



UNIVERSITAS NEGERI YOGYAKARTA

Adaptation of Scale/Questionnaire Instrument: Teaching Self-Efficacy Scale

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Instrument Adaptation

Step of Instrument
Adaptation

Scoring Technique



1. Taking a specific part of the instrument and adapting it to the purpose and context of our research
2. List the citation source clearly and indicate which part was adapted and why (should be clear in chapter 3)
3. References for adaptation should also be presented, for example adding aspects of the SSI assessment according to the characteristics of SSI according to Zeidler (1990)
4. Adapted instruments must be re-validated theoretically/expertly and empirically

Research purposes:

Measuring the self-efficacy of prospective teachers to apply context-based chemistry learning (quantitative data)

Required instruments:

Self-Efficacy Scale by adapting instruments from previous research

Adapted instrument sources:

Wiyarsi, A. (2018). Enhancing of preservice chemistry teachers' self efficacy through the preparation of pedagogical content knowledge in vocational context. *Journal of Science Education*, 5(2), 14-23.

Instrument Identity:

The instrument was developed by the researcher himself and refers to various theories of self-efficacy (Bandura, Zimmerman, Riggs & Knoch, Bleicher)

To measure the self-efficacy of prospective teachers teaching chemistry in vocational schools

Consists of 2 aspects with a total of 20 items, in the form of a Likert scale with 5 alternative answers Very sure, sure, undecided, not sure, very unsure

It has been validated theoretically/expertly and empirically/field trial with an r value (Cronbach's alpha) of 0.886 high reliability



Why Adaptation?

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Adjusting research objectives

Both teaching efficacy but previous research for teaching chemistry in general in vocational schools

In a research that will be conducted to measure the efficacy of teaching chemistry with a context-based approach



It is necessary to adjust the question items related to the characteristics of context-based learning based on the theory of Gilbert (2006)

Aspects and Indicators used are the same

The original self-efficacy instrument grid

Aspect	Indicator	No of Item	Amount of Item
Personal Science Teaching Efficacy (PSTE)	Personal effort efficacy	1,2	2
	Instructional Strategies Efficacy	3,4,5	3
	General Teaching Efficacy	6,7,8,9,10	5
Science Teaching Outcome Expectancy (STOE)	Efficacy in supporting students' achievement	11,12,13,15,18,19	6
	Efficacy in self-reflection	14,16,17,20	4
		Total	20

Check the statement items and adjust them for the terms of learning in vocational schools with context-based learning



Aspects of Personal Science Teaching Efficacy (PSTE)

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Indicator	Item	No
Personal effort efficacy	I will continue to find the best way to teach chemistry in vocational schools	1
	I can't teach chemistry in a vocational school as well as if I teach in a public school, no matter how hard I try	2
Instructional Strategies Efficacy	As students' chemistry skills improve, it depends more on my discovery of effective chemistry learning approaches	3
	I know the essential steps for teaching chemistry effectively in vocational schools	4
	I can't develop effective chemistry experiments for vocational schools	5
General Teaching Efficacy	I would teach chemistry more in vocational schools less effectively	6
	The low basic knowledge of vocational students about chemistry can be overcome by learning chemistry that I do well	7
	When students' chemistry learning progress is slow, I must be able to pay more attention to overcome it	8
	I understand chemistry concepts well to be able to teach chemistry effectively in vocational schools	9
	I am fully responsible for the chemistry learning achievements of the vocational school students I teach	10

Item	No
I will continue to find the best way to teach chemistry in schools by involving context	1
I couldn't teach context-based chemistry in school as well as I could with other approaches, no matter how hard I tried	2
When students' chemistry abilities increase, it depends more on my findings about the effective implementation of context-based chemistry learning	3
I know the essential steps for teaching context-based chemistry effectively in schools	4
I can't develop effective context-based chemistry experiments for school	5
If I apply context-based chemistry learning in schools it will be less effective	6
Basic knowledge of students' early life context related to chemistry is low, it can be overcome by learning chemistry that I do well	7
When students' chemistry learning progress was slow, I had to further improve the relevance aspect of chemistry	8
I understand context models well so I can determine the right context to teach certain chemistry concepts	9
I am fully responsible for the achievements of the chemistry students I teach with a context-based approach	10



Aspects of Science Teaching Outcome Expectancy

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Efficacy in supporting students' achievement	11	Student achievement in chemistry is directly proportional to the effectiveness of teaching that I carry out
	15	I can be the best chemistry teacher for vocational school students because I have the competence to teach chemistry in vocational schools
	12	I can motivate vocational school students to learn chemistry better
	13	I find it difficult to develop chemistry lessons that encourage student activity for vocational schools
	18	I don't know what to do to attract vocational school students to study chemistry
	19	If I have good chemistry teaching skills, I'm still not able to help some students learn chemistry
Efficacy in self-reflection	16	If I may choose, I don't want my boss or other people to evaluate my chemistry lessons
	14	I can answer questions related to student vocational chemistry material
	17	When teaching chemistry, I will be open to any questions from students
	20	I don't have the ability to develop proper chemistry materials for vocational school students

How are the items adapted?

