

***Phonetisches Zeichen* Based Learning Method to Improve Students German *Sprechfertigkeit* Speaking Skills**

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Abstract. This study aimed to develop a *Phonetisches Zeichen* based learning method in order to improve the *Sprechfertigkeit* speaking skills of German language students in Semester II Academic Year 2020/2021. This study with a focus on *phonetisches Zeichen*-based learning method was a research and development that uses ADDIE development model. The development model involved five phases, namely analysis, design, development, implementation, and evaluation. The subjects of this study included 24 second semester students of German Language Study Program. Data collection was conducted with the use of method validation questionnaires by expert validators and students *Sprechfertigkeit* pre-test and post-test. The instruments used consisted of method validation sheets and test question sheets. The data analysis techniques used were the assessments of the method feasibility and the student learning outcomes. *Phonetisches Zeichen* is a sub-discipline of phonology that is designed to describe how to pronounce sound symbols, be it vowels, diphthongs and consonants in German. Each sound is clearly transcribed in *phonetisches Zeichen* in accordance with the International Phonetic Alphabet (IPA) system. *Sprechfertigkeit* speaking skills refers to a person's ability to articulate sound or word to express, state and convey thoughts, ideas and feelings so that they can easily be understood. Clear and effective communication can be achieved if the articulation of the spoken message is correct according to pronunciation rules. The rules for pronouncing German sounds are found in the International Phonetic Alphabet (IPA) system. The phonetic spelling, the IPA system of speech sounds, is used to pronounce the spoken language, i.e., its sounds (vowels, consonants) and its prosodic features (intonation, e.g., word and sentence accent) [2]. Based on the IPA system and the application of the *phonetische Zeichen* method, students will be more skilled in speaking German. The primary function of language is for interaction and communication [4]. If students are able to communicate well, this means that the main objective of the German Language Education study program curriculum to improve students' speaking skills has been achieved.

Keywords: *Phonetisches Zeichen* method, *Sprechfertigkeit*.

1 Introduction

As a foreign language that has distinctive sound and pronunciation difficulties and is motivated by the limited frequency of German lessons at the General High School level, it is a factor causing the low quality of German language skills possessed by students, especially in

the early semester. From the author's experience (as a lecturer in the German Language Study Program, it was found that students experienced difficulties, especially in the *Sprechfertigkeit* 'speaking skill' course). This is due to the unique and foreign sounds of German vowels, consonants and diphthongs to pronounce (eg the 'sch' sound in *Deutsch*, the 'spr' sound in *Sprache*, the 'ch' sound in the word *ich*, the sound 'umlaut' in *hören, üben, Sätze* and the 'eu' sound in *heute*). These difficulties will be overcome through phonetisches Zeichen based on the *Internationales Phonetisches Alphabet German pronunciation guideline* (IPA). Through *Zeichen's phonetisches*, a clear transcription of how the German sounds are pronounced can lead students to not be shy or afraid of making mistakes in speaking German. Speaking skill is one of the most important skills of language skills in the curriculum which includes four aspects, namely, listening skills, writing skills, speaking skills and reading skills. Speaking is the ability to pronounce articulation sounds or words to express, state and convey thoughts, ideas and feelings [1]. So that speaking skill means a person's ability to communicate clearly so that it can be easily understood and understood by the listener. Speaking skills can be achieved if the articulation of the spoken message is correct according to the pronunciation criteria. If the pronunciation of 'Aussprache' is in accordance with the existing guidelines, the communication will run smoothly, where the listener can easily understand what is meant. Learning speaking skills is an effort to be able to speak well. Starting from the pronunciation of vowels, increasing to the form of meaningful speech. In this study, the material on *Sprechfertigkeit* 'speaking skills' became the focus of *phonetisches Zeichen* to be transcribed according to the correct Aussprache 'pronunciation' based on the *German Internationales Phonetisches Alphabet* (IPA). *Zur Beschreibung der gesprochenen Sprache, d.h. seiner Laute (Vocal, Konsonanten) und seiner prosodischen Merkmale (Intonation, z.B. Wort und Satzakzent), bedient man sich der Lautschrift, des Zeichensystem IPA (Internationales Phonetisches Alphabet)* [2]. The learning method is a method or procedure used in carrying out teaching and learning activities to facilitate the implementation of various learning activities in order to achieve predetermined goals. The learning method can be interpreted as a technique or a typical pattern that is mastered by educators to present subject matter to students both individually and in groups so that the subject matter can be absorbed, and understood. It can be concluded that the method is a way to implement the plans that have been prepared in the form of real and practical activities to achieve learning objectives. The success of a learning process is determined by how well students can master the material through a method. For this reason, this study was intended to transcribe phonetisches Zeichen sound symbols of German, both vowels, diphthongs and consonants in order to improve students' speaking skills. Examples of German sounds that have a distinctive Aussprache 'pronunciation' difficulty include:

