

### **International Journal of Health Sciences**

Available online at www.sciencescholar.us Vol. 6 No. 2, August 2022, pages: 661-681 e-ISSN: 2550-696X, p-ISSN: 2550-6978 https://doi.org/10.53730/ijhs.v6n2.7580



### Development of Digital Instruments for Measuring the Effect of Open Selection, Job Satisfaction, Transformational Leadership, and Work Motivation on the Performance of Civil Servants



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Manuscript submitted: 4 January 2022, Manuscript revised: 26 March 2022, Accepted for publication: 23 April 2022

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#### Kevwords

digital instruments; employee performance; job satisfaction; open selection; transformational leadership; work motivation;

#### **Abstract**

The state civil apparatus (SCA) is a state asset. SCA must be maintained, and its competence is developed to provide quality public services according to the times. The classic problem faced by several local governments is that many SCA is less than optimal in carrying out their service tasks to the community, arrive late, and are less productive. This study aims to develop a digital measurement instrument about the effect of open selection, job satisfaction, transformational leadership, and work motivation on the performance (OSTMonP) of civil servants. Several steps of instrument development are determining evaluation components, determining evaluation aspects, instrument items, testing instrument items, analyzing instrument items, and determining final items data collection through questionnaires and documentation. The subjects of this research are two experts who pick the validity and 45 respondents as SCA in the reliability test. The analytical technique instrument through content validation uses the Gregory formula. The instrument reliability test used the Cronbach Alfa formula. The development of OSTMonP resulted in 133 items with very high validity and very high-reliability categories. OSTMonP can support the measurement of public services through several relevant factors.

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#### 1 Introduction

The performance of the State Civil Apparatus (SCA) is currently the focus of the government and society amid the high demands of the community to obtain quality public services (Engdaw, 2020). SCA is a state asset that must be maintained, and its competence developed so that it can provide services to the community by showing dedicated, disciplined, and competitive performance as mandated in the Act. The government issued Law No. 5 of 2014 concerning State Civil Apparatus stipulating that the filling of the primary high leadership position is carried out openly and competitively among SCA so that it is hoped that there will be an increase in SCA performance (Abbasi et al., 2020). SCA is also expected to carry out public service tasks, government duties, and certain development tasks. SCA employees must have professional and SCA management based on a merit system or a comparison between the qualifications, competencies, and performance of candidates in recruitment, promotion of positions that are carried out openly and competitively, and in line with good governance (Aurora, 2021; Boyd, 2021).

The classic problem faced by some local governments is that many SCA is less than optimal. There are in carrying out their service tasks to the community, arriving late, leaving assignments during working hours, doing less productive activities, creating long and convoluted bureaucracies, and other things that do not reflect effective and efficient performance (Mallari et al., 2020; Zhang et al., 2020). The position and role of SCA as elements of the state apparatus who serve as public servants must provide good service to the community based on loyalty and obedience to Pancasila and the 1945 Constitution. Employees need to receive guidance to carry out their duties properly. Employee coaching is directed at improving the quality of human resources so that they have attitudes and behaviors that can provide services according to the demands of community development (Deslatte et al., 2020). Thus, good performance can be achieved following the applied performance standards under the government's vision and mission.

Employees' work motivation strongly influences the increase in the performance of government employees both from internal and external factors (Paais & Pattiruhu, 2020). One of the motivations from outside the individual is leadership (Tran et al., 2021). The concept of leadership is generally interpreted as a key aspect in determining the success of an organization because leadership plays an important role in the management of employees, which helps to maximize their efficiency (producing the most output with the least input) and effectiveness to achieve their organizational goals. Leaders play a very important role in ensuring the good behavior of their employees (Kaluza et al., 2021). Leaders must have good decision-making skills in carrying out responsibilities for all processes, from procurement to evaluating work programs and the workforce (Alonso-Almeida & Llach, 2019). Leadership competence will lead to employee performance, showing how an employee completes his job duties.

Government Regulation No. 11 of 2017 concerning Management of Civil Servants aims to manage SCA to produce professional SCA, have basic values, and professional ethics, be free from political intervention, clean from practices such as collusion, corruption, and nepotism (Bass et al., 2003; Breaugh et al., 2018). However, in reality, there are still SCA who cannot manage themselves to change their mindset according to government policies (Love et al., 2020). Several previous research results show that the increase in employee performance is influenced by available selection and transformational leadership. The facts show that the quality of the relationship between leaders and subordinates is still less harmonious and relevant (Barnes et al., 2020; Harb et al., 2021). In some cases, efforts to find potential transformational leaders are less open and competitive (Donkor et al., 2021). In addition, job satisfaction and work motivation also determine the quality of employee performance. If there is an increase in job satisfaction, work motivation also increases by 66.3% (Afifah & Al Musadieq, 2017). This study aims to provide a digital measurement instrument for the effect of open selection, job satisfaction, transformational leadership, and work motivation on the performance of civil servants

(OSTMonP) as field implementers in the government system (Ernawati et al., 2022). The research question is (1) how is the grand theory of the basis for compiling employee performance measurement instruments?; (2) what are the results of the validity and reliability of the OSTMonP measurement instrument?; and (3) How is the final item of the reliable OSTMonP measurement instrument used to measure the performance of civil servants?

