

Implementation of the Developed Situational Judgment Test in the Faculty Recruitment Process in Higher Education Institutions, Pakistan.

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ABSTRACT

The developed 20 Situational Judgment Test situations represented five non-academic domains: Personal Ethics, Organizing & Planning, Communication Skills, Enthusiasm & Motivation, and Resilience & Adaptability. Specifically, 8 situations assessed Personal Ethics, 5 assessed Organizing & Planning, 2 each assessed Communication skills, Enthusiasm & Motivation, 1 assessed Resilience & Adaptability. Of the remaining 2 situations which measured two domains, one measured Organizing & Planning + Resilience & Adaptability, and the other measured Communication Skills + Resilience & Adaptability. The contents and four response choices of each situation in the developed Situational Judgment Test were validated by the vice chancellors of different universities in Sindh province. This group of vice chancellors also developed answer key with consensus for assessment of the answers of Situational Judgment Test test-takers.

Keywords: Situational Judgment Test, Non-academic Competencies, Non-academic domains, Answer key development.

1 | INTRODUCTION

Human resource professionals and administrators in Higher Education Institutions (HEIs) in Pakistan, consistently seek effective tools for selecting appropriate teaching faculty who possess both academic and non-academic capabilities. Academic excellence is certainly vital in determining a candidate's suitability for faculty roles. However, it is equally important to evaluate candidate's non-academic job-related abilities such as interpersonal skills, communication and motivation abilities, emotional maturity, professional ethics, and aspiration for research and development (Tripathy, 2022). For assessment of non-academic competencies, Situational Judgment Tests (SJTs) seem to be best suited, since these are recognized by researchers as the most effective tools for measuring workplace non-academic skills of the candidates (Patterson et al. 2012). We have previously reported the development and application of a SJT for assessment of non-academic competencies of the candidates appearing for faculty positions in Higher Education Institutions in Pakistan. This was undertaken because no suitable test model for measuring non-academic competencies was available in the country. The developed SJT has made a practical contribution to the existing body of knowledge in SJT literature. In this communication we are describing the implementation of the developed SJT in the Faculty Recruitment Process in HEIs in Pakistan.

2 | LITERATURE REVIEW

McDaniel, et al. (2001) provided a simple definition of situational judgment test as "any paper-and pencil test designed to measure judgment in work settings". Situational Judgment Tests (SJTs) are specifically designed to assess job-seekers decision making ability, behavior, and skills to handle fictitious workplace situations (Khand, Bhutto & Pitafi, 2024). These are typically used to evaluate how potential candidates would respond to a series of job-related situations presented to them in a multiple-choice format. SJT situations are particularly useful because they help to assess not only the technical knowledge or cognitive ability of candidates but also their judgment, decision-making skills, and emotional intelligence (Kepes, Keener, Lieven & McDaniel, 2024). These tests are increasingly recognized as one of the most effective tools for measuring both technical and non-technical skills in potential candidates.

Currently Situational Judgment Tests (SJTs) are recognized as the valid context-dependent knowledge and behavior testing tools (Knorr et al. 2024; Whetzel and McDaniel, 2008; Lievens, Peeters and Schollaert, 2008). SJTs compared to many teaching faculty induction processes in practice (interviews, psychometric tests, etc.) are considered multidimensional (Chan and Schmitt, 2002), and these can be effectively implemented in the

selection of appropriate teaching faculty in higher education institutions (HEIs). Situational judgment test-takers' replies become more factual when they take into consideration the essentials of the situations portrayed. Although, cognitive (e.g., academic record, subject familiarity, pedagogical awareness) capabilities of the appearing candidates are easy to examine, it is challenging to evaluate non-cognitive (e.g., interpersonal skills, personality, motivation) capabilities of the candidates most reliably and professionally (Khand, Bhutto & Pitafi, 2024; Woods & Patterson, 2023; Agarwall & Arya, 2021). Presently in many educational institutions around the globe, SJTs are being utilized as an instrument for selection of candidates who possess the requisite non-cognitive characteristics for the job applied (Bardach, Klassen & Perry, 2022). SJTs have been reported to have lower adverse impact related to race and ethnicity compared to traditional cognitive ability tests (Whetzel, McDaniel, and Nguyen, 2008), thus making SJTs a more equitable tool for assessing candidates from diverse backgrounds.

