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Validity and Reliability of Job Performance Questionnaire for Instructors Physical Education

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Abstract- Questionnaire as the data collection tool is mostly used in social science research. The main purpose of tool is to obtain relevant data from the respondents for analysis. The study was conducted to assess the content validity, construct validity and reliability of the adapted job performance Questionnaire developed (Atta, 2012) and (Nigar, 2017). Content validity was assessed through expert opinion by using CVR formula construct validity was checked through exploratory factor analysis while reliability was evaluated by Cronbach alpha. The sample of the study consisted of 171 Instructors Physical education (IPEs) through simple random sampling technique, and data were analyzed through SPSS version 26. The study found that Job performance questionnaire has shown content validity, concurrent validity, and internal consistency among IPEs working in Government Higher Secondary Schools of Khyberpakhtunkhwa, Pakistan. Therefore, the study recommended for the use of this adapted questionnaire for measuring job performance among IPEs for future researchers.

Keywords: Job Performance, Instructors Physical education (IPEs), Higher Secondary Schools

I. INTRODUCTION:

The term performance refers to the act of performing an activity by the individual in a specific time or completing or achieving something and more specifically performing of duty to achieve the specific target (Fogaça, Rego, Melo, Armond, & Coelho Jr, 2018). Job performance is an individual's behavior towards work and a function of what an individual knows or able to do a task and what the individual believes. Such believes are related to the individual's knowledge, skills, and attitude. It is difficult for an individual to perform a task without Knowledge, skills, and attitude. The performance of an individual depends upon how much he or she has the knowledge, competency, and attitude toward work (Ramawickrama, Opatha, & PushpaKumari, 2017). An individual's job performance is a degree to which the responsibilities are completed in a certain environment. Two significant criteria for estimating performance are the amount of work and the nature of work (Opatha, 2015).

According to Li and Mahadevan (2017) and Nigar (2017) the interaction between knowledge, skills, attitude, and environment influences the teaching-learning process. Knowledge, skills, and attitude are associated with the cognitive part of an individual whereas the environment is a physical aspect and internal aspect in which an individual works. So, both internal and external aspects of an individual influence job performance.

Indicators of job performance

Job performance refers to the action of an individual to execute a particular task in order to attain the objectives (R.W Griffin, 2012). Employees working in any organization perform specific tasks or duties in the working environment to achieve the predetermined organizational objectives. The teacher plays a dynamic role in the teaching-learning process in a school. S/he performs duties in a school environment to deliver his/her responsibilities effectively to accomplish the school objectives. The following are the indicators of teachers' job performance which are described in the National Professional Standard for Teachers (NPST) in Pakistan in 2011 (Q. Kalsoom & Qureshi, 2019).

Subject matter knowledge

Teacher Subject Matter Knowledge is one of the essential and important competencies, teachers cognitive skills and performance determined their competency to involve students in the teaching-

learning process by different intellectual activities. Subject Matter knowledge is knowledge and understanding level that the teacher has about the particular subject that he or she teaches in the class (Kiamba, Mutua, & Mulwa, 2017). The evidence in empirical studies depicts that students bring expectations in the classroom which are influenced by the teachers' subject matter knowledge. Student's understanding level is high when taught by those teachers who are more experienced and qualified in subject matter knowledge than less experienced. Teachers who have command over subject knowledge are distinguished from other teachers. There is a high demand for teachers in Pakistan who have command over the subject knowledge. Command over subject matter knowledge requires a great deal of particular content, facts and ideas, build association among different discipline or content and understand the new approaches and trends introduced in the subject (Nawaz, Atta, & Khattak, 2016).

All these three elements include the content of subject, organization, and structure of content, and the inquiry method used within the subject could be interpreted as the central elements of subject matter knowledge. So, one who is aware of all the three components of subject matter knowledge and use in his teaching-learning process has a significant impact on the students' understanding level (Nigar, 2017).

Instructional planning and management

Instructional management is an activity to design teaching and learning programs, portray teaching and learning processes, and evaluate learning outcomes and managing the classroom activities (Danarwati & SE, 2013). Instructional management is the way toward enabling learning resources to accomplish academic goals. Effective instructional management is the application of the management abilities on learning components, particularly, teachers, students, learning outcomes, materials, teaching methods, and assessment (Rahayu, 2015).