#### 2 Materials and Methods

#### Stages of Research

This research is instrument development research. The research description focuses on the study of product development of measurement instruments. The instrument developed is an instrument that refers to the quality of public services that can support the measurement of the effect of open selection, job satisfaction, transformational leadership, and work motivation on the performance of civil servants (OSTM). The stages of developing the instrument can be seen in Figure 1.

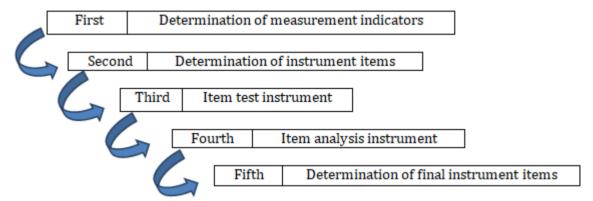


Figure 1. Stages of Developing the OSTMonP Digital Measurement Instruments

First, researchers carry out activities to determine measurement indicators. This stage determines the main purpose of the measurement indicator, namely employee performance. Several supporting variables are available selection, job satisfaction, transformational leadership, and work motivation (Gumusluoglu & Ilsev, 2009). Several indicators in the first stage serve as a reference for determining instrument items. Second, the researcher determines the items of the measurement instrument that will be used later as a measuring tool for activities in the field. Third, the researcher conducted a test of the instrument items to get an expert's assessment and the results of the respondents' measurements to show the quality of the item (Chua & Ayoko, 2021; Ciakaren, 2014). Fourth, the results of data from experts and respondents were analyzed so that the item of the instrument proved to be valid and reliable. Fifth, the Determination of the final measurement instrument product is ready to be used as a measuring tool in the assessment process in the field.

#### Research subject

The subject of this study involved two administrative and management education experts who played a role in supporting the instrument's validity. In addition, forty-five respondents were involved in supporting the instrument's reliability. Respondents have status as SCA in the Bali Provincial Government, Indonesia.

#### Data collection instruments

The data in this study were obtained through a questionnaire. The questionnaire contains the items of the measurement instrument on the variables of the effect of open selection, job satisfaction, transformational

leadership, and work motivation on the performance of civil servants (Arshadi, 2010). Data collection is also supported by documentation in the form of photos of the validation process by experts. Reliability data were collected through response questionnaires. Additional authentic evidence is also equipped with photos of distributing questionnaires to respondents.

#### Research data analysis techniques

This study uses data analysis techniques based on content validity through expert data analysis using the Gregory formula. The reliability test of the measurement instrument uses Cronbach's Alpha coefficient. The research data is based on a non-test instrument that uses a Likert scale. Information on the validity and reliability of the instrument in this study follows the Guilford classification. Table 1 shows the classification of validity and reliability scores (Divayana et al., 2019).

Table 1 Classification for Validity and Reliability Scores of Instruments

Score Range	Validity Category	Reliability Category
$.80 < r_{xy} \le 1.00$	Very High	Very High
$.60 < r_{xy} \le .80$	High	High
$.40 < r_{xy} \le .60$	Enough	Enough
$.20 < r_{xy} \le .40$	Low	Low
$.00 < r_{xy} \le .20$	Poor	Poor
$r_{xy} \leq .00$	Invalid	Invalid

#### 3 Results and Discussions

#### 3.1 Results

Some of the findings that need to be discussed in more detail in this study follow the existing problems. Based on the research method used to solve these problems, the results of this study present several things as follows.

#### Measurement indicator

The first stage in this study presents the main objective of measurement variables, namely aspects of employee performance. Supporting factors, namely open selection, job satisfaction, transformational leadership, and work motivation, are also clearly described. The measurement indicators are arranged through a grand theory matrix on each variable. Grand theory refers to the literature review. The contents of the grand theory matrix can be seen in full in Table 2.

