

**BUKTI KORESPONDENSI**  
**ARTIKEL JURNAL INTERNASIONAL BEREPUTASI**

Judul artikel : Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia

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Penulis : Tri Wrahatnolo, Ekohariadi , Yeni Anistyasari

No.	Perihal	Tanggal
1	Bukti konfirmasi submit dan artikel yang akan disubmit	2 Desember 2022
2	Bukti konfirmasi review dan hasil review yang pertama	1 Februari 2023
3	Bukti konfirmasi submit revisi yang pertama	14 Februari 2023
4	Bukti konfirmasi review dan hasil review yang kedua	22 Februari 2023
5	Bukti konfirmasi submit revisi kedua, respon kepada reviewer dan artikel yang akan diresubmit	23 Februari 2023
6	Bukti konfirmasi artikel accepted	6 Maret 2023
7	Bukti konfirmasi artikel dipublished online	9 Maret 2023

## Bukti 1 Konfirmasi Submit dan Artikel yang akan Disubmit (2 Desember 2022)

T

Tri Wrahatnolo <[triwrahatnolo@unesa.ac.id](mailto:triwrahatnolo@unesa.ac.id)>

Fri, Dec 2, 2022,  
9:11 AM

to IJLTER

**Dear. Editor of IJLTER**

Let me introduce myself, Tri Wrahatnolo from the Faculty of Engineering, Universitas Negeri Surabaya (State University of Surabaya), Surabaya, East Java Province, INDONESIA.

Would you please allow us to submit a paper entitled "*Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia*" written by:

Author: Tri Wrahatnolo, Ekohariadi, and dan Yeni Anistyasari.

Corresponding author: *Tri Wrahatnolo, [triwrahatnolo@unesa.ac.id](mailto:triwrahatnolo@unesa.ac.id)*

The article was written by the stylistic and bibliographic requirements outlined in the Author Guidelines found in About the Journal. This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0).

We have completed the submission requirements and a plagiarism check (attached), so we hope our paper can be accepted and published in *International Journal of Learning, Teaching and Educational Research*.

Thank you for your attention and cooperation.

Best Regards,

Tri Wrahatnolo  
[triwrahatnolo@unesa.ac.id](mailto:triwrahatnolo@unesa.ac.id)



**IJLTER ORG** <[ijlter.org@gmail.com](mailto:ijlter.org@gmail.com)>

Wed, Dec 6, 2022,  
6:03 AM

to Yeni, Ekohariadi, me

On Tue, Dec 6, 2022 at 10:54 AM IJLTER ORG <[ijlter.org@gmail.com](mailto:ijlter.org@gmail.com)> wrote:

Dear Authors,

Thank you for your submission.

The paper is relevant to IJLTER and has passed the preliminary assessment stage.

The notification will be sent on 31st January 2023 for possible publication in the February 2023 issue if accepted and all procedures are followed on time.

Kindly do not submit this paper elsewhere while we are busy reviewing it.

Our fees are as follows. Please check it.

<http://ijlter.org/index.php/ijlter/about/submissions#authorFees>

**If the paper is accepted, you will be asked to pay the publication fees of \$800 USD.**

**Are you agreeable to pay this?**

Your paper will be placed under review after we receive your reply on the payment of the fees.

Prof. Antonio Sprock  
CE

—  
**Editorial Office**  
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**IJLTER ORG** <ijlter.org@gmail.com>

Wed, Dec 7, 2022,  
7:08 AM

to me, Ekohariadi, Yeni

Thank you.

Your paper is now under review.

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**Tri Wrahatnolo** <triwrahatnolo@unesa.ac.id>

Thu, Dec 8, 2022,  
2:12 PM

to IJLTER

Dear **Prof. Antonio Sprock**,

Thank you for your response to our paper submission.

If the paper is accepted, **we agree to pay a publication fee of \$800 USD.**

We are waiting for further notification from you about the result of the review and how to pay.

Thank you.

Best regards,

Tri Wrahatnolo

[triwrahatnolo@unesa.ac.id](mailto:triwrahatnolo@unesa.ac.id)

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ReplyForward

# Bukti 2 Konfirmasi Review dan Hasil Review yang Pertama (1 Februari 2023)

## [IJLTER] Editor Decision

External

Inbox

IJ

**IJLTER .ORG** [ijlter.org@gmail.com](mailto:ijlter.org@gmail.com) **via** [ijhss.net](http://ijhss.net) Wed, Feb 1, 7:16 AM  
to me, Ekohariadi, Yeni

Tri Wrahatnolo:

We have reached a decision regarding your submission to International Journal of Learning, Teaching and Educational Research, "Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia".

Our decision is to: accept the paper if the requested changes are made  
Language editing is required.  
Similarity report must be reduced to less than 10%. The paragraph on scale must be reviewed. Other parts are ok.

IJLTER .ORG  
[ijlter.org@gmail.com](mailto:ijlter.org@gmail.com)

-----  
Reviewer A:

Paper length::  
Ok

Originality::  
Good

Scope of paper::  
Relevant to IJLTER

Related work::  
Acceptable

Language::  
ok

References::  
ok

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

Please revisit the research methodology, I give suggestion and article that you can refer to in the comment section... you see it by track changes on in the review tab.

see 23190

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Reviewer B:

Paper length::

Ok

Originality::

Acceptable

Scope of paper::

Relevant to IJLTER

Related work::

Acceptable

Language::

discuss requires professional proofreading

References::

still need readjustment in writing APA

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

abstract: novelty research needs to be clarified again

introduction: in this section you need to explain in detail why you should develop this scale. what kind of conditions that require a development

Methods: method needs some improvement

see 23768

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Reviewer G:

Paper length::

Ok

Originality::

Good

Scope of paper::

Highly relevant

Related work::

Acceptable

Language::

Acceptable but still need editing for more clarity and understanding

References::

Well referenced and adequate in numbers

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

Please see a few comments on the manuscript.  
see 23767

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Reviewer N:

Paper length::

Ok

Originality::

Good

Scope of paper::

Highly relevant

Related work::

Acceptable

Language::

Paper of 6794-23709-1-RV.DOCX

The language is safe and so comprehensible and the paper is well presented. Mistakes are seldom. Besides this, the article is well organized and written in an acceptable degree of coherence and unity in terms of ideas, sentences, paragraphs, and sections. Some language and methodological problems are corrected by the reviewer and some edited parts are marked in colours. The author needs to know what the colours symbolize in the paper:

- yellow = Corrections / additions.
- line across the words = Omission.
- Bleu = directions or suggestions to what is marked in Red

NB

The sentence fragment in red in the abstract should be revised.

References::

For the references, both the in-text references and list of references are CAREFULLY adapted to APA 7th Ed.

- The author(s) mixed between outdated references and updated ones.
- Some references range from 1951 and 1999;
- Most references range from 2000 and 2022; they range with NO significant

gap in terms of the years involving this period seeing that just few years were missed; they are 2001, 2004, 2005, 2014, and 2015.

- The authors have succeeded to acknowledge references up to 2022.

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

Methodology speaking, the theme is so innovative and the related work is well.

- The research work originality is excellent.
- The title of the paper is precise and clear.
- The content of the abstract is highly relevant.
- The key-words are many; omit some and keep five as maximum.
- The IJLTER Template format is CAREFULLY adopted.
- The paper from introduction to conclusion is well written, organized and presented.
- The literature review is enough (3 pages).
- The practical part is rich in terms of data collection instruments (questionnaires, research subjects (300teachers) and data analysis methods (descriptive statistical method; SPSS).
- ONLY quantitative data were collected but they were adequately analyzed, interpreted and discussed.
- The presentation of the findings is well sequenced and presented in the relevant sections, and tables.
- The reference to Table 1 on p.4 is not consistent with Table 1 on p. 6.
- The authors are recommended to enclose the limitations of their study before the directions for future research in the conclusion.

Paper of 6794-23709-1-RV.DOCX

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Reviewer R:

Paper length::  
Ok

Originality::  
Acceptable

Scope of paper::  
Relevant to IJLTER

Related work::  
Acceptable

Language::  
The manuscript needs revision.

References::



References are in the proper format.

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

1. Chi-square score ( $\chi^2/df$ ) < 3  
 $1096.432/246 = 4.45$ . The model is not valid.

2. VHS only mentions in abstract. VHS should mention anywhere from introduction till 2.1 Participants.

3. Some wrong words and punctuation in 1. Introduction, 2.1 Participants and Table 1.

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Reviewer S:

Paper length::  
Ok

Originality::  
Good

Scope of paper::  
Highly relevant

Related work::  
Excellent

Language::  
Some words should be improved and fully translated in English language.

References::  
References are sufficient, but the authors must follow thoroughly the guidelines of IJLTER reference.

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

This paper is relevant and practical especially in the field of education as well as psychometric property.  
see 23569

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Reviewer V:

Paper length::

Ok

Originality::

Good

Scope of paper::

Highly relevant

Related work::

Acceptable

Language::

English

References::

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<https://doi.org/10.1186/s12913-020-05154-0>

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

The presentation of the paper appears to be good and very relevant. It offers essential information on innovation, offering new research instruments for measuring the psychological characteristics of teachers in general. However, some factors need to be modified to improve the quality of the paper.

Additionally, for future researchers to replicate a similar process in doing related studies, authors need more explanation about the methodology, results, and similarity content score in a precise manner, to wit;

1. More explanation of the research design
2. Need additional information and support on the obtained results

3. Describe the figures and tables in detail
4. Remove up to 10% of the similarity content score

Moreover, the findings and the process included in this paper will serve as a perfect avenue to add up future researchers learning in conducting research like this. Furthermore, methods, results, and discussion found in this research paper are worth to be repeated and attaining their utmost significance as it can be a source of literature to support related studies.  
see 23545

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Reviewer Z:

Paper length::  
Ok

Originality::  
Good

Scope of paper::  
Relevant to IJLTER

Related work::  
Acceptable

Language::  
The language is acceptable but needs polishing.

References::  
Check for the sequence of references.

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:

The presentation and discussion must be harmonized. Corroborate literature review with the evaluation of results and research implications.  
see 23719

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Reviewer a:

Paper length::  
Ok

Originality::  
Acceptable

Scope of paper::  
Relevant to IJLTER



Related work::  
Acceptable

Language::  
The author uses structured language, and is easily understood by readers.

References::  
The author uses 41 sources of relevant and up-to-date article references from the last ten years. However, relevant authorities for supporting sources in the discussion section still need to be added and explored.

Additional comments along the following lines: originality, literature review, methodology, evaluation of results, research implications, quality of communication, etc.:  
The originality level of the study's findings was well welcomed.

In research investigations, use relevant reference sources.

Description The research sample size in the method section needs to be rechecked. Each stage of the instrument's and scale items' development must be rechecked and adjusted to the presentation of the results in the results and discussion (or vice versa). Writing down the criteria used to determine the index received or those that did not satisfy the need to be impressed again. The author needs to write down the related supporting reference sources. The categorization of items is accepted or not accepted based on the criteria for the loading factor value. It still needs to be done further checking.

The author needs to adjust and describe the research results according to the stages in the method section. The presentation of the study's objectives and outcomes in the results and discussion section with an abstract must be more suitable. They need to be improving again. Sources of supporting references still need to be added to the results and discussion section.

Implications of the research results in developing instruments for TPCS assessment provide significant implications for improving the performance of vocational teacher teachers.  
see 23758  
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International Journal of Learning, Teaching and Educational Research  
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**One attachment** • Scanned by Gmail

## **Reviewer 1**

**Research Title:** Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia

The presentation of the paper appears to be good and very relevant. It offers essential information on innovation, offering new research instruments for measuring the psychological characteristics of teachers in general. However, some factors need to be modified to improve the quality of the paper.

Additionally, for future researchers to replicate a similar process in doing related studies, authors need more explanation about the methodology, results, and similarity content score in a precise manner, to wit;

1. More explanation of the research design
2. Need additional information and support on the obtained results
3. Describe the figures and tables in detail
4. Remove up to 10% of the similarity content score

Moreover, the findings and the process included in this paper will serve as a perfect avenue to add up future researchers learning in conducting research like this. Furthermore, methods, results, and discussion found in this research paper are worth to be repeated and attaining their utmost significance as it can be a source of literature to support related studies.

Reviewed by:

**ELIZER M. REBUCAS, PhD**

# Hasil Review

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Vol. 21, No. 4, pp. 1-8, Month 2022  
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## Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia

**Abstract.** Positive psychology intervention in education is an effort to study various positive aspects of the psychological system and is believed to improve the performance of Vocational High School (VHS) teachers. This research is a type of survey that aims to develop a Teachers Psychological Capital Scale (TPCS) measuring instrument based on a psychometric approach. Psychological analysis to test convergent validity and discriminant validity using structural equation model (SEM) with confirmatory factor analysis (CFA) technique. The TPCS measuring instrument consists of 24 items that describe the four dimensions namely self-efficacy, optimism, hope, and resiliency. The subjects of the study were VHS teachers (N = 30) spread across 10 districts/cities in Indonesia. From the results of the CFA analysis, the Psychological Capital measurement model significantly fits with the data. This means TPCS has strong psychometric feasibility and deviations from insubstantial measurements. Of the 24 items from TPCS, all of them are valid and reliable, so this instrument is feasible to use to measure the TPC level of vocational teachers on a wider scale. The future needs further research to test TPCS by adding other dimensions that still relate to this construct or applying it to different types of education.

**Keywords:** hope; optimism; positive psychology; teacher psychological capital; self-efficacy; resiliency

### 1. Introduction

Positive psychological approaches to organizational behavior and culture in public companies have been included into contemporary theories of management (Buchanan, 2013). Committed personnel that take pride in their job and actively contribute to the establishment of industry-leading benchmarks are essential in today's competitive business environment baik (Ben Moussa & El Arbi, 2020). Proactively encouraging a positive psychological approach and avoiding highlighting the negative with regards to instructors and pupils is essential for schools to follow the contemporary organizational ideas (Um-E-Rabbab & Mehdi Raza Naqvi, 2020). When applied to employees, stakeholders, and the company as a whole, positive psychology has a tendency to spark innovation and revitalize operations (Zafar et al., 2017). When confronting complicated conditions and the new normal that has emerged in the wake of the

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Covid-19 epidemic, the positive psychology method is often regarded as an effective tool for educational intervention.

Strategically equipping students with several skills for the future is one of a teacher's primary responsibilities (Valtonen et al., 2021). Teachers have a significant impact on student learning, particularly when they are provided with a stress-free environment that fosters innovation and creativity (Wang & Tahir, 2020). School-based treatments informed by positive psychology are generally well-received (Ryff, 2022). This field of research focuses on the many beneficial characteristics of the educational psychology system. Education in the new normal requires positive psychology interventions to revive the joy of learning and raise both instructors' and students' hopes and self-assurance. Since it is expected that returning to school would have a favorable effect on both instructors' and students' emotional well-being, it is crucial that they be immersed in a supportive and encouraging atmosphere.

