International Journal of Learning, Teaching and Educational Research Vol. 21, No. 5, pp. 263-280, May 2022 https://doi.org/10.26803/ijlter.21.5.14 Received Mar 6, 2022; Revised May 19, 2022; Accepted May 25, 2022

# Measurement of Non-academic Attributes in the Situational Judgment Test as Part of School Teacher Selection: Systematic Literature Review

'Azad Iqram Nadmilail<sup>®</sup>, Mohd Effendi <sup>®</sup> Ewan Mohd Matore and Siti Mistima Maat<sup>®</sup>

Faculty of Education, National University of Malaysia, Malaysia

**Abstract.** The Situational Judgment Test (SJT) has become an increasingly well-known measurement method that is frequently used in various fields, especially for personnel selection, promotion, and professional development. The SJT also has a greater potential in relation to the selection of teachers in the education sector. Teacher selection aspects such as non-academic attributes, specifically the interpersonal and intrapersonal, are the focus of this study. This study uses a Systematic Literature Review (SLR) consisting of a review protocol to determine the topic that has been researched and the method used for making revisions. The SLR approach has four phases: searching, screening, analysing, and the results with numerous criteria established. The review consists of seven studies on teacher selection using the SJT instrument over the past ten years during the period January 2012 to December 2021. Eight interpersonal attributes were obtained based on six previous studies, namely organisation, planning, empathy, communication, teaching, relationships with colleagues, counselling, and contingency. Meanwhile seven intrapersonal attributes were obtained, namely conscientiousness, mindset, emotion regulation, adaptability, enthusiasm and motivation, resilience, and professional ethics. The attributes found can be utilised as they are fundamental for teacher selection criteria. The previous studies employed the same attributes. However, the attributes should only be employed according to the suitability of the selection context being performed.

**Keywords:** interpersonal; intrapersonal; situational judgment test (SJT); systematic literature review (SLR); teacher selection

#### 1. Introduction

The Situational Judgment Test (SJT) is popular and is widely used in various fields such as education, medicine, nursing, and the military (Nadmilail & Mohd

©Authors

\_

<sup>\*</sup> Corresponding author: Mohd Effendi @ Ewan Mohd Matore, effendi@ukm.edu.my

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0).

Matore, 2021). The SJT is also used in the selection of personnel and as part of promotions (Whetzel et al., 2020). The selection of personnel is a priority at the international level. In fact, the medical field in the United Kingdom has decreed that selection is among the first procedures to be carried out when engaging in medical education and training (Patterson et al., 2016). This clearly shows that admission to medical colleges at the international level is a priority in the selection of personnel. Likewise, in the United States for example, the military field also evidences a high level of competition among newly appointed officers for promotion (Lievens et al., 2008). Potential members seeking to assume the position of officer should choose the best response from among the response options given. In the promotion test, the SJT is used to measure select leadership considerations (Whetzel et al., 2020). This situation shows that the SJT is implemented not only in the selection of newly appointed personnel but also for the purpose of promotion. Overall, most Western countries have conducted SJTrelated studies such as the United States of America, the United Kingdom, and Germany.

As the SJT grows in popularity as a predictor of personnel performance, various organisations around the world have adopted the use of SJT as a psychological gauge and individual marketability tool (Weekley et al., 2013). The main challenge is accurately predicting a person's future work performance based on the findings using the limited information available during the selection process. Moreover, this prediction is very useful, especially in the research of educational psychology, as well as when explaining the achievements of university students (Breen & Lindsay, 2020). This is because predictions, such as student success and hidden talent, are also useful to enable educational institutions to identify students who are having difficulty adapting to the college environment and who are at risk of failing academically (Matošková & Kovářík, 2017). In some cases, work situations in relation to achievements can contextually provide additional information on the appropriate criteria and personality measurements (Golubovich et al., 2020). Most of the studies using the SJT were done by measuring the psychology of the test candidates based on hypothetical situations to describe select interpersonal, intrapersonal, and intellectual constructs (National Research Council, 2015). As such, the SJT is increasingly being accepted worldwide in various professions and it is used for various purposes.

For a better understanding, it is important to further explore the issues using the SJT in relation to teacher selection. Therefore, this review will identify and analyse the attributes measured using the SJT related to prospective pre-service teachers based on previous studies in terms of non-academic attributes. The non-academic attributes cannot be measured solely on the premise of the IQ Test achievement. Patterson et al. (2012) also stated that the SJT can accurately assess the non-academic characteristics that are relevant in clinical practise, such as integrity, empathy, and resilience. Understanding human attitudes, particularly those including non-academic characteristics, can assist both stakeholders and researchers in understanding a current phenomenon. In fact, future predictions can be made based on the data obtained. As a result, this review will provide insights into the human attitudes studied that include non-academic attributes.

## 2. Literature and Studies

Lievens and Coetsier (2002) said that the SJT is used as a method of measurement to evaluate the respondents' views or interpretations of the work-related environment that reflects the actual work scenario. The SJT also aims to measure competency and the interpersonal attributes related to work (Lievens et al., 2008), while the methodologies are designed to measure the non-academic attributes of targeted characters (Patterson & Driver, 2018). Basically, the SJT is an instrument of psychological measurement that contributes ideas and knowledge to enable researchers to decide and evaluate any result based on the responses given by the test candidates (Nadmilail & Mohd Matore, 2021). In addition, the SJT is one of the best predictive measurement methods and strategies due to its varied possible test structures (Ployhart, 2013).

The SJT is also known as a simulation method (O'Connell et al., 2007) that requires the respondents to make judgments in situations that highlight problems in the assignment (Al Hashmi & Klassen, 2019). The simulation test contains a set of actual state tasks and asks the respondents to respond as if they are doing it. These reactions or responses are interpreted as an indication of the respondents' future behaviour expectations. Generally, the fidelity of the test denotes a simulation test that varies according to the way that the test is performed (Nadmilail & Mohd Matore, 2021). The test, when it is used as an accurate expectation of genuine working conditions, denotes a high-fidelity simulation test. Therefore, a highfidelity simulation test is important to reflect a real situation possible in a particular field of work. As such, the SJT is designed to create individual assessments in a contextual workplace environment (Ryan & Ployhart, 2014). To link it to work-related situations, a collection of critical situations and responses are provided as a checklist. The collection will then target the attributes or competencies based on an analysis of the job description. The selected response will provide a prediction of the actions taken based on the description of the targeted task.

