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## Overcoming Vocabulary-Related Anxieties in Students When Communicating in the Media Internationally

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**Abstract:** The purpose of the study was to identify how the designed instructional model moderated the vocabulary-related anxieties in students when they communicated in the media internationally. The methodological approach used in the study was aimed at controlling and manipulating variables which were as follows: The level of vocabulary anxiety related to communication in the media, cultural intelligence, and English vocabulary level. The study relied on quantitative and qualitative methods to gather the experimental data and answer the research questions. Insufficient vocabulary was found to be one of the key factors of anxieties in students when they communicated in the media internationally. The major sub-factors of the vocabulary-related anxieties in the students when they communicated in the media internationally (as perceived by the respondents) were spontaneous interaction with the native speakers, guessing the meaning of the words from the context, and paraphrasing ideas using synonyms. The instructional-purpose use of the predesigned vocabulary lists, learning them using the Telegram bot, talking to the foreign speakers in the media, self-analysis, and analysis by peers were proven to be capable to moderate the vocabulary-related anxieties in students when they communicate in the media with the foreign speakers.

**Keywords:** *Communication in the media, cross-cultural communication, higher education, L2 learning, vocabulary-related anxieties.*

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### Introduction

Anxieties in students when using a foreign language to communicate in the media internationally are quite common because learning and teaching English still serves and facilitates a limited use in daily activities (Derakhshan & Shirmohammadi, 2015; Elaldi, 2016; Kralova & Petrova, 2017). Bhatti et al. (2018) associated foreign language anxieties with lingual and extra-lingual factors, psychological and linguistic language constructs, and inter-personal and intra-personal determinants. Kralova and Soradova (2015) revealed the L2/foreign language anxieties from the perspective of inefficient learners' cognitive performance, communication nervousness, and skills deficit. The above implies that whoever's perspective on the problem of foreign language anxieties is considered, the vocabulary-related ones should be given the primary focus because vocabulary underpins all language skills and seems to be a major cause of stress in students in oral and written communication (Mofareh, 2015). International communication via the media is becoming an available and promising option for online foreign language learning due to its borderless reach and facilities such as instant messaging, e-mailing, and/or videoconferencing. This option enables university undergraduates to raise their intercultural awareness and gain the prerequisite experiences in communicating across cultures and understanding their peers and future colleagues from abroad (Amara, 2020; Greenhow & Lewin, 2016). In that regard, vocabulary – the use of it appropriately and relevantly – seems to represent a dual challenge for a language learner and the teacher because culture determines not only the context and interpretation of the words but influences the emotional sphere of an

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interlocutor which, if vocabulary does not meet the one's expectations, can cause the manifestation of intolerant behaviour patterns (Aktar & Strong, 2019; Aldhahi et al., 2017). The above suggests that there is a need for finding instructional ways to overcome vocabulary-related anxieties in students so that they communicate confidently in the media internationally (Alqahtani, 2015). This created a gap for the study.

## Literature Review

### *L2 Anxieties in Students and Foreign Language Vocabulary*

Generally, the psychological and psycholinguistic literature interprets anxiety – specifically, in learning foreign languages its worst is also defined as xenoglossophobia – as a body reaction to some kind of triggers that leads to either controlled or uncontrolled mental and psychological imbalances manifested emotionally, behaviourally, or cognitively (Hu & Wang, 2014; Zheng & Cheng, 2018). It is reported that xenoglossophobia is commonly manifested in L2 communication (Sadighi & Dastpak, 2017). Having analysed the causes of anxiety, Liu (2006) rated insufficient vocabulary as the second most reported cause of anxiety after “lack of practice and experience”. Alwis (2020) found that more than half of the surveyed foreign language learners mentioned “inadequate knowledge of vocabulary” as the difficulty that prevents them from feeling confident in using English as a communication medium. Marzec-Stawiarska (2015) opines that there is a short-term and long-term impact of foreign language anxiety on the tertiary students' academic performance, learning motivation, self-efficacy, and self-perception, in general. Interestingly, the book chapter author found that more than 50% of the respondents reported that vocabulary-related stress was the key barrier to interacting in communication with the native speakers spontaneously and effectively.

### *Communication in the Media and Vocabulary-Related Cross-Cultural Domain*

Instructional literature emphasises the importance of fostering awareness and skills of communication in the media cross-culturally in the students of higher educational institutions (Amara, 2020; Little & Kirwan, 2019). These skills are considered to be both a prerequisite for the vocational excellence of the graduates and an expected outcome of teaching foreign languages (Wu & Marek, 2018). The examination of the sources found that the media such as social networks are used as an instructional tool to train the students' intercultural competence. Wu and Marek (2018) along with Burgan and Hilligje (2010) advocate the use of social networking sites to develop students' interculturality because the media provides the environment for gaining real-life experience in verbal and non-verbal communication. They are certain that communication in the media allows learners of the foreign language to build up experience through practice in establishing trust, collaborating, and reflecting along with observing, exploring, and evaluating the efficiency of the interaction approaches and situational contexts. Aldhahi et al. (2017) and Chahak and Basirizadeh (2012) argue that the practice of communication in the media cross-culturally seems to be optimal for the use of authentic language and vocabulary, for instance, culture-bound items. Matthews and Cheng (2015) found a strong correlation ( $r = .73, p < .05$ ) between the students' skills in using high-frequency L2 vocabulary and efficiency in listening comprehension. This finding also illustrates the link between the ability to communicate in the media and the importance of a vocabulary-related cross-cultural domain.

The above suggests that finding and testing the instructional ways to moderate the vocabulary-related anxieties in students when communicating in the media internationally seems to be a relevant pedagogic task. It is also clear that the growing potential of the media creates more feasible opportunities for teachers and learners to design anxiety-free models of learning foreign languages.

Therefore, the *purpose* of the study was to identify how the designed instructional model moderated the vocabulary-related anxieties in students when they communicated in the media internationally. The study sought to investigate four research questions which were as follows: a) whether the designed Foreign/Second Language Media and Class Communication Anxiety Scale is reliable and valid; b) what factors (situations) cause the vocabulary-related anxieties in the students' when they communicate in the media internationally (as perceived by the respondents); c) how the use of instruction based on cultural, communication, and psychological training moderates the vocabulary-related anxieties in students occurred in certain cultural contexts when they communicated in the media internationally; d) how the experimental group students perceive the instructional approach used in the study.