3 | RESEARCH METHODOLOGY

Mixed method exploratory study design uniting qualitative and quantitative approaches were utilized to validate and implement a situational judgment test that could be used as a tool to assess non-academic competencies of the probable candidates for the faculty positions of lecturers/assistant professors in higher education institutions.

4 | METHODS FOR DATA COLLECTION

Vice chancellors belonging to different universities of Sindh province were contacted via e. mails, WhatsApp messages and telephone calls to attend a one-day workshop to be held at HEC Sindh. Sixteen vice chancellors agreed to attend the workshop. The purpose of conducting this workshop was two-fold; first to validate the contents of fictitious workplace situations and their respective reply choices and second to develop with consensus answer key for evaluation of the answers of test-takers. Vice chancellors were chosen for this job as they are the leaders of Pakistan's universities and other higher education institutes. Additionally, all of them have prior teaching and research expertise in their respective academic fields. To achieve the objectives of the workshop, every member of the 16 vice chancellors was provided a copy of the SJT booklet comprised of 20 fictitious work-place situations with four reply options for each situation. Every situation in this booklet mimicked typical circumstances from classrooms, corridors, conference halls, and hostels. All the situations

were displayed one by one through video. The vice chancellors were asked to critically evaluate the contents of each situation and its associated reply choices. They also played a pivotal role in assessing each response option on a Likert scale, ranging from 1 to 4 (where 1 = Most Unlikely, 2 = Unlikely, 3 = Likely, and 4 = Most Likely). In this way 20 situations and their respective response choices described in the SJT booklet were reviewed by them. In addition to that, this group of vice chancellors was also asked to establish consensus ratings for each reply option, in line with the scoring method described by Patterson, Ashworth and Good (2013), to be utilized as the answer key for assessing the answers of test-takers.

5 | STATISTICAL ANALYSIS OF DATA

Statistical analysis of the data was carried out as follows:

The test-takers responses to the developed SJT situations were entered, scored, and analyzed by using the software of Statistical Program for Social Sciences (SPSS version 22).

6 | RESULTS

Typical examples of three situations for answer key development:

SITUATION 1:

You have finished your class and cross by another class before reaching your office, you noticed that the classroom is very disturbed and untidy with lots of papers on the floor and with students scattered in three groups. In the first group, students are sitting on a bench inattentively; in the second group, students are shouting loud at each other, and in the third group they are bullying and hitting each other.

What would you do with the following response options?

Responses	Most Unlikely	Unlikely	Likely	Most Likely
a) Enter the classroom and talk to them about their behavior and class etiquette.		√		
b) Stand at the rostrum and inform the students that this type of behavior is not bearable.			√	
c) Shout out to students and make them realize their mistakes.	√			
d) Ask the students to clean the classroom and show hope that they won't do it again.				√

Vice Chancellors Consensus Responses

- a)** This is an unlikely response as it is better to communicate with students in a humble and friendly manner and try to motivate them.
- b)** This is likely response as you are just guiding them.
- c)** This is the most unlikely response, as it is unethical and faculty may get back rude behavior from students.
- d)** This is the most likely response as faculty need to engage in a positive way with students. Showing them the right behavior traits.

SITUATION 2:

You are teaching an undergraduate class, and you have fixed the last fifteen minutes for question-and-answer session. At the start of the question-and-answer session one of your students started asking multiple questions, ignoring the right of other students to ask the questions.

What would you do with the following response options?

Responses	Most Unlikely	Unlikely	Likely	Most Likely
a) You will try to answer the asked questions by ignoring the right of other students.	√			
b) You will try to engage others students in the discussion on the questions asked by on student.		√		
c) You will give precise answers to every question asked.				√
d) You will advise students to ask only those questions whose answers are not clear to them.			√	

Vice Chancellors Consensus Responses

- a)** This is the most unlikely response as students are allowed to ask as many questions as they want.
- b)** This is an unlikely response as it denies the right of other students to ask questions.
- c)** This is most likely a response as it will engage all of the students and make it an interactive session.
- d)** This is likely response as it will give due preference to one individual without giving equal rights to others.

SITUATION 3:

You are teaching a first year undergraduate class and the students are listening to your talk attentively. At one point, you pause as you forget what to say next. On that occasion, a student sitting in the front row smiled and passed the comment that short memory teachers are not required to teach us.