There are several theories underlying the SJT in the development of similar instruments. Past studies have shown that some researchers have approached the subject with a variety of views and opinions on SJT-related theories such as Motowidlo et al. (2006) who targeted the Theory of Behavioural Consistency as a theory related to SJT, and Motowidlo et al. (2013) who explained the Implied Nature Policy. To date, there are considerably clear views related to the basis of the SJT theory.

There are two predominant theories proposed by past researchers. The first theory is the Theory of Behavioural Consistency. This describes behaviour in the past as being the best predictor of future behaviour. The main principle of this theory highlights the current behavioural sample to enable the prediction of future behaviour (Motowidlo et al., 2006). SJT has proven to be a predictor of good work performance as it measures the understanding of procedures about effective behaviour in certain situations (Lievens & Patterson, 2011). Thus, the predictions shown by the test candidates provide a clearer picture to the panel of selectors as the key indicators in the decision-making process related to the selection,

promotion, and professional development requirements, especially in the workplace.

Second, Implicit Trait Policies (ITPs) is another theory that has created a consensus and attention among researchers regarding literature reviews. ITPs are implicit beliefs about the impact and cause of the consequences expressed by various actions related to the effectiveness of said actions (Motowidlo et al., 2013). These actions are measured as the main function along with the behavioural characteristics of the response options and the individuals' consideration of the effectiveness of their behaviour. However, it depends also on specific areas such as employment level, job knowledge, and job description (Motowidlo & Beier, 2010; Patterson et al., 2016). In any given situation, measurements that express inner nature are referred to as behaviours (Golubovich et al., 2020). Furthermore, tendencies or traits that have been patterned will contribute some ideas about behaviours and characteristics that will be permanent. Human beings individually have different beliefs about the effectiveness of the behaviours that related to inherent tendencies or personality traits.

In the field of teacher education, a large number of studies have been carried out by many researchers using the SJT as a model for various purposes. This includes the selection of personnel, recruitment, and professional development. The main importance of an education policy, at the international level, is to produce quality teachers who can engage in quality teaching (Beauchamp et al., 2013). This means that the teacher selection policy becomes important as the main policy of concern. The focus on the teacher selection policy of relevance is always given special care and attention. This is aimed at attracting as many candidates as possible and producing quality teacher candidates (Feuer et al., 2013; Schleicher, 2014). Over the years, many studies involving personnel selection in relation to schoolteachers have been conducted and are increasingly active in various countries. Klassen and Kim (2019) reviewed and found there to be a total of 32 studies that have been conducted on the subject from 2000 to 2017. The findings also involved studies that measured academic and non-academic attributes as well as measuring the effectiveness of the teachers using an external measurement. However, the focus of this review is on measuring non-academic attributes, specifically intrapersonal and interpersonal ones, using the SJT in a more current study time interval.

## 3. Methodology

#### 3.1. Research Method

This study used the Systematic Literature Review (SLR) as the research method, specifically consisting of a review protocol that determines the topic to be investigated and a customised method when conducting the subsequent review. The SLR is a systematic and explicit method used for identifying, selecting, critically evaluating, collecting, and analysing data from related past research (Moher et al., 2009). This method was chosen on the basis that it helps to synthesise all relevant academic literature in depth. The SLR is also a fundamental procedure for recognising important literature studies and examining how the data was obtained from major studies. The SLR is based on the method proposed by Karabulut-ilgu et al. (2018) as shown in Figure 1. The four phases involved in

this review were the search phase, the screening phase, the analysis phase, and the results phase. In this review, all articles were identified using the keywords "Situational Judgment Tests" and "Teacher Selection." The SJT was used to obtain a comprehensive picture of the attributes used in teacher selection based on a systematic analysis of the relevant publications.

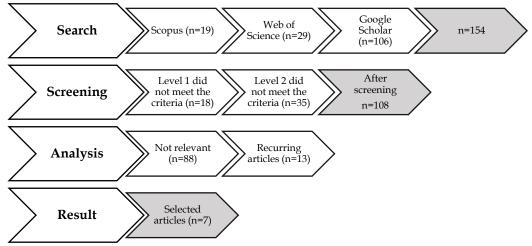


Figure 1. Adaptation of the Article Selection Process from Karabulut-Ilgu et al. (2018)

## 3.2. Data Gathering Procedure

## 3.2.1. Article Search Strategy

This phase consisted of the article search strategy using a search database focused on three major scientific databases, namely Scopus, the Web of Science (WoS), and Google Scholar. WoS was chosen because it has grown into one of the world's leading scientific citation, discovery, and analytical information search platforms. It is used as both an academic library research tool and a rich dataset for information of a large scope across a wide range of academic fields (Li et al., 2017). Meanwhile, Scopus was considered as well because it is progressively used in academic papers (only slightly less than WoS competitors) and it challenges the WoS division method externally (Zhu & Liu, 2020). In addition, Google Scholar can help to develop important resources for publicly accessible archives covering a wide range of disciplines and languages, It is unmatched by others in terms of the provision of efficient and effective online scientific documents (Gusenbauer, 2019).

The keywords "Situational Judgment Tests" and "Teacher Selection" were used in this phase. The appropriate keywords were selected based on the objective to be achieved following the search process. Researchers also used the phrase search function and the Boolean OR or/and operator to combine keywords in the initial search process. This review used three basic techniques in the manual search: handpicking, backward tracking, and forward tracking (Mohamed Shaffril et al., 2020). Subsequently, a search strategy was added to obtain the latest articles. Finally, the relevant articles were selected by limiting the publication year to between January 2012 and December 2021 which is within ten years. This is because SJT-related studies on school teachers are still underway and therefore limited (Nadmilail & Mohd Matore, 2021).