Atta (2012) elaborates that planning is the core element in effective teaching. A teacher should plan well before going to teach in the class. Basically, planning is an intellectual activity and is part of the decision-making process.

There is a need to create and refine pre-instructional skills to execute effective instructional management. The desired objective will be achieved if effective planning is executed. Once the teacher planned a lesson, he or she must implement it. Implementation of a successful lesson maximizes the understanding level and achieves required class-room learning outcomes. The difficult tasks can be easily done if teachers plan it before execution (Freiberg, 2013; Nigar, 2017).

Saifi et al. (2018) elaborated that academic planning needs a description of teaching-learning methods that teachers will employ while teaching a lesson. More specifically, the prime element of the teaching-learning process is teaching strategies that the teacher uses in the class. For this purpose, the lesson plan plays an important role which is designed in a way that assesses the success of the teaching strategy.

Assessment

Assessment is considered as one of the most important parts of the teaching-learning process. Literature shows that assessment has a significant effect on the teaching of a teacher and the learning of the students. It is a substantial part of learning which indicates the understanding level of the students in the class. Assessment is essential to teaching-learning activities in school. It can be characterized as all efforts of teachers and students to acquire information that can be used to change teaching and learning. This incorporates teacher observation and assessment of student work (schoolwork, tests, articles, reports, practical and classroom conversation) (Amua-Sekyi, 2016). It may also be kept in mind that assessment is a continuous procedure as it is carried out persistently in different types; it helps the teacher to know about student abilities (Abosalem, 2016).

Communication

Communication is the process of conveying one's ideas and thoughts to other people. There are two kinds of communication verbal and nonverbal, both of the types are essential to convey one's thoughts to others. The relationship between teachers and students mostly depends upon communication whether it is verbal or nonverbal. The importance of communication is like blood in the human body. Successful correspondence assumes a significant job in character building and improving the standard of understudy's learning. Aptitudes and communication methods of the teacher improve the capacity of the students in the field of education. Teacher's Love, friendliness, honesty, commitment, obligation, and devotion may bring success and love which is necessary for students learning (Asrar, Tariq, & Rashid, 2018).

The communication contains a crucial role in the organization because the extensiveness, structure, organizational climate, and scope of the organization are determined by active communication. In other words, communication is called the essence of the organization (Canary & McPhee, 2010).

Objectives

1. To examine the content validity of the Job Performance Questionnaire for Instructors Physical Education
2. To examine the construct validity of the Job Performance Questionnaire for Instructors Physical Education
3. To assess the reliability of the Job Performance Questionnaire for Instructors Physical Educatio

II. METHODOLOGY

Participants

The population of the study consists of the entire 296 IPEs (187 male and 109 female) in higher secondary schools of Khyber Pakhtunkhwa. The sample size of the study based on Yamane 1967 formula of determining sample. According to this formula sample size is approximately 171. Simple random sampling technique was applied to provide equal chance to each member of the population to be selected as sample. 171 questionnaires were distributed, 168 were successfully returned and used for data analysis.

Job performance questionnaire (JPQ)

This questionnaire was adapted from (Atta, 2012) and (Nigar, 2017). Different dimensions of job performance included in the questionnaire, like subject matter knowledge, instructional planning and management, students' assessment, communication, and organizing sports and physical education.

Table 1: Structure of questionnaire

Variable	Dimensions	No. of items
Demographic Variables	Gender, Age and Experience	
Job Performance	Subject matter knowledge	6
	Instructional planning and Management	12
	Students' assessment	7
	Communication	7
	Organizing sports and Physical education	5

Validity of the research instruments

Validity is an important and essential stage in instrument construction. Validity is the development of sound evidence to demonstrate that the instrument interpretation of score about the construct that the instrument is assumed to measure) matches of proposed used (Creswell, 2012; Menold, Bluemke, & Hubley, 2018). In other words, validity is the degree to which all of the evidence points to the intended interpretation of the instrument score for the proposed purpose. The researcher measured the content validity of the questionnaire in this section. According to YAGHMAEI (2003) and Almanasreh, Moles, and Chen (2019) determining and reporting the content validity of the questionnaire is essential. Because content validity helps to confirm construct validity and provides confidence to the researcher regarding the instrument. This type of validity is also known as intrinsic validity, content related validity, relevance, and representative validity. The basic aim of content validity is to measure whether the instrument covers the content that it is supposed to be measured (Mebrate & Lemma, 2017; Yaghmaie, 2009).

