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**USE OF ONLINE TRANSLATORS TO DEVELOP  
TRANSLATOR'S COMPETENCE OF 'DIGITAL NATIVES'  
GENERATION**

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*Abstract*

The paper reviews the use of neural-based online translators in the process of teaching students in a translation classroom in order to develop their translator's competence. The authors define modern students as 'digital natives' and formulate their research goal as an attempt to create a specific method of working with online translators to develop translator's competence of the students who are 'digital natives'. The paper defines the most popular online translators and their specific features, singles out the main components of translator's competence, describes the step-by-step action plan for developing translator's competence of the students from 'digital natives' generation by means of online translators. The authors concentrate on detailed description of the experiment organized to check the method developed by them, discuss the results and draw the conclusions. In the paper, translator's competence is understood as a unity of five components: translation, linguistic, information and technological, reflexive and motivational one. The main characteristics of the 'digital native' generation are described as complex information perception from audio-, video-, multimedia, graphic, sensor channels; insufficiency in perceiving information provided only in text format; insufficient skills of moving along the information labels while searching for the information in need; multitasking. At the end of the paper, some practical recommendations for translation teachers working with 'digital natives' who study the aspects of Practical Translation Course are given.

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**Keywords:** Digital native, online translators, step-by-step action plan, translator's competence, translator's competence components.



## 1. Introduction

In recent years online translators have become an essential part of our life, especially when a quick translation of web-pages and text documents is needed. In fact, online translators can fulfil the function of an instant translation from any language in the world that is very convenient in a practical sense.

However, there is a tendency that the students who study foreign languages at different levels and with different purposes (including those going for a translator's diploma) have been starting to use online translators. Their teachers have mixed feelings about this, as one of the main goals of a translation student is to learn how to translate by themselves.

In September 2017 the anonymous questionnaire survey conducted by us in the group of 167 translation students resulted in 88% saying they occasionally use online translators, even while translating the texts as a part of their homework. They explain it by accessibility of online translators which are a fact of reality that is impossible to deny. 12 % of the students said that they knew about online translators, but they didn't use them while preparing for translation classes and doing their homework.

The results of this questionnaire survey also showed that translation students mostly prefer such online translator apps as Yandex.Translate (25 %), Google Translate (75 %), Promt (5 %) and other apps (5 %).

It's interesting to mention that the bigger part of the surveyed (60%) rather like the results of online translation. However, 80% of the surveyed usually proofread and correct the results of online translation in written form, and there are 20% of those who don't consider it necessary and only make some oral corrections while answering in a translation class.

## 2. Problem Statement

It is psychological and pedagogical characteristics of modern students that define, as a rule, the pedagogical tools which are used to reach the goal that is to develop translator's competence in translation students.

It's quite interesting to mention that modern university students can be defined as 'digital natives,' i.e. people who are from the day of their birth are immersed into the world where one of the key positions in social, economic and other spheres is taken by digital technologies and the Internet (Rourke & Coleman, 2010; Bylieva, Lobatyuk, & Rubtsova, 2017, 2018; Aladyshkin, Kulik, Michurin, & Anosova, 2017).

Some of the publications of the recent years (Jones & Healing, 2010; Thomas & Srinivasan, 2016; Gashkova, Berezovskaya, & Shipunova, 2017; Evseeva, Obukhova, & Tanova, 2017; Shipunova, Berezovskaya, Gashkova, & Ivanova, 2017) say that the main characteristic of the 'digital natives' is the very way of getting and transmitting information where the main role is played by the Internet. It's quite unnatural for them to learn something consistently and gradually, going from theme to theme in a logical way in accordance with information labels, with multitasking that has so much in common with Internet navigation being one of the vivid features of this generation.

Therefore, having studied the psychological and pedagogical publications we can draw the conclusion that the main characteristics of the 'digital native' generation are as follows:

- the necessity to have the elements of their 'natural habitat' (digital technologies, the Internet, smart phone apps, online translators, etc.) in the process of learning;

- complex information perception from audio-, video-, multimedia, graphic, sensor channels;
- insufficiency in perceiving information provided only in text format;
- insufficient skills of moving along the information labels while searching for the information in need;
- multitasking.

Taking into account how difficult it is to keep modern translation students from using online translators, we come to studying how to use them for didactic purposes. We make a hypothesis that by using a specific method of working with online translators – a step-by-step action plan – we can increase the level of translator's competence of our students

### **3. Research Questions**

#### **3.1. Online Translators and Their Peculiarities**

It's obvious that modern university students (including translation students trained at Tula State University) not only use online translators but also are 'digital natives.'