## 3.2.2 Article Selection Criteria

To obtain accurate and appropriate articles, several stages as part of the screening of the original articles were applied using the SLR. The main screening process was dependent on the designated inclusion and exclusion criteria shown in Table 1.

| Main Criterion      | Inclusion Criterion          | Exclusion Criterion           |
|---------------------|------------------------------|-------------------------------|
| Year of Publication | January 2012 - December 2021 | Other than January 2012 –     |
|                     |                              | December 2021                 |
| Type of Publication | Empirical Articles           | Other than Empirical Articles |
| Language            | English                      | Other than English            |

**Table 1. Screening Criteria Setting** 

The two inclusion criteria were (1) within the time frame from January 2012 until December 2021, and (2) empirical articles written in English. The two exclusion criteria were (1) studies outside of the time frame from January 2012 until December 2021, and (2) non-empirical studies in a language other than English. The next strategy was to remove past articles and studies that recurred through the method of title reading and abstract reading. The final analysis was carried out through a full and in-depth reading of the remaining articles to remove any articles that were not relevant to the requirements of this study. A total of seven articles were selected based on the search, screening, and analysis processes. The seven selected articles are shown in Table 2.

| Authors & Year        | Country | Study  |  |
|-----------------------|---------|--|--|
| Bardach, Rushby, &    | England | The Selection Gap in Teacher Education: Adverse      |  |
| Klassen (2021)        |         | Effects of Ethnicity, Gender, and Socio-Economic     |  |
|                       |         | Status on the Situational Judgement Test             |  |
|                       |         | Performance  |  |
| Bardach et al. (2021) | England | Using video-and text-based situational judgement     |  |
|                       |         | tests for teacher selection: A quasi-experiment      |  |
|                       |         | exploring the relations between the test format,     |  |
|                       |         | subgroup differences, and applicant reactions.       |  |
| Klassen et al. (2020) | England | Can we improve how we screen applicants for          |  |
|                       |         | initial teacher education?                           |  |
| Chao et al. (2019)    | Taiwan  | Construction of situational judgment tests for       |  |
|                       |         | teachers.  |  |
| Al Hashmi &           | Oman    | Developing a situational judgement test for          |  |
| Klassen (2019)        |         | admission into initial teacher education in Oman: An |  |
|                       |         | exploratory study.                                   |  |
| Klassen et al. (2016) | England | Developing a Proof-of-Concept Selection Test for     |  |
|                       |         | Entry into Primary Teacher Education Programs.       |  |
| Klassen et al. (2014) | England | Applicant reactions to a situational judgment test   |  |
|                       |         | used for selection in initial teacher training.      |  |

**Table 2. Summary of the Selected Articles** 

#### 4. Results

The main objective of this review was to identify and analyse the characteristics of non-academic interpersonal and intrapersonal attributes as part of teacher

selection using the SJT instrument. A total of seven research articles related to the topic of the SJT and teacher selection were identified. Studies on the measurement of non-academic attributes have attracted a high level of interest among researchers around the world, particularly those looking into personnel selection. This is because non-academic attributes such as integrity, empathy, and resilience are believed to be important in practice (Patterson et al., 2012). However, studies on the use of the SJT as a teacher selection mechanism are still new and have been rarely carried out.

This literature review makes a valuable contribution to other researchers by giving them a critical assessment of the existing research on related topics. The findings may explain a more critical perspective on the impact of the SJT on nonacademic attributes as an indicator that can be considered continuous and useful. Such a review has been previously conducted by Patterson et al. (2012) but the review was only limited to the years of publication between 1990 to 2010. The review also used other databases such as MEDLINE, PsycINFO, BIOME, and BioMed Central. Moreover, the review did not focus on specific areas of selection and the findings did not list the areas of education, particularly those involving teacher selection. Klassen and Kim (2019) also conducted a meta-analysis looking into the method and mode of teacher selection. However, the results did not list any studies using the SJT. Additionally, Webster et al. (2020) conducted a metaanalysis of the validity of SJT users in personnel selection. However, the review only involved the medical field. Therefore, the current review focuses on the SJT and only involves the selection of teachers to assist other researchers embarking on studies related to the SJT and teacher selection specifically. This review can also provide a clear picture to other researchers regarding the popularity of nonacademic attributes which are often the choice of researchers looking into the context of personnel selection in the teaching profession.

In teacher selection, the three main aspects are measured as the selection aspects, namely intellectual, interpersonal, and intrapersonal. Intellectual constitutes the academic attributes, whereas interpersonal and intrapersonal constitute the non-academic attributes. The review of the literature, specifically regarding the analysis of non-academic attributes, has always been the concern of researchers around the world. The analysis could help other researchers to evaluate the attributes that are actively or poorly used when measuring the performance of test candidates (Patterson & Driver, 2018). The findings obtained from this review focus on the patterns of the attributes that researchers are interested based on the SJT instrument in teacher selection. The measured interpersonal and intrapersonal attributes in teacher selection using the SJT are as shown in Table 3.

Table 3. Measured Attributes

| Authors & Year        | Interpersonal | Intrapersonal      |
|-----------------------|---------------|--------------------|
| Bardach, Rushby, &    | Not discussed | Conscientiousness  |
| Klassen (2021)        |               | Mind-set           |
|                       |               | Emotion regulation |
| Bardach et al. (2021) | Organisation  | Adaptability       |
|                       | Planning      | Resilience         |

| Authors & Year                | Interpersonal   | Intrapersonal   |
|-------------------------------|---|---|
|                               | Empathy     Communication   | <ul><li>Conscientiousness</li><li>Mind-set</li><li>Emotion regulation</li></ul>                                 |
| Klassen et al. (2020)         | Organisation     Empathy  | <ul><li>Adaptability</li><li>Conscientiousness</li><li>Mind-set growth</li><li>Emotion regulation</li></ul>     |
| Chao et al. (2019)            | <ul> <li>Classroom<br/>management</li> <li>Teaching</li> <li>Relationships with<br/>colleagues</li> <li>Parent-teacher<br/>communication</li> <li>Counselling</li> <li>Contingency</li> </ul> | Not discussed   |
| Al Hashmi & Klassen<br>(2019) | <ul><li>Communication</li><li>Organisation</li><li>Planning</li></ul>   | <ul><li>Resilience</li><li>Adaptability</li><li>Professional ethics</li><li>Enthusiasm and motivation</li></ul> |
| Klassen et al. (2016)         | <ul><li>Organisation</li><li>Planning</li><li>Empathy</li><li>Communication</li></ul>   | Adaptability     Resilience   |
| Klassen et al. (2014)         | <ul><li>Organisation</li><li>Planning</li><li>Empathy</li><li>Communication</li></ul>   | Adaptability     Resilience   |

Table 3 shows a list of the measured non-academic interpersonal and intrapersonal attributes based on the previous studies. Five studies have measured interpersonal and intrapersonal attributes, namely Al Hashmi and Klassen (2019), Bardach et al. (2021), Klassen et al. (2014), Klassen et al. (2016), and Klassen et al. (2020). Only one study measured intrapersonal attributes, namely that of Bardach, Rushby, and Klassen (2021), while one study examined interpersonal attributes, specifically the work of Chao et al. (2019).

