop a change management competency (CMC) scale. Stratified Random sampling technique was adopted to sample 304 school heads in the eight districts of three regions (north, central & south) Punjab. Low literacy rate districts formed the main rationale for sampling the districts. An alternative hypothesis was also tested. On the basis of response categories, the strengths and weaknesses of managing change within a school system were also identified in this study. The demographic and professional competency factors have proved as strong enablers of change management for the school heads in order to keep the momentum of both intended and implemented new plans within a school system.

Keywords: Change Management; Competency Profile; ADKAR Change Model; Change Management Competency.

Introduction

Many organizations use different methods to manage changes in a formalized manner. This approach refers to 'Change Management' (CM). It provides a framework of managing the change within the

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people. The changes to be controlled lie within the control of the organization. Therefore, management of such changes certainly requires a range of managerial competencies both at the individual as well as organizational level.[1] Moreover, Hoffman quoted this term 'Competency' as:

> *"Competency has not been clearly defined in the literature. Two main concepts of this term have been identified, one refers to the outputs, or results of training – that is, competent performance. The other refers to the inputs, or underlying attributes, required of a person to achieve competent performance. Each definition has been used to describe both individual and organizational competencies*."[2]

The ADKAR Change Model
This model formulation process was completed in almost ten years. It was experimentally tested in business, government agencies and local communities. The ADKAR[3] model was first printed by Prosci in 1998 after conducting research with more than 300 organizations, working on major change projects. In 2006, for the first time, Prosci brought this ADKAR model in the form of text in the book of Jeff Hiatt on ADKAR. This model is meant to be a coaching tool to help change managers through the change

Figure 1: The ADKAR Change Competency Model

A	Awareness of the need for change
D	Desire to support and participate in the change
K	Knowledge of how to change
A	Ability to launch required skills and behaviors
R	Reinforcement to sustain the change

Source: Hiatt (2006)

Figure 1 shows the five outcome competency factors of ADKAR model.

This ability or competency of identifying such challenges as 'barriers to change' demands a transformational role of a head which can only be achieved successfully by understanding the philosophy of school culture. This is because the concept of school culture is particularly valuable to school heads who wish to change their institutions. Therefore, to become a successful transformational change agent, a head need to become first, the part of school culture rather than the school climate.[4]

With regard to school change "there has been strong adoption and implementation, but not strong institutionalization."

Here, the role of school heads as a single unit of change seems more demanding in order to institutionalize a series of developmental changes within their schools. Fullan's work is based on research and practice which focuses on school reforms. His undertakings in the field of leadership and change, he always described the school heads as a vision builders and one of the defining characteristics of a vision is that an individual or school can take multiple pathways to meet this vision.[5]

In Pakistan, a head, to run a school without any training for orientation as to what it means to be a change agent. Very often, school heads are appointed on the basis of seniority (75%) and by direct appointment at grade 17 through public service commission. By seniority what is meant is not experience in the area of headship, but years of teaching experience. Thus, when they are appointed as a head, they had to learn the tricks of the trade through trial and error and hands-on experience, without any professional content knowledge. Obviously such kind of factors hinder a school head from playing a catalytic role of a change agent in a school developmental plan.

Change Management Initiatives for the Secondary School Heads in Punjab Province
In the province of Punjab, a number of initiatives have been taken for the managerial trainings of both male and female heads of secondary and higher secondary schools. The following agency is working under Punjab Government for the professional empowerment of heads of schools.