## Methodology

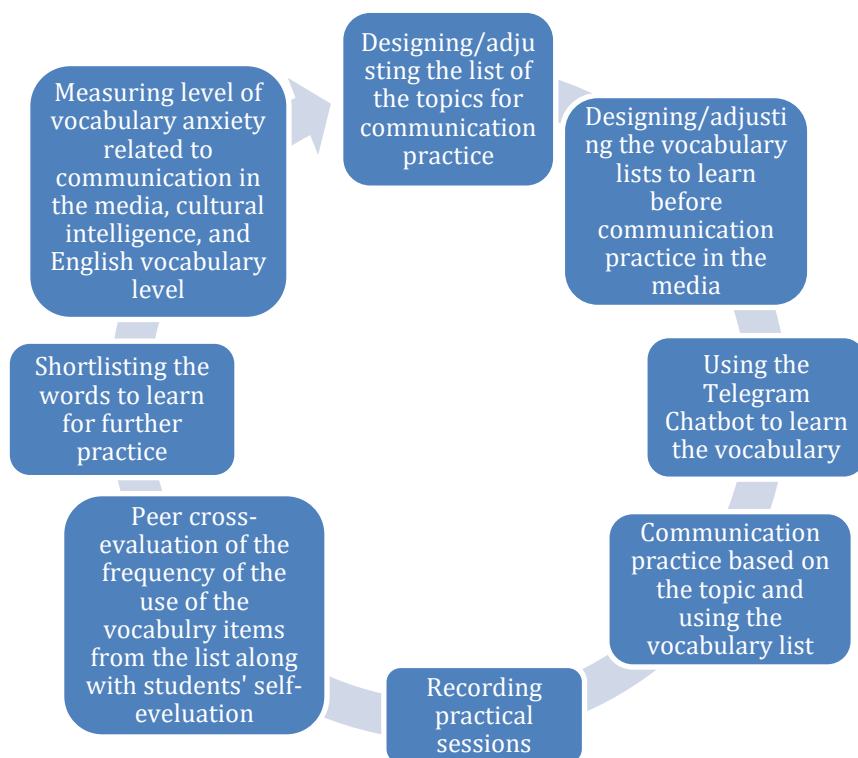
The methodological approach used in the study was aimed at controlling and manipulating variables. These were as follows: the level of vocabulary anxiety related to communication in the media, cultural intelligence, and English vocabulary level. The study relied on quantitative and qualitative methods to gather the experimental data and answer the research questions (McLeod, 2019a). The research included three basic steps such as, first, the design and validation of the Foreign/Second Language Media and Class Communication Anxiety Scale, second, quasi-experiment, and third, data analysis. The first phase lasted approximately 3 months, the second stage took about 8 months, and the final phase took about 2 months. The variables were measured using four instruments such as the Foreign/Second Language Media and Class Communication Anxiety Scale (FLMCCAS) (see Appendix A), Cultural Intelligence Scale (CIS), and English

Vocabulary Level Tests. The focus group discussion was used to obtain feedback from the experimental group students about their experiences. The online discussion was transcribed using the Otter App (Otter, 2020). In the data analysis phase, the collected materials – both numeric and written data – were systemised, analysed, interpreted, and described by the research team.

### *Design of the Experimental Project*

The intervention involved several student volunteers from China, Congo, Poland, New Zealand, and Australia whose English is fluent or whose native language is English. The experimental group students were provided a 6-ECTS training in cross-cultural communication and dealing with communication anxieties. The students were divided into several teams who were supposed to share or exchange information about Ukrainian culture using English verbally. The cultural topics for students to cover were as follows: “My country in cultural artifacts”, “Humour in my culture”, “Let’s make big laugh”, “Proverbs: different words, same meaning”, “Cosmopolitan Ukraine”, “Ukrainian national clothes – visualised music for the soul”. The language topics were as follows: language for speculation, polite language, language for expressing an opinion, etc. The techniques to deal with anxieties were as follows: mind-setting, recording themselves speaking on the topic with self-analysis and peer analysis, building up self-confidence, and visualising oneself communicating. Once in two weeks, the students took part in mind sessions aimed at sharing their cultural experiences with their groupmates and experiences of dealing with fears.

The intervention was a stage-wise flow of several stages. These were as follows: preparation, training, using, and reflection. First, the research team together with the students brainstormed the topics for the communication sessions. These were supposed to be related to the students’ majors. Then, the research team designed the vocabulary lists for the students to learn using the Telegram bot (which can be accessed via [https://t.me/WordHelper\\_bot](https://t.me/WordHelper_bot)). The bot was programmed by the students involved in the experiment. Following that, the students dedicated some time to learning the vocabulary lists either using the bot or without it. They also got ready for the live communication sessions. The students arranged the speaking sessions with volunteer foreign students in ZOOM or Cisco Webex or Google Meet and recorded them for further self-analysis and analysis by the peer. After the analysis is complete, the students shortlisted the vocabulary items that cause them to be nervous or anxious when using. These words were included in vocabulary training in the next stage.



*Figure 1. The Spiral Flow of Stages of the Experimental Project*

### *Sampling*

Random and convenience sample techniques were used in the study. A random sampling method was applied to pilot and validate the Foreign/Second Language Media and Class Communication Anxiety Scale. The convenience sampling method was utilised to form the experimental group and control group to participate in the experiment.

The phase of pilot and validation of the scale relied on reliability analysis, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA). To perform the EFA to the scale, the link to the electronic version of the draft of the scale was randomly sent to the 297 undergraduates majoring in International Relations, Finance, Banking, and Insurance from Hryhorii Skovoroda University in Pereiaslav (HSUP) (Ukraine), and Vinnytsia Mikhaïlo Kotsiubynskyi State Pedagogical University (VMKSPU) (Ukraine), and Kyiv National Linguistic University (KNLU) (Ukraine). Overall, two hundred and forty-eight valid responses were received from 102 students (29 males and 73 females, aged 20-22) of HSUP, 84 students (33 males and 51 females, aged 19-22) of VMKSPU, and 62 students (23 males and 39 females, aged 20-22) of KNLU.

To perform CFA to the scale, the link to the edited electronic version of the scale was randomly shared with 132 students majoring in International Relations, Finance and Banking, Ecology Studies, and Information Technology from Bila Tserkva National Agrarian University (BTNAU) and Kruty Heroes Military Institute of Telecommunications and Informatisation (KHMITI). Ninety-three valid responses were shortlisted for the CFA analysis. Fifty-seven responses (26 males and 31 females, aged 20-22) were from BTNAU and 36 responses (28 males, 8 females, aged 20-22) were from KHMITI. Thirty-nine responses were excluded from the analysis. This was for the reason being that the participants did not provide their consent or reported that they either suffered or were diagnosed with some neurological, neuropsychological, or psychological problems, or dyslexia, memory problems, learning disability of any nature, language disorders, psychiatric illness or concussion which could hinder the results of the study.