#### 5. Discussion

# 5.1. Interpersonal

Golubovich et al. (2017) defined "interpersonal" as the perception and processing of a cognitive interaction as well as the selection of behaviours to provide appropriate responses. This statement is also supported by Bedwell et al. (2014) who stated that "interpersonal" is the concept of there being multiple dimensions between an individual's cognitive and behavioural aspects. Meanwhile, Pavlidou et al. (2020) explained that "interpersonal" is a process of successful communication and interaction with others. In short, interpersonal shows there to be an active relationship between cognition and behaviour that effectively highlights the external characteristics of an individual. Table 4 shows a summary

of the findings of the previous studies that measured interpersonal attributes in the selection of trainee teachers using the SJT.

Authors (Year) (2014)Klassen et al. (2016) Bardach et al. (2021 Klassen et al. (2020) Al Hashmi & Klassen (2019) Chao et al. (2019) et al. **Total** Klassen Interpersonal Attribute Organisation 5 x Planning 5 x x  $\mathbf{x}$ X X Communication 5 x x x x x **Empathy** x 4 x x x Relationships with colleagues 1 x Teaching 1  $\mathbf{x}$ Counselling 1 x Contingency 1

Table 4. Summary of the Findings on Interpersonal Attribute

Based on Table 4, eight interpersonal attributes were obtained based on six past studies, namely organisation, planning, empathy, communication, teaching, relationship with colleagues, counselling, and contingency. Four studies measured the attributes of organisation and planning (Al Hashmi & Klassen, 2019; Bardach et al., 2021; Klassen et al., 2014, 2016). Organisation and planning were combined in these studies, focusing on the ability to effectively organise and manage the time and planning skills of the organisation (Klassen et al., 2014). These attributes were used to improve the positive learning interactions with the students. Meanwhile, Klassen et al. (2020) measured only the organisational attribute and Chao et al. (2019) had only measured planning focused on classroom management.

Three of the previous studies measured both attributes of communication and empathy (Bardach et al., 2021; Klassen et al., 2014, 2016). Communication and empathy were combined in the studies focused on the ability to listen actively and where an open dialogue with students and colleagues was involved (Klassen et al., 2014). In addition, communication and empathy focus on the ability to adapt the communication style used and the nature of the dialogue accordingly. Meanwhile, Al Hashmi and Klassen (2019) only focused on communication and Klassen et al. (2020) focused only on empathy. Chao et al. (2019) divided communication into two, namely communication with parents and relationships with colleagues. In addition, they also measured other interpersonal attributes, namely relationships with colleagues, teaching, counselling, and contingency.

Four popular interpersonal attributes, specifically organisation, planning, empathy, and communication, were explored by Klassen et al. (2014). The first group of researchers conducted a SJT study looking into teacher selection and

three more studies similarly used the same attributes (Bardach et al., 2021; Klassen et al., 2016, 2020) but based the context on different situations. According to Klassen et al. (2014), the selection of attributes is based on the situation and background of the place according to the contextual environment of the school. All situations in the SJT were built through discussions with specialist teachers who worked closely with trainee teachers using critical incident techniques.

Organisation, planning, communication, and empathy are the most popular interpersonal attributes based on past studies. Organisation and planning are among the requirements of job marketability (Zakaria et al., 2014). Both attributes are also used as key benchmarks to ensure that the personnel selected are of good quality, and the same goes for empathy and communication. Communication includes many facets that reflect the ability of the personnel when engaging in a two-way interaction with others. These two attributes are closely intertwined. Good communication is seen to increase a person's level of empathy (Kataoka et al., 2018). Therefore, past studies that combine communication and empathy as one attribute are appropriate given how the two attributes are closely intertwined.

Chao et al. (2019) used the highest number of attributes, namely planning, communication, relationship with colleagues, teaching, counselling, and contingency. They listed the attributes based on the needs in the field of Taiwanese education, specifically the profession of teaching in Taiwan. The attributes are classroom management, teaching, relationships with colleagues, parent-teacher communication, counselling, and contingency. These attributes were selected because teachers have very complex jobs. Teachers need to keep up to date with the latest curriculum, motivate their students to learn, and actively participate in the learning process. In addition, teachers also need to encourage learning and prepare the students to be productive. The complexity of the teachers' duties should be considered when developing better measurement tools regarding admission to the training programme. The research team identified attributes to build the situation in the SIT which was implemented through a discussion involving 60 experienced teachers in Taiwan. All of the situations developed were cross-checked with education experts to ensure that the items were realistic and reflect the real situation.

In short, the measured interpersonal attributes are of urgent interest and are needed in the teaching profession on both a global and local level. The selection of these interpersonal attributes is also based on the needs that have been used in the selection of other professions such as among doctors, the military, and nursing. However, among the eight listed attributes, four of them were not usually used by the authors except for Chao et al. (2019), namely a relationship with their colleagues, teaching, counselling, and contingency. Thus, future researchers can use the existing attributes or other unexplored attributes in teacher selection. This will also provide new insights and goals for other researchers to explore new attributes in the context of the teaching profession.

