

Development of a Valid and Reliable Questionnaire for Exploring the Role of Heads of Teaching Departments in the Promotion of Communication at Postgraduate Level

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Abstract

The purpose of the study was to develop a valid and reliable scale for measuring the role of heads of teaching departments in the promotion of communication in universities and postgraduate colleges. The population of the study consisted of all heads and teachers in postgraduate colleges and universities in Khyber Pakhtunkhwa, Pakistan. For the purpose of reliability, 61 respondents were randomly selected from the population. The scale was got valid in the views of 20 experts in social sciences. Cronbach' Alpha 0.937 was obtained for the whole scale. After validation and reliability, a questionnaire consisted of 27 items was ready for measuring the role of heads of teaching departments in the promotion of communication at postgraduate level.

Keywords: Questionnaire, Validity, Reliability, Cronbach's Alpha, Communication

Introduction

Communication is the life blood of every organization. Katz & Kahn consider Communication the soul of an organization.¹ Communication is utilitarian within an organization. That's why; managers employ communication primarily to accomplish organizational goals. Barnard stated Communication held a central place in an organization because the structure, extensiveness and scope of organization were almost entirely determined by communication techniques. Executives, managers,

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employees, and all organizational members need to understand and improve their communication abilities.² Communication is one of the most dominant and important activities in an organization.³ Communication may develop trust and motivation in employees. Organizations which had employed and obligated employees were 50 percent more productive than those organizations where employees were not employed.⁴

McKinney et al, found significant positive associations between concern-for-other and concern-for-issue conflict styles and communicative adaptability scale dimensions: social confirmation, social experience and appropriate disclosure.⁵ Negative relationship was found between a self-oriented conflict style and the communicative adaptability scale dimensions: social composure, articulation, and social experience. Sharma & Patterson state that effective communication is a key driver of antecedents' variables, i.e., technical quality, functional quality and trust, and the single most powerful determinant of relationship commitment.⁶ Elvins pointed out that participation in quality circle had positive effects on perceived individual influence/power, communication with superiors, subordinates, and to some extent, with peers.⁷

To improve communication process within an educational institution, one must understand potentials and problems that can affect the process. Source may intentionally withhold or filter information on the assumption that the receiver is in no need of it. Boyd stated that the communicator's selection might cause a breakdown in communication that could not be repaired even with good follow up communication. Credibility/background and hostility/conflict problems are considered to be the most serious barriers.⁸ Personality differences, know-it-all attitude, either-or-thinking, resistance to change, and jumping to conclusions are considered the most frequent barriers to effective communication.⁹

The head of teaching department does multifaceted jobs, which include setting objectives, organizing tasks, reviewing results, making decisions and motivating employees. Without effective communication, all these jobs of the head of the Dept. cannot be completed on the campus. The centrality of communication to the overall job of an educational manager is evident from the time which is spent in sharing of information. Effective communication is necessary not only for the managers of postgraduate level institutions, but also necessary for school managers. The school principals spend a great of deal of time in communication. As Lunenburg & Irby state, "Elementary schools principals, high schools principals and school superintendents spend 70 to 80 percent of their time in communication".¹⁰ Mintzberg explored

that administrators spent 80 percent of their time in communication.¹¹ Leadership styles of an educational manager may affect communication within an institution. Supervisor task and relational leadership style are strongly related to supervisor' communication competence.¹² Snyder & Morris found strong correlation among perceived communication variables, i.e, the quality of supervisory communication and information exchange within peer work groups, and critical revenue and workload measures of overall organization performance.¹³

By communication, an individual has an opportunity to express emotions, share hopes and remember accomplishments. Organizational capabilities are developed and performed through intensively social and communication process.¹⁴ Communication is essential for the administration of an institution. As Gronn elaborates that not only do administrators spend much of their time in talking but this talk accomplishes administration, and that talk also does the work of tightening and loosening administrative control.¹⁵

Validity and Reliability

Validity and reliability are the two important characteristics of a good measuring instrument. Both these characteristics are essential for the existence of each other. Validity means effectiveness or soundness. Validity is the degree to which a questionnaire measures what it claims to measure. It is also possible that a test may be valid for some specific objectives, but may not be valid for other objectives. Therefore, Brog identified five types of validity. These types are (1) content validity (2) predictive validity (3) concurrent validity (4) construct validity, and (5) face validity.¹⁶

Reliability means consistency of measurement. Reliability deals with the level of internal consistency of the questionnaire, or it gives same results on two different times under same conditions. The reliability of educational measure is usually expressed as a coefficient that indicates the degree of relationship between two set of scores obtained from the same subjects under different conditions. Reliability coefficient ranges between 0 and 1. Here 0 indicates no reliability, while 1 shows perfect reliability. The closer the reliability coefficient to 1, the more the scale is reliable.

Purpose of the Study

The purpose of the study was to develop a valid and reliable questionnaire for measuring the role of heads of teaching departments in the promotion of communication in universities and postgraduate colleges in Khyber Pakhtunkhwa, Pakistan.