Directorate of Staff Development (DSD) & Punjab Institute of Teacher Education (PITE) Lahore, Pakistan
In Punjab, both DSD and PITE are considered as the hub of Pre and In-service teacher training programs since 1959 with different names. In 2007, the DSD- PITE, launched a project of 'Continuous Professional Development (CPD)' model and under this framework it gave training to the heads of Secondary Schools, initially in the twelve districts of Punjab. Currently, the CPD model has been implemented in all 36 districts of Punjab. In order to cover whole Punjab on average 60 Cluster Training & Support Centers (CTSC) have been established. One cluster covers 30 schools lying within the radius of 16km. At one cluster (1-5) District Teacher Educators (DTEs) are placed depending upon the schools attached with cluster. A DTE has been allotted 10-15 school for implementation of CPD at cluster level. At present this

model has been implemented in 36 districts of Punjab. Its major components are: Assessment, Mentoring, Continuous Professional Development, Reporting, Planning, Coordination, Monitoring, and Management.[6]

ITA Trust (Center for Education & Consciousness) in Punjab
Idara-e-Taleem-o-Aagahi (ITA) or the "Centre of Education and Consciousness" Public Trust, is thus a response to the profound crisis of education and multiple crises forming the nuts and bolts of the Education Challenge. The main objectives of the Trust included: Embark upon appropriate institutional arrangements to explore, experiment, research and implement quality alternatives committed to educational excellence in a global setting; ITA has launched a number of programs for the school heads and teachers in government schools of Punjab. Some other programs: Whole School Improvement Program (WSIP), Teacher Education (TE), School Enrichment Program (SEP), Information and Communication Technology (ICT), Education in Emergencies (EE), District and Local Level Planning in Education (DLP)

Whole School Development Project in District Faisalabad
The project embarked upon an ambitious institutional change and reform effort which sought to change the ways in which local government works and thereby improve the condition of government schools of Faisalabad in the framework of whole school development framework (WSDF). The task formed Strategic Policy Unit, as a think-tank. Its key aim was to act as a conduct in the district from which all development programs could be initiated. In 2004, the United Kingdom's Department for International Development (DFID) agreed to provide technical assistance to the district using the SPU as the platform from which change would be driven. SPU set up the Institute of Learning (IoL) with the specific aim of professional development of school heads.

School Improvement Plan in District Chakwal
Similarly, a School Improvement Programs (SIP) in 30 government schools in district Chakwal was launched as a project in partnership between Plan Pakistan and MIED (Mountain Institute of Educational Development) supported by Swedish Students Organization (SSO) in November 2005.One of the strong recommendations of this project was that the more focused support should be provided to the school heads, support in mentoring, school management and administration, and developing School

Development Plans (SDP) will help the school heads to accelerate the pace of the progress of their schools. This project offered a highly interactive course of school leadership and management for the school heads in order to strengthen their change management competencies for the school management plan.[7]

SAHE (Society for Educational for the Advancement in Education) in Lahore
As an independent organization, the society aims at educating heads and teachers. All Pakistani children not only have the right to go to school but an equal right to get quality education". Over the past 30 years, this society has always emphasized on research-based advocacy, outreach to communities as well as the provision of different education reforms. SAHE always engaged in working with different bilateral and multilateral donor agencies and provincial governments It has worked with collaboration of different international agencies such as Open Society Institute (OSI), Department for International Development (DFID), World Bank, UNICEF, UNESCO, The British Council as well as national organizations including Punjab Education Foundation (PEF), Directorate of Staff Development (DSD).

These efforts for developing professional competency of school heads seemed more dominant in the northern and central part of Punjab while the heads of Secondary Schools of southern Punjab were felt remain aloof due to the lack of both governmental and non-governmental organization in this part. Direct access to these training platforms was not possible for the heads and teachers of southern Punjab. That was the reason, the literacy rates of districts of northern Punjab seemed better than the literacy rates of districts of Central and Southern Punjab.

Objectives of the Study
  i.   To find out the contributory role of demographic and professional competency factors of for the development of change management competency profile of school heads.
  ii. To explore the perceptions of school heads about the strengths and weaknesses of change management in a school system.
  iii. To analyze the change management initiatives for the school heads in Pakistan.