Psychological capital (PsyCap) is the most important factor in teacher success, according to the field of organizational psychology. PsyCap refers to the process of cultivating one's psychological fortitude in order to take on and master the difficulties and skillsets inherent in one's chosen endeavors (Luthans & Youssef-Morgan, 2017). PsyCap refers to a psychological factor that predicts how invested an employee is in their work, and it includes things like feeling appreciated and having input into how they are evaluated. The use of psychological capital in academia is expanding quickly, particularly with the aim of enhancing the efficiency of institutional administration. In recent years, there has been a growing recognition among researchers and professionals of the importance of, and potential for, psychological capital in achieving one's full potential in the workplace. Several studies show that teachers' happiness is related to their satisfaction with their working conditions and their connections with their pupils, suggesting that teachers' psychological capital plays a role in their sense of happiness in the classroom. Multiple studies (Esmaili et al., 2019; Rand, 2009) demonstrate the benefit of PsyCap creation on teacher performance and its favorable effect on student success, motivation, and emotional development. Many students' attitudes and actions in the classroom may be attributed to two PsyCap constructs: the theory of expectancies (Snyder, 2000) and the theory of self-efficacy (Bandura, 2006). Academic and motivational factors have been proven as responsive to self-efficacy training, which has been addressed in the context of both cognitive and motivational domains.

There are four components that make up one's psychological capital: self-efficacy, optimism, hope, and resiliency (Luthans & Youssef-Morgan, 2017). Hope is described as a constructive outlook grounded on a learned agency and a strategy for achieving one's goals via interaction (Yim et al., 2017). A person's self-efficacy is their confidence in their own capacity to behave appropriately and successfully in a particular circumstance (Lyu et al., 2020). According to Bandura (Bandura, 2006), one's confidence in their abilities is influenced by four things: prior successes, exposure to role models, persuasive arguments, and feelings of excitement. Expert teachers may boost their pupils' self-esteem by

setting a good example. Self-efficacy is a predictor of work stress, job performance, turnover intention, and burnout (firedness), among other cognitive aspects, depending on the data source and analytic technique. People who don't believe in their own abilities are more likely to experience anxiety and tension when confronted with obstacles, which can have a chilling effect on their output. (Lyu et al., 2020). Cognitively motivated goal attainment and improved performance are both connected with hope (Brosch & Steg, 2021; Brundin et al., 2021). Evidence suggests that hope may be applied to and has a bearing on a wide range of performance variables, including those associated with the workplace and the people within an organization (Luthans & Youssef-Morgan, 2017; Shanahan et al., 2020). Educators who set lofty goals for their students tend to reap financial benefits, have more job satisfaction, and remain in their positions for longer (Azizi et al., 2021; Piwo war-Sulej, 2021).

Individuals may have a predisposition for optimism, but it is also a trait that may be taught and changed by one's environment (Vos et al., 2021). An optimistic outlook on life has been shown to have beneficial effects on both physical and mental health (Hosgor & Yaman, 2022). The likelihood of developing both mental and physical health issues is lower in more optimistic people (Cho et al., 2021). Furthermore, optimistic people have better coping mechanisms than pessimists. Having the mental fortitude to persevere in the face of adversity and emerge stronger on the other side is the definition of resilience (C. Delgado et al., 2017). Workplace stress may be mitigated in part by cultivating good emotions like resilience (Çam, 2017). Having a high resilience level is linked to better health, happiness, success in the workplace, and overall contentment with life. Employees who practice positive resilience are less likely to quit their professions, have fewer mental health issues including weariness and depression, and have higher levels of professional and personal satisfaction. In light of the preceding, it is clear how crucial it is for contemporary educational institutions to reveal their teachers' Psychological Capital, especially in times of crisis and mounting difficulty. As the discipline evolves and new research questions are posed, the need for a PsyCap scale or instrument designed specifically for use in the classroom arises. Many studies on PsyCap have been conducted in other countries, but in Indonesia, particularly in the sector of vocational education, there have been surprisingly few. Even among Indonesia's vocational education instructors, empirical notions concerning PsyCap are still uncommon.

Scale is a manifestation of latent constructs that measure aspects of attitudes, behaviors, and hypothetical scenarios that we expect to exist as a result of our theoretical understanding of the world, but cannot judge directly. Scales are typically used to capture behaviors, feelings, or actions that cannot be captured in a single item or variable. The use of multiple items to measure the underlying latent construct can also explain, and isolate the measurement errors of a particular item, leading to more accurate research findings. Thousands of scales have been developed that can measure a variety of behaviors and experiences that are social, psychological, and educational. However, scale development is not an easy, obvious, or direct effort.

There are many stages in scale development, which are expensive and take time, and complex statistical analysis. Despite the availability of a large amount of technical literature on the theory and scale development (Bai et al., 2008) incomplete scales in particular are used to measure mental and behavioral attributes that are fundamental in vocational education for our scientific research. On the other hand, the theoretical agreement on the PsyCap construct results in the many dimensions of the measurement scale of this construct in a variety of specific jobs. One difficulty that arises for psychologists and human resources researchers is how to measure a teacher's PsyCap in a reliable and relatively unbiased way. A way to overcome the current impasse is to conduct studies with a focus on the problem of the teacher's PsyCap measurement scale and on the assessment to test the extent to which the construction is measured according to the facts on the ground. Therefore, our goal is to develop the PsyCap scale for vocational Teachers in Indonesia in a simple, valid, and reliable format, in addition to helping to scale up existing ones. By testing the structure in different versions of IPCS the authors expect to obtain a valid and reliable measurement scale so that it can be applied to a wider scope and level of education.

## 2. Methods

This research is a type of survey that aims to develop a Teachers Psychological Capital Scale (IPCS) measuring instrument based on a psychometric approach.

### 2.1 Participants

The sample consisted of VHS teachers ( $N = 300$ ) spread across 10 regencies/cities in Indonesia, namely Surabaya, Bojonegoro, Tuban, Jombang, Kediri, Blitar, Tulungagung, Nganjuk, Madiun, and Malang, each school as many as 30 teachers. Teachers have the status of government employees (Permanent Teachers) as many as 220 people (73.3 %) and Non-Permanent Teachers as many as 80 (26.7 %). The gender distribution was 178 males (59.3 %) and 122 females (40.1 %). The characteristics of the sample are shown in Table 1 and indicate that it corresponds to the data of the selected study subject by purposive sampling. Participants in the study were also selected voluntarily, with all participants surveyed at data collection locations or where they worked. IPCS is anonymous and data is handled collectively. Only teachers have the authority and responsibility for their classes/study groups for at least one full year serving as teachers at VHS. This research was conducted following the principles and code of ethics of the APA (Team, 2017).

### 2.2 Item and Scale Development

Producing a valid and reliable scale entails formulating a battery of scale items with which to test a proposed theoretical framework in research. We begin with a comprehensive summary of all the stages of scale development (Boukeng et al., 2018). For each stage, we outline the necessary steps by defining key concepts and providing examples from the fields of psychology, education, and behavior

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Commented [MIR5]: The writing description of the sample size used in this study needs to be rechecked.

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to illustrate how these steps can be accomplished successfully. As much as possible, we've made an effort to keep the content simple; this study's central focus is on how to select reference materials for technical projects. The first phase, item development, consists of identifying the domain and making the items, and it poses some preliminary scale questions. Domain identification efforts aim to establish boundaries for new domains and make it easier to create new items that fit within those boundaries (Boateng et al., 2018; Haynes et al., 1995; McCoach et al., 2013; Raykov & Marcoulides, 2011). Step 2 involves thinking about the content's veracity, with the goal of assessing each domain item for experienced representation of the target population (Boateng et al., 2018; Guion, 2015; Haynes et al., 1995; Hinkin, 1995; McCoach et al., 2013; Raykov & Marcoulides, 2011), as well as for relevance to the content at hand, representativeness of the domain, and technical quality.

The next phase, scale development, involves transforming the individual parts into more cohesive and measurable wholes. The third step, known as the pretest questions, is when researchers determine if the questions adequately represent the study's focal area and if the measurements generated by the questions can be trusted (Beatty & Willis, 2007; Guion, 2015; Morris et al., 2017). Step 4: Methods for Obtaining Sufficient Data for Scale Development Through Sampling and Survey Administration (Greenlaw & Brown-Welty, 2009; Harris et al., 2009; Morris et al., 2017); Step 5: CTT and IRT analysis (Hendriks et al., 2003; Lorenzo-Seva et al., 2011; McCoach et al., 2013; Raykov & Marcoulides, 2011).

Step 7 is a dimensionality reduction test, which examines the latent structure of scale items and their underlying relationships to determine whether or not earlier hypothetical structures correspond to items (Brunner et al., 2012; Cochran, 1952; Kim et al., 2017; Morin et al., 2015; Pushpanathan et al., 2018; Reise et al., 2010; Sideridis et al., 2015; Vandenberg & Lance, 2000), and step 8 is a reliability test, which evaluates the internal consistency of the scale (Cronbach, 1951; Raykov & Marcoulides, 2011), to what extent the performance of participants can be repeated; that is, how consistent their scores over time (Boateng et al., 2018; McCoach et al., 2013; Raykov & Marcoulides, 2011); and Step-9 validity test, to determine whether the score predicts future outcomes, to what extent the scale score has a stronger relationship with the criteria measurements made near the time of administration, whether the sa is reliable and valid, etc.

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### 2.3 Teachers' Psychological Capital Scale

Twenty-four questions make up the PsyCap questionnaire, which was developed by a team of experts following extensive literature review and consideration of context (Luthans et al., 2007; Luthans & Youssef, 2007). We created a survey to get a sense of whether or not respondents thought second-order components should be part of the proposed model. Here, we employ the Psychological Capital Questionnaire-24 (PCQ-24) developed by Luthans and colleagues (Luthans et al., 2007; Peterson and Luthans, 2003; Youssef and Luthans, 2007) to measure PsyCap. Self-efficacy, optimism, hope, and resilience

are the four facets of the PsyCap construct that this tool may assess. Six items are used to symbolize these dimensions. This instrument's items are based on and adapted from those of four other measuring instruments that have been field-tested and published in a wide range of studies: (1) the Hope Scale (Snyder et al., 1996), (2) the Resilience Scale (M. M. Dolgado & Reeve, 2018), (3) the Optimism Scale (Scheier & Carver, 1985), and (4) the Efficacy Scale. After adapting, a measuring tool for teacher psychological capital was created called the Teacher Psychological Capital Scale (TPCS). The TPCS in this study is shown in Table 1.

Table 1: Dimensions of teacher psychological capital scale

Dimensi	Deskripsi	No. Item
Self-efficacy	An educator's self-assurance in his ability to steer student motivation and knowledge toward the achievement of learning objectives and the completion of tasks.	1, 2, 3, 4, 5, 6
Hope	VIE educators' drive and optimism arise from the dynamic interplay between the potency of desire and the discipline of planning, which they use to accomplish their goals and address the challenges they face in the here and now and in the foreseeable future.	7, 8, 9, 10, 11, 12
Resiliency	VIE educators' resilience in the face of setbacks, disappointments, and failures, as well as success, advancement, and additional responsibilities.	13, 14, 15, 16, 17, 18
Optimism	A persistent image in positive psychology of the educator as a positive future hope who is open to self-development.	19, 20, 21, 22, 23, 24

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#### 2.4 PsyCap Measurement

To emphasize the "state-like" nature of the measure, the participants were asked to respond by describing "how you may think about yourself right now." Then all responses for the TPCS were anchored on a 5-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree or agree, 4 = agree, and 5 = strongly agree. For unfavorable items, the scale scoring is the opposite of the scoring rule, starting from a score of 1 for the "Strongly Agree (SA)" option to a score of 5 for the "Strongly Disagree (SD)" option.

#### 2.5 Scale Evaluation

The purpose of this research is to use Multiple-Group Confirmatory Factor Analysis (MG-CFA) to determine if there are any substantive differences in the measurement between the original questionnaire and the translated version. When the group's interests are uniform across the spectrum of the latent construction's direction and strength of the link to the observed variables, this gives empirical evidence for the invariance hypothesis of the measuring instrument. Therefore, the goal of this type of research is to determine if the



measuring model consistently produces the same scale or feature (Fitts et al., 1996). To ensure that the versions of TPCS they develop can be used across regions and levels of vocational education, the authors use traditional methods to evaluate measurement variance (Schmitt & Kuljanin, 2008). Identifying the model with the greatest potential for generalization may be done by evaluating many alternatives (Hair et al., 2007).

Extracting a model's projected component or factor structure and putting it to the test over many time periods in longitudinal research, or preferably on a new sample, is what's known as a dimensionality test (Kenny & Editor, 2007). Dimension verifies whether or whether the same item, component, or function has been measured consistently across several samples or throughout time. The examination may be carried out using an independent cluster model (ICM), such a confirmatory factor analysis (CFA), bifactor modeling, or measurement invariance.

Confirmatory factor analysis is a type of psychometric assessment that permits the systematic comparison of alternative a priori factor structures through the use of fit assessment procedures and the estimation of relationships between latent constructions that have been corrected for measurement errors (Morin et al., 2015). As pointed out by Morin et al., it is predicated on an extremely conservative ICM that assumes there is no relationship between items and non-target variables (Morin et al., 2015). The technique for determining the partners to pair up with is determined by a main appropriate limit. Common methods for evaluating dimensions include the Root Mean Square Error of Approximation (RMSEA.06), Tucker Lewis Index (TLI.95), Comparative Fit Index (CFI.95), Standardized Root Mean Square Residual (SRMR.08), and Weighted Root Mean Square Residual (WRMR1.0).

## 2.6 Measurement Invariance

Measurement invariance, also known as factorial invariance or measurement equivalence (Vandenberg & Lance, 2000), is another technique for evaluating dimensions. The degree to which the psychometric properties of the observed indicators may be transferred (generalized) between groups or across time is what is meant by "measurement invariance" (Sideridis et al., 2015). Factor structure, regression slope, intercept, and residual variance are all examples of such characteristics. Five different configurationally, metric, scalar, strict (residual), and structural levels of invariance testing were performed in sequence (Kyriazos, 2018; Vandenberg & Lance, 2000). The invariant of the configuration is the primary focus of the dimension test since it indicates whether or not the structure of the hypothesized component is consistent across samples. Any further testing will be meaningless unless this presumption holds (Kyriazos, 2018; Vandenberg & Lance, 2000).