Table 2
Grand Theory Matrix on Each Measurement Variable

Variable	Grand Theory	Characteristics	Indicator
Employee Performance	Performance is the result of work that can be achieved by a Civil Servant in an organization following the authority and responsibility of a person both in quantity and quality in carrying out work optimally by utilizing existing resources within the specified time.	<ul> <li>Quantity</li> <li>Quality</li> <li>Proactive behavior</li> <li>Work procedures</li> <li>Organizational processes</li> <li>Effectiveness</li> <li>Behavior</li> <li>Function</li> <li>Attitude</li> </ul>	Y1.1 Quality Y1.2 Quantity Y1.3 Effectivity Y1.4 Proactive Behavior Y1.5 Working Procedure Y1.6 OrganizationalProcess Y1.7 Function

Variable	Grand Theory	Characteristics	Indicator
Open Selection	Open selection is a process or procedure for hiring the right SCA candidate for a High Leadership Position by assessing the suitability of the candidate by predicting the extent to which they will be able to carry out the role successfully.	<ul> <li>Planning</li> <li>Implementation</li> <li>Evaluation</li> <li>Implementation using psychometric tests, presentations, case studies interviews</li> </ul>	X1.1.Planning X1.2. Implementation X1.3. Evaluation and Monitoring
Job Satisfaction	Job satisfaction is defined as a sense of achievement and success of a Civil Servant which is believed to be directly related to productivity and work performance in achieving personal well-being.	<ul> <li>Leadership style</li> <li>Financial</li> <li>Working hours</li> <li>Stress level</li> <li>Level of flexibility</li> <li>Productivity</li> <li>Work performance</li> <li>Behavior at work</li> <li>Wages</li> <li>Career development</li> <li>Relations between employees</li> <li>Job placement</li> <li>Type of work</li> <li>Organizational structure</li> <li>Quality control</li> <li>Job design</li> <li>Work environment</li> </ul>	X2.1 Productivity X2.2 Work Performance X2.3 Behavior at Work X2.4 Salary X2.5 Relations Between Employees X2.6 Quality Control X2.7 Work Environment
Transformational Leadership	Transformational leadership is defined as a leadership style that inspires Civil Servants or followers to change beliefs, values, capabilities, and motives to improve their performance beyond personal interests for the benefit of the organization while building a sense of self-motivation in its employees.	<ul> <li>Ideal influence</li> <li>Inspirational motivation</li> <li>Intellectual stimulation</li> <li>Individual considerations</li> </ul>	X3.1 Ideal Effect X3.2 Inspirational Motivation X3.3 Intellectual Stimulation X3.4 Individual Considerations
Work Motivation	Work motivation is the drive and desire that causes a Civil Servant to do an activity or job by giving his best to achieve the desired goal.	<ul> <li>Internal</li> <li>External</li> <li>Salary Safety benefits</li> <li>Awards and praise</li> <li>Retrieval system</li> <li>Relationships with colleagues</li> <li>Self-development</li> <li>Extrinsic (additional incentives such as salary or promotion, some praise, and appreciation)</li> <li>Intrinsic</li> <li>Need for achievement</li> <li>Need for affiliation</li> <li>The need for power</li> </ul>	X4.1 Internal X4.2 External X4.3 Extrinsic X4.4 Intrinsic X4.5 Achievement requirement X4.6 Need to affiliate X4.7 Need for power

#### Measuring Instrument Items

The second stage produces a measurement instrument that has not been judged. The items of the measuring instrument are derived from each of the indicators described in Table II. The items of the measuring instrument can be seen in Table 3.

Table 3
Items of Ostmonp Measurement Instruments

Variable	Indicators	Positive items	Quantity (Statement Number)
Employee	Y1.1 Quality		5 (1,2,3,4,5)
Performance	Y1.2 Quantity		5 (6,7,8,9,10)
(N=28)	Y1.3 Effectiveness		3 (11,12,13)
	Y1.4 Proactive Behavior	$\sqrt{}$	6 (14,15,16,17,18,19)
	Y1.5 Working Procedure	$\sqrt{}$	3 (20,21,22)
	Y1.6 Organizational Process	$\sqrt{}$	3 (23,24,25)
	Y1.7 Function	$\sqrt{}$	3 (26,27,28)
Open Selection	X1.1.Open Selection Planning	$\sqrt{}$	8 (1,2,3,4,5,6,7,8)
(N=26)	X1.2.Implementation of Open Selection	$\sqrt{}$	7 (9,10,11,12,13,14,15)
	X1.3.Evaluation and Monitoring of	$\sqrt{}$	11(16,17,18,19,20,21,22,23,2
	Open Selection		4,25,26)
Job Satisfaction	X2.1 Productivity	$\sqrt{}$	3 (1,2,3)
(N=22)	X2.2 Work Performance	$\sqrt{}$	4 (4,5,6,7)
	X2.3 Behavior at Work	$\sqrt{}$	3 (8,9,10)
	X2.4 Salary	$\sqrt{}$	3 (11,12,13)
	X2.5Relations Between Employees	$\sqrt{}$	3 (14,15,16)
	X2.6Quality Control	$\sqrt{}$	3 (17,18,19)
	X2.7Work Environment	$\sqrt{}$	3 (20,21,22)
Transformational	X3.1Ideal Effect	$\sqrt{}$	7 (1,2,3,4,5,6,7)
Leadership	X3.2Inspirational Motivation	$\sqrt{}$	8(8,9,10,11,12,13, 14,15)
(N=35)	X3.3 Intellectual Stimulation	$\sqrt{}$	9(16,17,18,19,20,21,22,23,24)
	X3.4Individual Considerations	$\sqrt{}$	11(25,26,27,28,29,30,31,32,3
		_	3,34,35)
Work Motivation	X4.1 Internal	$\sqrt{}$	3 (1,2,3)
(N=29)	X4.2 External	$\sqrt{}$	3 (4,5,6)
	X4.3 Extrinsic	$\sqrt{}$	4 (7,8,9,10)
	X4.4 Intrinsic	$\sqrt{}$	6 (11,12,13,14,15,16)
	X4.5 Achievement requirement	$\sqrt{}$	5 (17,18,19,20,21)
	X4.6 Need to affiliate	$\sqrt{}$	5 (22,23,24,25,26)
	X4.7 Need for power	$\sqrt{}$	3 (27,28,29)