Significance of the Study

The role of demographic and professional competency factors with reference to the competency profile of school heads in the three regions (northern, central & southern) of Punjab province played a significant role in establishing the creditability of this study. The study revealed that the academic and professional qualification and management experience of school heads played crucial role in strengthening the change management competency (CMC) profile of these heads. These factors were ultimately diagnosed both as enablers as well as barriers in the way of successful implementation of different school plans. It would be equally valuable for the educational planners and managers, in order to identify gaps in the change management process and to provide effective coaching of the employees. The five outcome competency factors would enable the educational planners, policy makers, the heads of the schools, to anticipate emerging barriers towards planning and implementing plans. The development of change management competency profiles of the heads of Secondary Schools of three regions of Punjab could be effective for the Directorate of Staff Development (DSD) Lahore for the capacity-building of the heads of Schools of Punjab. Researchers, teachers, and students could equally draw benefits.

Methodology
Sample of interest in this study was school heads (N=304) of eight districts of the Punjab. Low literacy was the main indicator for sampling these districts of the Punjab. Stratified random sampling technique was adopted for the selection of school heads of government secondary and higher secondary schools (n=38 from each district) of sampled districts. Both male and female school heads were included in the sample.

Table 1: Sampling Framework of Heads of Secondary & Higher Secondary Schools in Punjab

		Sample				Total		Grand Total
S.No	Districts	M		F		M	R	Heads
		U	R	U	R	19	19	38
1.	Rawalpindi	10	9	10	9	19	19	38
2.	Mianwali	10	9	10	9	19	19	38
3.	Lahore	10	9	10	9	19	19	38
4.	Gujranwala	10	9	10	9	19	19	38
5.	Pakpattan	10	9	10	9	19	19	38
6.	Chiniot	10	9	10	9	19	19	38

7.	Multan	10	9	10	9	19	19	38
8.	Rajanpur	10	9	10	9	19	19	38
Total		80	72	80	72	152	152	304

Source: PESR, Government of Punjab (2011)

Change Management Competency Scale (CMCS)
This measure was based on ADKAR (Awareness, Desire, Knowledge, Ability, and Reinforcement) change model developed by Hiatt.[8] In the present investigation, 'change management competency' has been referred to as an individual's potential to compete a change effectively. The scale, measured the differences among individuals against Change Management Competency Scale (CMCS) and finally the differences were recorded in the form of an individual change management competency profile of each school head

Figure 2: Final CMC Competency Factors after Factor Analysis

ADKAR elements	Data Driven Competency Factors
Awareness of the need for change	1. Current Situational Analysis 2. A Person's Managerial Style 3. Credibility of Information
Desire to support and participate in the change	4. Supporting Desire through Stakeholders 5. A Person's Motivational Level 6. Facing Challenges to Support Desire to Change
Knowledge of how to change	7. Persons' current knowledge 8. Facilitating Change 9. Equipping Change with latest Strategies
Ability to implement required skills and behaviors	10. Combating Change Psychologically 11. Practicing Change Intellectually 12. Behavioral Change Initiatives 13. Coaching Change Actively
Reinforcement to sustain the change	14. Maintaining Momentum of a Change Process 15. Accountability of Participants of a Change Process 16. Reinforcement of a Change Process

Data Analysis
In this analysis independent t-test and analysis of Variance (one-way ANOVA) were used to give region-wise mean competency differences between the demographic and professional competency factors of all heads of northern, central and southern Punjab.

Table 2: Region-wise distribution of heads in Punjab

Region	District	Frequency	Literacy Rate (%)
Northern Punjab N= 76	Rawalpindi	38	79
	Mianwali	38	57
Central Punjab N=152	Lahore	38	80
	Gujranwala	38	73
	Pakpattan	38	45
	Chiniot	38	34
Southern Punjab N=76	Multan	38	56
	Rajanpur	38	27

In this table, total numbers of eight districts with equal distribution of heads were finally selected on the basis of the literacy rate of each district.