<i>Deutsch</i>	[d ɔY t ʃ] 'German language'
<i>die Sprache</i>	[d i: ʃ p r a ç e] 'language'
<i>wohnen</i>	[v o ʔ n e n] 'reside in'
<i>morgen</i>	[m o ʁ g ə n] 'tomorrow'
<i>über</i>	[y: b ɐ] 'about'
<i>schreiben</i>	[ʃ r a I b e n] 'write'

The occurrence of language sounds generally begins with the process of pumping air from the lungs to the larynx in which there are vocal cords, so that the sounds of language are: vowels, diphthongs and consonants. German vowels according to the international phonetic alphabet (*Internationales Phonetisches Alphabet*) consist of: [e, i, ü, u, a, , o, ö]. Parameters for determining vowels are determined by the state of the high and low position of the tongue, the moving parts of the tongue, the structure and shape of the lips.

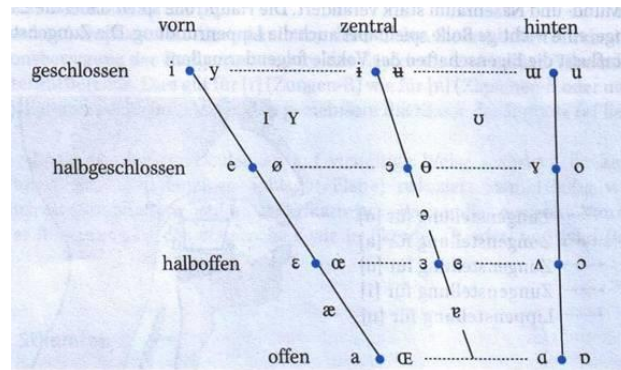


Fig. 1. Consonants.

Sounds are called consonants, when they are blocked at the articulator, accompanied by vibrating or non-vibrating vocal cords, so that consonants are formed, namely: bursting inhibitory consonants (*stops, plosives*) (*bilabial*: [p, b], *apico-dental*: [t, d], *apico-alveolar*: [t, d], *apico-palatal*: [t, d], *medio-palatal*: [c, j] and *dorso-velar*: [k, g]), nasal consonants (*nasal*) (*bilabial* [m], *apico - alveolar* [n], *medio - palatal* [ɲ] and *dorso - velar* [ŋ]), *apico-prepalatal* (*affricat*) consonants [tʃ, dʒ], side consonants (*laterals*): [l], shifting or fricative consonants (*labio - dental*: [f, v], *apico - dental*: [θ, ð], *apico - palatal*: [ç, ʝ], *lamino - alveolar*: [s, z], *apico - prepalatal*: [ʃ, ʒ], *dorso - velar*: [x] and *laryngeal*: [h]), vibrating consonants (*trills, vibrants*) (*apico-alveolar* [r] and *uvular* [ʀ]). It is called diphthongs because the vocal cords do not produce two sounds, but one because they are in one syllable.

Example: *die Zeitung* [d i: ts æ t u ŋ] 'newspaper'
der Freund [d e: ʀ f r ɔ̃ n d] 'male friend'
der Bauer [d e: ʀ b ʌ ɔ̃ ɐ] 'farmer'
deutlich [d ɔ̃ Y t l I ç] 'clear'

Table 1. German vowels, diphthong, and consonant sounds.

German Vowels and Diphthong Sound		
Kurzvokale	Langvokale	Diphthonge
a was	ɑ: Rat, Hahn, Aal	aɪ Hai, Ei
ɛ hell, Hände	e: den, sehr, See	aʊ lau, (Kakao)
ɪ bin	i: Lid, ihr, sie	ɔ̃Y neu, Säue, (Boy)
ɔ dort	o: Rot, Ohr, Boot	ʊɪ pfui
ʊ um	u: gut, Uhr	
ə bitte	e: Bär, Ähre	
(ə aber)	ø: Öl, Höhle	
œ Hölle	y: Tür, kühn, (Typ)	

Y Fünf, (Mystik)			
German Consonant Sound			
b	bei, Ebbe	ʃ	Schuh, (Chef)
d	du, Kladde	j	ja, (Voyeur)
g	geh, Egge	h	hier
p'	Pol, Nepp, ab	ç	(China), echt
t'	Tat, satt, und (Theke)	x	acht
k'	Kuh, Bock, weg, quer, (Chor)	l	lang, Ball
pf	Pfund	m	Mai, komm
ts	Zeit, Witz, (Cäsium)	n	nun, wenn
tʃ	tschüss, Matsch	ŋ	eng, Bank (=ŋk)
v	wer, (Vase)	r	rot, irre, (rh) - (Zungen-r)
f	Faß, vor, (Phase)	ʀ	rot, irre, (rh) - (Zäpfchen-r)
z	so, Rose, (Gaze)	ʁ	er, wir, Tor, für
s	das, Masse, Maße		

Table 2. Classification German consonant sound.