#### Test instrument

The results in stage three are tested instrument items. The measurement instrument was tested through two forms of trials. The tests carried out were the content validity test of the instrument and the instrument's reliability test. The content validity test involved two experts. The instrument reliability test is 45 respondents as SCA. The complete data from the content validity test results are in Table 4. The experimental data are then presented in a cross-tabulation. A complete description of the cross-tabulation process is as follows.

Table 4
Data Cross Tabulation of Test Results for OSTMonP Measurement Instruments Performed by Two Experts

Variable	E	vrn out		Expert I	
variable	E	xpert	Less Relevant	Very Relevant	Validity
Employee	Expert	Less	12		.96
Performance	II	Relevant	A (1)	B (0)	
		Very		1,2,3,4,5,6,7,8,9,	
		Relevant		10,11,13,14,	

Variable Expert		ariable Expert Expert Expert I		— Validity	
variable	E	xpert	Less Relevant	Very Relevant	— validity
				15,16,17,18,19,	
				20,21,22,23,24,	
				25,26,27,28	
			C (0)	D (27)	
Open Selection	Expert	Less	6		
	II	Relevant	A (1)	B (0)	
		Very	21	1,2,3,4,5,7,8,9,	.92
		Relevant		10,11,12,13,14,	
				15,16,17,18,19,20	
				22,23,24,25,26	
			C (1)	D (24)	
Job Satisfaction	Expert	Less	14		
	II -	Relevant	A (1)	B (0)	
		Very		1,2,3,4,5,7,8,9,	.95
		Relevant		10,11,12,13,15,	
				16,17,18,19,20,21	
				22	
			C (0)	D (21)	
Transformational	Expert	Less	33		
Leadership	II -	Relevant	A (1)	B (0)	
•		Very		1,2,3,4,5,7,8,9,	.97
		Relevant		10,11,12,13,14,	
				15,16,17,18,19,	
			C (0)	20,21,22,23,24,	
				25,26,27,28,29,	
				30,31,32,34,35	
				D (34)	
Work Motivation	Expert	Less	10,25	,	.93
	II .	Relevant	A (2)	B (0)	
		Very		1,2,3,4,5,7,8,9,	
		Relevant		11,12,13,14,	
			C (0)	15,16,17,18,19,	
				20,21,22,23,24,	
				,26,27,28,29	
				D (27)	

Table 4 describes the results of validation by experts using the Gregory formula (Divayana et al., 2019) with the formula (D/(A+B+C+D)). The validation results show the value of the instrument variable for employee performance is .96, the instrument variable for available selection is .92, the instrument variable is job satisfaction .95, the instrument variable is transformational leadership .97, and the instrument variable is work motivation .93. After the validation of the contents of the instrument is known, the next step is to determine the instrument's reliability. Table 5 shows the complete data on the results of reliability trials using SPSS.

Table 5
Reliability Test Result Data For OSTMonP Measurement Instruments

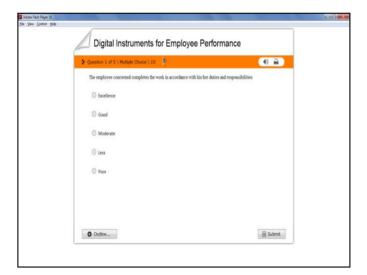
Variable	N	Cronbach's Alpha	Description
Employee Performance	28	.93	Reliable
Open Selection	26	.94	Reliable

Job Satisfaction	22	.94	Reliable
Transformational Leadership	35	.97	Reliable
Work Motivation	29	.94	Reliable

Table V shows the results of the reliability test. There are open selection variable data with 26 statements, Cronbach's Alpha value is .94, job satisfaction is obtained with 22 statements, Cronbach's Alpha is .94, transformational leadership is obtained with 35 statements, Cronbach's Alpha is .97, work motivation is 29 statements. Cronbach's Alpha value was obtained at .94, and performance with 28 statements obtained Cronbach's Alpha value at .93.