Part A: Analysis of Demographic and Professional Competency of heads

In this analysis of independent t-test was used because there were two different categories of heads with equal number.

Table 3: Score of the heads main competence of CMCS Scores of three age groups of heads

Main Competency Factors	30-40 years N=62		41-50 years N=146		51-60 years N=96		f-Value
	Mean	SD	Mean	SD	Mean	SD	
Awareness for the need of change	24.79	2.06	23.61	3.05	23.95	2.35	4.20**
Desire to support & participate in the change process	32.74	2.99	31.68	3.75	31.73	3.18	2.24
Knowledge of how to change	26.32	3.41	25.88	3.77	25.95	3.99	0.30
Ability to implement required skills & behaviors	34.45	4.64	33.67	5.13	33.03	5.65	1.40
Reinforcement to sustain a change	27.40	2.79	26.91	2.86	26.92	2.55	0.75

**p< .01 d f= 2

It is reflected in the table above the calculated value of f was on overall 'Awareness outcome competency factor and it sub-competency factors was 4.20 which is less than table value (4.60 at .01 level). It shows there are significant differences in mean scores of three age groups. On awareness outcome competency scale, age group between 30-40 years has significantly higher mean scores as compared to two other age groups of heads. While comparing other two age group reveals that the mean scores of age group 51-60 is higher than age group ranges between 41-50.

Table 4: Scores of three levels of academic qualification of heads

Main Competency Factors	Bachelor Degree N=41		Master Degree N=249		M.Phil & Above N=14		f-Value
	Mean	SD	Mean	SD	Mean	SD	
Awareness for the need of change	24.26	2.85	23.87	2.71	24.71	1.81	.949
Desire to support & participate in the change process	31.90	3.44	31.84	3.50	33.28	2.01	1.159
Knowledge of how to change	25.82	3.61	26.02	3.78	25.92	4.17	.051
Ability to implement required skills & behaviors	32.29	5.55	33.76	5.21	35.21	3.66	2.08
Reinforcement to sustain a change	27.19	2.72	27.02	2.72	26.42	3.39	.406

P= n.s

In this table the calculated values of f are less than table value (2.99 at .05 levels).This indicates that there is no significant statistical mean difference between three levels of academic qualification of heads of schools.

Table 5: Scores of two levels of professional qualification of heads

Main Competency Factors	B.Ed N=105		M.Ed N=199		t-value
	Mean	SD	Mean	SD	
Awareness for the need of change	24.1	2.39	23.8	2.84	.706
Desire to support & participate in the change process	31.8	3.52	31.9	3.41	.362
Knowledge of how to change	25.4	3.94	26.2	3.64	I.85
Ability to implement required skills & behaviors	32.7	5.60	34.0	4.96	2.09*
Reinforcement to sustain a change	27.1	2.51	26.96	2.86	.479

p>.05, df= 302

In this table, the calculated values of t are less than table value (1.96 at .05 level) on four competency factor except one. Only on Ability outcome competency factor and its sub-competency factors the calculated value of t is 2.09 which is greater than table value. It indicates that there is significant statistical mean difference between two levels of professional qualification of heads on 'Ability' competency factors.

Table 6: Two categories of management experience of heads

Main Competency Factors	Up to 5years N=166		Above 5years N=138		t-value
	Mean	SD	Mean	SD	
Awareness for the need of change	23.6	2.90	24.3	2.36	2.58*
Desire to support & participate in the change process	31.6	3.24	32.1	3.68	1.24
Knowledge of how to change	25.4	3.89	26.6	3.49	2.92*
Ability to implement required skills & behaviors	32.8	5.43	34.5	4.82	2.71*
Reinforcement to sustain a change	26.8	2.77	27.2	2.70	1.39

p>.05, df= 302

In this table , the calculated t-values (2.58,2.92,2.71)   on three outcome competency factors (Awareness, Knowledge, Ability) and their sub-competency factors, are greater than table value (1.96 at .05 level) .Therefore, it shows that there is statistical mean difference between two categories of management experience of heads.