The phase of the experiment relied on the convenience sample that involved 48 students majoring in International Relations from the National University of Life and Environmental Sciences of Ukraine (NULESU). These students formed an experimental group (EG) of 24 students (6 males and 18 females, aged 19-21) and the control group of 24 students (8 males and 16 females, aged 19-21). The scale was used as a screening form. Importantly, the targeted participants' anxiety level was supposed to be between 60–89 (“Mild Level of Anxiety”) and 120–150 meaning “Panic (Uncontrolled) Level of Anxiety” according to the scale. The demographic features of the experimental group and control group students are presented in Table 1.

Table 1. Demographic Features of the Experimental Group and Control Group Students ( $n = 48$ )

Demographic features	NULESU		Mean	SD	
	EG, n=24	CG, n=24			
Year of study	2nd ( $n_{\text{pool}} = 27$ )	14 (51.85%)	13 (48.15%)	13.5	0.5
	3rd ( $n_{\text{pool}} = 21$ )	10 (47.61%)	11 (52.39%)	10.5	0.5
Gender	Male (n=19)	8 (42.11%)	11 (57.89%)	9.5	1.5
	Female (n=29)	16 (55.17%)	13 (44.83%)	14.5	1.5
Level of anxiety	Mild	5 (20.83%)	3 (12.5%)		
	Severe	12 (50.00%)	17 (70.83%)	8.0	4.96
	Panic	7 (29.17%)	4 (16.67%)		
Grade Point Average (GPA)		3.12	3.21	3.16	0.05
Cultural Intelligence Scale (CIS)		2.56	3.02	2.79	0.23
English Vocabulary Level Test	Pre-Intermediate	7 (29.16%)	5 (20.83%)		
	Intermediate	14 (58.33%)	15 (62.50%)	8	4.76
	Upper-intermediate	3 (12.51%)	4 (16.60%)		

Both groups were considered homogeneous because the values for grade point average (GPA) for EG and CG – 3.12 for EG and 3.21 for CG that corresponded to “B” ECTS – were comparable. The results of the pre-treatment measurements based on the Foreign/Second Language Media and Class Communication Anxiety Scale were also approximately similar. The results of the English Vocabulary Level Test (OOE, 2021) also indicated more or less similar levels of vocabulary. The results drawn from the Cultural Intelligence Scale were rather similar proving that students' cross-cultural awareness was generally comparable. Moreover, the EG and CG students were informed that taking part in the experiment could earn them extra credit points in the English language course.

#### Ethical Considerations

Random sample students who were involved in piloting and validating the Foreign/Second Language Media and Class Communication Anxiety Scale provided their informed consent through agreeing with the consent statement which came before the first page of the scale. The sampled students who formed the experimental group (EG) and control group (CG) were informed about the goals, purpose, procedure, expected outcomes, volunteer basis of participation, and possible challenges and inconveniences related to communication in the media via the Letter of information and consent to participate in the research. The EG and CG students were also asked to sign the consent form for the use of their personal information for the study purposes and to confirm that their decision to become involved in the study at the intervention point is informed. The participants were also informed and guaranteed that any data they provide could be used

confidentially and anonymously. The draft of the Foreign/Second Language Media and Class Communication Anxiety Scale was examined by the research team members several times to double-check for not consisting of any discriminatory language and avoiding any offensive wording (Goodwin et al., 2019).

### *Instruments*

The research questions were addressed through the use of the Foreign/Second Language Media and Class Communication Anxiety Scale (FLMCCAS) (see Appendix A), Cultural Intelligence Scale (CIS), English Vocabulary Level Test, and the focus group discussion administered online. The *Jamovi* computer software (Version 2.2.5) and Statistical Package for the Social Sciences (Version 26.0.0.1) were used to analyse the data drawn from the scales, tests, and discussions.

#### *Foreign/ Second Language Media and Class Communication Anxiety Scale (FLMCAS)*

The FLMCCAS consisted of 30 questions (situations) distributed under 4 domains such as “Communication uneasiness”, “Comprehension anxiety”, “Media communication apprehension” and “L2 Vocabulary anxiety”. It was adapted from Alrabai (2014), (see Appendix A) and is available at [https://forms.gle/28N1E15Jw2VQU4Fu5\\_](https://forms.gle/28N1E15Jw2VQU4Fu5_). The communication uneasiness domain included 12 items (situations). The comprehension anxiety domain comprised 6 items. The media communication apprehension domain relied on 6 situations. The L2 vocabulary anxiety domain also included 6 situations. The scale used a 5-point Likert agreement scale with 1 meaning “Strongly agree”, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly disagree.

The scores were supposed to correspond to four levels of L2 media and class communication anxiety. These were as seen below: 30–59 – “Moderately Controlled (Relatively Low) Level Anxiety”, 60–89 – “Mild Level of Anxiety”, 90–119 – “Severe (Relatively Uncontrolled) Level of Anxiety”, 120–150 – “Panic (Uncontrolled) Level of Anxiety”.

The scores that range between 30 and 59 – “Moderately Controlled (Relatively Low) Level Anxiety” are referred to as students’ ability to speak or write using English without feeling any anxiety. They spontaneously share their thoughts or feelings either in interaction with foreigners or in class. They feel confident when their peers are talking or their teacher attempts to correct their mistakes. They easily follow the explanations of the English teacher or communication partner when the one speaks English. They feel comfortable when communicating in the media or when communicating with native speakers of English. They can control their feelings when they are supposed to comprehend or learn the vocabulary through listening or when guessing the meaning of the words or when they are expected to paraphrase the ideas using synonyms.

The scores that range between 60 and 89 – “Mild Level of Anxiety” – are referred to as students’ ability to speak or write using English with tension and nervousness. They share their thoughts or feelings either in interaction with foreigners or in class with some feeling of anxiety. They feel they need to be treated with some understanding and care when they speak to peers or their teacher attempts to correct their mistakes. They generally follow the explanations of their English teacher or communication partner when the one speaks English. They feel they need some preparation before they communicate in the media or before they communicate with native speakers of English. They pay an effort to control their feelings when they are supposed to comprehend or learn the vocabulary through listening or when guessing the meaning of the words or when they are expected to paraphrase the ideas using synonyms.