Table 2 Descriptive statistics for TPCS

No	Item	Mean	SD	Skewness	Kurtosis
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No	Item	Mean	SD	Skewness	Kurtosis
1.	When educating other educators or technicians, I have no uncertainties about expressing my knowledge.	3.71	.583	-.407	.636
2.	I am prepared to contribute to the establishment of my department's aims and objectives.	3.63	.669	-.006	-.227
3.	I'm comfortable adding my two cents to the conversation on how to improve education.	3.66	.516	-.934	-.116
4.	I have no problems about looking at the big picture to figure out how to fix things.	3.57	.733	-.033	.021
5.	I think I have something worthwhile to add to the conversation about pedagogical tactics at school.	3.76	.628	-1.17	-.046
6.	I have no problem having meaningful conversations about important topics with adults outside of the classroom (parents, industry, business).	3.94	.654	.026	-.556
7.	I am more succeeding in all of my planned activities.	4.16	.802	-1.218	2.302
8.	Numerous options have occurred to me for addressing the issue.	4.58	.547	-.808	-.431
9.	If I encounter difficulties, I can find a way out.	3.84	.676	.172	-.754
10.	As a school vocational instructor, I feel like I've really hit my stride recently.	3.55	.653	1.00	-.256
11.	My current focus is on fulfilling my work's ultimate goals.	3.61	.610	.111	-.398
12.	Many options exist for me to reach my present professional objectives.	3.92	.679	-.423	.677
13.	The results of my efforts as a vocational educator were never satisfying.	4.19	.747	-.464	-.654
14.	In the face of academic uncertainty, I tend to have a positive outlook.	3.75	.787	-1.46	-.096
15.	I try to look at the bright side of things and believe that making a mistake is unavoidable.	3.77	.762	.011	-.604
16.	I always see the positive side of everything about my work.	3.68	.560	.083	-.663
17.	At this point in time, I feel like I'm doing a good job of navigating the trip.	3.69	.659	3.09	-.613
18.	In general, I have a positive outlook on life.	3.47	.581	-1.18	-.551
19.	I know I can get through the challenging moment at work because I have been through it before.	3.46	.733	.432	-.194

No	Item	Mean	SD	Skewness	Kurtosis
20.	Every issue has several potential answers.	3.69	.714	-.212	-.108
21.	I had a hard time getting back on track after encountering workplace failures.	3.59	.642	.104	-.331
22.	At work, I can find "privacy" to conduct private conversations if I need to.	3.63	.648	.104	-.313
23.	I'm comfortable offering my thoughts on potential educational reforms.	3.63	.607	.104	-.621
24.	I'm comfortable offering my thoughts on potential.	3.60	.591	.104	-.617

Each proposed dimension must be independently verified for unidimensionality, regardless of whether the postulated structure has two or more dimensions. Confirmatory factor analysis is another method for doing this. Items' latent structures may be evaluated based on their index precise model fit and the strength of their factor loadings (refer to Table 2) (Boaking et al., 2018). After a successful first factor analysis, CFA on a new sample often yields a poor global model fit. No excellent matches allow for more wasted parts. Items with loading scores below 3 may be removed. Mplus and other SEM tools provide a modification index to help identify regions that need improvement. In certain cases, one or more "super" factors are utilized to describe the relationship between the original components. Statistical analysis techniques can also assess it (SPSS).

Scale scores can be derived from the last item of the dimension test, which can then be used for substantive analysis like reliability and validity testing. Scores on a scale may be determined either without or with the use of weighting. A raw item score or standard item score can be added together, or the raw item score can be averaged out. Through the use of statistical software, one can generate a weighted method of calculating scale scores. Each factor that emerges from analyses such as canonical correlation, structural equation modeling, or exploratory factor analysis reveals a unique and statistically significant contributor to the total variance among the items in the original dataset. The factor loading value quantifies the relative importance of each item's contribution to this factor. Using factor loading, the scores associated with each factor in the model represent a weighted sum of individual item scores to produce a composite scale score (Vandenberg & Lance, 2000). There is little difference in results whether a scale is calculated as a weighted item (like a mean or a sum) or a weighted item (like a percentage).

### 3. Results and Discussion

The primary aim of this research was to develop a measuring model for TPCS that could be used as a starting point for comparing structural invariances between different populations. Table 3 displays the most important descriptive parameters (mean, standard deviation, and size of distribution). The results of

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the confirmatory factor analysis (CFA) in Table 4 show that the value of S-B  $\chi^2$  is 1096,432, degrees of freedom = 246, at statistical significance ( $p=0.000$ ). This shows that the model fits significantly with the data.

Based on the results of the factor analysis, the TPCS measurement obtained a GFI value of .688 which is below .950, meaning that the model does not fit the data. A Root Mean Squared Error of Approximation (RMSEA) value of .138 ( $> 0.10$ ) indicates a mismatch between the hypothesized model and the observed data. However, a TLI index of .958 ( $>0.90$ ) indicates a substantially adequate scale or has a sensitivity to variations and sample sizes or shows items are very accurately used for the measurement process. Likewise, a Standardized Root Mean Square Residual (SRMR) threshold value of .088 ( $<0.10$ ) indicates a fit model with the observed data. But a Comparative Fit Index (CFI) value of .936 ( $<0.95$ ) is considered a less acceptable match.

Researchers also used other fit measures before concluding the fit model with the research data. Standardized Regression Weights (SRW) estimation values of 24 TPCS items have high scores in the range of .923 to .995. This suggests that all standard regression coefficients are estimated to be statistically significant ( $> .2$ ,  $p = .01$ ), meaning that all items are valid and reliable. This means that the basic model confirms the dimensions of the TPCS construct which includes self-efficacy, hope, resiliency, and optimism. Likewise Cronbach's alpha value of the first-order constructs is .976 was greater than .70, indicating acceptable consistency. The AVE values of all the sub-constructs also exceeded the cut-off point, indicating construct validity.

Table 3. Goodness of fit indices for CFA models of the TPCS (N = 300)

Model	S-B $\chi^2$	df	GFI	RMSEA	SRMR	NFI	RH	CFI	TLI
Default model	1096.432	246	.688	.138	.088	.909	.897	.936	.958
Saturated model	-	-	-	-	.00	1.00	-	1.000	1
Independence model	-	-	.091	.450	.229	.00	.000	.000	.000

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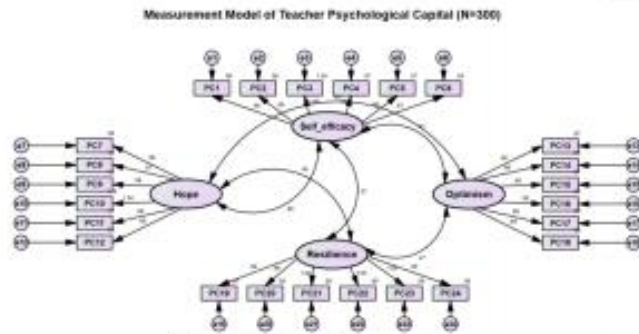


Figure 1: TPCS Model Measurement

Estimate correlations between model variables, including self-efficacy and hope (.683), self-efficacy and resiliency (.372), self-efficacy and optimism (.613), optimism and hope (.590), resilience and hope (.484), and optimism and resilience (.469). [TPCS appears psychometrically feasible and deviates from insignificant invariant metrics.] Researchers use these four-dimensional PsyCap metrics to examine multi-group structural invariance because they have a good fit index. Figure 1 shows the item-Teacher PsyCap dimension connection.

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The above study demonstrates that the Teacher Psychological Capital Scale (Table 6) may be effectively utilized to gauge the mental health of Indonesia's VHS educators. The importance of the Psychological Capital Measurement Model for VHS Teachers in motivating educators to raise student achievement by focusing on their individual strengths and interests cannot be overstated. According to (Gomes da Costa et al., 2021), the positive psychological factors of self-efficacy, hope, resilience, and optimism all contribute to positive mental health and, in turn, boost performance. This agrees with the view of Jansen et al. (2020) that a guru with high self-efficacy might draw on past experience to raise their performance expectations on the job. Other research has found that schools with higher expectations for their teachers see greater profits, employee retention, and dedication from their staff. Similarly, if a teacher's reliance on experience is positive, it will boost the educator's sense of autonomy and self-reliance, enhance their professional capabilities and job and life satisfaction, lessen the impact of mental health issues like exhaustion and depression, and prevent them from quitting their job (am, 2017). Positive affect, hope, and optimism: a productive trifecta for productivity in the workplace (Shanahan et al., 2020).

Table 4: Teachers psychological capital scale

No.	Item
1.	When educating other educators or technicians, I have no uncertainties about expressing my knowledge.
2.	I am prepared to contribute to the establishment of my department's aims and objectives.
3.	I'm comfortable adding my two cents to the conversation on how to improve education.
4.	I have no problems about looking at the big picture to figure out how to fix things.
5.	I think I have something worthwhile to add to the conversation about pedagogical tactics at school.
6.	I have no problem having meaningful conversations about important topics with adults outside of the classroom (parents, industry, business).
7.	I am now succeeding in all of my planned activities.
8.	Numerous options have occurred to me for addressing the issue.
9.	If I encounter difficulties, I can find a way out.
10.	As a school vocational instructor, I feel like I've really hit my stride recently.
11.	My current focus is on fulfilling my work's ultimate goals.
12.	Many options exist for me to reach my present professional objectives.
13.	The results of my efforts as a vocational educator were never satisfying.
14.	In the face of academic uncertainty, I tend to have a positive outlook.
15.	I try to look at the bright side of things and believe that making a mistake is unavoidable.
16.	I always see the positive side of everything about my work.
17.	At this point in time, I feel like I'm doing a good job of navigating the trip.
18.	In general, I have a positive outlook on life.
19.	I know I can get through the challenging moment at work because I have been through it before.
20.	Every issue has several potential answers.
21.	I had a hard time getting back on track after encountering workplace failures.
22.	At work, I can find "privacy" to conduct private conversations if I need to.
23.	I'm comfortable offering my thoughts on potential educational reforms.
24.	I'm comfortable offering my thoughts on potential.

Since the study of PsyCap in vocational education teachers in Indonesia is also still rare, the existence of a reliable and reliable Teachers Psychological Capital Scale is very important not only for new teachers but also teachers who have long work experience. The emerging issue of how to measure the reliable, practical, easy, and relatively unbiased PsyCap of vocational teachers in Indonesia has been answered through this study. [The findings of this study reinforce the theory developed by Luthans & Youssef (Luthans & Youssef, 2007) regarding the constructs and dimensions of the Teacher's Psychological Capital Scale scale, so the emergence of theoretical debates regarding the PsyCap construct that has occurred so far is not very significant.]

<http://qher.org/index.php/qher>

Commented [MRR13]: The authors still need to add relevant research studies and discuss the results obtained from previous studies.

For this case, what kind of previous research and research results now support what results?

This measurement of psychological capital is believed to be able to support studies of the application of positive psychology in the management of the education system organization in this modern era, especially to arouse the enthusiasm of teachers in working, creating, and innovating according to their potential. Although research on positive psychology in the world of education has been widely carried out abroad, in Indonesia there are still very few, so after all the results of this study will eventually be able to contribute to the progress of vocational education and general education in Indonesia. It does not support full-scale equality, which means that group scores must be compared with other factors that also have a strong influence. From this point of view, further research adopting TPCS would require the use of other measures to evaluate the discriminant validity of the scale (e.g., personal growth initiative, or organizational structure). Because of the results of this study, the authors propose the following guidelines for the use and development of TPCS at other levels of education in the future. From a theoretical point of view, this research confirms (especially in the field of vocational education) the importance of social aspects and the organizational structure of schools to determine teacher performance.

This study uses a social information processing approach, our findings support the idea that occupational attitudes and perceptions are influenced by social conditions drawn directly from the work environment. The relationship between items and latent factors, as well as the number of described variances, observed all seem to point in this direction. Nevertheless, this does not mean ignoring other aspects that were not involved in this study. Furthermore, the basic invariant of the TPCS measurement modeling our study subjects provides valuable evidence for the relatively stable dimensions of PsyCap.

On the methodological side, the teacher's PsyCap measurement is most appropriately performed with a small number of items. From the author's experience in developing the TPCS, we conclude that the PsyCap indicator as a whole helps to evaluate and understand the construction under study. However, it also seems beneficial to include a small number of more specific items to create a more comprehensive framework that allows researchers to explore its effects simultaneously. One of the possible explanations for the excellent psychometric TPCS is the inclusion of specific indicators that further complement and amplify the overall TPCS scale. Finally, from a practical point of view, the ease of filling out questionnaires, the time to answer questions, and the interpretation of questions in this instrument prove that this scale can be applied on a wider scale because it is short, practical, and easy to use for leaders, researchers, and education practitioners to collect data on teachers' psychological capital in schools.

#### 4. Conclusion

This study evaluated the invariance of TPCS measurements in VHS in 10 districts in Indonesia. For this purpose, confirmatory factor analysis, multigroup

comparison, internal consistency, and convergent validity tests are carried out. By looking at the parameters of the CFA results shown from the Chi-square score, the GFI, NFI, CFI, and RMSEA values show that the TPCS measurement model is fit with the data. Likewise, from the score of estimate correlations between the latent variables of the developed model it can be concluded that the dimensions of TPCS have strong psychometric feasibility and deviations from insubstantial invariant measurements. The CFA demonstrated a model of PsyCap measurement in an educational context that includes four dimensions: self-efficacy, hope, resiliency, and optimism proven fit with data in the field. This means that the four dimensions can explain the variance in the Psychological Capital of vocational teachers as a whole. Likewise, of the 24 TPCS items, all of them are valid and reliable. In general, the results showed that TPCS had strong psychometric feasibility and deviations from insubstantial invariant measurements. So this instrument is feasible to use to measure the PsyCap level of vocational teachers. This study's results imply that in the future it will be necessary to further test the teacher psychological capital scale over a wider area. The importance of measuring teachers' mental states in the face of increasingly severe challenges and prolonged social crises is critical.

#### 5. Author Contribution

This article's writers have confirmed that they have no financial or personal stakes in the subjects or outcomes of the study. Author1 conducted the research, compiled the literature review, and oversaw the whole writing process. Research methodology was written by Author2 and data input was completed by Author2. All statistical work and interpretation of data was done by Author3.

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Commented [MRR14]: Various kinds of analytical approaches are used in this study. The authors need to double-check the research results described in the results and discussion section.



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## **Bukti 3 Konfirmasi Submit Revisi yang Pertama (14 Februari 2023)**

**Tri Wrahatnolo <triwrahatnolo@unesa.ac.id>** Feb 14, 2023, 12:30 PM

to IJLTER, Ekohariadi, Yeni

Dear Committee,

We are grateful for the information. We have revised the manuscript as suggested by the reviewers.

Kindly find the revised manuscript (6794-Tri\_Wrahatnolo\_et\_al\_(Author)-Final\_Rev\_14\_Des\_2023.docx), response file (Response-to-Reviewers-Template-IJLTER-2020.docx), and Turnitin results (turnitin IJLTER 2.pdf).

We hope that this manuscript can be published on February 2023.

Yours sincerely,

Dr. Tri Wrahatnolo

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**3 Attachments** • Scanned by Gmail



**IJLTER ORG <ijlter.org@gmail.com>**

Feb 19, 2023, 5:04 PM

to me, Ekohariadi, Yeni

Dear Authors,

Kindly submit the final revised paper (via email) by including the name, affiliation and orcid of all authors.