# 5.2. Intrapersonal

Sambaiah and Aneel (2016) defined "intrapersonal" as personality, attitude, self-concept, self-management ability, and integrity. This statement was also supported by Park et al. (2017) in that "intrapersonal" denotes self-awareness that requires an accurate assessment of one's feelings, interests, and values. Table 5 shows a summary of the findings of the past studies that have measured intrapersonal attributes as part of teacher selection using the SJT. Seven intrapersonal attributes were obtained from the six previous studies: conscientiousness, mindset, emotional regulation, adaptability, enthusiasm and motivation, resilience, and professional ethics.

Authors (Year) лл Hashmi & Klassen (2019) Bardach, Rushby, & Klassen (2021 Bardach et al. Klassen et al. Klassen et al. Klassen et al. (2016)(2021)(2020)**Total** Interpersonal **Attributes** 5 Adaptability х  $\mathbf{x}$ х х х Resilience x 4 X X Conscientiousness 3 x x X Mind-set 3 X х х **Emotion regulation** x X x 3 1 **Professional Ethics** х Enthusiasm & Motivation 1

Table 5. Summary of the Findings on Intrapersonal Attributes

A total of six previous studies selected the adaptability attribute (Bardach, Rushby & Klassen, 2021; Bardach et al., 2021; Klassen et al., 2020; Al Hashmi & Klassen, 2019; Klassen et al., 2016; Klassen et al., 2014;). Adaptability is defined the ability to make changes according to a particular suitability based on a particular situation (Klassen et al., 2014). Meanwhile, Ryan and Ployhart (2014) defined adaptability as a person's ability, skills, inclination, readiness, and motivation to change or adapt to different tasks, as well as the social and environmental features. In the teaching profession context, adaptability is needed to test a teacher's ability to change their teaching style in response to various situations in the classroom. Hence, researchers have long highlighted adaptability as an important attribute to be measured.

Resilience is the second most selected intrapersonal attribute, featuring in four studies (Al Hashmi & Klassen, 2019; Bardach et al., 2021; Klassen et al., 2014, 2016). Resilience denotes an individual's ability to stay calm, stable, and focused while under pressure (Klassen et al., 2014). Leys et al. (2020) defined resilience as a dynamic process that allows for a positive adaptation in the context of significant difficulties. In the context of the teaching profession, resilience is always necessary in the selection of personnel because a teacher needs to be able to remain professional when it comes to balancing his or her duties and personal life. Thus,

resilience is an important attribute for teachers when facing challenges involving their duties and personal life.

Three of the previous studies have focused on the conscientiousness attribute (Bardach, Rushby, & Klassen, 2021; Bardach et al., 2021; Klassen et al., 2020). Conscientiousness refers to the stable feelings, thoughts, and behaviours that make up a unique individual (Turiano, 2020). Meanwhile, Stoll et al. (2020) defined conscientiousness as the tendency to be meticulous, punctual, and to follow the rules. The conscientiousness attribute was chosen in past studies because the teachers had high scores in conscientiousness, particularly those involving situations in the classroom (Klassen & Kim, 2019). The teaching profession requires a high level of conscientiousness, especially among the teachers who teach at an early education level. They are faced with children under the age of seven who have self-management difficulties. Therefore, such teachers should have a high level of conscientiousness to enable them to manage the children as well as to help the children manage themselves.

Other than conscientiousness, the "mindset" attribute was also selected by three of the previous studies (Bardach, Rushby, & Klassen, 2021; Bardach et al., 2021; Klassen et al., 2020). Mindset denotes the formation process of different meanings and goals, motivations, and behaviours (Schroder et al., 2017). Seaton (2018) explained that mindset is an individual's view of intelligence that can be developed and expanded. The mindset attribute was selected as one of the target attributes due to the teachers' belief in the nature of learning and the flexibility of the student's abilities which can impact the teachers' teaching as well as the students' performance and self-confidence. Hence, mindset is important to teach students who have various levels of intelligence. Teachers should also have a good mindset as well so then the teaching and learning process can be implemented smoothly.

Additionally, the "emotion regulation" attribute was selected by three of the previous studies (Bardach, Rushby, & Klassen, 2021; Bardach et al., 2021; Klassen et al., 2020). According to Aldrup et al. (2020), "emotion regulation" refers to the process in which an individual influences his or her emotions and the expression of emotions. Meanwhile, Koschmieder and Neubauer (2021) defined emotion regulation as the ability to modify emotions through self-control strategies. In the teaching profession context, teachers must deal with emotional situations in their daily working lives. Any work with such a high consumption of emotional energy can be burdensome and result in emotional exhaustion. Emotional fatigue is one of the main elements of burnout, especially in the workplace. Burnout is considered to be the result of an ineffective response strategy that results in constant stress that can lead to more chronic problems.

Al Hashmi and Klassen (2019) selected the "professional ethics" attribute as well as the enthusiasm and motivation attribute in their study. Professional ethics is divided into two, namely ethics and professionalism. Ethics denote a moral value or behavioural principle that an individual or a group holds (Ahmad & Mat Zin, 2001). Peterson and Arthur (2021) defined "ethics" as a moral principle that deals

with the advantages or disadvantages of a habit or temperament. Meanwhile, "professionalism" is defined as a privately held belief about one's conduct as a member of a profession (Burmeister, 2017). Therefore, professional ethics is the moral principle and belief of an individual or a group of employees when doing a job. Correspondingly, professional ethics was selected as an attribute to ensure that the personnel selected are individuals who have good morals and adhere to the discipline of the employment profession in question. In the teaching profession context, professional ethics is referred to as a moral quality that has a direct connection to any type of classroom practice, including caring about the students, thoroughness, determination, and a willingness to cooperate with colleagues.

Enthusiasm and motivation are closely intertwined. Enthusiasm can be defined as the pleasure, excitement, and joy that individual experiences while doing a job (Lazarides et al., 2018). Heckhausen and Heckhausen (2018) defined motivation as activating the life orientation towards positively assessed goals. Meanwhile, Tohidi and Jabbari (2012) described motivation as empowering the personality to achieve a high level of performance and being able to overcome any obstacles to change. In short, enthusiasm and motivation are related to the positive qualities that a person needs to have while doing something to produce a positive work result. Both enthusiasm and motivation are important to ensure that teachers are always passionate about teaching and can provide more support to their students. They can also have a positive impact on the students' motivation. Therefore, enthusiasm and motivation are qualities that personnel need to demonstrate to establish credibility with the recruitment organisations (Bougie & Sekaran, 2020).