What would you do with the following response options?

Responses	Most Unlikely	Unlikely	Likely	Most Likely
a) You will strictly ask that student to leave the class to establish your authority in front of other students	√			
b) You will tell the student that his/her remark is intolerable, and he/she has to apologize for that.			√	
c) You will ignore the student's remarks, gather your thoughts and continue your lecture with more authority and confidence.				√
d) You will report to the head of the department for his action on the remark passed by the student in the class.		√		

Vice Chancellors Consensus Responses

- a)** This is the most unlikely response as it shows the negative behavior of teacher.
- b)** This is likely response as it is unethical for a student to point out teacher in that way.
- c)** This is the most likely response as it gives a message to students that you have a complete knowledge of the topic and short comments do not influence your positive behavior.
- d)** This is an unlikely response, as a good teacher himself can handle the situation.

Table 1. Demonstrates how Likert response format was typically scored by awarding points to test-takers based on the extent to which their responses matched with the conventional scoring

key set with consensus by the second group of SMEs. For example, in case of situation 1, the answer key for response **a is most likely**. Now, the candidates whose responses were in direct alignment with the answer key were given four points, those whose responses were one position away, they were given three points, if their responses were two positions away, they were given two points, and if their responses were three positions away, they were given one point.

Similarly, the answer key for response **b is likely**. Now those candidates whose responses were in direct alignment with the answer key were assigned four points, in case when their responses were one position away on either side, they were assigned three points, and if their responses were two positions away, they were assigned two points.

Likewise, the answer key for response **c is unlikely**. Now those candidates whose responses were in direct alignment with the answer key, they were given four points, if their responses were one position away on either side, they were given three points, and if their responses were two positions away, they were given two points.

Also, the answer key for response **d is most unlikely**. Now those candidates whose responses were in direct alignment with the answer key, they were assigned four points, if their responses were one position away, they were assigned three points, if their responses were two positions away, they were assigned two points, and if their responses were three positions away, they were assigned one point.

In case of situation 2 (p. 44), the answer key for response **a** is most unlikely, for response **b** is unlikely, for response **c** is most likely and for response **d** is likely.

Similarly, in case of situation 3 (p. 45) the answer key for response **a** is most unlikely, for response **b** is likely, for response **c** is most likely and for response **d** is unlikely.

In this way, 16 maximum points per situation (4 response options =16) and 320 points for 20 situations (16 points per situation × 20 situations) were available to every candidate. The highest and - the lowest scores secured by test-takers were 43,186 and 24,310 respectively, with a mean value of 33,784 and standard deviation 9,400.

Table 1: Scoring points awarded to test-takers based on alignment of their responses with subject matter experts scoring key.

Test-takers rating of response options

Response options	Most likely	Likely	Unlikely	Most unlikely
Most likely	4a	3	2	1
Likely	3	4a	3	2
Unlikely	2	3	4a	3
Most unlikely	1	2	3	4a

^a Correct answer for each response choice based on subject matter experts' developed key.

Table 2 depicts distribution of the twenty SJT booklet situations into five non-academic domains (personal ethics, organizing and planning, communication skills, enthusiasm and motivation, resilience and adaptability), according to the content in each situation and its associated reply options (description of the five domains is presented in Appendix 4). Notably, 08 situations assessed teachers' professional ethics (PE); 05 situations measured organizing and planning (OP) skills; 02 situations each measured communication skills (CS), enthusiasm and motivation (EM); and 01 situation measured resilience and adaptability (RA). Of the 02 situations which measured two domains, one measured OPS and RA, and the other measured CS and RA. The test-takers scored highest in professional ethics and lowest in resilience and adaptability domains.