Prof. Sprock

CE

593 of 13,540

**International Journal of Learning, Teaching and Educational Research (IJLTER)**

## Response to Reviewers' Form

**Title of Paper:** Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia

**Paper ID:** 6794

**Number of Reviewers:** 8 persons.

Reviewer 1: 6794-23190 -1-RV (MA. VICTORIA MAGAYON)			
#	Reviewer's comments	Response	Page No.
1	<p>Revise</p> <p><b>Method</b></p> <p>The method is not survey but a development see this article DDR is defined as "the systematic study of the design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey &amp; Klein, 2007, p.1).</p>	<p><i>The method has been revise.</i></p> <p>The method is a design, development and evaluation (DDR) is defined as "the systematic study of the design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey &amp; Klein, 2007, p.1). There are two types of DDR, including type I product and tool research and type II model research (Richey &amp; Klein, 2007). This study uses type II. There are three phases to creating a rigorous scale—item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps.</p>	p.4



**Reviewer 2 : 6794-23454-1.RV (ELIZER M. REBUCAS, Ph.D)**

#	Reviewer's comments	Response	Page No.
1	<p>The presentation of the paper appears to be good and very relevant. It offers essential information on innovation, offering new research instruments for measuring the psychological characteristics of teachers in general. However, some factors need to be modified to improve the quality of the paper.</p> <p>Additionally, for future researchers to replicate a similar process in doing related studies, authors need more explanation about the methodology, results, and similarity content score in a precise manner.</p> <p>Moreover, the findings and the process included in this paper will serve as a perfect avenue to add up future researchers learning in conducting research like this. Furthermore, methods, results, and discussion found in this research paper are worth to be repeated and attaining their utmost significance as it can be a source of literature to support related studies.</p>	<p><i>Thank you for the comments, several factors need to be modified to improve the quality of the paper, We have been corrected them according to the reviewer's suggestions.</i></p>	-
2	<p><i>More explanation of the research design</i></p>	<p><i>Further explanation of the research design has been added:</i></p> <p>There are three phases to creating a rigorous scale – item development, scale development, and scale evaluation( Boateng, 2018); these can be further broken down into nine steps. Item development, i.e., coming up with the initial set of questions for an eventual scale, is composed of: (1) identification of the domain(s) and item generation, and (2) consideration of content validity. The second phase, scale development, i.e.,</p>	p.4

		turning individual items into a harmonious and measuring construct, consists of (3) pre-testing questions, (4) sampling and survey administration, (5) item reduction, and (6) extraction of latent factors. The last phase, scale evaluation, requires: (7) tests of dimensionality, (8) tests of reliability, and (9) tests of validity.	
3	<i>Need additional information and support on the obtained results</i>	<p><i>Additional information and support for research results has been added:</i></p> <p>The results of the TPCS scale's predictive validity assessment are adapted or newly developed and intended for vocational education, but can be applied to general schools, even relevant to other fields such as health, social, and behavioral sciences.</p>	p.13
4	<i>Describe the figures and tables in detail</i>	<p><i>Figures and tables have been described in detail.</i></p> <p>Table 1 also shows the description and item count of the TPCS dimension. The self-efficacy dimension consists of 6 items, starting with numbers 1, 2, 3, 4, 5, and 6; Hope consists of 6 items numbered 7, 8, 9, 10, 11, and 12; Resiliency consists of 6 items numbered 13*, 14, 15, 16, 17, and 18, and Optimism consists of 6 items numbered 19, 20*, 21, 22, 23*, and 24.</p> <p>From Table 2, the mean of all items is in the range of scores from 3.46 to 4.58, meaning that it is in the high category. The slope coefficient and kurtosis were calculated to verify the multivariate normality assumption. All skewness coefficients and kurtosis on each item are in the value range -2 to 2, significant (<math>p &lt; 0.001</math>), implying a violation of the assumption of normality. There is a revision of</p>	<p>p. 6</p> <p>p.9</p> <p>p.10</p>

		table numbering, Table 3 becomes Table 2, Table 4 becomes Table 3. (p.10), and Table 6 becomes Tabale 4 (p.11). Table 2 has been display the most important descriptive parameters (mean, standard deviation, and size of distribution). Table 3 has been display the model fits significantly with the data.	
5	<i>Remove up to 10% of the similarity content score</i>	<i>Content similarity score has been reduced to under 10%</i>	
<b>Reviewer 3: 6794- 23569-1-RV</b>			
<b>#</b>	<b>Reviewer's comments</b>	<b>Response</b>	<b>Page No.</b>
1	Abstract Keyword  <i>Please arrange the keywords based on alphabetical order</i>	<i>Keywords have been arranged in alphabetical order.</i> <b>Keywords:</b> hope; optimism; positive psychology; resiliency; self-efficacy; teacher psychological capital;	p.1
2	<b>Introduction:</b> <i>Revised Meaning</i> <i>".. baik.."</i>	<i>The word "baik" was removed</i>	p.1
3	<b>Introduction:</b> <i>The third paragraph, in the sentence of:</i> According to Bandura (Bandura, 2006).....	<i>The Citation already repaired.</i> According to Bandura (2006).....	p.2
4	<b>Introduction:</b> <i>Revise citation.</i> The second paragraph, in the sentence:  Having the mental fortitude to persevere in the face of adversity and emerge stronger on the other side is the definition of resilience (C.Delgado et al., 2017)	<i>The Citation has been revised:</i>  Having the mental fortitude to persevere in the face of adversity and emerge stronger on the other side is the definition of resilience (Delgado et al, 2017)	p.3
5	<b>Introduction:</b>	<i>The Punctuation has been revised:</i>	p.3

	<p><i>Revise punctuation</i></p> <p>The third paragraph, in the sentence: .....but cannot judge directly Scales</p>	<p>.....but cannot judge directly. Scales</p>	
6	<p><b>Introduction:</b></p> <p><i>Revise grammar.</i></p> <p>The third paragraph, in the sentence of: Thousands of scales have been developed that can measure a variety of behaviors and experiences that are social, psychological, and educational.</p>	<p><i>The grammar has been revised:</i></p> <p>Thousands of scales have been developed that can measure a variety of behaviors and experiences that are social, psychology, and education.</p>	p.3
7	<p><b>Introduction:</b></p> <p>Revise punctuation.</p> <p>The first paragraph, in the sentence of: <u>One difficulty that arises for ....</u></p>	<p><i>The Punctuation has been revised:</i></p> <p>One difficulty that .....</p>	p.4
8	<p><i>Please elaborate more, describe briefly about the main discussion of this subtopic.</i></p> <p><b>Method</b></p>	<p><i>The Method has been revise.</i></p> <p>The method is a design, development and evaluation (DDR) is defined as "the systematic study of the design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey &amp; Klein, 2007, p.1). There are two types of DDR, including type I product and tool research and type II model research (Richey &amp; Klein, 2007). This study uses type II. There are three phases to creating a rigorous scale—item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps.</p>	p.4
9	<p>Please explain it first before you use the short form.</p>	<p><i>The abbreviated form has been explained.</i></p>	p.5

	<p><b>2.2 Item and Scale Development</b> The second paragraph, in the sentence of: ...Step 5: <u>CTT and IRT</u> analysis .....</p>	<p>...Step 5: Classical Test Theory (CTT) and Item Response Theory (IRT) analysis .....</p>	
10	<p><i>Check punctuation.</i> <b>2.2 Item and Scale Development</b> The third paragraph, in the sentence of: .....<u>Step-9</u> validity test, ....</p>	<p><i>The Punctuation has been revised:</i> ... Step 9 validity test, .....</p>	p.5
11	<p><i>Check meaning.</i> 2.2 Item and Scale Development The third paragraph, in the sentence of: ...whether <u>the sa</u> is reliable and valid, etc...</p>	<p><i>The meaning has been revised:</i> ...<u>is it</u> reliable and valid, etc...</p>	p.5
12	<p>2.3 Teachers' Psychological Capital Scale The final paragraph, in the sentence of: .... Here, <u>we</u> employ the .... <i>Replace with the term: the researchers</i></p>	<p><i>The word "we" has been replace with "the researchers"</i></p> <p>Here, <u>the researchers</u> employ the Psychological Capital Questionnaire-24 (PCQ-24) developed by .....</p>	p.5
13	<p><i>Revise format.</i> The first paragraph, in the sentence of:</p> <p>This instrument's items are based on and adapted from those of four other measuring instruments that have been field-tested and published in a wide range of studies: (1) the Hope Scale (<u>Snyder</u> et al., 1996), (2) the Resilience Scale (.M. Delgado &amp; Reevy, 2018), (3) the Optimism Scale (<u>Scheier</u> &amp; Carver, 1985), and (4) the Efficacy Scale.</p>	<p><i>Format has been revised.</i></p> <p>This instrument's items are based on and adapted from those of four other measuring instruments that have been field-tested and published in a wide range of studies: (1) the Hope Scale (<u>Snyder</u> et al., 1996), (2) the Resilience Scale (Delgado &amp; Reevy, 2018), (3) the Optimism Scale (<u>Scheier</u> &amp; Carver, 1985), and (4) the Self-Efficacy Scale.</p>	p.6
14	<p>Table 1: Dimensions of teacher psychological capital scale</p> <p><i>Please use English language of "dimensi" and "deskripsi" of the words.</i></p>	<p><i>The word "dimensi" and "deskripsi" was replaced "dimenssions" and "Description" respectively.</i></p>	p.6

15	<i>Remove this sentence of the final paragraph :</i>  As pointed out by Morin et al.,	<i>The sentence has been removed.</i>	p.7
16	<i>Translate into English.</i> ... <u>guru</u> ... of the final paragraph ...their job ( <u>am</u> , 2017)..	The word “guru” has been translated “teacher”  The word "am" should be written (Çam, 2017)	p.11
17	<i>Revise format og the References.</i>	The format and layout of the references have been revised according to the APA standard.	pp. 14- 20

Reviewer 4: 6794-23709-1-RV			
#	Reviewer's comments	Response	Page No.
1	<p><b>Abstract</b></p> <p>Psychological analysis to test convergent validity and discriminant validity using structural equation model (SEM) with confirmatory factor analysis (CFA) technique (<i>this is a fragment, rewrite to form a completed sentence</i>).</p>	<p><i>This sentece has been revised.</i></p> <p>Data analysis to test the validity of the items using structural equation models (SEM) with confirmatory factor analysis (CFA) techniques.</p>	p.1
2	<p><b>Introduction:</b></p> <p><i>The third paragraph, in the sentence of:</i> According to Bandura (Bandura, 2006).....</p>	<p><i>The Citation already repaired.</i> According to Bandura (2006).....</p>	p.2
3	<p><b>Introduction:</b></p> <p><i>The second paragraph, in the sentence of:</i></p> <p>....People who <b>do not</b> believe in their own abilities are more likely to experience...</p>	<p><i>This sentece has been removed.</i></p> <p>Someone who is not confident in his abilities is more....</p>	p.3
4	<p><i>Table 1 is not relevant with that you send your readers to see in it)</i></p>	<p>The numbering of tables in this paper has been revised.</p> <p>The phrase "are shown in Table 1 and' has been removed and Table 1 and so on have been adjusted to the contents of the table.</p>	p. 5, 8, 10, 12
5	<p>Check the word "have" of the sentence pada alinea 1 pada subab 2.2 Item and Scale Development:</p> <p>"As much as possible, we <b>have</b> made an effort to keep the content simple; this study's central "</p>	<p>The word "have" has been removed</p>	p.5

<b>Reviewer 5: 6794-23719-1-RV</b>			
<b>#</b>	<b>Reviewer's comments</b>	<b>Response</b>	<b>Page No.</b>
1	<p><b>Introduction:</b>  <i>Revised Meaning</i>            ".. baik.."</p>	<p><i>The word "baik" was removed</i></p>	p.1
2	<p>When confronting complicated conditions and the new normal that has emerged in the wake of the Covid-19 epidemic, the positive psychology method is often regarded as an effective tool for educational intervention.</p> <p><i>Provide claim why is this so.</i></p>	<p><i>We have been added an explanation about it in the first pharagraph in p.2.</i></p> <p>During the Covid-19 pandemic, teaching learning process was carried out online system which created psychological problems in learning. Most studies highlight negative things from a psychological aspect, both from students and teachers.</p>	pp.1-2
3	<p><i>Psychological capital .....in the third pharagraph of the page 3:</i>  <i>What is the role of this in the context of the objective of the paper?</i></p>	<p>The role of Psychological capital in the context and research objectives are:</p> <p>That this research wants to produce a PsyCap scale and determine the teacher's PsyCap level. Positive psychology interventions in education are believed to improve teacher performance.</p>	p.2
4	<p><i>The next phase, scale development,.....in the second pharagraph of the page 5</i></p> <p><i>If it is possible to show in tabular presentation the steps of this phase.</i></p>	<p><i>Scale development steps have been added in the latest revision of the paper (p.4).</i></p> <p>There are three phases to creating a rigorous scale – item development, scale development,</p>	p.4



		and scale evaluation [1, 2]; these can be further broken down into nine steps. Item development, i.e., coming up with the initial set of questions for an eventual scale, is composed of: (1) identification of the domain(s) and item generation, and (2) consideration of content validity. The second phase, scale development, i.e., turning individual items into a harmonious and measuring construct, consists of (3) pre-testing questions, (4) sampling and survey administration, (5) item reduction, and (6) extraction of latent factors. The last phase, scale evaluation, requires: (7) tests of dimensionality, (8) tests of reliability, and (9) tests of validity.	
5	<p>Table 1: Dimensions of teacher psychological capital scale</p> <p><i>Please use English language of "dimensi" and "deskripsi" of the words.</i></p>	<i>The word "dimensi" and "deskripsi" was replaced "dimenssions" and "Description" respectively.</i>	p.6
6	<p>The first pharagraph of the sub chapter: <b>2.5 Scale Evaluation</b></p> <p>The purpose of this research is to use Multiple-Group Confirmatory Factor Analysis (MGCFA) to determine if there are any substantive differences in the measurement between the original questionnaire and the translated version.</p> <p><i>Is this purpose consistent with the purpose of the whole study?</i></p>	<p>This objective is one of the overall objectives of this research.</p> <p>The sentence has been revised:</p> <p>The research objective was to develop the Teachers Psychological Capital Scale (TPCS) based on psychometric analysis using the Confirmatory Factor Analysis (CFA) approach. The validity test was carried out using the Confirmatory Factor Analysis (CFA) method with the help of AMOS SPSS software. According to Kenny &amp; Editor (2007) the steps in testing the validity of this research scale are as follows: (1) Do the CFA test with an undimensional model and look at the resulting Chi-Square value. If</p>	p.6

		<p>the Chi-Square value is not significant (<math>p &gt; 0.05</math>) it means that all items have been measured according to the theory, and can be continued by looking at the loading factor for each item. If the Chi-Square value is significant (<math>p &lt; 0.05</math>), a modification of the measurement model is required; (2) Modify the measurement model by estimating the correlation between measurement errors on several items that may be multidimensional. This means that in addition to an item measuring the construct that should be measured (according to theory), it can also be seen whether the item measures something else (measuring more than one thing). If after some measurement errors are freed to correlate with each other and finally a fit (unidimensional) model is obtained; (3) Then see if there are items with negative factor loading. If there is, the item must be dropped or not included in the factor score calculation analysis; (4) By using SPSS and the unidimensional model then the true score value of the variable is estimated.</p>	
7	<p><i>The sentence in the first paragraph of the sub chapter:</i></p> <p><b>3. Results and Discussion</b></p> <p>The primary aim of this research was to develop a measuring model for TPCS that could be used as a starting point for comparing structural invariances between different populations.</p> <p><i>How is this different from the aforementioned purpose on scale developmeht?</i></p>	<p><i>The sentence has been changed to:</i></p> <p>The main objective of this research is to test the validity of TPCS items.</p>	p.9

8	<p><i>The second pharagraph in p.13</i>  .....our findings support the idea that occupational attitudes and perceptions are influenced by social conditions drawn directly from the work environment.  <i>Hos is this so? Provide suuport?</i></p>	<p><i>The sentence is changed to:</i></p> <p>The findings of this study prove that psychological capital is influenced by psychological aspects of teachers such as self-efficacy, hope, resilience, and optimism, which are closely related to the work environment.</p>	p.13
9	<p><i>The first pharagraph in Sub Chapter: 4. Conclusion</i>  This study evaluated the invariance of TPCS measurements in VHS in 10 districts in Indonesia.  Is this in line with the set objective of the study?</p>	<p><i>The sentence is changed to:</i></p> <p>This study evaluates the validity of TPCS items in SMKs in 10 districts in Indonesia.</p>	