Artikulationsart	Artikulationsstelle/-organ						
	<u>Bilabial</u>	<u>labio-dental</u>	<u>dental-alveolar</u> (apikal/koro-nal/dorsal)	<u>Palatal</u> (dorsal)	<u>Velar</u> (post-dorsal)	<u>Uvular</u>	<u>Glottal</u>
Öffnung							[h]
Verschlußst (Plosive) <i>stl</i>	[b]		[d]		[g]		
	[p]		[t]		[k]		
Reibung, Enge <i>sth</i> (Frikative) <i>stl</i> (Lateral) <i>sth</i>		[v]	[z] [ʒ]	[j]	[ʁ]		
		[f]	[s] [ʃ]	[ç]	[x]		
			[l]				
Nasalöffnung (Nasale)	[m]		[n]		[ŋ]		
unter. Verschl. (Vibranten)			[r]			[ʀ]	

Phonetics investigates how the sounds of language are produced by the organs (or “organs”) of speech. The most commonly used phonetic writing system is the system of *the Internationales Phonetisches Alphabet* (IPA), which is marked with [].

In *Zeichen's phonetisches* 'phonetic transcription' each sound of a language is represented by the way in which it is pronounced. For example: phoneme “e” [e:, e, ε, ε: dan ə] [l e b e n], [m o ʌ g ə n], [e b ə n] dan [hɛrn], phoneme “i” [i:, i, I] [Im], [ʃli:βen], [i:m] and [i:ʌ], consonant [ŋ, m, n] such us: [bediŋuŋ], [ʃlaŋe], [faŋen], [tsaetuŋ], [hɔfnuŋ], Vibrant (Schwinglaut) [R, r] such us: [Riçtig], [eʔRe], [bevaʔRen], [auzRufen] and diphthongs [ɔʏ] [nɔʏ], [Sɔʏe], [kakaʊ], [aI]. If the pronunciation of 'Aussprache' is in accordance with the existing guidelines, then speaking skills can be achieved. For this reason, it is necessary to master the right articulation structure of speech.

2 Method

This type of research is research and development. The development of learning methods based on the *Zeichen phonetisches* method was developed using the ADDIE development model. The steps for developing this method are carried out based on five stages, namely *analysis, design, development, implementation, and evaluation* [3] and student learning outcomes using the *before-after* (O₁XO₂) quantitative experimental design method.

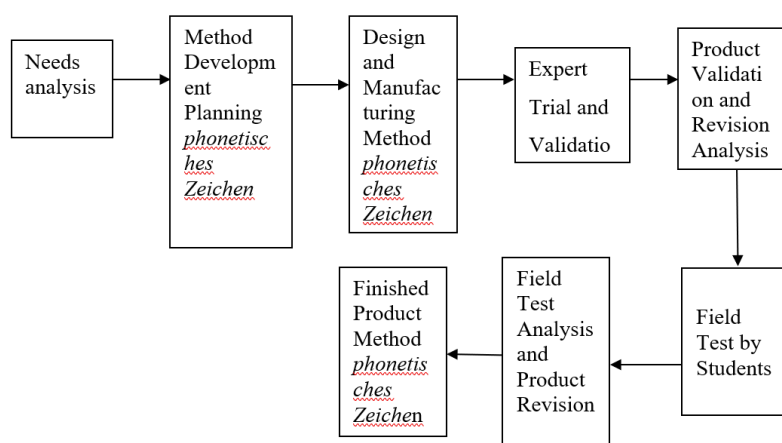


Fig. 2. Research method.

The test of the validity of the learning method is using expert validity according to the Likert scale with the criteria (1) very not good, (2) not good, (3) good, and (4) very good. This research was carried out at the *Sprechen A2* lecture of the German Language Education Study Program, Department of Foreign Language Education, Faculty of Language and Arts, Medan State University, Academic Year 2020/2021. The research subjects were Semester II students of the Academic Year 2020/2021 who took the *Sprechen A2* course as many as 24 second semester students. The product produced in this research is a learning method based on the *Zeichen phonetisches* method which will be used to improve speaking skills. The feasibility of the learning method by experts by providing responses with the criteria of very good, good, not good, and not good. The trial of the learning method was applied to the *Sprechen A2*

lecture as well as the student's speaking skill test instrument to determine the effect of using the *phonetisches Zeichen*-based learning method to improve the mastery of *Sprechen A2*.