Table 4.2: Distribution of the developed SJT situations by five domains

Domain	SJT Situations	Total
Personal Ethics (PE)	03, 07, 08, 10, 11, 15, 19, 20	08
Organizing and Planning (OP)	01, 05, 09, 13, 17	05
Communication Skills (CS)	12, 14	02
Enthusiasm and Motivation (EM)	16, 18	02
Resilience and Adaptability (RA)	06	01
OP and RA	04	01
CS and RA	02	01
Total		20

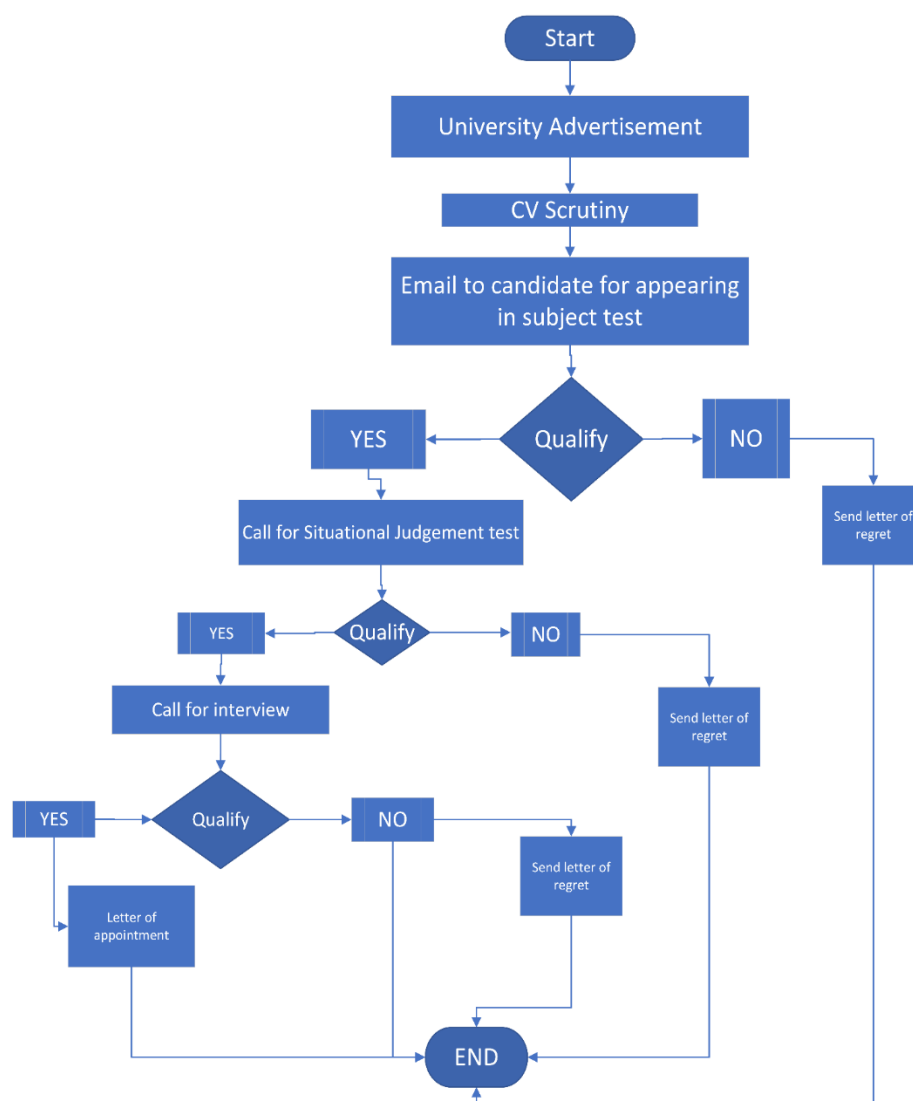


Figure 1: Illustrates the mechanism for the induction of faculty in higher education institutions.

7 | DISCUSSION

In recent years, SJTs have attained recognition as an instrument used for employment of candidates in jobs that involve recruiting, promoting, and professional development (Bardach, Klassen & Perry, 2022). Effective employment of teaching staff in higher educational institutions, however, has remained a serious concern owing to lack of any outright methodology for inviting, selecting and staffing the most suitable candidates (Pounder and Young, 1996). The recruitment of competent teaching staff in higher educational institutions is momentous, as teachers selected are the main source of building nation for imminent generations. Historically, researchers have predominantly relied on two well-established psychometric assessment methods for employee selection i.e., temperament and intellectual ability tests (Gul & Ghazal, 2022). Both temperament and intellectual ability tests are currently recognized as the fundamentals of the Situational Judgment Test.