Content validity can be obtained from three different sources i.e. literature, representatives of the relative population, and experts (Burns & Groves, 1997). For the professional judgment of the

questionnaire, the researcher administered the questionnaire to experts in the field of sports sciences and physical education and social sciences for content validity. The draft of the questionnaire for content validity comprised of 3-Point Likert questionnaire (1. Not relevant 2. Item needs minor revision 3. Very relevant). The experts were requested to rate on the three options. For measuring the score of content validity, the researcher used the Content Validity Ratio (CVR). The cutoff criteria for accepted questions ranging from 0.3 to 1.0 (Lindell & Brandt, 1999). The following formula was used for content validity;-

$$CVR = \left[\left(E-\frac{\frac{N}{2}}{\frac{N}{2}}\right)\right]$$

E refers to all the experts who rated the item relevant and N refers to experts contributed in the validation process.

Table 2: CVR score of job performance questionnaire

	S#	Statement	Content Validity	
		I	CVR Score	Remarks
Subject Matter Knowledge	1	Elaborate each and every step of the lesson to clarify the message.	1	Valid
	2	Repeat and explain the difficult portions of the lesson.	1	Valid
	3	Explain topics with the help of appropriate daily life examples	1	Valid
	4	Have sufficient knowledge and command over the subject matter.	1	Valid
	5	Link topics with other discipline.	.67	Valid
	6	Stay on subject while teaching.	1	Valid
Instructional planning and strategies	7	Manage all sports activities in schools and district level.	.50	Valid
	8	Properly plan lesson before teaching.	1	Valid
	9	Take feedback before starting a new topic	1	Valid
	10	Use adequate methods/strategies according to the topic and level of the students.	1	Valid
	11	Complete the course within time.	1	Valid
	12	Use AV Aids (like Charts, models, pictures etc.) during teaching.	1	Valid
	13	Follow the method from easy to difficult during teaching.	1	Valid
	14	Judge the ability of students and teach accordingly.	.67	Valid
	15	Answer the questions up to the satisfaction of students.	1.0	Valid
	16	Use ICT (Information and Communication Technologies) while teaching to keep my knowledge up-to-date.	.83	Valid
Students, asse	17	Formally evaluate the tests and assignments of the students	1	Valid

	18	Check the previous knowledge of the students.	1	Valid
	19	Identify and attempt to solve the difficulties of students.	1	Valid
	20	Ask questions at the end of class.	1	Valid
	21	Observe the activities of students in the school.	1	Valid
	22	Assign and check homework and other academic tasks regularly.	1	Valid
	23	Conduct Practical Examination.	1	Valid
Communication	24	Use verbal communication while teaching.	1	Valid
	25	Use easy language while teaching.	1	Valid
	26	Apply written communication in teaching learning process.	.83	Valid
	27	Listen to every student patiently and then reply.	1	Valid
	28	Comprehend facial expressions and body language.	1	Valid
Organizing sports and physical activities	29	Explore the talented students.	1	Valid
	30	Train talented students.	.83	Valid
	31	Encourage students for sports activities.	1	Valid
	32	Prepare students for various events like Inter Board Sports Tournaments.	1	Valid
	33	Carry out scouts activities in school.	1	Valid
	34	Control discipline in the school	1	Valid
	35	Control all physical activities in the school	1	Valid
	36	Regularly conduct sports competition	1	Valid
	37	Try to bring out the potentialities of the students on surface	1	Valid
	38	Motivate the students to participate at national and international level sport	.83	Valid
	39	Try to make them realize that sports and physical activities are important for healthy life	.67	Valid

The above table shows the content validity ration score of the job performance questionnaire. Cutoff criteria for accepted questions ranging from 0.3 to 1.0. The score of all the items was above 0.3 therefore all the items were considered accepted/valid.