<b>Reviewer 6: 6794-23758-1-RV (Mercedita Reyes)</b>			
<b>#</b>	<b>Reviewer's comments</b>	<b>Response</b>	<b>Page No.</b>
1	<p><i>The sentence in the twelfth line of the Abstract:</i></p> <p>.....From the results of the CFA analysis, the Psychological Capital measurement model significantly fits with the data.</p> <p><i>The compatibility test results with CFA analysis need to be written down. What kind of description of the results corresponds to the data?</i></p>	<p><i>The following senteces is an explanation of the revised research results.</i></p> <p>The results of the TPCS item validity test using CFA showed the value of S-B 2 was 1096.432, df = 246, p = .000). This means the model fits significantly with the data.</p> <p>Other parameters GFI .688 (&lt;.950), CFI .916 (&lt;0.95), RMSEA .138 (&gt; 0.10) mean the model does not fit the data. However, the TLI score of</p>	p.1

		0.958 (> 0.90) indicates that the TPCS is quite substantial or shows very accurate items used for the measurement process. Also the SRMR score of .008 (<1.0) indicates the fit of the model with the observed data.	
2	<p><i>The sentence in the fifteenth line of the Abstract.</i></p> <p>...Of the 24 items from TPCS, all of them are valid and reliable, so this instrument is feasible to use to measure the TPC level of vocational teachers on a wider scale.</p> <p><i>The results of this study are not by the convergent and discriminant validity test that the researcher has carried out.</i></p>	<p><i>The sentences in the abstract:</i></p> <p>Psychological analysis to test convergent validity and discriminant validity using structural equation model (SEM) with confirmatory factor analysis (CFA) technique.</p> <p><i>This sentence has been changed to:</i></p> <p>Psychological analysis to test the validity of TPCS items using structural equation model (SEM) with confirmatory factor analysis (CFA) technique.</p> <p><i>This sentence has also been adapted to the explanation in the Method sub-section.</i></p>	<p>p.1</p> <p>p. 4</p>
3	<p>Sample</p> <p>The sample consisted of VHS teachers (N = 300)</p>	<p><i>The sentence has been added in the paragraph:</i></p> <p>The population is VHS teachers in Indonesia. The sample selection technique uses purposive sampling.</p>	p. 4
4	<p><i>The writing description of the sample size used in this study needs to be rechecked.</i></p> <p>Teachers have the status of government employees (Permanent Teachers) as many as 220 people (73.3 %) and Non-Permanent Teachers as many as 180 (26.7 %). The gender distribution was 178 males (59.3 %) and 122 females (40.1 %)</p>	<p><i>Description of writing sample size used in this study have been re-checked and revised.</i></p> <p>Teachers have the status of government employees (Permanent Teachers) as many as 220 people (73.3 %) and Non-Permanent Teachers as many as 180 (26.7 %). The gender distribution was 178 males (59.3 %) and 122 females (40.7 %)</p>	p. 4
5	2.2 Item and Scale Development	All descriptions in this sub-chapter	p. 4

	<p><i>This section is too dense, consisting of several steps to develop scales and test instruments. Still, the presentation of research results in the results and discussion section needs to be written down and described.</i></p>	<p>are revised as follows.</p> <p>There are three phases to creating a rigorous scale – item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps. Item development, i.e., coming up with the initial set of questions for an eventual scale, is composed of: (1) item development, consists of identifying the domain and making the items, and it poses some preliminary scale questions; (2) consideration of content validity, as well as for relevance to the content at hand, representativeness of the domain, and technical quality; (3) pre-testing questions, is when researchers determine if the questions adequately represent the study's focal area and if the measurements generated by the questions can be trusted; (4) sampling and survey administration; (5) Classical Test Theory (CTT) and Item Response Theory (IRT) analysis to item reduction; (6) extraction of latent factors to determine the optimal number of factors or domains that correspond to a set of items (7) tests of dimensionality, is a dimensionality reduction test, which examines the latent structure of scale items and their underlying relationships to determine whether or not earlier hypothetical structures correspond to items; (8) tests of reliability, is a reliability test, which evaluates the internal consistency of the scale to what extent the performance of participants can be repeated; that is, how consistent their scores over time; and (9) tests of validity, to determine whether the score predicts future outcomes, to what extent the scale score has a stronger</p>	
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		relationship with the criteria measurements made near the time of administration, is it reliable and valid, etc.	
6	<p>Tabel 1 Dimensions of teacher psychological capital scale</p> <p><i>An item with a star sign (*), what do you mean?</i></p>	A star sign (*) indicates an unfavourable item, it has been added to the notes below the table.	p. 6
7	<p><i>The last sentence in sub-chapter 2.5 Scale Evaluation</i></p> <p>Common methods for evaluating dimensions include the Root Mean Square Error of Approximation (RMSEA.06), Tucker Lewis Index (TLI.95), Comparative Fit Index (CFI.95), Standardized Root Mean Square Residual (SRMR.08), and Weighted Root Mean Square Residual (WRMR 1.0).</p> <p><i>Authors need to write down more clearly the criteria used to determine which indexes are accepted or which do not meet them.</i></p>	<p><i>The criteria used to determine which index is accepted or not, the author has explained by adding the following sentence.</i></p> <p>Criteria for determining model fit with data are: (a) Chi-square test of model fit has been assessed to be overly sensitive to sample size and to vary when dealing with non-normal variables. Hence, the use of non-normal data, a small sample size (n =180–300), and highly correlated items make the chi-square approximation inaccurate; (b) <math>RMSEA \leq 0.05</math> as indicative of close fit, <math>0.05 \leq RMSEA \leq 0.08</math> as indicative of fair fit, and values <math>&gt;0.10</math> as indicative of poor fit between the hypothesized model and the observed data; (c) TLI, that models with overall fit indices of <math>&lt;0.90</math> are generally inadequate and can be improved substantially; (d) <math>CFI \geq 0.95</math> is often considered an acceptable fit; and (e) SRMR, threshold for acceptable model fit is <math>SRMR \leq 0.08</math> (Botaeng et al., 2018; Kenny &amp; Editor, 2007).</p>	p. 7

8	<p><i>The sentence in the last paragraph on page 9:</i></p> <p>Items with loading scores below 3 may be removed.</p> <p><i>Please check again for the categorization of the loading factor values.</i></p>	<p><i>The correct sentence according to the original paper is, and this has been revised.</i></p> <p>Items with loading scores below .3 may be removed.</p>	p. 9
9	<p><i>The index criteria used and used as a reference in this results section need to be written down and described in the methods section along with the reference source.</i></p> <p>Researchers also used other fit measures before concluding the fit model with the research data. Standardized Regression Weights (SRW) estimation values of 24 TPCS items have high scores in the range of .923 to .995. This suggests that all standard regression coefficients are estimated to be statistically significant (<math>&gt; .2</math>; <math>p = .01</math>), meaning that all items are valid and reliable. This means that the basic model confirms the dimensions of the TPSCS construct which includes self-efficacy, hope, resiliency, and optimism. Likewise Cronbach's alpha value of the first-order constructs is .976 was greater than .70, indicating acceptable consistency. The AVE values of all the sub-constructs also exceeded the cut-off point, indicating construct validity.</p>	<p>The index criteria used have been written and described in section 2.5 Scale Evaluation with reference sources, in page 7.</p>	p.9
10	<p>3. Results and Discussion</p> <p><i>In the sentence below table 1, it is written:</i></p> <p>TPCS appears psychometrically feasible and deviates from insignificant invariant metrics.</p> <p><i>This statement is supported by what theory and criteria?</i></p>	<p><i>This sentence is revised to become:</i></p> <p>Based on the estimated correlation scores between dimensions (<math>&lt; .2</math>) and the model fit index, as described above, TPCS appears to be psychometrically feasible as a measure of psychological capital.</p> <p><i>Figure 1 shows the estimated correlation scores between TPCS dimensions.</i></p>	

11	<p><i>The text in the first paragraph on page 13 it has been said:</i></p> <p>The findings of this study reinforce the theory developed by Luthan &amp; Youssef (Luthans &amp; Youssef, 2007) regarding the constructs and dimensions of the Teacher's Psychological Capital Scale scale, so the emergence of theoretical debates regarding the PsyCap construct that has occurred so far is not very significant.</p> <p><i>The author still needs to add relevant research studies and discuss the results obtained from previous studies.</i></p> <p><i>For this case, what kind of previous research and research results now support what results?</i></p>	<p><i>We have added relevant study results and explanations to the results of previous studies.</i></p> <p>The findings of this study strengthen the theory developed by Luthan &amp; Youssef (Luthans &amp; Youssef, 2007) regarding the constructs and dimensions of the Teacher Psychological Capital Scala.</p> <p>PsyCap is an individual's positive psychological state of development and is characterized by having high levels of HERO (i.e., hope, efficacy, resilience, and optimism) (Luthans &amp; Youssef, 2007; Ohlinm, 2020).</p> <p>Researchers consider PsyCap to be a fundamental asset for authentic, unique, and vital leadership. This is in accordance with Bao's research (2015) which says that authentic leaders have many things hope, efficacy, resilience, and optimism.</p>	pp.12-13
12	<p>Conclusion</p> <p>For this purpose, confirmatory factor analysis, multigroup comparison, internal consistency, and convergent validity tests are carried out. Various kinds of analytical approaches are used in this study. The authors need to double-check the research results described in the results and discussion section</p>	<p><i>This sentence should not exist so it has been removed from this paper.</i></p>	



**Reviewer 7: 6794-23767-1-RV**

#	Reviewer's comments	Response	Page No.
1	<p>Title: Developing Psychometric Property on the Psychological Capital Scale for Vocational High <u>Schools</u> in Indonesia</p> <p><i>I suggest to add Teachers to read as School Teachers in Indonesia</i></p>	<p><i>Suggestions are welcome by adding "teacher" in the title of the paper.</i></p> <p>Developing Psychometric Property on the Psychological Capital Scale for Vocational High <u>School</u> Teachers in Indonesia</p>	P.1
2	<p>Need editing appropriately</p> <p><b>2. Methods</b></p>	<p><i>The Method has been revise.</i></p> <p>The method is a design, development and evaluation (DDR) is defined as "the systematic study of the design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey &amp; Klein, 2007, p.1). There are two types of DDR, including type I product and tool research and type II model research (Richey &amp; Klein, 2007). This study uses type II. There are three phases to creating a rigorous scale – item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps.</p>	p.4
3	<p>Tabel 1 Dimensions of teacher psychological capital scale</p> <p><i>Need to have information in the foot note what is the meaning of *</i></p>	<p><i>A star sign (*) indicates an unfavourable item, it has been added to the notes below the table.</i></p>	p. 6
4	<p>Table 2.</p>	<p><i>The following explanation has been added in the paragraph below table 2.</i></p>	p. 9

	<p><i>Confirm where this Table 2 has been referred in the Text???</i></p>	<p>From Table 2, the mean of all items is in the range of scores from 3.46 to 4.58, meaning that it is in the high category. The slope coefficient and kurtosis were calculated to verify the multivariate normality assumption. All skewness coefficients and kurtosis on each item are in the value range -2 to 2, significant (<math>p &lt; 0.001</math>), implying a violation of the assumption of normality.</p>	
5	<p><b>2.6 Measurement Invariance</b></p> <p><i>The text in the first paragraph on page 9:</i></p> <p>Each factor that emerges from analyses such as canonical correlation, structural equation modeling, or exploratory factor analysis reveals a unique and statistically significant contributor to the total variance among the items in the original dataset. The factor loading value quantifies the relative importance of each item's contribution to this factor. Using factor loading, the scores associated with each factor in the model represent a weighted sum of individual item scores to produce a composite scale score (Vandenberg &amp; Lance, 2000). There is little difference in results whether a scale is calculated as a weighted item (like a mean or a sum) or a weighted item (like a percentage).</p>	<p><i>This sentence gives rise to an incorrect interpretation. So it is replaced with the following sentence.</i></p> <p>In the results of modeling using the CFA or the full model using the structural equation modeling (SEM) will meet the interpretation of the loading factor. Loading factor is a correlation coefficient between the indicator and its latent construct (Vandenberg &amp; Lance, 2000). In many social studies, the measurement of a construct is very often done indirectly through its indicators. An indicator with a high loading factor has a higher contribution to explain its latent construct. Conversely, indicators with low factor loading have a weak contribution to explaining the latent construct. For sample sizes above 300, the criteria are valid in CFA analysis or it can be said to be valid if the loading factor is <math>&gt; 0.30</math> (Hair, 2017).</p>	p. 10
6	<p><b>3. Results and Discussion</b></p> <p><i>Discussion needs to be briefed up for more clarity and understanding Also, should have some citations. Add appropriately</i></p>	<p><i>This section has added the sentence:</i></p> <p>In this section, the results of data analysis will be discussed to answer the research objectives. The aim of the research is to produce valid and reliable TPCS so that it is feasible to be used to measure the</p>	p. 11. P.

		<p>PsyCap of Vocational School Teachers.</p> <p>The findings are in line with the results of research (Tamar &amp; Wirawan, 2020) that the combination of linear values of self-efficacy, hope, optimism, resilience and work engagement from the components of psychological capital to predict work engagement at a significant level. The psychological capital has also a positive impact on work involvement and happiness at work which ultimately has an impact on job satisfaction and commitment to work (Wen &amp; Liu-Lastres, 2021).</p>	
7	<p><b>3. Results and Discussion</b></p> <p><i>Table 1 is not relevant with that you send your readers to see in it)</i></p> <p>Need to cross check as Table 3 does not reflect some of the parameters eg. Mean, standard Deviation....Is it not Table 2??</p>	<p><i>The numbering of tables in this paper has been revised.</i></p> <p>The phrase "are shown in Table 1 and' has been removed and Table 1 and so on have been adjusted to the contents of the table.</p>	p. 5, 8, 10, 12
8	<p><i>The first sentence on page 10.</i></p> <p><i>Insert a citation supporting the statement eg. Creswell, 2018</i></p>	<p>This sentence has been revised according to the reviewer's suggestion, by adding a citation Creswell 2018.</p>	p.10
9	<p>Figure 1</p> <p><i>Refer Figure 1 at the appropriate place in the text</i></p>	<p><i>The explanatory text in Figure 1 has been placed in the appropriate place or under Figure 1.</i></p> <p><i>The sentences has been written "Figure 1 shows the item-Teacher PsyCap dimension connection."</i></p> <p><i>This has been revised to become:</i></p> <p>"Figure 1 shows the estimated correlation between the dimensions of the TPCS model."</p>	p.11

10	<p>Table 6</p> <p><i>There is no Table 6 in the Text, Please check all the Table numbering and ,their referencing correctly at appropriate place.</i></p>	<p>The correct one is table 4, and it has been revised in the text.</p>	p.11
11	<p>Written sentence:</p> <p>Other research has found.....</p> <p><i>Need cite the reference</i></p>	<p><i>This sentences and citations are properly revised.</i></p> <p>Other research has found that schools with higher expectations for their teachers see greater profits, employee retention, and dedication from their staff (Hong et al., 2021)</p>	p.11
12	<p>Written sentence:</p> <p>Positive affect, hope, and optimism: a predictive trifecta for productivity in the workplace (Shanahan et al., 2020).</p> <p><i>Its Not clear.....</i></p>	<p><i>This sentences and citations are properly revised.</i></p> <p>Hope and optimism as predictors of academic performance and subjective well-being in college students (Kevin, 2020).</p>	p.12
13	<p>Written sentence:</p> <p>Since the study of PsyCap in vocational education teachers in Indonesia is also still rare, the existence of a reliable and reliable Teachers Psychological Capital Scale is very important not only for new teachers but also teachers who have long work experience.</p> <p><i>Too long sentence, need to be broken meaningfully</i></p>	<p><i>This sentence has been revised to become:</i></p> <p>As it is known that the measurement of PsyCap in education in Indonesia is still rare. Therefore the existence of a reliable Teacher Psychological Capital Scale is very important. This is not only for new teachers but also experienced teachers.</p>	p.13
14	<p><i>... This study's results imply that in the future it will be ...</i></p> <p><i>Insert atleast two recommendation based on the findings and conclusion</i></p>	<p><i>The recommendations have been given based on the findings and conclusions:</i></p> <p>PsyCap helps teachers become committed to carrying out their duties, and maintain dedication</p>	pp.14-15