The scores that range between 90 and 119 – “Severe (Relatively Uncontrolled) Level of Anxiety” – are referred to as students’ ability to speak or write using English unconfidently and with a fear of being misunderstood or laughed at. They often complain about the reaction of their mind and body and feel uneasy, distressed, or dreadful when they are expected to share their thoughts or feelings either in interaction with foreigners or in class. They feel they need to be treated with some understanding and care when they speak to peers or their teacher attempts to correct their mistakes. They hardly follow the explanations of their English teacher or communication partner when they speak English. They feel they need thorough preparation before they communicate in the media or before they communicate with native speakers of English. They pay a big effort to control their feelings when they are supposed to comprehend or learn the vocabulary through listening or when guessing the meaning of the words or when they are expected to paraphrase the ideas using synonyms.

The scores that range between 120 and 150 – “Panic (Uncontrolled) Level of Anxiety” – are referred to as students’ inability to speak or write using English confidently and without fear of being misunderstood or laughed at. They experience intense, excessive, and persistent fear about the situations when they are expected to share their thoughts or feelings either in interaction with foreigners or in class. They feel they need to be treated with much understanding and care when they speak to peers or their teacher attempts to correct their mistakes. They often fail to follow the explanations of their English teacher or communication partner when the one speaks English. They feel they need thorough preparation before they communicate in the media or before they communicate with native speakers of English. They have to pay a great effort to control their feelings when they are supposed to comprehend or learn the vocabulary through listening or when guessing the meaning of the words or when they are expected to paraphrase the ideas using synonyms.

### *Cultural Intelligence Scale (CIS)*

The Cultural Intelligence Scale (CIS) comprised 20 questions and it was used to explore how the instructional model influenced students' cultural tensions and cultural awareness. The 20-item scale has been validated in several studies with approximately the same results (Johnson & Buko, 2013; Khan & Hasan, 2016; Robledo-Ardila et al., 2016). It used a 7-point Likert Scale with 1 meaning "strongly disagree" up to 7 meaning "strongly agree". Robledo-Ardila et al. (2016) found the coefficients for the reliability and discriminant validity of the CFA factors satisfactory. The metacognitive domain value for the composite reliability was .88 and it was .65 for AVE. The cognitive domain value for composite reliability was .84 and .51 for AVE. The motivational domain value for composite reliability was .92 and it was .71 for AVE. The value for composite reliability in the behavioral domain was .89 and it was .63 for AVE. The relevance of the scale for the study was identified by 5 research team members via measuring the inter-rater agreement among the raters (Fleiss' Kappa coefficient) who used the 4-point relevance scale with 1 meaning "not relevant" to 4 meaning "highly relevant". Fleiss' Kappa coefficient was .728 which meant 'substantial agreement' between the raters and this indicated that the CIS can be used in the study (Gwet, 2014).

### *English Vocabulary Level Test (EVLT)*

In the pre-treatment phase, the study used the vocabulary level test designed by Oxford Online English company (OOE, 2021). In the post-treatment phase, it was used a similar test based on the vocabulary that was introduced within the experiment. Both tests consisted of 40 questions. The scores between 1-10 meant *Elementary level*, 11-19 corresponded to *pre-Intermediate level*, 20-27 were regarded as the *Intermediate level*, 28-36 referred to *Upper-Intermediate level* and 37-40 meant the *Advanced level* of vocabulary. The draft of the post-treatment vocabulary test was validated through the calculation of the item-level content validity index (I-CVI). The above procedure was performed by 5 raters – research team members. The I-CVI index was .86 which was sufficient according to Polit and Beck (2006).

### *Focus Group Discussion Questionnaire*

The focus group discussion was based on 5 open-ended questions and was administered online to 7 randomly selected EG students. It lasted an hour and a half and it was moderated by two research team members. One research team member transcribed the discussion using the Otter App (Otter, 2020). At this phase, the data-driven approach was used to code and analyse the transcribed data. The coding scheme was constructed based on the themes of discussion questions.

The guidelines for establishing reliability when coding narrative data were used to identify the coding reliability (Syed & Nelson, 2015). Following that, the draft of a manual for the coding procedure was designed. Two volunteer graduates from the National University of Life and Environmental Sciences of Ukraine agreed to be trained to be coders of the transcribed data. They used the coding manual that was designed by the research team to avoid misinterpretations. Each coder first work on their own and then they met online for the consensus discussion. The calculated value for Cohen's *k* was .762 which meant "substantial agreement" between the coders.

The questions were as seen below:

1) *How do you feel about the effect of integrating networking sites, language exchange, and social language learning sites in teaching/learning the English language? Illustrate your experience with examples.*

2) *Can you describe your positive and negative impressions that were formed as a result of participation in the experimental instructional model of training vocabulary through using it in communicating in the media internationally? What were the reasons or causes for your negative feelings? What, in your view, can be done to prevent them in the future? Explain your reasons.*

3) *What, do you think, was the purpose of using networking sites, language exchange, and social language learning sites to teach the English language? Illustrate your answers with your experiences.*

4) *Do you think integrating networking sites, language exchange, and social language learning sites in teaching/learning the English language can reduce the anxiety related to the use of vocabulary in students/learners occurred when they communicate in the media?*

5) *How the networking sites, language exchange, and social language learning sites can be used more efficiently to moderate the vocabulary-related anxieties in students?*

## **Results**

The results of the study showed that the designed Foreign/ Second Language Media and Class Communication Anxiety Scale was reliable and valid. The study found that the major factors (situation) that caused the vocabulary-related anxieties in the students when they communicate in the media internationally (as perceived by the respondents) were a spontaneous interaction with the native speakers, guessing the meaning of the words from the context and paraphrasing ideas using synonyms. The study proved that the use of networking sites, language exchange, and social language learning

sites to practice English along with the instructional model moderated the vocabulary-related anxieties in students that occurred in the cultural context. The results drawn from the focus group discussion indicated that the EG students perceived the instructional approach used in the study positively. The above findings are presented in more detail below.

#### *Validation of the Foreign/Second Language Media and Class Communication Anxiety Scale*

The validation procedure included four steps such as content validation of the scale draft, reliability analysis, Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA). The content validation of the scale draft was performed by six and five volunteering colleagues with Ph.D. degrees in Psychology and Education. The value for the item-level content validity index (I-CVI) of the scale was .859 which was greater than the acceptable cut-off score for six experts according to Polit and Beck (2006). The relevance of scale items was identified by five volunteering colleagues through rating the items along the 4-point relevance scale and calculating the Fleiss' Kappa coefficient. The coefficient value was .735. It meant the 'substantial agreement' of the raters on the relevance of the scale items. The results drawn from the reliability analysis of the scale can be seen in Appendix B. The first attempt to perform the reliability analysis found two outliers such as Item 27 and Item 30. They were edited and paraphrased. The Cronbach's  $\alpha$  for the entire scale was .928. The inter-item statistics (Cronbach's alpha) varied from .923 to .931. This proved that the scale items conceptually correlated well with each other, according to DeVon et al. (2007). Therefore, the values for Cronbach's  $\alpha$ , mean = 3.10, SD = 0.565 showed good consistency of the scale.