Procedure for the development of Questionnaire

The researcher studied relevant literature for the development of questionnaire. He studied various roles of a chairperson of academic department in universities and postgraduate colleges. The researcher specially explored the communicative role of heads of teaching departments in universities and postgraduate colleges. The researcher initially developed a questionnaire consisting of 60 items and was sent to 20 experts in social sciences for content validation. The experts were chairpersons of teaching departments and professors in postgraduate level institutions.

The following instructions were given to the experts regarding the validity of the questionnaire.

- Check the item if it best fit to the Pakistani context
- Identify the item which repeats the concept
- Suggest any changes in the item of the scale.

Twenty-Five items were dropped from the questionnaire. Majority of the experts considered these items unsuitable regarding the communicative role of heads in postgraduate level institutions. Seven items were rewritten following the suggestions of experts in social sciences. After content validation, the number of items in the questionnaire was 35.

The format of the questionnaire was approved by Ph.D research supervisor.

These statements were composed on a five point Likert type scale from “Always”, “Frequently”, “Occasionally”, “Seldom” to “Never”. The score varied from 5 to 1. Demographic characteristics, viz: Nature of institute, nature of department, category of respondents, gender, age, qualification, total experience in the present department, designation and experience as a chairperson were made a part of the questionnaire.

Procedure for the Reliability

For the purpose of reliability of the questionnaire, the researcher randomly selected 61 respondents (21 heads and 40 teachers from the population. The population of the study consisted of all heads and teachers of universities and postgraduate colleges in Khyber Pakhtunkhwa, Pakistan. These numbers were excluded from the research sample. The researcher personally administered the questionnaire to the respondents. The response rate was 100 percent.

The data obtained through survey was then put into SPSS version 12. Mean, Standard deviation, Item total correlation and Cronbach alpha were computed to measure the reliability of the scale.

Results

Item mean, variance, corrected item total correlation and Cronbach's alpha for the whole scale

Item No	Means	Variances	Corrected Item-Total Correlation	Cronbach's Alpha	Cases
1	137.3443	403.796	.477	.936	61
2	136.7869	402.437	.489	.936	61
3	136.5082	404.121	.592	.936	61
4	136.7705	399.013	.517	.936	61
5	137.1148	395.670	.569	.935	61
6	137.2623	390.497	.681	.934	61
7	137.9344	396.929	.437	.937	61
8	136.9016	391.923	.667	.934	61
9	137.1475	388.895	.705	.934	61
10	137.2623	394.330	.597	.935	61
11	138.3443	395.130	.504	.936	61
12	136.7213	391.238	.702	.934	61
13	136.7705	389.046	.752	.933	61
14	136.8852	396.370	.573	.935	61
15	136.5246	398.387	.706	.935	61
16	137.1475	398.928	.453	.936	61
17	137.1803	400.384	.434	.937	61
18	136.5902	394.479	.716	.934	61
19	137.4918	383.821	.690	.934	61
20	136.9508	402.814	.420	.937	61
21	136.7049	399.145	.587	.935	61
22	136.6393	391.734	.683	.934	61
23	137.0820	400.677	.499	.936	61
24	137.3443	395.230	.537	.936	61
25	137.3279	386.157	.647	.934	61
26	136.9016	392.457	.689	.934	61
27	136.9016	398.723	.507	.936	61
28	136.8852	391.403	.786	.933	61
29	136.6066	394.043	.698	.934	61
30	136.5902	406.579	.343	.937	61
31	136.9836	394.983	.579	.935	61
32	136.8525	400.861	.471	.936	61
33	138.8033	431.227	-.246	.944	61
34	136.6721	408.324	.260	.938	61
35	136.8525	404.695	.282	.939	61

Note: Alpha = .9373, Mean = 141.082, Variance = 420.50

The above table shows item Mean, Variance, Corrected Item total correlation and Cronbach's Alpha of each item for the whole scale. Those items were dropped out from the scale whose items total correlation was 0.45 or less than 0.45. As Nunnally, proposed a cut off of .40 to determine the number of items to retain in a specific factor.¹⁷ Items 7, 16, 17, 20, 30, 33 34 and 35 were dropped out from the whole scale because item total correlation of these items were 0.45 or less than 0.45, i-e, .437, .453, .434, .420, .343 .246, .260, .282. Other 27 items of the scale possess item total correlation more than 0.45 as the table reflects. These 27 items constitute the questionnaire.

Item mean, variance, corrected item total correlation and Cronbach's alpha for the selected items of scale

Item No	Means	Variances	Corrected Item-Total Correlation	Cronbach's Alpha	Cases
1	137.3443	403.796	.477	.936	61
2	136.7869	402.437	.489	.936	61
3	136.5082	404.121	.592	.936	61
4	136.7705	399.013	.517	.936	61
5	137.1148	395.670	.569	.935	61
6	137.2623	390.497	.681	.934	61
7	136.901	391.923	.667	.934	61
8	137.1475	388.895	.705	.934	61
9	137.2623	394.330	.597	.935	61
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13	136.8852	396.370	.573	.935	61
14	136.5246	398.387	.706	.935	61
15	136.5902	394.479	.716	.934	61
16	137.4918	383.821	.690	.934	61
17	136.7049	399.145	.587	.935	61
18	136.6393	391.734	.683	.934	61
19	137.0820	400.677	.499	.936	61
20	137.3443	395.230	.537	.936	61
21	137.3279	386.157	.647	.934	61
22	136.9016	392.457	.689	.934	61
23	136.9016	398.723	.507	.936	61
24	136.8852	391.403	.786	.933	61
25	136.6066	394.043	.698	.934	61
26	136.9836	394.983	.579	.935	61
27	136.8525	400.861	.471	.936	61