Fig1

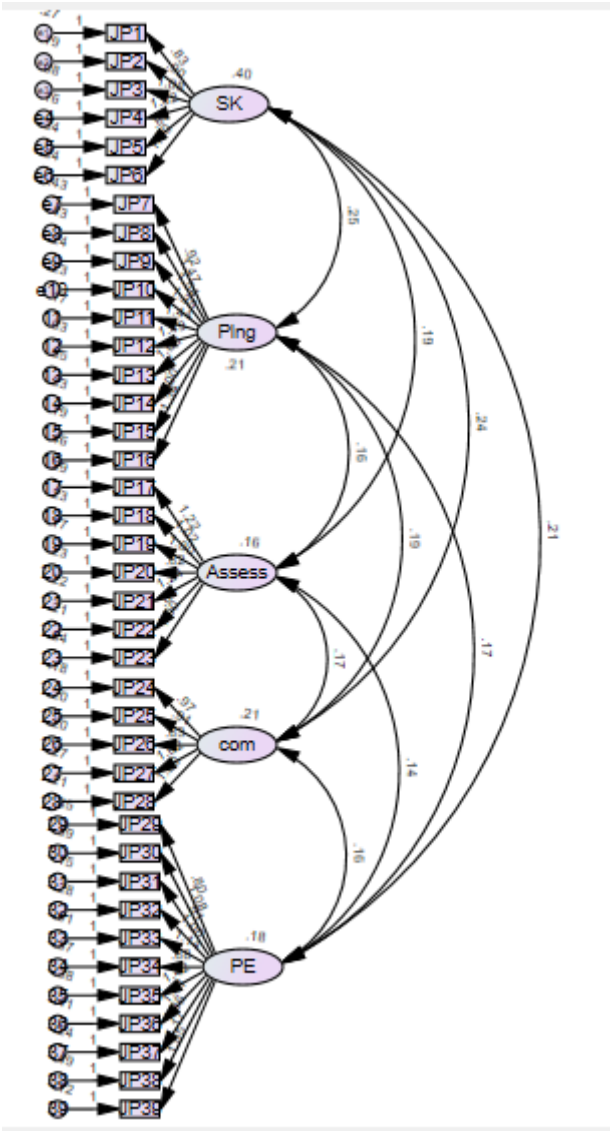

Table3:

Measure	Estimate	Threshold	Interpretation
CMIN	3367.454	--	--
DF	692.000	--	--
CMIN/DF	4.866	Between 1 and 3	Acceptable
CFI	0.91	>0.95	Acceptable
SRMR	0.094	<0.08	Acceptable
RMSEA	0.07	<0.06	Acceptable
PClose	0.000	>0.05	Not Estimated

Your model is fit. Based on the standardized residual covariances,

Table4: Cutoff Criteria*

Measure	Terrible	Acceptable	Excellent
CMIN/DF	> 5	> 3	> 1
CFI	<0.90	<0.95	>0.95
SRMR	>0.10	>0.08	<0.08
RMSEA	>0.08	>0.06	<0.06
PClose	<0.01	<0.05	>0.05

*Note: Hu and Bentler (1999, "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives") recommend combinations of measures. Personally, I prefer a combination of CFI>0.95 and SRMR<0.08. To further solidify evidence, add the RMSEA<0.06.

Reliability of instruments

The goal of good research is to have measures or observations that are reliable. Several factors can result in unreliable data including when questions on the questionnaire are ambiguous or participants feel nervous to fill the questionnaire. Reliability is generally easy to understand as it is a measure of consistency. If the score is not reliable they are not valid (Creswell, 2012). There are four different techniques to check the reliability of the instrument but Cronbach's alpha is used most commonly in social research studies. Criterion validity is considered when the item-total correlation exceeds 0.3. In other words, the value of item-total correlation is greater than 0.3 then criterion validity for each item is considered satisfactory. The reliability of the instrument is presented in the following table.

Table 5: Reliability score of the questionnaire

Questionnaire	**No. of Items**	**Cronbach's Alpha**
Job Performance	39	.949

Table 5 shows the Chronbach alpha coefficient of all the three questionnaires of the Job Performance questionnaire yielded an internal consistency coefficient as .949 ranged above 0.9 Chronbach alpha coefficient and in excellent internal consistency coefficient.