The five main intrapersonal attributes that the previous researchers have most often selected are adaptability, resilience, conscientiousness, mindset, and emotion regulation. All five intrapersonal attributes were selected owing to the interest in choosing competent and qualified personnel to become future teachers. To meet the challenges in the education field through teaching and learning, this situation requires teachers with high flexibility and resilience when facing any situation so then education can be delivered in various circumstances. This exerts a strong influence on the empathy of teachers based on the high level of conscientiousness needed. This is as well as a stable mind and approach to emotion regulation so then any challenges encountered can be overcome. Hence, the aforementioned five attributes are appropriate to ensure that the selected personnel can become competent teachers to meet the global challenges.

## 6. Conclusion

This review reveals some of the commonly utilised characteristics that have been used as interpersonal and interpersonal attributes. The popularity of the chosen attributes were determined based on the continuation of the research as well as according to the locality context. However, there are still unexplored characteristics that could still aid in predicting individual quality as a schoolteacher. The novelty of this review is that it provides an in-depth focus on the non-academic attributes measured for the selection of schoolteachers using the SJT. The previous reviews conducted did not focus on the use of the SJT

instrument. Instead, they were more generic and made it difficult for the researchers to relate to the issues at hand. This review will make it easier for future researchers to obtain direct concentrated information. For future studies, the unexplored attribute judgements can be employed as the predictors of teacher selection because each of them has unique features that need to be considered. This review also anticipates that with the continued research focus on ways to improve teacher quality, more attention will be given to the characteristics chosen based on the policy practiced and its associated requirements. Additionally, future SJT reviews can be further explored in terms of item development, scoring, opportunities, and contributions. As recommended, researchers should also explore the highlights of other studies through in-depth research based on related experts, screening articles in other foreign languages, and using a wider database.

# 7. Acknowledgement

We appreciate the financial support provided by Universiti Kebangsaan Malaysia (UKM) as part of the FPEND Research Grant Data (Grant no: GG-2021-K021854). We are thankful to those who provided insights and expertise for inclusion and consideration within this study. We would like to thank all experts for their constructive feedback as part of improving this manuscript. The authors would also like to thank Ms Madihah Tan Sri Dr Abdullah for always giving her full support and encouragement during the writing process.

#### 8. References

- Ahmad, S., & Mat Zin, R. (2001). *Adab & Etika Kerja Dalam Organisasi* [Work Ethics & Etiquettes In Organization]. Penerbit Universiti Utara Malaysia. https://doi.org/10.32890/983955980x
- Al Hashmi, W., & Klassen, R. M. (2019). Developing A Situational Judgement Test For Admission Into Initial Teacher Education In Oman: An Exploratory Study. *International Journal of School and Educational Psychology*, 8(1), 187–198. https://doi.org/10.1080/21683603.2019.1630042
- Aldrup, K., Carstensen, B., Köller, M. M., & Klusmann, U. (2020). Measuring Teachers' Social-Emotional Competence: Development And Validation Of A Situational Judgment Test. Frontiers in Psychology, 11, 892. https://doi.org/10.3389/fpsyg.2020.00892
- Bardach, L., Rushby, J. V, Kim, L. E., & Klassen, R. M. (2021). Using Video- And Text-Based Situational Judgement Tests For Teacher Selection: A Quasi-Experiment Exploring The Relations Between Test Format , Subgroup Differences , And Applicant Reactions And Applicant Reactions. European Journal of Work and Organizational Psychology, 30(2), 251–264. https://doi.org/10.1080/1359432X.2020.1736619
- Bardach, L., Rushby, J. V, & Klassen, R. M. (2021). The Selection Gap In Teacher Education: Adverse Effects Of Ethnicity, Gender, And Socio-Economic Status On Situational Judgement Test Performance. *British Journal of Educational Psychology*, 91(3), 1015–1034. https://doi.org/10.1111/bjep.12405
- Beauchamp, G., Clarke, L., Hulme, M., & Murray, J. (2013). Research And Teacher Education: The BERA-RSA Inquiry. Policy And Practice Within The United Kingdom. In *The BERA-RSA Inquiry*. http://www.bera.ac.uk/resources/research-and-teacher-education-bera-rsa-inquiry
- Bedwell, W. L., Fiore, S. M., & Salas, E. (2014). Developing The Future Workforce: An