Table 7: Management course attended   by heads

Main Competency Factors	Attended N=196		Not Attended N=108		t-value
	Mean	SD	Mean	SD	
Awareness for the need of change	24.4	2.32	23.09	3.09	4.29*
Desire to support & participate in the change process	32.4	3.25	31.03	3.63	3.35*
Knowledge of how to change	26.52	3.52	25.03	4.00	3.35*
Ability to implement required skills & behaviors	34.47	4.98	32.10	5.31	3.88*
Reinforcement to sustain a change	27.35	2.69	26.41	2.75	2.87*

p>.05, df= 302

In this table, the calculated values of t on all five outcome competency factors are 4.29, 3.35, 3.35, 3.88, 2.87 which are greater than table value of t (1.96 at .05 level) reveal that there is statistical mean difference between the two heads' response categories of management course attended on all five outcome competency factors. So, it can be observed that those heads who attended a management course possessed better change management competency profile as compared to those who did not attend any management course.

Part-B: Open-Ended Items Analysis Regarding Effects of Different Changes on School System
The analyses of the open ended responses are as:

Table 8: Problems of curricular changes in school

S. No.	Response	Freq.	%
i.	Lacking teacher training facilities	157	52
ii.	Shortage of subject teachers	68	22
iii.	Top management pressure	39	13

The table identified problems included: lack of teacher training facilities (52%), top management pressure (39 %), shortage of subject teachers (68%).

Table 9: Planning change facilitation strategies

S.No	Response	Freq.	%
i.	Incentives for team building page	157	52
ii.	Time framework	78	26
iii.	Seeking more top management cooperation	39	13
iv.	Decreasing excessive staff transfers	18	6

The planning strategies were: incentives team building (52 %), Time framework (26%), seeking more top management cooperation (13%).

Table 10: impact of change on students' academic achievement

S.No	Response	Freq.	%
i.	Generate teaching-learning challenges	161	53
ii.	School reputation	101	33
iii.	Effect on students' behavior	21	7

This table shows, the impact of change on students' academic achievement are categorized at four levels. The percentages of major responses are: generating teaching-learning strategies (53%), school reputation (33 %).

Table 11: Evaluation Mechanism

S. No.	Response	Freq	%
i.	Maintaining a diary for teachers & staff	175	58

ii	Feedback from senior employees	77	25
iii.	Feedback from to parents and community members	21	7
iv.	School rounds by head of a school	17	6

All the heads reported four mechanisms which they use for evaluation of staff. This table mainly indicates the percentages of these procedures are: maintaining a diary for staff performance (58%), feedback from seniors (26%).

Table 12: Priority of effective change Management

S.N	Response	Freq.	%
i.	Continuous Funds provision	151	50
ii.	Provision of training opportunities	90	30
iii.	Establishment of an effective Accountability system	82	27

In this table, heads of secondary schools prioritized five improvement areas for effective change management system within their schools. These areas are: continuous provision of funds (50%), provision of training opportunities (30%), establishment of an effective accountability system (27%).

Findings
The major findings are distributed in two part.

Part-A: Findings of Demographic and Professional Competency Factors
  i.   f -value (4.20) of scores of three age groups revealed that only prospective (30-40 years) of heads scored high on first outcome competency factor (Awareness) and its sub-competency factors current situational analysis, persons' managerial style, credibility of information from top management, was significant at .01 level.
  ii. t-value (2.09) of score of heads of two level of professional qualification on outcome competency factor of Ability was significant at .05 levels. This finding reflected that those heads having high professional qualification scored higher on Ability outcome competency factor.
  iii. t-values (2.58, 2.92, 1.71) of scores of heads of two categories of management experience on Awareness,

Knowledge, Ability and their sub-competency factors was significant at .05 level. This indicated that those heads having high management experience scored higher on these three outcome competency factors.