3 Results and Discussion

The stage of developing a learning method based on the *Phonetisches Zeichen* method in this study was adjusted to the rules or guidelines of the *Internationales Phonetisches Alphabet* (IPA). The purpose of developing this learning method is to improve students' ability in pronouncing and pronouncing each sound symbol, be it vowels, diphthongs and consonants in German, so that they are skilled in speaking, especially *Sprechen A2*. The results of developing a learning method based on the *Zeichen phonetisches* method are presented below.

[ferIen unt uəlaʊb]

[vilkommen Im ʀalʒəland dɔʏtʃland]

[fʏə stadtuəlaʊbər Ist haɪdelberg Immə aɪn ʀalʒetsi:l] [vi:le tɔʏristen kommen auz dem auzlant] [zi: kœnnen di: ʀomantIʃe altstadt am neçəʀ unt daz ʃloss bezIçtIgen]

[zommer, zonne, ʃtrand unt me:ə - vi:le uəlaʊbər maçen Im yull unt aʊguz unt ferIen an de:ə oztze:, tsum bæzpi:l aʊf de:ə Inzel ʀy:gən] [aɪnə tʊpIʃ dɔʏtʃe tradItIon de:ə ʃtrandkorp]

[vi:le uəlaʊbər entʃalden zIç fʏə vɪnterferi:en unt fə:ʀen tsum bæzpi:l In den thyʀIŋer vald] [man kann dœrt ʃi: faʔren unt aʊç Im vɪntəʀ gu:t vandern] [de:ə vɪntəʃportœrt obəʀhof Ist Inernational bekannt]

[vi:le uəlaʊbər faʔren In di:e alpen] [In den bœgen kann man vandeʀn] [daz ʃloss nɔʏʃvanstaɪn Im allgɔʏ Ist aɪnə tœuristenatrakʃIon] [a:bəə aɪnə bezIçtiguŋ kœstet vi:l tsalt] [ez gIpt faʒt Immə vaʀteʃlaŋən vo:ə dem ʃloss]

[famillə meʀtenz Im uəlaʊb]

[entIç zomməferIən]

[eʀʒter tag nɔʏnuntswantsigzten junI] [vo:əmittags ankunft In pazzau] [dœrt ʔaben vi:ə faʔʀre:deʀ gemi:tet] [aɪnən ʀalʒəfʏʔʀer ʔatten vi:ə ʃon] [unzere radtɔʏr beɡinnt] [di:eʀzte etappe Izt kurts zi:benuntsvantsIç kɪlometer]

[tsvalter tag draɪzigzten junI] [hɔʏte ʔaben vi:ə aɪnuntzɪbtsIç komma fynf kɪlometer geʃaft - von eŋelʔartzsell naç linz] [mɪttags ʔaben vi:ə aɪŋekauft unt dann an de:ə donaʊ aɪn piçniç gemaçt] [In linz ʔaben vi:ə In aɪnəʀ penziõŋ y: bœnaçtet]

[maɪnə eltern varen seʔə my:də]

[drɪtter tag ersten jull] [hɔʏte ʔaben vi:ə vi:dər den gantsen tag unervegz]

[vo:əmittagz ʔaben vi:ə aɪnən bummel dʏʀç linz gemaçt] [Iç ʔabe ɪnzer torte problert se:ə gu:t] [mɪttagz velterfaʔrt ʀIçtuŋ melk] [dœrt ʔaben vi:ə daz kloster besuçt]

[zi:benter tag fynften jull] [naç draɪʔundert zeçs kɪlometer] [vi:en] [daz ri:zenrat Im prater ʔaben vi:ə ʃon angəʃaʊt unt fotografi:rt] [mœ:əgən maçen vi:ə aɪnən tag paʊze unt beziçtigen di: stadt]