#### Instruments item analysis

Based on the results of the calculation of the instrument's content validity, the value of content validity is obtained, which indicates that, in general, the contents of the instrument are classified as very high validity. This category can be identified according to the Guilford classification in the range of  $0.80 < r_{xy} 1.00$ . Based on Table 5, several items must be discarded because they are not relevant to the expert's judgment. Some of the items that were wasted on the variables of employee performance, open selection, job satisfaction, transformational leadership, and work motivation, respectively, were one item, two items, one item, and two items. Based on the value of Cronbach's alpha, the reliability value is obtained, which indicates that the reliability of the instrument items is classified as very high reliability. Cronbach's alpha is used to measure the reliability of the indicators used in the research questionnaire. The final shows 133 item analysis results based on the results of the validity and reliability tests. For more details about the form of digital instruments can be seen in the following Figure 2.







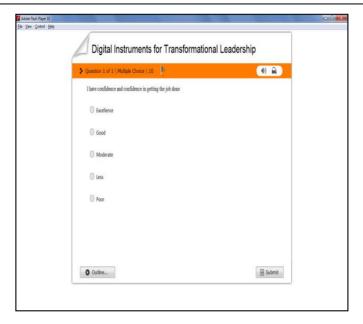




Figure 2. Display of Digital Instruments for Measurement of OSTMonP

#### Final digital instruments

The following descriptions are statements as the final digital instrument items that lead to each measurement indicator.

Table 6
Digital instruments for employee performance

# No Statements Y1.1Quality

- 1. The employee concerned completes the work following his/her duties and responsibilities
- 2. The employee works optimally throughout working hours
- 3. The employee concerned analyzes each type of work for which he is responsible
- 4. The employee concerned completes the work according to the proportion of his duties

No	Statements
5.	The employee completes the work following the specified working hours
	V1.20uantity

- 6. The employee in question arrived at the office on time
- 7. The employee completes the assigned work according to the number of tasks assigned by the leadership
- 8. The quantity of employee work following predetermined work standards
- 9. The employee can complete the work according to the position in the assignment
- 10. The employee in question often asks for permission while at work Y1.3Effectiveness
- 11. The employee concerned shall document in writing the duties, authorities, and responsibilities of the job in the policies, procedures, and job descriptions
- 12. The employee and other employees take advantage of the organizational resources provided (wasted)
- 13. The employee finishes his work before the allotted time Y1.4 Proactive Behavior
- 14. The employee adapts to changes in technology and policies
- 15. The employee does different things from time to time independently
- 16. The employee and co-workers provide feedback to the organization
- 17. The employee has a very high commitment to work
- 18. The employee uses time very effectively to do the work according to his/her duties
- 19. Employees act based on work procedures established by the organization/office Y1.5 Working Procedure
- 20. The employee completes according to the SOP in the organization
- 21. The employee organizes workgroups and manages the resources available in the work environment
- 22. The employee carries out work based on his position in the office Y1.6 Organizational Process
- 23. The employee is concerned with completing the task by following the procedures and regulations in the organization
- 24. The employee actively interacts in building the organization
- 25. The employees concerned help each other in completing tasks Y1.7 Function
- 26. These staff/employees have a good understanding of the duties of their positions with other positions within or outside the scope of the organization
- 27. These staff/employees understand the roles and functions of each fellow staff
- 28. These staff/employees play an active role in setting the mission and objectives of the office

### Table 7 Digital instruments for open selection

#### Statements No X1.1 Open Selection Planning Planning for the selection of positions is announced openly 1 2 Explanation and description of the type of work held before the open selection 3 The selection process is carried out to fill vacant positions 4 To take part in the open selection, a candidate must meet certain requirements 5 The selection process must go through several objective stages 6 Interview test required during the selection process (wasted) 7 A health test is required in the selection process 8 Candidates must also take a written test that has been prepared X1.2 Implementation of Open Selection 9 The implementation of an open selection is accompanied by a description and job description 10 The selection process through a clear mechanism and the results can be accounted for

- 11 Having work experience is very important
- 12 The tests carried out are related to the work in the selected position
- 13 Each stage of the selection is announced openly
- 14 Announcement of the election results is also carried out through mass media and social media
- After the selection, it is necessary to have a performance contract between the leadership and staff **X1.3 Evaluation and Monitoring**
- 16 The selection planning process contains requirements that are following competencies and job positions
- 17 The selection process also involves an independent selection monitoring team
- 18 Educational background following the chosen field of work

My work environment is very supportive of my work

- 19 The selection process does not discriminate between ethnicity, religion, and race
- 20 Each stage of the assessment has its score