iv. t-values (4.29, 3.35, 3.35, 3.88, 2.87) of scores of heads of two response categories of management course attended on all five outcome competency factors were significant at .05 level. It indicated that those heads who had attended management course scored higher on these all five outcome competency factors: ADKAR

Part-B: Finding of open ended Responses
The significant findings regarding the responses of heads against each open ended question are given below:

i. Heads' perceptions regarding the problems of Curricular Changes in school. The findings generated from this question are given in response categories: (52 %) 157 heads regarded 'Lack of teacher training services' as one of the significant problems of curricular changes in their schools. (22 %) 68 heads reported 'Shortage of subject teachers' found one of the barriers towards meeting the challenges of curricular changes. (13 %) 39 heads perceived 'Top management pressure' was one of the problems faced by heads effecting curricular reforms.

ii. 'Planning Change Facilitation Strategies' are: (52 %) 157 heads regarded 'Team building' as one of the crucial change facilitation strategy needed to adopt by heads. (26 %) 78 heads commented that 'decreasing external pressures' was a significant strategy to facilitate change within school.

iii. 'Impact of Change on Students' Academic Achievement' reveled that (53 %) 161 heads reported 'teaching-learning challenges' generated progressive result of impact on students' achievement. (33 %) 101 perceived that 'school reputation' suffered as a result of impact of change on students' achievement.

iv. 'Evaluation Mechanism or Procedure for Staffs' Performance in a change Process'. (58%) 175 heads reported 'Maintaining a diary for teachers and staff' in order to evaluate their performance. (25%) 77 heads considered 'Feedback from senior employees' was one of the effective mechanisms to evaluate the performance of participants in change process within a school.

v. 'Prioritizing Improvement Areas for Effective Change Management' were: (50%) 151 heads gave   priority to "Provision of funds" as one of the improvement areas.(30 %) 90 heads gave his priority to "Provision of training opportunities" as one of the improvement areas. (27 %) 82 prioritized "Establishment of an effective Accountability system" was one of the improvement areas for effective change management.

Conclusions & Discussion

The overall t-test analysis of outcome competency profile of heads on 'Change Management Competency (CMC)' scale revealed that out of three age groups of heads, only the prospective heads aged 30-40 possessed positive attitude towards 'Awareness and its sub-competency factors. It was concluded that a prospective group of heads of secondary schools in Punjab were more equipped with awareness competencies for managing change as compared to other two age groups of heads. It was also revealed that heads having high professional qualification scored higher on outcome competency scale 'Ability' and its sub competency factors. Therefore, it was concluded that the heads' professional qualifications were positively related with their 'Ability competencies for managing change and its challenges within their schools. It was concluded that the heads with high management experience possessed better CM competency profile on these three outcome competency factors as compared to those heads having less than five years of management experience. It was also concluded from the open ended response that, 'Impact of change on students' academic achievement'. These indicated that generating teaching-learning challenges, school reputation, effects on students' behavior and parental reaction. On the basis of open ended questionnaire from the evaluation, it was concluded that four ways of evaluation by heads of their staff by community, parents and senior employee feedback and own round.

Further, comparative analysis of CMC profile of heads in three regions of Punjab: northern, central, southern Punjab) revealed that CMC profiles of heads of northern Punjab were higher as compared to those heads belonging to central and southern Punjab. This was also one of the significant findings supported by an alternative hypothesis. The rationale of this finding had some strong basis: firstly, all eight districts of Punjab were sampled on the basis of literacy rate, the literacy rate of districts of northern Punjab (Rawalpindi & Mianwali) was high as

compared to central and southern Punjab. As regards field experience, it was felt that this CMC model provided an opportunity for the first time, to the heads of the schools of Punjab, not only to share their catharsis of being affected by a number of change management challenges but also they wished to professionalize and streamline their CM competencies as an 'effective change agent.'

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