Note: Alpha = .9373, Mean = 141.082, Variance = 420.50

The above table shows Mean, variance, item total correlation and Cronbach's Alpha of each item for the questionnaire. Items total correlation of all these items are more than 0.45. Therefore, these items constitute the reliable scale. The total Cronbach's Alpha of the questionnaire is 0.937.

**Questionnaire for Heads
Role of Heads of Teaching Departments in the Promotion of
Communication at Postgraduate Level**

Name of the college/university: _____

Name of the department: _____

Designation:

Professor____ Associate Prof. ____ Assistant Prof. ____ Lecturer ____

Qualification: Ph.D____ M.Phil____ Master____

Age : _____ (In Years) Gender: Male____.Female____

Total length of service in the present department _____ (In Years)

Experience as a chairperson _____ (In Years)

Note: "A" stands for Always, "F" for Frequently, "O" for Occasionally, "S" for Seldom, "N" for Never. Please (√) tick the most appropriate answer,

S.No	Statements	A	F	O	S	N
1	I call meetings of teachers.					
2	I like to distribute agenda of the meeting in advance.					
3	I make every effort to provide favorable environment for faculty meetings.					
4	I provide information regarding rules and regulations governing service of the employees in staff meetings					
5	I notify whatever is related to the faculty.					
6	I keep aware my colleagues about the decisions taken in the meetings of the heads of teaching departments.					
7	I share information received from the high-ups with teachers.					
8	I provide opportunity to discuss various issues with my colleagues.					
9	I seek views of the teachers on different issues.					
10	I do not call teachers to discuss any					

	particular issue.						
11	I encourage teachers to communicate whatever they want to communicate.						
12	I do not keep channels of communication open.						
13	I use both formal and informal ways of communication.						
14	I favor establishing effective channels of communication with all concerned.						
15	I listen to my colleagues whenever they have something to discuss it to me.						
16	I invite all concerned to give me feedback.						
17	I allow faculty members to meet and discuss their problems with me.						
18	I hesitate to initiate dialogues with my colleagues.						
19	I conceal information from my fellows.						
20	Participation of staff members in framing institutional plans is invited by me.						
21	I convey suggestions of my colleagues to high ups.						
22	I keep authorities informed of my colleagues' performance.						
23	I do not exchange views with my counterparts about the promotion of educational activities.						
24	I let my colleagues to seek information from every source.						
25	I believe in free and frank discussions on every matter related to educational enterprise.						
26	I mind when someone is communicating something to me.						
27	I believe in providing fair chance of participation to every member in group discussion.						

The above questionnaire consisted of 27 items is a valid and reliable one. The part one of the scale consisted of eight demographic variables, i-e, name of the college/university, name of the department, designation, qualification, age, gender, total length of service in the present

department and Experience as a chairperson will be used as independent variables during data analysis.

Part- II of the questionnaire consisted of 27 Likert-type items, responded on a 5 point scale from "Always to Never", carrying a value of 5 to 1 respectively. Items designated positively are scored by 5, 4, 3, 2 and 1 respectively. Items designated negatively are scored in the reverse manner. Omitted or invalid responses are given a score of 3. The scale reflects amount of involvement of heads in the process of communication.

Discussion

The questionnaire was developed by the researcher himself. 27 items of the questionnaire were the communicative behaviours of a head of teaching department which make his/her role as a communicator on the campus. The questionnaire was personally administered by the researcher to measure the role of heads of teaching departments in the promotion of communication at postgraduate level. The scale reflects amount of involvement of heads in the process of communication.

For the purpose of reliability of the scale, a random sample of 61 (21 heads and 40 teachers) was selected for the pilot study. This number was excluded from the final sample. Cronbach's coefficient Alpha formula was used in estimating the internal consistency of the scale. Obtained Cronbach's Alpha was 0.937 for the scale (scale mean if item deleted, scale variance if item deleted, corrected item-total correlation. Cronbach's alpha reliability coefficient usually ranges between 0 and 1. There is no really lower limit to the coefficient. The nearer the reliability coefficient is to 1.0, the better the internal consistency of the item in the scale. In general the reliabilities less than 0.6 are considered to be poor, those in the 0.70 range are acceptable, and those over 0.8 are considered good.¹⁸ George & Mallery gave these rules of thumb: "≥.9 =Excellent, ≥ .8 = Good, ≥ .7 = Acceptable, ≥.6 = Questionable, ≥ .5 = Poor and ≤ .5 = Unacceptable".¹⁹ The scale was developed by the researcher himself, so its Cronbach's Alpha could not be compared to any other scale in the literature.

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