Statements

- 21 The evaluation process at each stage is announced publicly (wasted)
- 22 Evaluation of the selection results is carried out by a competent team/committee
- 23 The Selection Team involves elements from the external government
- 24 Skill tests are carried out to support the open selection of high leadership positions
- 25 Monitoring after the selection is carried out for employee performance evaluation material
- 26 Psychological tests and interviews are carried out by different selection teams/committees

### Table 8 Digital Instruments for Job Satisfaction

#### No X2.1 Productivity 1 I produce work that fits the task with minimal resources 2 I can improve my work 3 I feel my work results have improved based on the time allotted **X2.2 Work Performance** 4 I show achievement in my work 5 I improve my work 6 I can finish the quantity according to the set time limit I do my job according to my abilities and skills 7 X2.3 Behavior at Work 8 I act according to the organization's rules at work The organization I work for has written rules that govern my work 10 I behave according to religious norms, respected local culture X2.4 Salary I get a salary that fits my job 11 12 The salary given by the organization is in accordance with my job 13 The payroll system is very open in my organization X2.5 Relations between Employees I have a good relationship with subordinates (wasted) 14 15 I have a good communication relationship with co-workers I have a good relationship with the boss where I work **X2.6 Quality Control** 17 My boss does regular monitoring My work is evaluated regularly 18 The results of monitoring and evaluation of my work are communicated openly 19 **X2.7 Working Environment** 20 Access to my work environment supports my work 21 The atmosphere of my workplace is very comfortable to work

22

## Table 9 Digital instruments for transformational leadership

	Statements
No	X3.1 Ideal Effect
1	I have confidence and confidence in getting the job done
2	I can convince subordinates that the interests of the organization must come first
3	I set high work goals and standards
4	I provide beliefs and values in the organization as things that must be done by subordinates
5	I convince subordinates of the work standards that must be followed and completed
6	I make sure the work of the subordinates is completed on time
7	I encourage subordinates to work creatively
	X2.2 Inspirational Motivation
8	I can influence co-workers to participate in completing work
9	I inspire my subordinates with ways of looking at problems that were very difficult for me at first
10	I create a work environment that can provide work motivation to subordinates
11	I allow subordinates to see problems as learning opportunities
12	I express important goals in a simple way
13	I show and acknowledge the achievements of subordinates
14	I allow subordinates to work according to their own work methods
15	I inspire my subordinates with ways to look at problems that are very difficult at first
	X2.3 Intellectual Stimulation
16	I allow subordinates to state the problem
17	I can manage work teams in creating innovations in carrying out work
18	I make sure there is some kind of agreement between what is expected with what is done and what is
10	obtained from his efforts
19	I give awards for the work performance of subordinates I give freedom to my subordinates to complete work in their way
20 21	I tell my subordinates how I do my job
22	I give opportunities to subordinates that mistakes are learning opportunities
23	I treat subordinates as individuals
24	I am satisfied with the performance of subordinates as long as it is built with a work plan
	X3.4 Individual Considerations
25	I can direct subordinates in completing work
26	I understand the psychological and emotional conditions of subordinates
27	I consider subordinates as individuals who have biological, psychological, social, and spiritual needs
28	I provide mental and emotional support for subordinates who are having problems
29	I use my qualifications to provide job technical guidance
30	I use my knowledge in training the ability of subordinates to complete the job
31	I know the desires of subordinates and help to get them
32	I emphasize the use of intelligence to overcome obstacles
33	I avoid interfering with the work of subordinates unless they fail to achieve their goals (wasted)
34	I don't hesitate to praise my subordinates if they do a good job
35	I cultivate respect among employees

Table 10
Digital instruments for work motivation

	Statements
No	X4.1 Internal
1	I get paid according to work
2	The income received is sufficient to meet my needs
3	I get additional income from my base salary
	X4.2 External
4	I feel safe doing my job
5	I get health insurance
6	I get an old age guarantee
	X4.3 Extrinsic
7	I get enough salary in my position
8	My boss's leadership style is very supportive of my work
9	My working relationship is very good in the organization
10	My work environment is very comfortable in helping my work (wasted)
	X4.4 Intrinsic
11	I have a strong will to complete my work
12	I have a desire to succeed in my job
13	I have sufficient experience to achieve organizational goals
14	With the abilities I have, I want to develop myself
15	I want to show my best performance
16	I take training courses related to my job
	X4.5 Achievement Needs
17	I try hard to achieve organizational goals
18	I am trying to reach the highest career in the organization
19	I try to build a conducive organizational climate
20	I want to get an edge in doing my job
21	I want to have more creativity
	X4.6 Affiliate Requirement
22	I need a good relationship with my boss in my work
23	I need communication in completing my work
24	I can interact with co-workers
25	There is mutual respect among co-workers (wasted)
26	I need cooperation with coworkers
27	X4.7 Power Needs
27	I develop myself for my work
28	I have hope to get a position in the organization
29	I work to get a certain position in the organization

The final digital instruments are determined based on the results of the validity of the instruments' content and the results of the instruments' reliability. Items considered relevant from the expert validation results are still used, while items that are not valid are discarded. This study's final measurement instrument item is based on the results of the instrument content validation by experts shown in Table 4 and the reliability results from the respondents in Table 5. The final instrument item was used for the variables of employee performance, open selection, job satisfaction, transformational leadership, and work motivation in general. Sequentially are 27 items, 24 items, 21 items, 34 items, and 27 items. A total of 133 final items received a "very relevant" assessment from experts and a very reliable category from the respondents' results.