- Approach for Integrating MBA Classroom. *Academy of Management Learning & Education*, 13(2), 171–186. https://doi.org/10.5465/amle.2011.0138
- Bougie, R., & Sekaran, U. (2020). Research Methods For Business: A Skill-Building Approach. Eighth Edition. Wiley.
- Breen, R., & Lindsay, R. (2020). Different Disciplines Require Different Motivations For Student Success. *Research in Higher Education*, 43, 693–725. https://doi.org/10.1023/a:1020940615784
- Burmeister, O. K. (2017). Professional Ethics in the Information Age. *Journal of Information, Communication and Ethics in Society,* 15(4), 348–356. https://doi.org/10.1108/JICES-11-2016-0045
- Chao, T.-Y., Sung, Y.-T., & Huang, J.-L. (2019). Construction Of The Situational Judgment Tests For Teachers. *Asia-Pacific Journal of Teacher Education*, 48(4), 355–374. https://doi.org/10.1080/1359866X.2019.1633621
- Feuer, M. J., Floden, R. E., Chudowsky, N., & Ahn, J. (2013). *Evaluation Of Teacher Preparation Programs: Purposes, Methods, And Policy Options*. National Academy of Education.
- Golubovich, J., Lake, C. J., Anguiano-Carrasco, C., & Seybert, J. (2020). Measuring Achievement Striving Via A Situational Judgment Test: The Value Of Additional Context. *Revista de Psicologia Del Trabajo y de Las Organizaciones*, 36(2), 157–167. https://doi.org/10.5093/jwop2020a15
- Golubovich, J., Seybert, J., Martin-Raugh, M., Naemi, B., Vega, R. P., & Roberts, R. D. (2017). Assessing Perceptions Of Interpersonal Behavior With A Video-Based Situational Judgment Test. *International Journal of Testing*, 17(3), 191–209. https://doi.org/10.1080/15305058.2016.1194275
- Gusenbauer, M. (2019). Google Scholar to Overshadow Them All? Comparing The Sizes Of 12 Academic Search Engines and Bibliographic Databases. *Scientometrics.*, 118(1), 177–214. https://doi.org/10.1007/s11192-018-2958-5
- Heckhausen, J., & Heckhausen, H. (2018). Motivation annd Action. 3rd Edition. Springer.
- Karabulut-ilgu, A., Cherrez, N. J., & Jahren, C. T. (2018). A Systematic Review of Research on The Flipped Learning Method in Engineering Education. *British Journal of Educational Technology*, 49(3), 398–411. https://doi.org/10.1111/bjet.12548
- Kataoka, H., Iwase, T., Ogawa, H., Mahmood, S., Desantis, J., Hojat, M., & Gonnella, J. S. (2018). Can Communication Skills Training Improve Empathy? A Six-Year Longitudinal Study of Medical Students in Japan. *Medical Teacher*, 0(0), 1–6. https://doi.org/10.1080/0142159X.2018.1460657
- Klassen, R. M., Durksen, T. L., Kim, L. E., Patterson, F., Rowett, E., Warwick, J., Warwick, P., & Wolpert, M. (2016). Developing A Proof-Of-Concept Selection Test For Entry Into Primary Teacher Education Programs. *International Journal of Assessment Tools in Education*, 4(2), 96–114. https://doi.org/10.21449/ijate.275772
- Klassen, R. M., Durksen, T., Rowett, E., & Patterson, F. (2014). Applicant Reactions To A Situational Judgment Test Used For Selection Into Initial Teacher Training. *International Journal of Educational Psychology*, 3(2), 104–124. https://doi.org/10.4471/ijep.2014.07
- Klassen, R. M., & Kim, L. E. (2019). Selecting Teachers And Prospective Teachers: A Meta-Analysis. *Educational Research Review*, 26, 32–51. https://doi.org/10.1016/j.edurev.2018.12.003
- Klassen, R. M., Kim, L. E., Rushby, J. V., & Bardach, L. (2020). Can We Improve How We Screen Applicants For Initial Teacher Education? *Teaching and Teacher Education*, 87, 1–11. https://doi.org/10.1016/j.tate.2019.102949
- Koschmieder, C., & Neubauer, A. C. (2021). Measuring Emotion Regulation For Preservice Teacher Selection: A Theory-Driven Development Of A Situational Judgment

- Test. *Personality and Individual Differences*, 168, 1–16. https://doi.org/10.1016/j.paid.2020.110363
- Lazarides, R., Buchholz, J., & Rubach, C. (2018). Teacher Enthusiasm And Self-Efficacy, Student-Perceived Mastery Goal Orientation, And Student Motivation In Mathematics Classrooms. *Teaching and Teacher Education*, 69, 1–10. https://doi.org/10.1016/j.tate.2017.08.017
- Leys, C., Arnal, C., Wollast, R., Rolin, H., Kotsou, I., & Fossion, P. (2020). Perspectives on Resilience: Personality Trait or Skill? *European Journal of Trauma & Dissociation*, 4(2), 1–6. https://doi.org/10.1016/j.ejtd.2018.07.002
- Li, K., Rollins, J., & Yan, E. (2017). Web Of Science Use in Published Research and Review Papers 1997–2017: A Selective, Dynamic, Cross-Domain, Content-Based Analysis. *Scientometrics*, 115(1), 1–20. https://doi.org/10.1007/s11192-017-2622-5
- Lievens, F., & Patterson, F. (2011). The Validity and Incremental Validity of Knowledge Tests, Low-Fidelity Simulations, And High-Fidelity Simulations for Predicting Job Performance in Advanced-Level High-Stakes Selection. *The Journal of Applied Psychology*, 96(5), 927–940. https://doi.org/10.1037/a0023496
- Lievens, F., Peeters, H., & Schollaert, E. (2008). Situational Judgment Tests: A Review Of Recent Research. *Personnel Review*, 37(4), 426–441. https://doi.org/10.1108/00483480810877598
- Matošková, J., & Kovářík, M. (2017). Development Of A Situational Judgment Test As A Predictor Of College Student Performance. *Journal of Psychoeducational Assessment*, 35(8), 768–784. https://doi.org/10.1177/0734282916661663
- Mohamed Shaffril, H. A., Samsudin, S. F., & Abu Samah, A. (2020). The ABC Of Systematic Literature Review: The Basic Methodological Guidance For Beginners. *Quality & Quantity. Advance Online Publications*. https://doi.org/10.1007/s11135-020-01059-6
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Journal of Clinical Epidemiology*, 62(10), 1006–1012. https://doi.org/10.1016/j.jclinepi.2009.06.005
- Motowidlo, S. J., & Beier, M. E. (2010). Differentiating Specific Job Knowledge From Implicit Trait Policies In Procedural Knowledge Measured By A Situational Judgment Test. *Journal of Applied Psychology*, 95(2), 321–333. https://doi.org/10.1037/a0017975
- Motowidlo, S. J., Hooper, A. C., & Jackson, H. L. (2006). Implicit Policies About Relations Between Personality Traits and Behavioral Effectiveness in Situational Judgment Items. *Journal of Applied Psychology*, 91(4), 749–761. https://doi.org/10.1037/0021-9010.91.4.749
- Motowidlo, S. J., Hooper, A. C., & Jackson, H. L. (2013). A Theoritical Basis For Situational Judgement Tests. In J. A. Weekley & R. E. Ployhart (Eds.), *Situational Judgment Tests: Theory, Measurement And Application* (pp. 57–82). Lawrence Erlbaum Associates, Inc.
- Nadmilail, A. I., & Mohd Matore, M. E. E. (2021). Trend Of Using Situational Judgement Test On School Teachers: A Systematic Literature Review. *Journal of Contemporary Issues in Business and Government*, 27(2), 6117–6141. https://doi.org/10.47750/cibg.2021.27.02.607
- National Research Council. (2015). Situations And Situational Judgment Tests. In National Research Council (Ed.), Measuring Human Capabilities: An Agenda For Basic Research On The Assessment Of Individual And Group Performance Potential For Military Accession (pp. 187–199). National Academies Press. https://doi.org/10.17226/19017