Table 6: Alpha reliability coefficient of the individual items of the job performance questionnaire

Serial No	**Cronbach's Alpha**	**Item-total correlation**	**Serial No**	**Cronbach's Alpha**	**Item-total correlation**	**Cronbach's Alpha**	**Serial No**	**Item-total correlation**
1.	.948	.595	14.	.947	.736	27.	.948	.609
2.	.947	.697	15.	.947	.628	28.	.948	.531
3.	.948	.604	16.	.950	.404	29.	.948	.493
4.	.949	.407	17.	.947	.644	30.	.948	.493
5.	.947	.746	18.	.948	.523	31.	.948	.482

6.	.948	.501	19.	.949	.447	32.	.949	.425
7.	.948	.484	20.	.948	.618	33.	.949	.443
8.	.947	.640	21.	.947	.684	34.	.948	.482
9.	.949	.463	22.	.948	.519	35.	.949	.465
10.	.948	.589	23.	.947	.720	36.	.948	.611
11.	.948	.492	24.	.947	.682	37.	.948	.617
12.	.948	.569	25.	.947	.647	38.	.948	.496
13.	.947	.659	26.	.947	.648	39.	.947	.730

Table 6 shows the Chronbach alpha coefficient of the job performance questionnaire yielded an internal consistency coefficient of the questionnaire item wise and as a whole of 39 items is 0.949 ranged above 0.9 Chronbach alpha coefficient and in excellent internal consistency coefficient. The Corrected item-total Correlation of each measure is above 0.3; which means that the criterion validity of the questionnaire is satisfactory.

Construct Validity (Exploratory factor analysis)

Table 7: KMO and Bartlett's test for job performance

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.835
Bartlett's Test of Sphericity	Approx. Chi-Square	6128.576
	Df	741
	Sig.	.000

Table 7 indicates KMO and Bartlett's test for independent variable (job performance). The table depicts that the value of KMO is .835 which is greater than .60. Thus, KMO result indicates that the data set is appropriate for factor analysis. In the above table, Bartlett's test shows the chi-square value (6128.576) and P-value of .000 which indicates that the correlation between the variables is significantly different from one another and this case is appropriate for factor analysis.

Table 8: Component matrix for job performance

Item	Factor loading	Item	Factor loading	Item	Factor loading
JP1	.768	JP15	.591	JP29	.862
JP2	.780	JP16	.636	JP30	.823
JP3	.643	JP17	.508	JP31	.764
JP4	.626	JP18	.524	JP32	.751
JP5	.662	JP19	.516	JP33	.663
JP6	.493	JP20	.708	JP34	.801
JP7	.739	JP21	.527	JP35	.487

JP8	.600	JP22	.742	JP36	.647
JP9	.479	JP23	.620	JP37	.451
JP10	.559	JP24	.659	JP38	.652
JP11	.633	JP25	.482	JP39	.603
JP12	.715	JP26	.596		
JP13	.618	JP27	.727		
JP14	.473	JP28	.661		
Percentage of variance explained (commutative)			75.79		

The table 8 reveals the factor loading of each item of job performance by using varimax technique. The table indicates that each item or statement is greater than the cutoff value .40 because the minimum acceptable criteria for factor loading are mentioned earlier which is .40. Most of the items (JP1-JP2, JP7, JP12, JP20, JP22, JP27, JP29-JP34) are good factor loading. The extracted factors explained 74.72% variability of the dependent variable (Job Performance).

III. Conclusion and Recommendations

Overall, the results of the study indicated acceptable content validity, construct validity and reliability of the Job performance questionnaire. Researchers are provided with a valid and reliable research instrument to measure job performance among IPEs comprehensively and generally. On the basis of the findings, it is recommended that this adapted questionnaire can be used by future researchers to assess the performance of Instructors Physical Education.

References:

1. Abosalem, Y. (2016). Assessment techniques and students' higher-order thinking skills. *International Journal of Secondary Education, 4*(1), 1.
2. Almanasreh, E., Moles, R., & Chen, T. F. (2019). Evaluation of methods used for estimating content validity. *Research in Social and Administrative Pharmacy, 15*(2), 214-221.
3. Amua-Sekyi, E. T. (2016). Assessment, Student Learning and Classroom Practice: A Review. *Journal of Education and Practice, 7*(21), 1-6.
4. Asrar, Z., Tariq, N., & Rashid, H. (2018). The Impact of Communication Between Teachers and Students: A Case Study of the Faculty of Management Sciences, University of Karachi, Pakistan. *European Scientific Journal, ESJ, 14*(16), 32.
5. Atta, M. A. (2012). *Gender based comparative study on the Performance of subject specialists in Southern districts of Khyber Pakhtunkhwa* ((PhD Thesis)), Gomal University, D.I.Khan, Khyber Pakhtunkhwa, Pakistan.
6. Burns, N., & Groves, K. (1997). *Practice of nursing research*: WB Saunders company Philadelphia, PA.
7. Canary, H. E., & McPhee, R. D. (2010). *Communication and organizational knowledge: Contemporary issues for theory and practice*: Routledge.
8. Creswell, J. W. (2012). Educational research: planning. *Conducting, and Evaluating*.