#### 3.2 Discussion

This research produces a digital instrument for measuring the performance of state-owned civil servants. Available selection, job satisfaction, transformational leadership, and work motivation affect employee performance—the indicators in detail through the grand theory matrix on each measurement variable in Table 2. Several employee performance indicators are supported by research results using role-based employee performance measurement.

Table 2 is supported by research results that use a role-based employee performance measurement that integrates socio-emotional selectivity theory and a future time perspective. Several employee functions in an organizational system are applied to productive and non-productive ages, which indicates some challenges that employees with potentially poor qualities (Pahos et al., 2021). Indicators on employee performance variables are relevant to redesigning the diversity of performance measurement systems that add a personorganization fit (P-O fit) point of view (Wei et al., 2019). This measurement emphasizes the congruence of goals between employees and the company. Innovations in measuring employee performance have also been developed, showing human resources as an important key in supporting measurement maturity (Sardi et al., 2020). The indicator on the available selection variable is relevant to the results of a review of the principles of open and competitive recruitment in government employee positions under the auspices of the law. The law on local government employees forms the basis for an open selection of employees (Côtéet al., 2021; Triguero-Sánchez et al., 2018). Such rules can be in the form of rules for rehiring employees and general rules for recruitment for official positions (Wiacek-Burmańczuk, 2020). Table II also shows several indicators of other variables in the OSTMonP measurement instrument, namely job satisfaction, transformational leadership, and motivation. Job satisfaction variables are also closely related to productivity, motivation, achievement, and life satisfaction, meaning that job satisfaction also affects a sense of security and satisfaction in working well in the organization (Abuhashesh et al., 2019). Staff inspired by transformational leadership are more likely to engage in work and produce helpful behavior (Lai et al., 2020).

This study also presents in detail the items of the OSTMonP measurement instrument in Table 3. Quality and quantity indicators state that employees complete work according to the proportion of their duties and their position in the task (Jann & Veit, 2021). Items in the Effectiveness indicator show employees were documenting in writing the duties, authorities, and responsibilities of workers in policies, procedures, and job descriptions. Employees' proactive behavior is shown by adapting to technological changes and providing feedback to the organization (Bartsch et al., 2020). Employees' proactive efforts are also faced with the emergence of industry 4.0, which raises interest in work-life balance and work quality. The results of the study highlight job quality as a driving factor for innovative performance in technology startup organizational systems (Choi et al., 2020). The instrument's items in the other indicators are planning, implementation and evaluation. In planning, prospective employee participants who participate in the open selection must meet certain requirements objectively according to the state civil apparatus recruitment regulations (Gadowska, 2018). Announcement of the selection results stage is also carried out through mass media and social media. In the final selection process, monitoring is carried out for evaluation materials. SCA employees act as planners, implementers, and supervisors to implement general government duties through the implementation of policies and professional public services. Productivity can be demonstrated by producing work appropriate to the task with minimal resources. In addition to productivity, the behavior of government employees is also following respected local norms and culture. The positions of government employees have their respective roles (Unsworth et al., 2021). The position of the leader has the authority to provide intellectual stimulation by providing opportunities for subordinates to state their problems (Pollermann et al., 2020). Extrinsically, the superior's leadership style supports the employee's work. Intrinsically, employees have a desire to succeed in their work.

Table 4 presents some items of the OSTMonP measurement instrument that are less relevant based on expert evaluations. In the employee performance variable, there is an indicator that has one less relevant item. In the effectiveness indicator, a statement in number 12 is discarded; namely, the employee and other employees utilize the organizational resources provided. These items are less relevant to represent effectiveness indicators because effectiveness includes elements of adaptability, work performance, and job satisfaction (Davidescu et al., 2020). In the open selection variable, two indicators have one less relevant item.