		<p>under the most extraordinary circumstances. But most importantly, PsyCap helps teachers to motivate and foster students' interest in learning.</p> <p>To achieve all of the above, nurse leaders need to invest in developing their teachers' PsyCap through long-term and short-term interventions. The first step that school organizations can take is to develop a teacher's PsyCap. Educational institution leaders simply introduce teachers to the concept by empowering them to recognize and raise their own personal HERO level and encourage them to do the same for others.</p> <p>Because we rarely hear this concept used in professional settings, implementing these steps is essential maximize teacher performance.</p> <p>The findings of this reserach also contribute to the literature by examining the role of management education to develop teachers' psychological resources, which have key implications for dedication, job commitment, and job performance, and institutions' engagement in responsible management education.</p>	
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**Reviewer 8:6794-23768-1-RV**

#	Reviewer's comments	Response	Page No.
1	Abstract <i>Novelty research needs to be clarified again</i>	<i>The novelty of this research is the importance of developing the Psychological scale for Vocational High School (VHS) teachers, which contributes to the development of psychology science -- particularly regarding job satisfaction and ultimately also influences teacher performance -- as well as the social life</i>	p.1

		<i>of VHS teachers.</i>	
2	<p><b>Introduction</b>  <i>in this section you need to explain in detail why you should develop this scale. what kind of conditions that require a development</i></p>	<p><i>We need to develop the Psychological Capital scale, because as far as we know in Indonesia there has not been much research on developing this scale for Vocational High School (VHS) teachers as we have written in the sentence in the background.</i></p>	p.1
3	<p><i>The last sentence of the second paragraph.. Academic and motivational factors have been proven as responsive to self-efficacy training, which has been addressed in the context of both <u>cognitive and motivational domains.</u></i></p> <p><i>when viewed from the theory of self-efficacy in the domain of self-efficacy there is also an affective aspect. why don't you include it?, give an explanation so why only take two elements</i></p>	<p><i>So this sentence is not correct. Thanks for the correction. We have been perfected this sentence to become:</i></p> <p>The domains of self-efficacy in this study include beliefs about the teacher's ability to direct motivation and sources of cognition, carry out a number of activities needed to achieve goals. , and success in carrying out tasks in the context of learning management (Youssef &amp; Luthans, 2007)</p>	p.2
4	<p><i>The last sentence of the second paragraph of p.3</i></p> <p>...Many studies on PsyCap have been conducted in other countries, but in Indonesia, particularly in the sector of vocational education, there have been surprisingly few. Even among Indonesia's vocational education instructors, empirical notions concerning PsyCap are still uncommon.</p> <p><i>you say a lot, but don't explain what their research looks like</i></p>	<p><i>Thanks for the correction.</i></p> <p><i>In the following, we will describe some of these studies. So we'd been added an explanation of this text in paragraph ... on page 3:</i></p> <p>Many studies on PsyCap have been conducted in other countries (Donald et al., 2019; Geremias et al., 2022; Gomes da Costa et al., 2021; Villagran &amp; Martin, 2022; Zhu et al., 2019) but in Indonesia, particularly in the sector of vocational education, there have been surprisingly few. Even among Indonesia's vocational education instructors, empirical notions concerning PsyCap are still uncommon.</p>	p.3
5	<p><b>2. Methods</b>  <i>explain why you need survey research, whereas here you want to develop an instrument. Are you sure that with the survey, you can arrange the scale you mean?</i></p>	<p><i>We correct this type of research to become development research. The Method has been revise.</i></p> <p>The method is a design,</p>	p.4

		<p>development and evaluation (DDR) is defined as "the systematic study of the design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey &amp; Klein, 2007, p.1). There are two types of DDR, including type I product and tool research and type II model research (Richey &amp; Klein, 2007). This study uses type II. There are three phases to creating a rigorous scale – item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps.</p> <p><i>While the survey research in question is to emphasize that data collection uses a questionnaire. Therefore it is more appropriate if it is only called development research.</i></p>	
6	<p>2.1 Participants</p> <p><i>what is the population of this study and how is the sample determined in this study?</i></p> <p>The sample consisted of VHS teachers (N = 300) spread across 10 regencies/cities in Indonesia, namely Surabaya, Bojonegoro, Tuban, Jombang, Kediri, Blitar, Tulungagung, Nganjuk, Madiun, and Malang, each school as many as 30 teachers.</p> <p><i>what is the population of this study and how is the sample determined in this study?</i></p> <p><i>specify the grouping that you do again. e.g. field of knowledge, age range, etc</i></p>	<p><i>We have been revised the text in this sentence in the paper, as follows.</i></p> <p>The research population is VHS teachers in Indonesia.</p> <p>While the research sample was determined using a purposive sampling technique, with the requirements: (1) VHS teachers with permanent status (both government and private teachers), (2) are productive study teachers, (3) are teachers who are responsible for a class, (4) have work experience for at least 1 year, and (5) willing to volunteer as a participant.</p> <p><i>The purpose of grouping productive fields is because they have fields of study that are relevant to the areas of expertise of students.</i></p> <p>The minimum sample size</p>	p. 4

		<p>required to reduce bias in all types of SEM estimates is 200 (Loehlin, 1998). So the researchers set a sample size of 300.</p>	
7	<p><b>Item and Scale Development.</b>  <i>the steps you wrote are still general in nature. it's good to be specific as to what you do in each phase and how you do it</i></p>	<p><i>All descriptions in this sub-chapter are revised as follows.</i></p> <p>There are three phases to creating a rigorous scale – item development, scale development, and scale evaluation (Boateng et al., 2018); these can be further broken down into nine steps. Item development, i.e., coming up with the initial set of questions for an eventual scale, is composed of: (1) item development, consists of identifying the domain and making the items, and it poses some preliminary scale questions; (2) consideration of content validity, as well as for relevance to the content at hand, representativeness of the domain, and technical quality; (3) pre-testing questions, is when researchers determine if the questions adequately represent the study's focal area and if the measurements generated by the questions can be trusted; (4) sampling and survey administration; (5) Classical Test Theory (CTT) and Item Response Theory (IRT) analysis to item reduction; (6) extraction of latent factors to determine the optimal number of factors or domains that correspond to a set of items (7) tests of dimensionality, is a dimensionality reduction test, which examines the latent structure of scale items and their underlying relationships to determine whether or not earlier hypothetical structures correspond to items; (8) tests of reliability, is a reliability test, which evaluates the internal consistency of the scale to what extent the performance of</p>	p. 4



		<p>participants can be repeated; that is, how consistent their scores over time; and (9) tests of validity, to determine whether the score predicts future outcomes, to what extent the scale score has a stronger relationship with the criteria measurements made near the time of administration, is it reliable and valid, etc.</p>	
8	<p>Teachers' Psychological Capital Scale  <i>you say the items you arrange are decent.  how to prove if the item is feasible</i></p>	<p><i>We say that the items we have compiled are suitable for use, because judging from the parameters of data analysis using SEM, in general, it shows that they are compatible with the data in the field.</i></p>	p.15
9	<p>Results and Discussion  <i>please sharpen the quality of the discussion again and emphasize the novelty of the research you are doing</i></p>	<p><i>This section has added the sentence:</i></p> <p>In this section, the results of data analysis will be discussed to answer the research objectives. The aim of the research is to produce valid and reliable TPCS so that it is feasible to be used to measure the PsyCap of Vocational School Teachers.</p> <p>The findings are in line with the results of (Tamar &amp; Wirawan, 2020) that the combination of linear values of self-efficacy, hope, optimism, resilience and work engagement from the components of psychological capital to predict work engagement at a significant level. The psychological capital has also a positive impact on work involvement and happiness at work which ultimately has an impact on job satisfaction and commitment to work (Wen &amp; Liu-Lastres, 2021).</p> <p>PsyCap helps teachers become committed to carrying out their duties, and maintain dedication under the most extraordinary</p>	pp.13-14

		<p>circumstances. But most importantly, PsyCap helps teachers to motivate and foster students' interest in learning.</p> <p>To achieve all of the above, nurse leaders need to invest in developing their teachers' PsyCap through long-term and short-term interventions. The first step that school organizations can take is to develop a teacher's PsyCap. Educational institution leaders simply introduce teachers to the concept by empowering them to recognize and raise their own personal HERO level and encourage them to do the same for others.</p> <p>Because we rarely hear this concept used in professional settings, implementing these steps is essential maximize teacher performance. The findings of this reserach also contribute to the literature by examining the role of management education to develop teachers' psychological resources, which have key implications for dedication, job commitment, and job performance, and institutions' engagement in responsible management education.</p>	
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## Bukti 4 Konfirmasi Review dan Hasil Review yang Kedua (22 Februari 2023)

IJ

IJLTER ORG <ijlter.org@gmail.com>

Feb 22, 2023, 8:56 AM

to me, Ekohariadi, Yeni

Dear Authors,

Kindly submit the final revised paper (via email) by including the name, affiliation and orcid of all authors.

Prof. Sprock

CE

**One attachment** • Scanned by Gmail

IJLTER ORG <ijlter.org@gmail.com>

Feb 22, 2023, 9:47 PM

to me

Dear Dr Wrahatnolo,

Thank you for making the requested changes and for submitting the revised paper (6794).

You can now make the payment of 800 USD using the following link:

<https://www.paypal.me/LondonConsultingLtd/800>

Payment can also be made via bank/wire transfer. The invoices containing the full bank account details are attached.

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Prof. Antonio Sprock

CE

T

**Tri Wrahatnolo** <triwrahatnolo@unesa.ac.id>

Feb 22, 2023, 11:42 AM

to IJLTER

Prof. Sporock,  
Kindly find the dock file of our manuscript.

Yours sincerely,

Dr. Tri Wrahatnolo

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# **Bukti 5 Konfirmasi Submit Revisi Kedua, Respon Kepada Reviewer dan Artikel yang akan Diresubmit (23 Maret 2023)**

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*Vol. 21, No. x, pp. a-b, Month 2022*

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## **Developing Psychometric Property on the Psychological Capital Scale for Vocational High Schools in Indonesia**

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**Abstract.** Efforts to understand psychological capital (PsyCap) in positive psychological intervention efforts in education are believed to improve teacher performance. The development of a PsyCap scale in vocational education is very important because it has not been widely implemented in Indonesia. This study aims to develop a new, valid, and reliable Teachers' Psychological Capital Scale (TPCS) based on a psychometric approach uses research development. In all, there are nine processes involved in the three stages (item development, scale development, and scale evaluation) of establishing a rigorous scale. Data analysis to test the validity of the items using structural equation models (SEM) with confirmatory factor analysis (CFA) techniques. The TPCS measurement tool consists of 24 items that describe four dimensions, i.e. self-efficacy, optimism, hope, and resilience. The research subjects were vocational school teachers (N = 300) spread across 10 districts in Indonesia. The results of the study show that the PsyCap measurement model fits significantly with the data, meaning that TPCS has strong psychometric feasibility and the deviation from the existing measurements is not substantial. Thus, TPCS is suitable for assessing teachers' PsyCap in a more general sense. Further research into TPCS is made easier now that scientists and practitioners have a deeper grasp of the ontology and technique of scale building and validation thanks to this work.

**Keywords:** hope; optimism; resiliency; self-efficacy; teacher psychological capital.

### **1. Introduction**

Positive psychological approaches to organizational behavior and culture in public companies have been included into contemporary theories of management (Buchanan, 2015). Committed personnel that take pride in their job and actively contribute to the establishment of industry-leading benchmarks are essential in today's competitive business environment

(Ben Moussa & El Arbi, 2020). Proactively encouraging a positive psychological approach and avoiding highlighting the negative with regards to instructors and pupils is essential for schools to follow the contemporary organizational ideas (Um-E-Rubbab & Mehdi Raza Naqvi, 2020). When applied to employees, stakeholders, and the company as a whole, positive psychology has a tendency to spark innovation and revitalize operations (Zafar et al., 2017). When confronting complicated conditions and the new normal that has emerged in the wake of the Covid-19 epidemic, the positive psychology method is often regarded as an effective tool for educational intervention. To combat the spread of the CoVD19 pandemic, classes were held online, which led to some students experiencing emotional and behavioral difficulties. As far as the kids' and the instructors' mental health are concerned, the majority of research have only found bad news.

Strategically equipping students with several skills for the future is one of a teacher's primary responsibilities (Valtonen et al., 2021). Teachers have a significant impact on student learning, particularly when they are provided with a stress-free environment that fosters innovation and creativity (Wang & Tahir, 2020). School-based treatments informed by positive psychology are generally well-received (Ryff, 2022). This field of research focuses on the many beneficial characteristics of the educational psychology system. Education in the new normal requires positive psychology interventions to revive the joy of learning and raise both instructors' and students' hopes and self-assurance. Since it is expected that returning to school would have a favorable effect on both instructors' and students' emotional well-being, it is crucial that they be immersed in a supportive and encouraging atmosphere.

Psychological capital (PsyCap) is the most important factor in teacher success, according to the field of organizational psychology. PsyCap refers to the process of cultivating one's psychological fortitude in order to take on and master the difficulties and skillsets inherent in one's chosen endeavors (Luthans & Youssef-Morgan, 2017). PsyCap refers to a psychological factor that predicts how invested an employee is in their work, and it includes things like feeling appreciated and having input into how they are evaluated. The use of psychological capital in academia is expanding quickly, particularly with the aim of enhancing the efficiency of institutional administration. In recent years, there has been a growing recognition among researchers and professionals of the importance of, and potential for, psychological capital in achieving one's full potential in the workplace. Several studies show that teachers' happiness is related to their satisfaction with their working conditions and their connections with their pupils, suggesting that teachers' psychological capital plays a role in their sense of happiness in the classroom. Multiple studies (Esmaeili et al., 2019; Rand, 2009) demonstrate the benefit of PsyCap creation on teacher performance and its favorable effect on student success, motivation, and emotional development. Many students' attitudes and actions in the classroom may be attributed to two PsyCap constructs: the theory of expectancies (Snyder, 2000) and the theory of self-efficacy (Bandura, 2006). The domains of self-efficacy in this study include beliefs about the teacher's ability to direct motivation and sources of cognition, carry out a number of activities needed to achieve goals, and success in carrying out tasks in the context of learning management (Youssef & Luthans, 2007).

There are four components that make up one's psychological capital: self-efficacy, optimism, hope, and resiliency (Luthans & Youssef-Morgan, 2017). Hope is described as a constructive outlook grounded on a learned agency and a strategy for achieving one's goals via interaction (Yim et al., 2017). A person's self-efficacy is their confidence in their own capacity to behave appropriately and successfully in a particular circumstance (Lyu et al., 2020).