9. Danarwati, S. Y. S., & SE, M. (2013). Manajemen pembelajaran dalam upaya meningkatkan mutu pendidikan. *Jurnal Mimbar Bumi Bengawan, 6*(13).

10. Fogaça, N., Rego, M. C. B., Melo, M. C. C., Armond, L. P., & Coelho Jr, F. A. (2018). Job performance analysis: Scientific studies in the main journals of management and psychology from 2006 to 2015. *Performance Improvement Quarterly, 30*(4), 231-247.

11. Freiberg, H. J. (2013). Classroom management and student achievement. *International guide to student achievement*, 228-230.

12. Gaskin, J. & Lim, J. (2016), "Model Fit Measures", AMOS Plugin. Gaskination's StatWiki.

13. Griffin, R. W. (2012). *Fundamentals of Management*: Mason, OH: South-Western Cengage Learning.

14. Kalsoom, Q., & Qureshi, N. (2019). Teacher Education for Sustainable Development in Pakistan: Content Analysis of Teacher Education Curriculum and Standards. *Available at SSRN 3388457*.

15. Kiamba, E. W., Mutua, F., & Mulwa, D. (2017). Influence of teacher's subject matter knowledge on students' academic achievement of Kiswahili language in public secondary schools in Kathonzweni sub-county, Kenya. *Scholarly Research Journal for Humanity Science & English Language, 2*(1), 8052-8059.

16. Li, Y. P., & Mahadevan, A. (2017). A Study On The Impact Of Organisational Climate On Employee Performance In A Malaysian Consultancy. *International Journal of Accounting & Business Management, 5*(1), 1-13.

17. Lindell, M. K., & Brandt, C. J. (1999). Assessing interrater agreement on the job relevance of a test: A comparison of CVI, T, rWG (J)}, and r* WG (J)} indexes. *Journal of Applied Psychology, 84*(4), 640.

18. Mebrate, S., & Lemma, S. (2017). The Effect of Gender and School Climate on Job Satisfacion of Government Secondary School Teachers in Sidama Zone. *IOSR Journal of Humanities and Social Science, 22*(2), 25-32.

19. Menold, N., Bluemke, M., & Hubley, A. M. (2018). Validity: Challenges in conception, methods, and interpretation in survey research.

20. Nawaz, Q., Atta, M. A., & Khattak, B. K. (2016). TEACHER'S SUBJECT MATTER KNOWLEDGE SELECTED THROUGH CONVENTIONAL, NATIONAL TESTING SERVICE (NTS) AND ONLINE PROCESS REGARDING COMPETENCY-BASED TEACHER EDUCATION. *Gomal University Journal of Research, 32*(1), 119-127.

21. Nigar, I. (2017). *A comparative analysis of the performance of c.t teachers selected through national testing services and departmental promoted committee.* (M.Phil), Gomal University.

22. Opatha, H. (2015). Organizational Behaviour: The Human Side of Work. *Colombo: Author Publisher*.

23. Rahayu, E. F. (2015). Manajemen Pembelajaran dalam Rangka Pengembangan Kecerdasan Majemuk Peserta Didik. *Manajemen Pendidikan, 24*(5), 357-366.

24. Ramawickrama, J., Opatha, H., & PushpaKumari, M. (2017). A synthesis towards the construct of job performance. *International Business Research, 10*(10), 66-81.

25. Saifi, I. L., Hussain, M., Salamat, L., & Bakht, M. I. (2018). Impact of classroom management on students' achievement at university level. *Asian Innovative Journal of Social Sciences & Humanities, 2*(2), 13-27.

26. YAGHMAEI, F. (2003). Content validity and its estimation.

27. Yaghmaie, F. (2009). Content validity and its estimation. *Journal of Medical Education, 3*(1), 870-870.

28. Yamane, T. (1967). *Elementary Sampling Theory*: Prentice-Hall Inc., Englewood Cliffs, NJ.