The Exploratory Factor Analysis (EFA) found that the overall value for the KMO measure of sampling adequacy was .893. It was trustworthy and sufficient according to Glen (2016). The 'principal axis factoring' extraction method was used in combination with a 'varimax' rotation to perform the EFA. A four-factor factor loading analysis was conducted. A value of 0.4 of factor loading was considered as the reference value for variable acceptance (see Appendix C). The domains of the scale were referred to as the factors. These were as follows: Factor 1 was identified as 'Communication uneasiness', Factor 2 was labeled as 'Comprehension anxiety', Factor 3 was referred to as 'Media communication apprehension', and Factor 4 was meant as 'L2 Vocabulary anxiety'. Table 2 shows the summary of each factor's SS loadings, percent of the variance, and cumulative percent.

*Table 2. Summary of Factor SS Loadings, Percent of the Variance, and Cumulative Percent*

Factor	SS Loadings	% of Variance	Cumulative %
1	6.09	20.30	20.3
2	2.66	8.85	29.2
3	2.53	8.42	37.6
4	1.66	5.53	43.1

As can be seen in Table 2, the L2 Vocabulary anxiety domain showed the highest cumulative percentage which was 43.1. Table 3 presents the summary of model fit measurements.

*Table 3. Summary of Model Fit Measurements of the Scale*

CFI	RMSEA	RMSEA 90% CI		TLI	BIC	Model Test		
		Lower	Upper			$\chi^2$	df	p
0.934	0.0382	0.0196	0.0540	0.931	-1159	380	283	0.012

As can be seen in Table 3, the values for the CFI (.934), RMSEA (.0382), TLI (.931), BIC (-1159), and  $\chi^2$  (380) proved that the model could be considered a 'good fit' for the data according to Coşkun and Mardikyan (2016).

Confirmatory Factor Analysis used the data obtained from the second pilot. The values for goodness-of-fit for the model were as follows:  $\chi^2 = 593$ ,  $df = 399$ ,  $p < .001$ . Appendix D presents the results of the confirmatory factor analysis of the FLMCAS. Table 4 shows that the model fit measurements of the scale exhibited a good fit to the data as well, according to Xia and Yang (2019).

*Table 4. Model Fit Measurements of the Scale*

CFI	SRMR	RMSEA	RMSEA 90% CI		TLI	Model Test		
			Lower	Upper		$\chi^2$	df	p
0.911	0.0679	0.0634	0.0524	0.0738	0.922	593	399	<.001

As can be noted in Table 4, the model fits sufficiently to the data which is supported by the values of CFI (.911), TLI (.922), SRMR (.067), and the RMSEA (.0634).

Overall, the reliability analysis, EFA, and CFA of the Foreign/Second Language Media and Class Communication Anxiety Scale proved that the scale could be utilized in the study as a reliable instrument.

### Experimental Project

The ANCOVA test was used to identify how the instructional project influenced the EG students' vocabulary anxiety related to communication in the media, cultural intelligence, and English vocabulary level. The test relied on the values drawn from CIS, FIMCAS, and EVLT. The pre-test measurement results were used as a covariate. The results of the analysis are provided in Table 5.

Table 5. ANCOVA Test Results Drawn from Measurements Performed Before and After the Intervention, EG ( $n = 24$ ), and CG ( $n = 24$ )

ANCOVA – Post-test	Sum of Squares	df	Mean Square	F	p	$\eta^2$	$\omega^2$
Overall model	2717.9	2	1359.0	7.434	.039		
Pre-test	2692.9	1	2692.9	14.736	.031	.824	.809
Programme	25.0	1	25.0	0.137	.006	.048	.046
Residuals	548.2	3	182.7				

As can be seen in Table 5, the  $\eta^2$  value which illustrated the proportion of the variability for the Pre-test and Post-test is close to 1.00. According to Navarro and Foxcroft (2021), it means that the relationship between those two can be considered sufficient. Furthermore, the  $\eta^2$  value for Programme (.048) shows a medium effect size of 4.8% (Eddy, 2010). The latter illustrated the variance caused by the instructional project. An obtained  $p$ -value was less than 0.05 which indicated the statistical significance of the treatment result (McLeod, 2019b).

It was equally important to identify what percentage of the EG and CG students shifted from the higher to the lower levels of vocabulary anxiety related to communication in the media after the intervention (see Fig. 2).

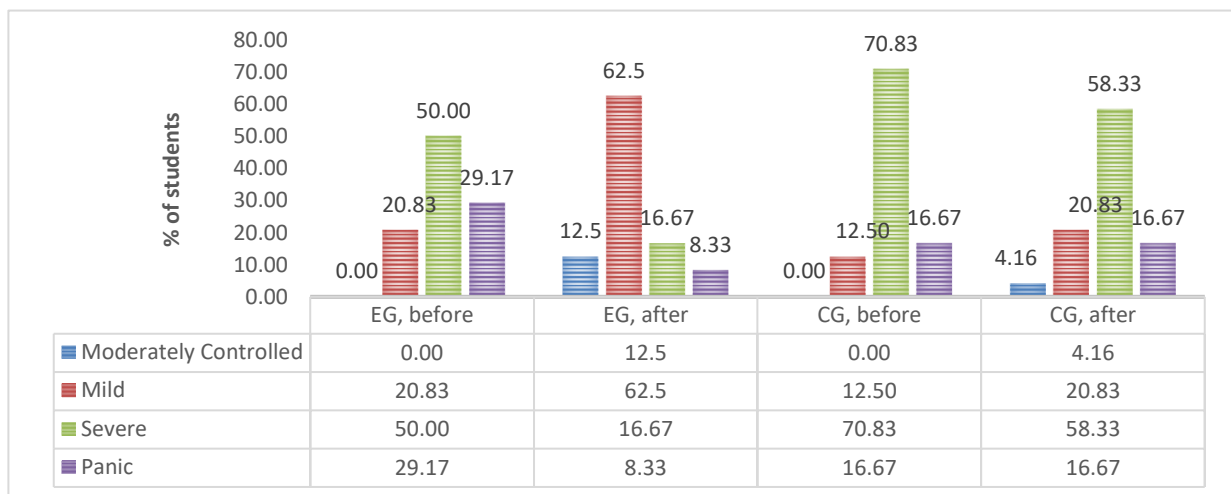


Figure 2. Shifts in Levels of Vocabulary Anxiety Related to Communication in the Media, Before and After the Intervention

As can be noted in Figure 2, students of both EG and CG experienced a decrease in vocabulary anxiety related to communication in the media. The majority of the EG students had the severe (50%) and panic (29.17%) levels of anxiety during the study before the intervention. There was a shift in those students to more controlled anxiety states such as a moderately controlled level ( $n = 3$ ; 12.50%) and a mild ( $n = 15$ ; 62.50%) level. The proportion of EG students who experienced severe and panic anxiety states reduced dramatically. There was a shift to moderately controlled ( $n = 1$ ; 12.50%) and mild ( $n = 5$ ; 62.50%) levels in the CG, too. However, it was less marked compared to the EG.