SKALA EFIKASI DIRI MENGAJAR KIMIA BERBASIS KONTEKS

KELAS :
SEM :
HARI/TGL :

PETUNJUK PENGISIAN ANGKET:

- A. Cermati setiap pernyataan yang ada dan berikan tanda centang (v) pada salah satu alternatif pilihan jawaban sesuai dengan kondisi Anda, yaitu:

SY jika Anda **sangat yakin**
Y jika Anda **yakin**
R jika Anda **ragu-ragu**
TY jika Anda **tidak yakin**
STY Jika Anda **sangat tidak yakin**

No	Pernyataan	Pilihan jawaban				
		SY	Y	R	TY	STY
1	Saya akan terus menemukan cara terbaik untuk mengajarkan kimia di sekolah dengan melibatkan konteks.					
2	Saya tidak dapat mengajarkan kimia di sekolah dengan berbasis konteks sebaik jika saya mengajar dengan pendekatan lain, meskipun telah berusaha keras.					
3	Ketika kemampuan kimia siswa meningkat, maka hal itu lebih banyak tergantung pada penemuan saya tentang implementasi pendekatan pembelajaran kimia berbasis konteks yang efektif.					

Instrument Name

Identity, according to the data analysis to be performed
For example, to analyze the influence of gender, it is necessary to have information about gender
Likewise other variables, for example length of teaching, educational background

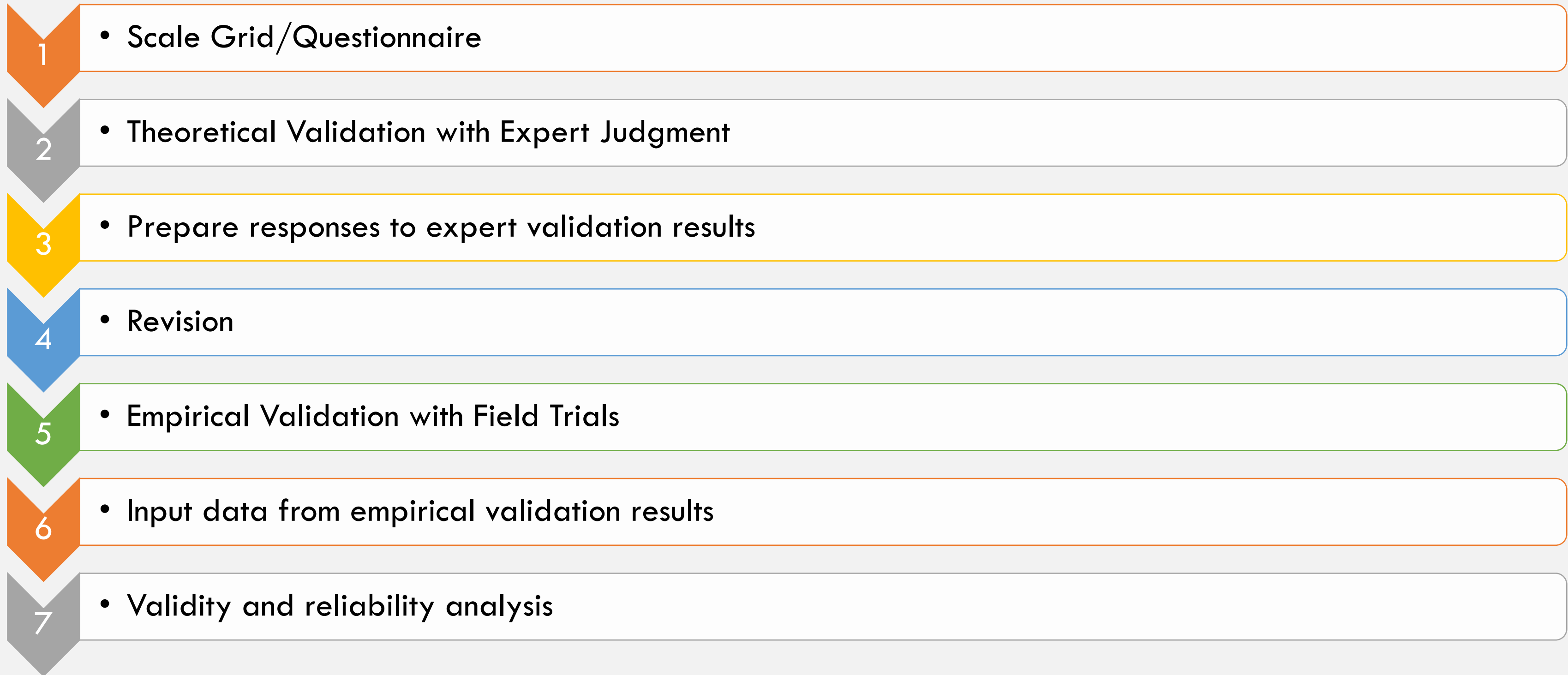
Instruction

No, statement items and alternative answers



Pay attention to positive and negative statements

Item	Type of Statement	Score				
		Very Confident	Confident	Fairly	Not confident	Very not confident
I will continue to find the best way to teach chemistry in schools by involving context	+	5	4	3	2	1
I couldn't teach chemistry in context-based schools as well as I could with other approaches, no matter how hard I tried	-	1	2	3	4	5
When students' chemistry abilities increase, it depends more on my findings about the effective implementation of context-based chemistry learning	+	5	4	3	2	1
I know the essential steps for teaching context-based chemistry effectively in schools	+	5	4	3	2	1
I can't develop effective context-based chemistry experiments for schools	-	1	2	3	4	5
If I apply context-based chemistry learning in schools it will be less effective	-	1	2	3	4	5





Context-Based Learning Motivation Scale

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Aspect	Definition		Example of Item
Enthusiasm	Express eagerness, enthusiasm and willingness	Express desire, interest, and willingness to learn/experiment according to the characteristics of CBL	
Efficacy	The acquisitions of the students mean for them (context-based learning)	Acquiring the significance of CBL for students	
Performance	The student expectations regarding their acquisitions and using these acquisitions	Students' expectations of the use of CBL	

Please practice, at least make 5 statements for each aspect..

Thank You
Any Question?