A statement in number 6 is discarded; namely, an interview test is needed during the selection process. These items are less relevant to represent indicators of open selection planning because planning leads to a logical thinking process and rational decision-making before taking action. A statement in number 21 is discarded; namely, the evaluation process at each stage is announced openly. These items are less relevant to representing evaluation and monitoring indicators because open announcements about the evaluation process do not fully represent objectivity (Gadowska, 2018). However, the evaluation results need to be publicly announced to support the transparency of the assessment. There are indicators about the relationship between employees in the job satisfaction variable, which have one less relevant item. The statement in number 14 is discarded: A good relationship with subordinates. This point is not relevant because the statement of good relations with subordinates tends to be a function of leadership. There are indicators about individual considerations in the transformational leadership variable, which have one less relevant item. The statement in number 33 is discarded that avoids interfering with the work of subordinates unless it fails to achieve the goal. This item is less relevant because, as a leader, it is necessary to monitor the work of subordinates who succeed and fail to achieve their goals (Sun et al., 2021). In the work motivation variable, two indicators have one less relevant item. A statement at number 10 is discarded; namely, the work environment is very comfortable helping in work. In the indicator of the need for affiliation, a statement at number 25 is discarded, namely mutual respect between co-workers. This item is not relevant because this item has been represented by another item, namely interaction with co-workers. Interaction means a form of communication, cooperation, or affinity between two parties (Kranz et al., 2020).

Table 5 shows that the OSTMonP measurement instrument is reliable. A reliable instrument indicates how much a measuring instrument can be trusted. When an instrument is used repeatedly to measure the same thing, the results are relatively consistent. The reliability of the OSTMonP measurement instrument is thought to be in line with several underlying studies. A survey showed that the average job satisfaction level of the three indices was 63.7% based on conditions, salary, and relationship with superiors (Dziuba et al., 2020). Salary and job security are factors that individuals significantly influence job satisfaction. Achievement of performance requires motivation to achieve achievement, carry out tasks with responsibility, and always work with colleagues to support performance (Narasuci et al., 2018). The transformative leadership style has a positive nature and does not significantly affect employee performance, while work motivation has a significant positive effect on employee performance. This study also proves that work motivation successfully mediates the effect of transformational leadership on employee performance from insignificant positive to positive significant (Martha et al., 2020). The OSTMonP measurement instrument was supported by a relevant study involving 504 employees. The employee as nurses uses hierarchical linear regression analysis. The analysis showed that after controlling for several relevant variables (e.g., leader-member exchange, role-based self-efficacy, and transactional leadership and some participant demographic variables (for example, gender, age, and education). It was found that work involvement still mediates a positive relationship between transformational leadership, job performance, and mutually helpful behavior (Lai et al., 2020). Some of the results of this study are quite relevant to be used as literature and sources in support of the reliability of research instruments, especially in assessing the relationship between variables supporting employee performance.

An instrument is a tool used to measure an object or collect data from a variable. This study resulted in 133 OSTMonP measurement instruments for all variables—a visualization of the number of final instrument items, namely a reliable instrument in Figure 3. Reliable instruments meet valid and reliable criteria (Erlina et al., 2018). Valid instruments are needed to obtain correct data to support conclusions following the actual situation. The criteria for the acceptance of the value of the reliability coefficient is very dependent on the researcher's reference in choosing the opinions of the experts used. The higher the criteria used, the more consistent the data results obtained (Divayana et al., 2019).

#### 4 Conclusion

The digital instruments for OSTMonP measurement are suitable to be used as a measuring tool to support the measurement of public services through several relevant factors. The digital instruments for OSTMonP measurement included instruments for measuring open selection, job satisfaction, transformational

leadership, and work motivation as the basic factors that influence employee performance in the state civil apparatus (James & Kane, 2008). Planning, Implementation, Evaluation, and Monitoring are indicators of open selection variables. Several indicators that support job satisfaction variables are productivity, work performance, behavior at work, salary, relations between employees, quality of supervision, and work environment. Several indicators that support transformational leadership variables are ideal influence, inspirational motivation, intellectual stimulation, and individual considerations. Several indicators that support work motivation variables are internal, external, extrinsic, intrinsic, need for achievement, affiliation, and need for power. The development of digital instruments for OSTM on P measurement resulted in 133 items with very high validity and very high-reliability categories to measure employee performance with indicators showing quality, quantity, effectiveness, proactive behavior, work procedures, organizational processes, and functions. Employee development is directed at improving the quality of human resources so that they have attitudes and behaviors that can provide services according to the demands of community development. Employee development was effective in carrying out their duties properly. The results of this study will provide practical implications for improving employee performance (Güngör, 2011; Elivana & Ma'arif, 2019). Several factors need to be improved to achieve good performance, namely implementing an objective, and open selection. In addition, employee job satisfaction needs to be fulfilled through transformational leadership. Thus, work motivation can be formed both internally and externally (Raziq & Maulabakhsh, 2015).

#### **Acknowledgments**

The authors would like to thank the Principals and teachers of Elementary Schools in West Denpasar who have helped the smooth running of this research. In addition, the authors would like to thank the supervisor for their input in writing this article. Hopefully, this article can be useful to improve teacher performance in Denpasar.

e-ISSN: 2550-696X 🚨 p-ISSN: 2550-6978

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