According to Bandura (2006), one's confidence in their abilities is influenced by four things: prior successes, exposure to role models, persuasive arguments, and feelings of excitement. Expert teachers may boost their pupils' self-esteem by setting a good example. Self-efficacy is a predictor of work stress, job performance, turnover intention, and burnout (tiredness), among other cognitive aspects, depending on the data source and analytic technique. Someone who is not confident in his abilities is more likely to experience anxiety and tension when confronted with obstacles, which can have a chilling effect on their output. (Lyu et al., 2020). Cognitively motivated goal attainment and improved performance are both connected with hope (Brosch & Steg, 2021; Brundin et al., 2021). Evidence suggests that hope may be applied to and has a bearing on a wide range of performance variables, including those associated with the workplace and the people within an organization (Luthans & Youssef-Morgan, 2017; Shanahan et al., 2020). Educators who set lofty goals for their students tend to reap financial benefits, have more job satisfaction, and remain in their positions for longer (Azizi et al., 2021; Piwowar-Sulej, 2021).

Individuals may have a predisposition for optimism, but it is also a trait that may be taught and changed by one's environment (Vos et al., 2021). An optimistic outlook on life has been shown to have beneficial effects on both physical and mental health (Hoşgör & Yaman, 2022). The likelihood of developing both mental and physical health issues is lower in more optimistic people (Cho et al., 2021). Furthermore, optimistic people have better coping mechanisms than pessimists. Having the mental fortitude to persevere in the face of adversity and emerge stronger on the other side is the definition of resilience (Delgado et al., 2017). Workplace stress may be mitigated in part by cultivating good emotions like resilience (Çam, 2017). Having a high resilience level is linked to better health, happiness, success in the workplace, and overall contentment with life. Employees who practice positive resilience are less likely to quit their professions, have fewer mental health issues including weariness and depression, and have higher levels of professional and personal satisfaction. In light of the preceding, it is clear how crucial it is for contemporary educational institutions to reveal their teachers' Psychological Capital, especially in times of crisis and mounting difficulty. As the discipline evolves and new research questions are posed, the need for a PsyCap scale or instrument designed specifically for use in the classroom arises. Many studies on PsyCap have been conducted in other countries, but in Indonesia, particularly in the sector of vocational education, there have been surprisingly few. Even among Indonesia's vocational education instructors, empirical notions concerning PsyCap are still uncommon.

It is our inability to make direct judgments about abstract concepts like attitudes, actions, and theoretical constructs that gives rise to the need for scales to quantify these concepts. Behaviors, emotions, and activities that cannot be measured by a single object or variable are commonly measured using scales. More precise results can be achieved by the use of numerous items to assess the underlying latent construct by explaining and isolating the measurement errors of a single item. In the fields of social science, psychology, and education, thousands of scales have been devised to assess a wide range of traits and events. However, progress on a large scale is seldom simple, clear, or straightforward.

The process of developing a scale is lengthy, costly, and requires intricate statistical analysis. Despite the availability of a huge volume of technical material on the theory and scale development (Bai et al., 2008) (Raykov & Marcoulides, 2011). When doing scientific research, we often utilize incomplete measures to assess students' cognitive and behavioral abilities, both of which are crucial to vocational training. On the other hand, the theoretical agreement on the PsyCap construct results in the many dimensions of the measurement scale of this



construct in a variety of specific jobs. One difficulty that arises for psychologists and human resources researchers is how to measure a teacher's PsyCap in a reliable and relatively unbiased way. A way to overcome the current impasse is to conduct studies with a focus on the problem of the teacher's PsyCap measurement scale and on the assessment to test the extent to which the construction is measured according to the facts on the ground. Therefore, our goal is to develop the PsyCap scale for vocational Teachers in Indonesia in a simple, valid, and reliable format, in addition to helping to scale up existing ones. By testing the structure in different versions of TPCS the authors expect to obtain a valid and reliable measurement scale so that it can be applied to a wider scope and level of education.

## **2. Methods**

This study used a development research method consisting of design, Development, and Evaluation (DDR). DDR is described as "the systematic study of the design, development, and evaluation processes with the purpose of developing an empirical foundation for the design of instructional and non-instructional goods and tools, and new or upgraded models that govern their development" (Richey & Klein, 2007, p.1). The first kind of DDR focuses on products and tools, while the second kind examines models (Richey & Klein, 2007). Type II is used in this investigation. Create a rigorous scale by following these three stages: item development, scale development, and scale evaluation (Boateng et al., 2018).

### **2.1 Population dan Sample**

The population is VHS teachers in Indonesia. The research population is VHS teachers in Indonesia. While the research sample was determined using a purposive sampling technique, with the requirements: (1) VHS teachers with permanent status (both government and private teachers), (2) are productive study teachers, (3) are teachers who are responsible for a class, (4) have work experience for at least 1 year, and (5) willing to volunteer as a participant. The minimum sample size required to reduce bias in all types of SEM estimates is 200 (Loehlin, 1998). So the researchers set a sample size of 300, spread across 10 regencies in Indonesia. Teachers have the status of government employees (Permanent Teachers) as many as 220 people (73.3 %) and Non-Permanent Teachers as many as 180 (26.7 %). The gender distribution was 178 males (59.3 %) and 122 females (40.7 %). The characteristics of the sample indicate that it corresponds to the data of the selected study subject by purposive sampling. Participants in the study were also selected voluntarily, with all participants surveyed at data collection locations or where they worked. TPCS is anonymous and data is handled collectively. Only teachers have the authority and responsibility for their classes/study groups for at least one full year serving as teachers at VHS. This research was conducted following the principles and code of ethics of the APA (Team, 2017).

### **2.2 Item and Scale Development**

The TPCS development process consists of nine stages, which are as follows: Initial questions for the scale are posed during (1) item development, which include determining the domain and creating the items. 2) taking into account the content's veracity in terms of its subject-matter appropriateness, domain-wide representativeness, and technological excellence; Thirdly, researchers pre-test questions to see if they accurately reflect the focus of the study and produce reliable results in terms of measurement. Four) The Conducting of Surveys and Sampling (5) Applying Item Response Theory (IRT) and Classical Test Theory (CTT) to eliminate unnecessary questions: extraction of latent factors to find the best fit between a collection of items and a number of factors or domains (step 6). Dimensionality reduction testing, often known as the "dimensionality test," looks at the latent structure of

scale items and their underlying linkages to see if they match up with hypothesized structures. Tests of validity look at whether the score predicts future outcomes, how strongly the scale score correlates with criteria measurements made close to the time of administration, and so on. Tests of reliability evaluate the internal consistency of the scale to see if participants' performance can be repeated; that is, how consistent their scores are over time.

### 2.3 Teachers' Psychological Capital Scale

Twenty-four questions make up the PsyCap questionnaire, which was developed by a team of experts following extensive literature review and consideration of context (Luthans et al., 2007; Luthans & Youssef, 2007). We created a survey to get a sense of whether or not respondents thought second-order components should be part of the proposed model. Here, the researchers employ the Psychological Capital Questionnaire-24 (PCQ-24) developed by Luthans and colleagues (Luthans et al., 2007; Youssef and Luthans, 2007) to measure PsyCap. Self-efficacy, optimism, hope, and resilience are the four facets of the PsyCap construct that this tool may assess. Six items are used to symbolize these dimensions. This instrument's items are based on and adapted from those of four other measuring instruments that have been field-tested and published in a wide range of studies: (1) the Hope Scale (Snyder et al., 1996), (2) the Resilience Scale (Delgado & Reevy, 2018), (3) the Optimism Scale (Scheier & Carver, 1985), and (4) the Self-Efficacy Scale (Greco et al., 2022). After adapting, a measuring tool for teacher psychological capital was created called the Teacher Psychological Capital Scale (TPCS).

**Table 1: Dimensions of teacher psychological capital scale**

Dimensions	Description	No. of Item
Self-efficacy	An educator's self-assurance in his ability to steer students' motivation and knowledge toward the achievement of learning objectives and the completion of tasks.	1, 2, 3, 4, 5, 6
Hope	VHS educators' drive and optimism arise from the dynamic interplay between the potency of desire and the discipline of planning, which they use to accomplish their goals and address the challenges they face in the here and now and in the foreseeable future.	7, 8, 9, 10, 11, 12
Resiliency	VHS educators' resilience in the face of setbacks, disagreements, and failures, as well as success, advancement, and additional responsibilities.	13*, 14, 15, 16, 17, 18
Optimism	A persistent image in positive psychology of the educator as a positive future hope who is open to self-development.	19, 20*, 21, 22, 23*, 24

Note: \*) question items are unfavourable

Table 1 also shows the description and item count of the TPCS dimension. The self-efficacy dimension consists of 6 items, starting with numbers 1, 2, 3, 4, 5, and 6; Hope consists of 6 items numbered 7, 8, 9, 10, 11, and 12; Resiliency consists of 6 items numbered 13\*, 14, 15, 16, 17, and 18, and Optimism consists of 6 items numbered 19, 20\*, 21, 22, 23\*, and 24.

### 2.4 PsyCap Measurement

Each participant was asked to describe "how you may think about yourself right now," a phrase chosen to highlight the "state-like" aspect of the measure. Then, the TPCS relied on a 5-point Likert scale for all replies: 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree or agree, 4 = agree, and 5 = strongly agree. For unfavorable items, the scale scoring is the opposite of the scoring rule, starting from a score of 1 for the "Strongly Agree (SS)" option to a score of 5 for the "Strongly Disagree (STS)" option.

## 2.5 Scale Evaluation

The research objective was to develop the Teachers Psychological Capital Scale (TPCS) based on psychometric analysis using the Confirmatory Factor Analysis (CFA) approach. The validity test was carried out using the Confirmatory Factor Analysis (CFA) method with the help of AMOS SPSS software. According to Kenny & Editor (2007) the steps in testing the validity of this research scale are as follows: (1) Do the CFA test with an unidimensional model and look at the resulting Chi-Square value. If the Chi-Square value is not significant ( $p > 0.05$ ) it means that all items have been measured according to the theory, and can be continued by looking at the loading factor for each item. If the Chi-Square value is significant ( $p < 0.05$ ), a modification of the measurement model is required; (2) Modify the measurement model by estimating the correlation between measurement errors on several items that may be multidimensional. This means that in addition to an item measuring the construct that should be measured (according to theory), it can also be seen whether the item measures something else (measuring more than one thing). If after some measurement errors are freed to correlate with each other and finally a fit (unidimensional) model is obtained; (3) Then see if there are items with negative factor loading. If there is, the item must be dropped or not included in the factor score calculation analysis; (4) By using SPSS and the unidimensional model then the true score value of the variable is estimated.

When the group's interests are uniform across the spectrum of the latent construction's direction and strength of the link to the observed variables, this gives empirical evidence for the invariance hypothesis of the measuring instrument. Therefore, the goal of this type of research is to determine if the measuring model consistently produces the same scale or feature (Pitts et al., 1996). To ensure that the versions of TPCS they develop can be used across regions and levels of vocational education, the authors use traditional methods to evaluate measurement variance (Schmitt & Kuljanin, 2008). Identifying the model with the greatest potential for generalization may be done by evaluating many alternatives (Hair et al., 2017).

Extracting a model's projected component or factor structure and putting it to the test over many time periods in longitudinal research, or preferably on a new sample, is what's known as a dimensionality test (Kenny & Editor, 2007). Dimension verifies whether or whether the same item, component, or function has been measured consistently across several samples or throughout time. The examination may be carried out using an independent cluster model (ICM), such a confirmatory factor analysis (CFA), bifactor modeling, or measurement invariance.

Confirmatory factor analysis is a sort of psychometric assessment that utilizes fit assessment processes and the calculation of links between latent constructs to systematically compare various a priori component structures after accounting for measurement error (Morin et al., 2015). It relies on an extremely stringent ICM that presupposes there is no connection between items and off-target variables (Morin et al., 2015). A primary suitable bound specifies the method for selecting pairings.

Criteria for determining model fit with data are: (a) Chi-square test of model fit has been assessed to be overly sensitive to sample size and to vary when dealing with non-normal variables. Hence, the use of non-normal data, a small sample size ( $n = 180-300$ ), and highly correlated items make the chi-square approximation inaccurate; (b) Root Mean Square Error of Approximation (RMSEA)  $\leq 0.05$  as indicative of close fit,  $0.05 \leq \text{RMSEA} \leq 0.08$  as indicative of fair fit, and values  $>0.10$  as indicative of poor fit between the hypothesized model and the observed data; (c) Tucker Lewis Index (TLI), that models with overall fit indices of  $<0.90$  are generally inadequate and can be improved substantially; (d) Comparative Fit Index (CFI)  $\geq 0.95$  is often considered an acceptable fit; and (e) Standardized Root Mean Square Residual (SRMR), threshold for acceptable model fit is  $\text{SRMR} \leq 0.08$  (Botaeng et al., 2018; Kenny & Editor, 2007).

## 2.6 Measurement Invariance

A further technique for evaluating dimensions is known as measurement invariance, also known as factorial invariance or measurement equivalency (Vandenberg & Lance, 2000). To what extent can the observed indicators' psychometric qualities be generalized (transferred) across groups or across time is what is meant by "measurement invariance" (Sideridis et al., 2015). Indicators include things like factor structure, regression slope and intercept, and residual variance. Invariance was checked at five distinct levels: configurational, metric, scalar, strict (residual), and structural (Kyriazos, 2018; Vandenberg & Lance, 2000). In order to determine if the structure of the hypothesized component is constant across samples, the dimension test focuses on the invariant of the configuration. However, if this assumption is not correct, then any further investigation is pointless (Kyriazos, 2018; Vandenberg & Lance, 2000).

**Table 2. Descriptive statistics for TPCS**

No	Item	Mean	SD	Skewness	Kurtosis
1.	When educating other educators or technicians, I have no uncertainties about expressing my knowledge.	3.71	.583	-.407	.636
2.	I am prepared to contribute to the establishment of my department's aims and objectives.	3.63	.669	-.006	-.227
3.	I'm comfortable adding my two cents to the conversation on how to improve education.	3.66	.516	-.934	-.116
4.	I have no problems about looking at the big picture to figure out how to fix things.	3.57	.733	-.033	.021
5.	I think I have something worthwhile to add to the conversation about pedagogical tactics at school.	3.76	.628	-.117	-.046
6.	I have no problem having meaningful conversations about important topics with adults outside of the classroom (parents, industry, business).	3.94	.654	.026	-.556
7.	I am now succeeding in all of my planned activities.	4.16	.802	-1.218	2.302

No	Item	Mean	SD	Skewness	Kurtosis
8.	Numerous options have occurred to me for addressing the issue.	4.58	.547	-.808	-.431
9.	If I encounter difficulties, I can find a way out	3.84	.676	.172	-.754
10.	As a school vocational instructor, I feel like I've really hit my stride recently.	3.55	.653	.100	-.256
11.	My current focus is on fulfilling my work's ultimate goals.	3.61	.610	.111	-.398
12.	Many options exist for me to reach my present professional objectives.	3.92	.679	-.423	.677
13.	The results of my efforts as a vocational educator were never satisfying.	4.19	.747	-.464	-.654
14.	In the face of academic uncertainty, I tend to have a positive outlook.	3.75	.787	-.146	-.096
15.	I try to look at the bright side of things and believe that making a mistake is unavoidable.	3.77	.762	.011	-.604
16.	I always see the positive side of everything about my work.	3.68	.560	.083	-.663
17.	At this point in time, I feel like I'm doing a good job of navigating the trip.	3.69	.659	.309	-.613
18.	In general, I have a positive outlook on life.	3.47	.581	-.118	-.551
19.	I know I can get through the challenging moment at work because I have been through it before.	3.46	.733	.432	-.194
20.	Every issue has several potential answers.	3.69	.714	-.212	-.108
21.	I had a hard time getting back on track after encountering workplace failures.	3.59	.642	.104	-.331
22.	At work, I can find "privacy" to conduct private conversations if I need to.	3.63	.648	.104	-.313
23.	I'm comfortable offering my thoughts on potential educational reforms.	3.63	.607	.104	-.621
24.	I'm comfortable offering my thoughts on potential.	3.60	.591	.104	-.617

From Table 2, the mean of all items is in the range of scores from 3.46 to 4.58, meaning that it is in the high category. The slope coefficient and kurtosis were calculated to verify the multivariate normality assumption. All skewness coefficients and kurtosis on each item are in the value range -2 to 2, significant ( $p < 0.001$ ), implying a violation of the assumption of normality.