Situational judgment tests give an insight into a candidate's decision-making, problem-solving, and interpersonal skills. These tests assist in the selection of faculty members who can successfully navigate real-life based scenarios/situations in an educational setting. For this purpose, SJTs had been designed to evaluate short listed candidates with a number of situations identical to situations they might meet during their career and observe their technical responsiveness as to how they would tackle those situations (Lievens and De Soete, 2012). However, none of these SJTs are able to measure long term aspiration of faculty members in terms of research aptitudes and non-academic competencies like interpersonal skills, problem solving, communication/ negotiation skills and trustworthiness. Situational judgment tests have attained popularity owing to their strong psychometric proof and potential for large-scale administration (Husbands et. al., 2015). These tests are widely applied to identify the highest performing candidates who own characteristics that supplement the knowledge and skills required in a particular job (Bardach, Klassen and Perry 2022; Bardach, Rusby and Klassen, 2021; Smith et. al., 2020).

It is now recognized that the appointment of proficient faculty members who possess both academic and non-academic competencies in institutions of higher learning is obligatory for enhancement of the quality education and usefulness of the plans and activities offered by an institution. The academic and non-academic competencies judged include thorough subject knowledge, ability to use technological teaching aids, belief in teamwork and eagerness for professional development (Burroughs et al., 2019; Hanushek and Rivkin, 2012; Caena, 2011)

Teachers selected on the basis of their academic competencies only are mostly observed as misfits within the organization. However, those selected on the basis of both academic and non-academic competencies are found to be a good fit within the organization. This is because they owing to their comprehensive knowledge, interpersonal skills, and abilities are able to not only deliver excellent teaching and research

services to their undergraduate and postgraduate students but also provide them guidance to their personal issues.

In present study SJT booklet comprised of twenty open ended workplace fictional situations with four response choices per situation was prepared with the aim to evaluate non-academic competences of the candidates wishful to be considered for faculty positions of lecturers and assistant professors in higher education institutions in Pakistan. The four response options for every situation were assessed on a 4-point Likert scale. This scale was chosen as it allows candidates to analyze and differentiate among all reply options for each situation. Recent research suggests several advantages of the Likert format, including the incorporation of added valued items thereby providing more information for reliability and validity analysis, decrease of cognitive-load, and independent rating of each response option (Weekley, Ployhart and Holtz, 2006). The twenty situations given in the booklet represented five non-academic domains i.e.,

PE, OP, CS, EM, and RA. Eighteen of the 20 situations were designed to measure a single specific domain, while only 02 measured two domains.

For development of scoring key, three approaches namely empirical, rational and theoretical are used by researchers (Weekley, Ployhart and Holtz, 2006). For this study rational approach was adopted to develop scoring key based on SMEs consensus agreements about efficacy of response options. These SMEs ranked the answers by assigning the 'best' option the highest score and the 'worst' option the lowest score. Responses of the test-takers on SJT situations were scored by using expert-based scoring method, using a distance-measure approach, where a score is calculated based on distance from SME-determined score.

8 | SUMMARY AND CONCLUSION

The scoring key for the developed SJT was prepared by vice chancellors with consensus. Responses of candidates on SJT situations were scored by expert-based scoring method, using a distance-measure approach, where a score is calculated based on distance from SME-determined score. Distribution of the 20 SJT situations into five domains showed that majority (90.0%) of the situations were designed to measure a single specific domain, while 10.0% situations measured two domains. The majority (65.0%) of the situations assessed the teacher's professional ethics and planning skills. In conclusion, conducted study served as a testament to the potential effectiveness and relevance of the developed SJT in assessing non-academic competencies of the candidates appearing for faculty positions in higher education institutions, underlining its value as a valuable tool in the selection process. In Pakistan, such a test model was lacking previously.

Recommendations and Future direction

The developed Situational Judgment Test can be recommended for adaptation as a supplementary assessment tool for use by selection boards in the faculty recruitment process. It is particularly valuable in facilitating informed decision-making by providing insights into candidates' non-academic competencies. These include essential teaching-related abilities such as problem-solving aptitude, and interpersonal communication skills—attributes critical for effective teaching performance in academic institutions. However, it is important to note that the current study did not examine the predictive validity of the SJT, specifically in relation to actual teaching performance or student learning outcomes in real-world instructional contexts. Therefore, future research is strongly recommended to investigate the relationship between candidates' performance on the developed SJT and their subsequent teaching effectiveness during professional practice. Establishing this linkage will be crucial in affirming the practical utility of the SJT as a robust psychometric tool in academic hiring frameworks.

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