[tsvantsigsten tag açtseʔnten jull] [zeçsʔundertzeçstsig kɪlometer] [vi:ə ʔaben budapest ɛrraIçt unt di: stadt beziçtigt] [di: tɔʏr var toll unt vi:ə ʔaben nette ɪɔʏtə kenneŋelœʀnt] [

budapest Izt zuper] [laIdəx Izt de:x uɔlaub fazt tsu ende] [maI elteRn unt maInə
 [vezter baIm pIçnIç]
 [?aben zi:]on mal uɔlaub In dɔY]land gemaçt] [vann maçen zi: feRi:ən] [vann ?azt
 du gebuRtzttag] [vann Izt de:x dɔY]kurz tsu endə] [vaz Izt daIn li:blIŋzmonat]
 [daz vettəx vɑ:R In den eRzten tagen gu:t] [In marseille ?at ez aInen tag geRegnet]
 [Iç vɑ:R mIt maInəm frɔnd tsvaI vɔçen In zydfrankraIç] [main mann unt Iç vɑ:Ren
 ts?en tagə In de:x]vaIts, nuɔ unzəre tæçtəx sophie nIçt] [ez vɑ:R se: x]çen] [In
 marseille vɑ:r ez toll]
 [vo vɑ:Ren zi: Im uɔlaub fRaU abt] [linz vɑ:r zu:peR] [vi: x vɑ:Ren dɔrt tsvaI tagə]
 [vi: x vɑ:Ren In aInem ?otel Im tsentrum y:bernaçtet] [vi: x ?aben aIne
 []iffztour gemaçt unt den mariendom unt daz rathaUz fotɔgrafi: ert]
 [vi: x ?aben di: altztadt aŋçaut] [unt vi: x ?aben IIntser torte probi: ert]
 [?m ze: x leçer] [daz vɑ:R allez]

The learning method based on the *phonetisches Zeichen* method that was developed received an assessment from a material validation expert, namely one of the lecturers from the German Education Study Program, Mrs. Linda Aruan, M.Hum. Validation was carried out in two stages until the learning method based on the *Zeichen phonetisches* method was declared valid and feasible to be tested. There are three aspects of the validator's scoring, namely the feasibility of content, language and the feasibility of presenting learning methods. The first stage of validation on the content feasibility aspect obtained an average score of 2.87 including quite valid criteria, the linguistic aspect obtained an average score of 2.85 including quite valid criteria, while the presentation feasibility aspect obtained an average score of 2.85 with quite valid criteria. The average number of all aspects of the feasibility of the material obtained a score of 2.86 which includes quite valid criteria. Based on the results of the validation of the feasibility of the material and language on the *phonetisches Zeichen*-based learning method, it is still necessary to make revisions according to the suggestions and input of the first stage of validation. The development of a learning method based on the *phonetisches Zeichen* method after being revised based on suggestions from validation experts, the next step is to carry out the second stage of validation. In the second stage of validation, each aspect gets an average score, the content feasibility aspect gets an average score of 3.78 with valid criteria, the linguistic aspect gets a value of 3.65 which is a valid criterion, and for the presentation feasibility aspect it gets a value of 3.60 which including valid criteria. The average value of each aspect is calculated as a whole related to the feasibility of the material and language, so that it gets an average score of 3.68 which is a valid criterion which means there is no improvement and can be used as a learning method. The score obtained from the second stage of validation is more advanced than the first stage of validation, so that the results of the feasibility of the material and language of the *phonetisches Zeichen*-based learning method are included in the "valid" criteria and deserve to be tested without revision. In the test of developing student learning outcomes in the *Sprechen A2* course using a learning method based on the *phonetisches Zeichen* method, it was measured using the results of the pre-test and post-test of students at the initial meeting and the final meeting of the lecture. The average pre-test and post-test scores of the students' *Sprechen A2* mastery can be seen in the following table:

Table 3. Description of Student *Sprechen* A2 Mastery Score.

	Pre-test	Post-test
N (Number of Students)	24	24
Average	62.5	87
Standard Deviation	12.5	17.4
Maximum	68	90
Minimum	60	83

The average score of students in the pre test was 62.5 while for the post test it was 87. From these data it can be said that the increase in student learning outcomes on average increased by 24.5%. The improvement is already "good enough". In the pre-test activity, more than 50% of students still got low scores. However, in the post-test activity, 80% of students were declared skilled in pronouncing each sound symbol, both vowels, diphthongs and German consonants according to the guidelines of the *Internationales Phonetisches Alphabet* (IPA). Although the increase was only 24.5%, *Sprechen* A2 learning using the *phonetisches Zeichen*-based learning method could be categorized as "good enough".

4 Conclusion

Based on the validator's assessment, that the development of a learning method based on the *phonetisches Zeichen* method in *Sprechen* A2 in this study was in accordance with the criteria of education experts, so that the learning method based on the *phonetisches Zeichen* method was suitable for use in learning *Sprechen* A2. Based on the data analysis conducted, it can be concluded that the development of learning methods based on the *phonetisches Zeichen* method in the *Sprechen* A2 course can improve students' German speaking skills.

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