### Focus Group Discussion

Question 1. When discussing this question, the students reported that using the designed the vocabulary lists and learning them using the Telegram bot, talking to the speaker of English at language learning communities' websites, self-analysis, and analysis by the peer, and repeated vocabulary training helped them to build up confidence and keep the emotional balance. The students' quotes to illustrate their experiences were as seen below:

*'... before the training, I could hardly concentrate on what and how to say. It took me time to formulate my thoughts and I believed I looked ridiculous... I was just desperate ...'*

Question 2. When responding to this question, the students emphasised that the training helped them to learn how to get control over their emotions and thoughts, how to focus their learning efforts on training vocabulary, and how to overcome communication issues related to the use of words. Concerning their negative feelings, they confessed that it



took them great efforts to not show any reaction to the irritation of the speakers of English caused by some technical issues. The quotes were as follows:

*'...I sometimes couldn't stop speaking which seemed to irritate my tutor... but I feel proud of myself...'*

*'...it was a crap when my native speaker hit his computer because it worked slower than he wanted...'*

Question 3. The students suggested that the purpose of using networking sites, language exchange, and social language learning sites to teach the English language was to simulate real-life situations-driven communication.

Question 4. The students confirmed that the instruction based on networking sites, language exchange, and social language learning sites helped them overcome the vocabulary-related anxieties *that* occurred when they communicate in the media.

Question 5. The ways that students suggested using to improve the instructional model that relied on the use of the networking sites, language exchange, and social language learning sites so that it could be used more efficiently to moderate the vocabulary-related anxieties in students were as outlined: a) creating Telegram, TikTok, or YouTube channels to share students' experiences in communicating with the foreigners in the (social) media; b) creating a kind of a peer support centre for students to get some psychological or instructional help when they have a disposition to experiencing fears about real or anticipated communication with foreigners.

### Discussion

The study attempted to investigate, first, whether the designed Foreign/Second Language Media and Class Communication Anxiety Scale was reliable and valid, second, what factors (situations) caused the vocabulary-related anxieties in the students' when they communicated in the media internationally, third, how the use of networking sites, language exchange, and social language learning sites to practice English moderated the vocabulary-related anxieties in students occurred in certain cultural context, fourth, how the experimental group students perceived the instructional approach used in the study.

The novelty of the study is in the design and validation of the Foreign/Second Language Media and Class Communication Anxiety Scale. Another strength of the study is in the use of the instructional model which is based on the use of the vocabulary lists and learning them using the Telegram bot, talking to the speaker of English at language learning communities' websites, self-analysis, and analysis by the peer and repeated vocabulary training which moderated the vocabulary-related anxieties in students when they communicated in the media internationally and helped students build up confidence and keep the emotional balance.

The study found Foreign/ Second Language Media and Class Communication Anxiety Scale was reliable and valid. This was proved by the results of reliability analysis, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA). The Cronbach's  $\alpha$  for the entire scale was .928. The inter-item statistics (Cronbach's alpha) varied from .923 to .931. This proved that the scale items conceptually correlated well with each other, according to DeVon et al. (2007). Therefore, the values for Cronbach's  $\alpha$ , mean = 3.10, SD = .565 showed good consistency in the scale. The EFA values for the CFI (.934), RMSEA (.0382), TLI (.931), BIC (-1159), and  $\chi^2$  (380) proved that the model could be considered a good fit for the data according to Coşkun and Mardikyan (2016). The CFA showed that the model fits sufficiently to the data which is supported by the values of CFI (.911), TLI (.922), SRMR (.067), and the RMSEA (.0634).

The results of this research provide supporting evidence that the instructional model moderates the vocabulary anxieties in students when they communicate in the media with English language speakers. The ANCOVA test was used to identify how the instructional project influenced the EG students' vocabulary anxiety related to communication in the media, cultural intelligence, and English vocabulary level. The test relied on the values drawn from CIS, FIMCAS, and EVLT. The pre-test measurement results were used as a covariate. The analysis showed that the  $\eta^2$  value which illustrated the proportion of the variability for the Pre-test and Post-test was close to 1.00. According to Navarro and Foxcroft (2021), it means that the relationship between those two can be considered sufficient. Furthermore, the  $\eta^2$  value for Programme (.048) shows a medium effect size of 4.8% (Eddy, 2010). The latter illustrated the variance caused by the instructional project. A  $p$ -value was less than 0.05 which indicated the statistical significance of the treatment result. The above supported the assumption the instructional model positively influenced the EG students. It was also found that students of both EG and CG experienced a decrease in the L2 vocabulary anxiety related to communication in the media. The majority of the EG students had the severe (50%) and panic (29.17%) levels of anxiety during the study before the intervention. There was a shift in those students to more controlled anxiety states such as a moderately controlled level ( $n = 3$ ; 12.50%) and a mild ( $n = 15$ ; 62.50%) level. The proportion of EG students who experienced severe and panic anxiety states reduced dramatically. There was a shift to moderately controlled ( $n = 1$ ; 12.50%) and mild ( $n = 5$ ; 62.50%) levels in the CG, too. However, it was less marked compared to the EG.

The findings drawn for the focus group discussion supported the above. The students reported that using the designed vocabulary lists and learning them using the Telegram bot, talking to the speaker of English at language learning communities' websites, self-analysis, and analysis by the peer, and repeated vocabulary training helped them to build up

confidence and keep the emotional balance. The EG students also emphasised that the training helped them to learn how to get control over their emotions and thoughts, how to focus their learning efforts on training vocabulary, and how to overcome communication issues related to the use of words. Concerning their negative feelings, they confessed that it took them much effort to not show any reaction to the irritation of the speakers of English caused by some technical issues.