- O'Connell, M. S., Hartman, N. S., McDaniel, M. A., Grubb, W. L., & Lawrence, A. (2007). Incremental Validity of Situational Judgment Tests for Task and Contextual Job Performance. *International Journal of Selection and Assessment*, 15(1), 19–29. https://doi.org/10.1111/j.1468-2389.2007.00364.x
- Park, D., Tsukayama, E., Goodwin, G. P., Patrick, S., Duckworth, A. L., Luther, M., & Jr, K. (2017). A Tripartite Taxonomy of Character: Evidence for Intrapersonal, Interpersonal, and Intellectual Competencies in Children. *Contemporary Educational Psychology*, 48(1), 16–27. https://doi.org/10.1016/j.cedpsych.2016.08.001
- Patterson, F., Ashworth, V., Zibarras, L., Coan, P., Kerrin, M., & O'Neill, P. (2012). Evaluations Of Situational Judgement Tests To Assess Non-Academic Attributes In Selection. *Medical Education*, 46(9), 850–868. https://doi.org/10.1111/j.1365-2923.2012.04336.x
- Patterson, F., Prescott-Clements, L., Zibarras, L., Edwards, H., Kerrin, M., & Cousans, F. (2016). Recruiting For Values In Healthcare: A Preliminary Review Of The Evidence. *Advances in Health Sciences Education*, 21(4), 859–881. https://doi.org/10.1007/s10459-014-9579-4
- Patterson, F., & Zibarras, L. (2018). Selection And Recruitment In The Healthcare Professions: Research, Theory And Practice. In *Palgrave MacMillan*. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-94971-0
- Patterson, F., Zibarras, L., & Ashworth, V. (2016). Situational Judgement Tests In Medical Education And Training: Research, Theory And Practice: AMEE Guide No. 100. *Medical Teacher*, 38(1), 3–17. https://doi.org/10.3109/0142159X.2015.1072619
- Pavlidou, K., Alevriadou, A., & Antoniou, A. S. (2020). Professional Burnout In General And Special Education Teachers: The Role Of Interpersonal Coping Strategies. *European Journal of Special Needs Education*, 1–18. https://doi.org/10.1080/08856257.2020.1857931
- Peterson, A., & Arthur, J. (2021). Ethics And The Good Teacher. Routledge.
- Ployhart, R. E. (2013). The Predictor Response Process Model. In J. A. Weekley & R. E. Ployhart (Eds.), *Situational Judgment Tests: Theory, Measurement and Application* (pp. 83–106). Lawrence Erlbaum Associates, Inc.
- Ryan, A. M., & Ployhart, R. E. (2014). A Century of Selection. *Annual Review of Psychology*, 65(1), 693–717. https://doi.org/10.1146/annurev-psych-010213-115134
- Sambaiah, M., & Aneel, Y. (2016). Intrapersonal Skills As Core Of The Personality: Some Home Truths. *Journal of English Language and Literature*, 3(1), 225–230.
- Schleicher, A. (2014). Equity, Excellence and Inclusiveness in Education: Policy Lessons from Around the World, International Summit on the Teaching Profession. OECD Publishing.
- Schroder, H. S., Yalch, M. M., Dawood, S., Callahan, C. P., Donnellan, M. B., & Moser, J. S. (2017). Growth Mindset Of Anxiety Buffers The Link Between Stressful Life Events And Psychological Distress And Coping Strategies. *Personality and Individual Differences*, 110, 23–26. https://doi.org/10.1016/j.paid.2017.01.016
- Seaton, F. S. (2018). Empowering Teachers to Implement A Growth Mindset. *Educational Psychology in Practice*, 34(1), 41–57. https://doi.org/10.1080/02667363.2017.1382333
- Stoll, G., Einarsdóttir, S., Song, Q. C., Ondish, P., Sun, J. J., & Rounds, J. (2020). The Roles of Personality Traits and Vocational Interests in Explaining What People Want Out of Life. *Journal of Research in Personality*, 86, 1–37. https://doi.org/10.1016/j.jrp.2020.103939
- Tohidi, H., & Jabbari, M. M. (2012). The Effects of Motivation in Education. *Procedia Social and Behavioral Sciences*, 31, 820–824. https://doi.org/10.1016/j.sbspro.2011.12.148

- Turiano, N. A. (2020). Conscientiousness. In V. Zeigler-Hill & T. K. Shackelford (Eds.), Encyclopedia of Personality and Individual Differences (pp. 848–853). Springer.
- Webster, E. S., Paton, L. W., Crampton, P. E. S., & Tiffin, P. A. (2020). Situational Judgement Test Validity for Selection: A Systematic Review and Meta-Analysis. *Medical Education*, 54(10), 888–902. https://doi.org/10.1111/medu.14201
- Weekley, J. A., Ployhart, R. E., & Holtz, B. C. (2013). On the Development of Situational Judgement tests: Issues in Item Development, Scaling and Scoring. In J. A. Weekley & R. E. Ployhart (Eds.), Situational Judgment Tests: Theory, Measurement and Application (pp. 157–182). Lawrence Erlbaum Associates, Inc.
- Whetzel, D. L., Sullivan, T. S., & McCloy, R. A. (2020). Situational Judgment Tests: An Overview Of Development Practices And Psychometric Characteristics. *Personnel Assessment and Decisions*, 6(1), 1–16. https://doi.org/10.25035/pad.2020.01.001
- Zakaria, M. H., Yatim, B., & Ismail, S. (2014). Implementation Of Graduate Employability Skills SJT Instrument In Universiti Utara Malaysia. *AIP Conference Proceedings*, 1635, 962–965. https://doi.org/10.1063/1.4903698
- Zhu, J., & Liu, W. (2020). A Tale of Two Databases: The Use of Web of Science and Scopus in Academic Papers. *Scientometrics. Advance Online Publication.*, 123(1), 321–335. https://doi.org/10.1007/s11192-020-03387-8