Each proposed dimension must be independently verified for unidimensionality, regardless of whether the postulated structure has two or more dimensions. Confirmatory factor analysis is another method for doing this. Items' latent structures may be evaluated based on their index precise model fit and the strength of their factor loadings (refer to Table 2) (Boateng et al., 2018). After a successful first factor analysis, CFA on a new sample often yields a poor global model fit. No excellent matches allow for more wasted parts. Items with

loading scores below .3 may be removed. Mplus and other SEM tools provide a modification index to help identify regions that need improvement. In certain cases, one or more "super" factors are utilized to describe the relationship between the original components. Statistical analysis techniques can also assess it (SPSS).

The last item of the dimensional test may be used to generate a scale score, which can subsequently be applied to more in-depth analyses, such as reliability and validity testing. Scale scores can be calculated with or without the use of weights. Standardized item scores can be added to raw item scores or vice versa, and raw item scores can be averaged. A weighted technique of calculating scale scores may be developed with the use of statistical tools. The interpretation of the loading factor is found in the results of modeling with the CFA or the entire model using structural equation modeling (SEM). A loading factor measures the strength of the relationship between an indicator and the latent construct being measured (Vandenberg & Lance, 2000). In several types of social science research, indicators are used to quantify a construct indirectly. High loading factors indicate that an indicator is more helpful in explaining its latent concept. But indicators with low factor loadings contribute less to the explanation of the hidden concept. Sample sizes greater than 300 for CFA analysis are considered legitimate, and a loading factor of more than 0.30 is considered to indicate validity (Hair, 2017).

### 3. Results and Discussion

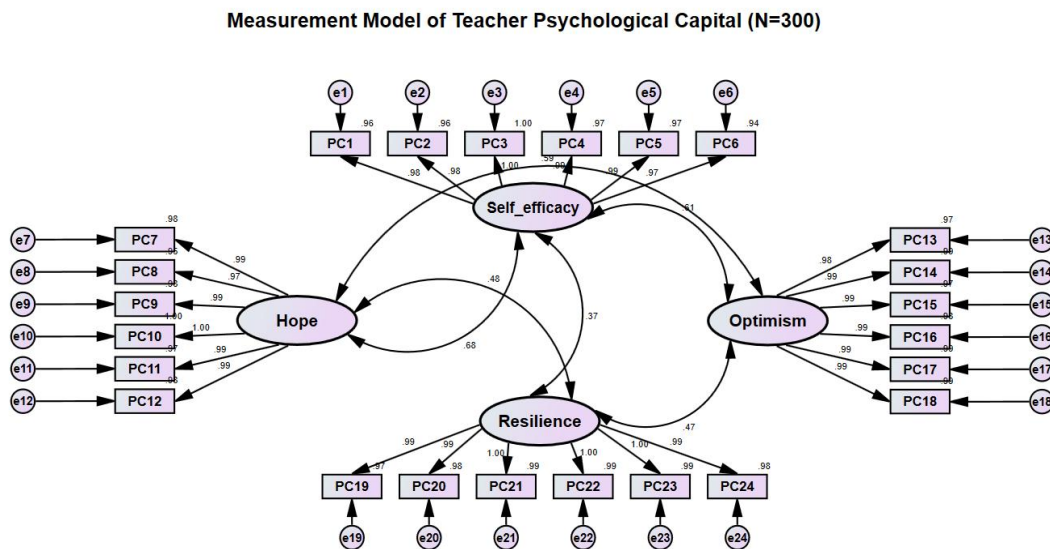
This subsection will analyze the data analysis results in light of the questions posed by the research. To begin comparing structural invariances across populations, this study's major objective was to create a measurement model for TPCS. The results of the confirmatory factor analysis (CFA) in Table 3 show that the value of S-B  $\chi^2$  is 1096,432, degrees of freedom = 246, at statistical significance ( $p=.000$ ). This shows that the model fits significantly with the data.

**Table 3.** Goodness of fit indices for CFA models of the TPCS (N = 300)

Model	S-B $\chi^2$	df	GFI	RMSEA	SRMR	NFI	RFI	CFI	TLI
Default model	1096.432	246	.688	.138	.008	.909	.897	.916	.958
Saturated model	-	-	-	-	.000	1.00	-	1.000	-
Independence model	-	-	.091	.450	.229	.000	.000	.000	.000

Based on the results of the factor analysis, the TPCS measurement obtained a GFI value of .688 which is below .950, meaning that the model does not fit the data. A Root Mean Squared Error of Approximation (RMSEA) value of .138 ( $> 0.10$ ) indicates a mismatch between the hypothesized model and the observed data. However, a TLI index of .958 ( $>0.90$ ) indicates a substantially adequate scale or has a sensitivity to variations and sample sizes or shows items are very accurately used for the measurement process. Likewise, a Standardized Root Mean Square Residual (SRMR) threshold value of .008 ( $<1.0$ ) indicates a fit model with the observed data. But a Comparative Fit Index (CFI) value of .916 ( $<0.95$ ) is considered a less acceptable match.

Researchers also used other fit measures before concluding the fit model with the research data. Standardized Regression Weights (SRW) estimation values of 24 TPCS items have high scores in the range of .923 to .995. This suggests that all standard regression coefficients are estimated to be statistically significant ( $> .2$ ;  $p = .01$ ), meaning that all items are valid and reliable. This means that the basic model confirms the dimensions of the TPCS construct which includes self-efficacy, hope, resiliency, and optimism. Likewise Cronbach's alpha value of the first-order constructs is .976 was greater than .70, indicating acceptable consistency (Creswel, 2018). The AVE values of all the sub-constructs also exceeded the cut-off point, indicating construct validity.



**Figure 1: TPCS Model Measurement**

Figure 1 shows the estimated correlation between the dimensions of the TPCS model. Estimate correlations between model variables, including self-efficacy and hope (.683), self-efficacy and resiliency (.372), self-efficacy and optimism (.613), optimism and hope (.590), resilience and hope (.484), and optimism and resilience (.469). TPCS appears psychometrically feasible and deviates from insignificant invariant metrics. Researchers use these four-dimensional PsyCap metrics to examine multi-group structural invariance because they have a good fit index.

The above study demonstrates that the TPCS may be effectively utilized to gauge the mental health of Indonesia's VHS educators. The importance of the Psychological Capital Measurement Model for VHS Teachers in motivating educators to raise student achievement by focusing on their individual strengths and interests cannot be overstated. According to (Gomes da Costa et al., 2021), the positive psychological factors of self-efficacy, hope, resilience, and optimism all contribute to positive mental health and, in turn, boost performance. This agrees with the view of Jansen et al. (2020) that a teacher with high self-efficacy might draw on past experience to raise their performance expectations on the job. Other research has found that schools with higher expectations for their teachers see greater profits, employee retention, and dedication from their staff. Similarly, if a teacher's resilient experience is positive, it will boost the educator's sense of autonomy and self-reliance, enhance their professional capabilities and job and life satisfaction, lessen the impact of mental health issues like exhaustion and depression, and prevent them from quitting their job (Çam, 2017). Hope and optimism as predictors of academic performance and subjective well-being in college students (Kevin, 2020).

**Table 4: Teachers psychological capital scale**

No.	Item
1	When educating other educators or technicians, I have no uncertainties about expressing my knowledge.
2	I am prepared to contribute to the establishment of my department's aims and objectives.
3	I'm comfortable adding my two cents to the conversation on how to improve education.
4	I have no problems about looking at the big picture to figure out how to fix things.
5	I think I have something worthwhile to add to the conversation about pedagogical tactics at school.
6	I have no problem having meaningful conversations about important topics with adults outside of the classroom (parents, industry, business).
7	I am now succeeding in all of my planned activities.
8	Numerous options have occurred to me for addressing the issue.
9	If I encounter difficulties, I can find a way out
10	As a school vocational instructor, I feel like I've really hit my stride recently.
11	My current focus is on fulfilling my work's ultimate goals.
12	Many options exist for me to reach my present professional objectives.
13	The results of my efforts as a vocational educator were never satisfying.
14	In the face of academic uncertainty, I tend to have a positive outlook.
15	I try to look at the bright side of things and believe that making a mistake is unavoidable.
16	I always see the positive side of everything about my work.
17	At this point in time, I feel like I'm doing a good job of navigating the trip.
18	In general, I have a positive outlook on life.
19	I know I can get through the challenging moment at work because I have been through it before.
20	Every issue has several potential answers.
21	I had a hard time getting back on track after encountering workplace failures.
22	At work, I can find "privacy" to conduct private conversations if I need to.
23	I'm comfortable offering my thoughts on potential educational reforms.
24	I'm comfortable offering my thoughts on potential.

Since the study of PsyCap in vocational education teachers in Indonesia is also still rare, the existence of a reliable and reliable Teachers Psychological Capital Scale is very important not only for new teachers but also teachers who have long work experience. The emerging issue of how to measure the reliable, practical, easy, and relatively unbiased PsyCap of vocational teachers in Indonesia has been answered through this study. The findings of this study strengthen the theory developed by Luthan & Youssef (Luthans & Youssef, 2007) regarding the constructs and dimensions of the Teacher Psychological Capital Scala. PsyCap is an individual's positive psychological state of development and is characterized by having high levels of HERO (i.e., hope, efficacy, resilience, and optimism) (Luthans & Youssef, 2007; Ohlinm, 2020). Researchers consider PsyCap to be a fundamental asset for authentic, unique, and vital leadership. This is in accordance with Bao's research (2015) which says that authentic leaders have many things hope, efficacy, resilience, and optimism.



This measurement of psychological capital is believed to be able to support studies of the application of positive psychology in the management of the education system organization in this modern era, especially to arouse the enthusiasm of teachers in working, creating, and innovating according to their potential. Although research on positive psychology in the world of education has been widely carried out abroad, in Indonesia there are still very few, so after all the results of this study will eventually be able to contribute to the progress of vocational education and general education in Indonesia. It does not support full-scale equality, which means that group scores must be compared with other factors that also have a strong influence. From this point of view, further research adopting TPCS would require the use of other measures to evaluate the discriminant validity of the scale (e.g., personal growth initiative, or organizational structure). Because of the results of this study, the authors propose the following guidelines for the use and development of TPCS at other levels of education in the future. From a theoretical point of view, this research confirms (especially in the field of vocational education) the importance of social aspects and the organizational structure of schools to determine teacher performance. PsyCap helps teachers become committed to carrying out their duties, and maintain dedication under the most extraordinary circumstances. But most importantly, PsyCap helps teachers to motivate and foster students' interest in learning. To achieve all of the above, nurse leaders need to invest in developing their teachers' PsyCap through long-term and short-term interventions. The first step that school organizations can take is to develop a teacher's PsyCap. Educational institution leaders simply introduce teachers to the concept by empowering them to recognize and raise their own personal HERO level and encourage them to do the same for others. Because we rarely hear this concept used in professional settings, implementing these steps is essential maximize teacher performance.

The findings of this study prove that psychological capital is influenced by psychological aspects of teachers such as self-efficacy, hope, resilience, and optimism, which are closely related to the work environment. The relationship between items and latent factors, as well as the number of described variances, observed all seem to point in this direction. Nevertheless, this does not mean ignoring other aspects that were not involved in this study. Furthermore, the basic invariant of the TPCS measurement modeling our study subjects provides valuable evidence for the relatively stable dimensions of PsyCap.

On the methodological side, the teacher's PsyCap measurement is most appropriately performed with a small number of items. From the author's experience in developing the TPCS, we conclude that the PsyCap indicator as a whole helps to evaluate and understand the construction understudy. However, it also seems beneficial to include a small number of more specific items to create a more comprehensive framework that allows researchers to explore its effects simultaneously. One of the possible explanations for the excellent psychometric TPCS is the inclusion of specific indicators that further complement and amplify the overall TPCS scale. Finally, from a practical point of view, the ease of filling out questionnaires, the time to answer questions, and the interpretation of questions in this instrument prove that this scale can be applied on a wider scale because it is short, practical, and easy to use for leaders, researchers, and education practitioners to collect data on teachers' psychological capital in schools. The results of the TPCS scale's predictive validity assessment are adapted or newly developed and intended for vocational education, but can be applied to general schools, even relevant to other fields such as health, social, and behavioral sciences.

## 4. Conclusion

This study evaluates the validity of TPCS items in VHS in 10 districts in Indonesia. By looking at the parameters of the CFA results shown from the Chi-square score, the GFI, NFI, CFI, and RMSEA values show that the TPCS measurement model is fit with the data. Likewise, from the score of estimate correlations between the latent variables of the developed model it can be concluded that the dimensions of TPCS have strong psychometric feasibility and deviations from insubstantial invariant measurements. The CFA demonstrated a model of PsyCap measurement in an educational context that includes four dimensions: self-efficacy, hope, resiliency, and optimism proven fit with data in the field. This means that the four dimensions can explain the variance in the Psychological Capital of vocational teachers as a whole. Likewise, of the 24 TPCS items, all of them are valid and reliable. In general, the results showed that TPCS had strong psychometric feasibility and deviations from insubstantial invariant measurements. So this instrument is feasible to use to measure the PsyCap level of vocational teachers. This study's results imply that in the future it will be necessary to further test the teacher psychological capital scale over a wider area. The importance of measuring teachers' mental states in the face of increasingly severe challenges and prolonged social crises is critical.

## 5. Author Contribution

This article's writers have confirmed that they have no financial or personal stakes in the subjects or outcomes of the study. Author1 conducted the research, compiled the literature review, and oversaw the whole writing process. Research methodology was written by Author2 and data input was completed by Author2. All statistical work and interpretation of data was done by Author3.

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Feb 23, 2023,  
12:02 PM

to IJLTER

Dear Prof. Antonio Sprock,

Thank you for submitting our revised progress paper (6794).  
I have made a payment of 800 USD via transfer to:

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Your paper is now being finalised for publication in the February 2023 issue.

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Prof. Sprock

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Dear Dr Wrahatnolo, Good Morning

There is a final set of comments which you need to address before we can publish the paper in the February 2023 issue.

Please do so and send us the paper by 7th March 2023.

Kindly ensure not to introduce any new errors in the paper.

Prof. Sprock

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Tue, Mar 7, 12:45 PM

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It will now be published in the February 2023 issue very soon.  
You will be kept informed.

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