The above findings contribute to the previous research. These findings agree with Sadighi and Dastpak (2017) who found that the major cause of anxiety in students is speaking. The findings also align with their conclusions that students are scared of spontaneous interaction with the native speakers because they are afraid of making mistakes (78% of students) and their vocabulary is limited (72% of the students), they are unable to guess the meaning of the words from the context because they lack practice (65% of the students), and their language proficiency is insufficient to paraphrase ideas using synonyms (42% of the students). These results are consistent with the claim made by Nozhovnik and Shykhnenko (2020) that a student-centered learning environment develops students' cognitive language skills and increases learners' motivation. The study goes in line with Greenhow and Lewin (2016), who proved the usefulness of social media in instruction and foreign language teaching. The study seems to be consistent with the findings of Hafner and Miller (2019) concerning the effectiveness of including the intercultural component in the English language practice because it enhances both language competencies (it reduces students' anxiety) and learning motivation.

### **Conclusion**

Insufficient vocabulary is one of the key factors of anxieties in students when they communicate in the media internationally. The major sub-factors of the vocabulary-related anxieties in the students when they communicate in the media internationally (as perceived by the respondents) were spontaneous interaction with the native speakers, guessing the meaning of the words from the context, and paraphrasing ideas using synonyms. The instructional-purpose use of the vocabulary lists and learning them using the Telegram bot, talking to the speaker of English at language learning communities' websites, self-analysis, and analysis by peers is capable to moderate the vocabulary-related anxieties in students when they communicate in the media with English language speakers. It also helps students build up confidence and keep their emotional balance. The instructional model has been proved to help students to learn how to get control over their emotions and thoughts, how to focus their learning efforts on training vocabulary, and how to overcome communication issues related to the use of words. Further study could be done to elaborate on our novel findings.

### **Recommendations**

The practitioners are suggested to use the bots to help students train the L2 vocabulary. They are also recommended to consider using Telegram, TikTok, or YouTube channels to share students' experiences in communicating with the foreigners on the (social) media. The teachers could be recommended to create a peer support centre for students to get some psychological or instructional support in cases they communicate with the foreigners with any purpose and feel anxious about it. Future researchers could fruitfully explore the problem under the study further by investigating the neuropsychological causes of vocabulary-related fears that occur to students when they communicated in the media internationally.

### **Limitations**

The availability of reliable internet for the students to get access to complete the Foreign/second language media and class communication anxiety scale and to use the Otter App could be limitations to the study. Students' health, memory and language issues used as screening criteria also imposed limitations on the study. The convenience sampling method was likely to be one more limitation.

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### **Conflicts of Interest**

All co-authors have no competing conflict of interest of any nature to declare.

### **Authorship Contribution Statement**

Borshchovetska: Conceptualization, supervision, drafting manuscript, final approval. Molotkina: Editing/reviewing, data acquisition, data analysis/interpretation. Vitomska: Conceptualization, critical revision of the manuscript, experimental project design, sampling. Serhienko: Anxiety criteria design, focus group discussion data acquisition and analyses, manuscript editing. Turitsyna: Data acquisition, data analysis/interpretation, proofreading the manuscript.

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## Appendices

### Appendix A. Foreign/second language media and class communication anxiety scale (FLMCAS)

(Adapted from Alrabai (2014)), can be accessed via the link: <https://forms.gle/28N1E15Jw2VQU4Fu5>

By answering the questions that follow, you provide your consent to participate in the research experiment on searching and testing the instructional ways to moderate the overcoming vocabulary-related anxieties in students when communicating in the media internationally. Considering this as a confidentiality agreement, you also give your permission to process, use and interpret your personal information within the research context and for study purposes. We would appreciate it if your answers to the questions were as accurate as possible.

1. Your age \_\_\_\_
2. Your gender:
  - a) Male
  - b) Female
3. Have you ever had any of the outlined below or are you currently suffering from:
  - a) neurological, neuropsychological, or psychological problems
  - b) dyslexia
  - c) memory problems
  - d) none of the above
4. Have you ever been diagnosed with:
  - a) learning disability of any nature
  - b) language disorders
  - c) psychiatric illness
  - d) concussion
  - e) none of the above.

Domain	#	Situation	Agreement Scale			Likert	
			1	2	3	4	5
Communication uneasiness	1	When I speak or write using English, I do not feel any anxiety.					
	2	When the teacher asks me a question in English, I feel panic.					
	3	I often feel that my language knowledge is not as good as one of my peers.					
	4	I lose my mind when I have to spontaneously share my thoughts or feelings in interaction with foreigners.					
	5	I feel awkward when I have to volunteer answers in interaction with foreigners.					
	6	I feel uneasy when I see my language teacher being ready to correct my mistake instantly.					
	7	I can hardly control my heart pounding when I expect to be called on during the class.					
	8	I always feel that my peers are better at speaking English than I am.					
	9	When speaking in front of the other students using a foreign language, I feel very uncomfortable about it.					
	10	I often feel anxious and confused when I speak a foreign language in class.					
	11	I am often reluctant to speak a foreign language for fear of being laughed at for some reason.					
	12	I feel worried that the foreign language teacher will ask questions which is undesirable for me to occur because I might not be prepared for them beforehand.					

## Appendix A Table Continued

Domain	#	Situation	Agreement Scale			Likert	
			1	2	3	4	5
Comprehension anxiety	13	It causes me stress when I cannot follow the explanations of my English teacher or communication partner when the one speaks English.					
	14	When participating in the foreign language class, I often get distracted by thoughts that have no connection with the course.					
	15	When participating in a foreign language class or communicating in the media, I often get overnervous which causes me to forget things I have learned.					
	16	It causes me stress when I cannot follow what specifically the foreign language teacher corrects in my language.					
	17	In the foreign language class, the students move through the material so quickly that I worry about being outpaced by my peers.					
	18	It causes me stress when I cannot follow every word the foreign language teacher or communication partner says.					
Media communication apprehension	19	I usually feel comfortable when communicating in the media.					
	20	I feel more tense and nervous when communicating in the media than when speaking in foreign language classes.					
	21	I feel tense and nervous about the possible failure to manage communication in the media.					
	22	I usually feel comfortable when communicating with native speakers of English.					
	23	Even in cases when I am well prepared for communicating with native speakers of English in the media, I feel anxious or even panic about it.					
	24	When communicating with native speakers of English in the media, I am afraid that there is no support from a language teacher or no one to correct the mistakes I make.					
L2 Vocabulary anxiety	25	I am often not sure whether I use the word-formation rules correctly when I speak.					
	26	I usually feel comfortable when I categorise the words.					
	27	I feel in trouble when I am supposed to comprehend or learn the vocabulary through listening.					
	28	I feel tense and nervous about the appropriate use of the words I memorised.					
	29	When communicating with native speakers of English in the media, I feel anxious or even panic about guessing the meaning of the words.					
	30	I get stuck when I am expected to paraphrase the ideas using synonyms.					

Note: 1 = Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly disagree

Interpretation of the scores:

30–59 – Moderately Controlled (Relatively Low) Level Anxiety,

60–89 – Mild Level of Anxiety,

90–119 – Severe (Relatively Uncontrolled) Level of Anxiety,

120–150 – Panic (Uncontrolled) Level of Anxiety.

*Appendix B. Results drawn from the item reliability analysis of the FLMCAS*

Item	Mean	SD	if item dropped	
			Cronbach's $\alpha$	McDonald's $\omega$
Item 1*	3.08	1.077	0.929	0.930
Item 2	3.31	1.065	0.924	0.925
Item 3	2.71	1.052	0.924	0.925
Item 4	2.98	1.076	0.925	0.926
Item 5	3.01	0.944	0.925	0.926
Item 6	3.24	1.049	0.926	0.927
Item 7	3.16	1.126	0.925	0.926
Item 8	3.15	1.152	0.923	0.924
Item 9	3.17	0.997	0.924	0.925
Item 10	3.30	1.077	0.923	0.924
Item 11	3.36	1.065	0.924	0.925
Item 12	3.08	1.085	0.925	0.926
Item 13	3.01	0.935	0.925	0.926
Item 14	3.24	0.992	0.928	0.929
Item 15	2.98	0.996	0.925	0.926
Item 16	3.22	0.962	0.925	0.926
Item 17	3.44	1.024	0.925	0.926
Item 18	3.25	0.924	0.927	0.928
Item 19*	3.14	0.943	0.931	0.932
Item 20	3.16	0.904	0.929	0.930
Item 21	2.98	0.904	0.927	0.928
Item 22*	3.08	0.963	0.931	0.931
Item 23	2.98	1.016	0.925	0.926
Item 24	3.32	0.977	0.926	0.927
Item 25	2.56	0.912	0.927	0.928
Item 26	2.78	0.747	0.929	0.930
Item 27	3.07	0.923	0.928	0.929
Item 28	3.16	0.885	0.927	0.928
Item 29	3.11	0.938	0.925	0.926
Item 30	2.96	0.898	0.927	0.928

\*reverse scaled item

*Appendix C. Factor Loading Data drawn for EFA of the FLMCAS*

Item	Factor				Uniqueness
	1	2	3	4	
Item 1	0.673				0.443
Item 2	0.663				0.471
Item 3	0.655				0.346
Item 4	0.631				0.538
Item 5	0.614				0.536
Item 6	0.595				0.488
Item 7	0.594				0.418
Item 8	0.588	0.418			0.428
Item 9	0.569				0.519
Item 10	0.567				0.402
Item 11	0.526				0.619
Item 12	0.521				0.467
Item 13	0.520				0.540
Item 14	0.487				0.714
Item 15	0.467				0.703
Item 16	0.461	0.424			0.534
Item 17		0.693			0.460
Item 18		0.559	0.447		0.392
Item 19		0.524			0.710
Item 20	0.456	0.517			0.477
Item 21	0.412	0.449			0.520
Item 22			0.623		0.586
Item 23			0.498		0.660
Item 24			0.451	0.413	0.589
Item 25			0.444		0.570
Item 26			0.443		0.772
Item 27				0.487	0.713
Item 28				0.442	0.794
Item 29				0.426	0.804
Item 30				0.518	0.854



*Appendix D. Results of the Factor Loadings Obtained from CFA of FLMCAS*

Factor	Indicator	Estimate	SE	95% Confidence Interval		Z	p
				Lower	Upper		
Factor 1	Item 1	0.357	0.0980	0.1643	0.549	3.64	<.001
	Item 2	-0.774	0.0848	-0.9400	-0.608	-9.13	<.001
	Item 3	-0.769	0.0838	-0.9332	-0.605	-9.18	<.001
	Item 4	-0.705	0.0888	-0.8788	-0.531	-7.93	<.001
	Item 5	-0.593	0.0788	-0.7474	-0.438	-7.52	<.001
	Item 6	-0.590	0.0898	-0.7658	-0.414	-6.56	<.001
	Item 7	-0.756	0.0922	-0.9367	-0.575	-8.20	<.001
	Item 8	-0.928	0.0877	-1.0996	-0.756	-10.58	<.001
	Item 9	-0.695	0.0807	-0.8529	-0.537	-8.61	<.001
	Item 10	-0.827	0.0839	-0.9913	-0.662	-9.85	<.001
	Item 11	-0.772	0.0849	-0.9386	-0.606	-9.10	<.001
	Item 12	-0.735	0.0886	-0.9091	-0.562	-8.30	<.001
Factor 2	Item 13	0.637	0.0783	0.4832	0.790	8.13	<.001
	Item 14	0.472	0.0903	0.2951	0.649	5.23	<.001
	Item 15	0.688	0.0832	0.5248	0.851	8.27	<.001
	Item 16	0.658	0.0814	0.4984	0.818	8.08	<.001
	Item 17	0.630	0.0883	0.4571	0.803	7.14	<.001
	Item 18	0.492	0.0822	0.3304	0.653	5.98	<.001
Factor 3	Item 19	0.130	0.0941	-0.0540	0.315	1.39	0.166
	Item 20	-0.388	0.0877	-0.5598	-0.216	-4.42	<.001
	Item 21	-0.519	0.0836	-0.6825	-0.355	-6.21	<.001
	Item 22	0.146	0.0962	-0.0423	0.335	1.52	0.128
	Item 23	-0.690	0.0898	-0.8663	-0.514	-7.69	<.001
	Item 24	-0.606	0.0872	-0.7774	-0.435	-6.95	<.001
Factor 4	Item 25	0.469	0.0857	0.3007	0.637	5.47	<.001
	Item 26	0.261	0.0728	0.1182	0.404	3.58	<.001
	Item 27	0.448	0.0886	0.2742	0.622	5.05	<.001
	Item 28	0.505	0.0826	0.3431	0.667	6.11	<.001
	Item 29	0.673	0.0830	0.5106	0.836	8.11	<.001
	Item 30	0.493	0.0833	0.3295	0.656	5.92	<.001