The popularity of online translators among translation students is rather high. Partially it can be explained by those dramatic changes that happened in the field of online translation in 2017. In 2017 such 'giant' as Google Translate and Yandex Translate switched to self-learning algorithm of neural machine translation that influenced the quality of text translation a lot.

Only for the recent two years the specific features of online translators of the kind were described in the number of abroad publications. For example, Ramati and Pinchevski (2018) stress that online translators of the new generation possess the operational logic that lets the system not only self-learn but also infinitely go for linguistic uniformity in translation in different natural language.

Lane and Bansal (2017) while describing an experimental case came to the conclusion that the use of neural-based online translators in natural language pairs proved its efficiency concerning text processing created in natural languages inclusive of the lexical functional grammar of both languages.

In the research of Seljan, Tucaković, and Dunder (2015) devoted to the assessment of online translators quality on the examples of the English, Russian, and Croatian languages it is asserted according to the criteria of translation accuracy and speech naturalness some optimistic results were achieved, and the inner entirety of the text is described as high.

On the whole, the conclusion can be drawn that nowadays neural-based online translators can provide quite a qualitative translation, with these systems being self-learning and the quality of translation getting higher and higher.

#### **3.2. The Components of Translator's Competence**

To define the components of translator's competence we come to the works of Gambier and van Doorslaer (2010) who took an attempt to systematize the content of translator's competence. Being a complex notion, such a competence presupposes the presence of such components as linguistic, thematic, cross-cultural, technological components and the ability to provide the translator's services on labour market together with the ability to extract the information from the text (Beeby, Ensinger, & Presas, 2003).

Taking into the consideration the results of the European work group together with the results of the research carried out at Tula State University (Lenartovich & Ivanova, 2017), in this paper we try to define such translator's competence components as:

- translation component (the ability to carry out different types of translation activity depending on a speech situation);
- linguistic component (the skills to use the linguistic structures receptively and productively);
- information and technological component (the skills of information and technological optimization of translator's activity);
- motivational component (interest in carrying out the professional translator's activity);
- reflexive component (critical evaluation and self-assessment of translator's activity results).

#### **4. Purpose of the Study**

The purpose of our study is to create a specific method of working with online translators to develop translator's competence of the students in a translation classroom.

In accordance with the purpose defined, we the objectives of the study are as follows: to define the most popular online translators and their specific features, to single out the main components of translator's competence, to create and describe the step-by-step action plan for developing translator's competence of the students from 'digital natives' generation by means of online translators, to conduct an experiment to check the offered method and describe its results.

#### **5. Research Methods**

In our research we used the set of research methods that mutually tested and completed each other. The main methods were: theoretical (analysis of psychological and pedagogical publications; systematization); empirical (oral and written surveys, method of expert assessment, testing, empirical-pedagogical work, pedagogical experiment); methods of mathematical processing the results.

To prove our hypothesis we try to review the step-by-step action plan to develop translator's competence on the basis of the most popular online translators Google Translate and Yandex.Translate (Table 1).

**Table 01.** Step-by-Step Action Plan to Develop Translator's Competence on the Basis of Online Translators

<b>Step</b>	<b>Competence Component</b>	<b>Action / Content</b>
1) Pre-Translation Analysis	Linguistic + Translation	-Read the text; define its genre, style, and context taking into consideration the communicative function of the utterance, etc. -Get the ready-made translation by means of neural-based online translators. -Define the syntactic structure of the original and the translation. -Define the tense of the original and the translation.  <b>For Example:</b>

		<p><b>The Original:</b> “<u>A study of bilingual children finds</u> that when <u>children</u> learn any two languages from birth <u>each language</u> proceeds on its own independent course, at a rate <u>that</u> reflects the quality of the children's exposure to each language.”</p> <p><b>Google Translate:</b> «<u>Изучение двуязычных детей показывает</u>, что, когда <u>дети изучают</u> любые два языка с рождения, <u>каждый язык исходит</u> из собственного независимого курса со скоростью, <u>которая отражает</u> качество воздействия детей на каждый язык».</p> <p><b>Yandex Translate:</b> «<u>Изучение двуязычных детей показывает</u>, что, когда <u>дети изучают</u> любые два языка с рождения, <u>каждый язык проходит</u> свой собственный независимый курс со скоростью, отражающей качество воздействия каждого языка на детей».</p>
<p>2) Analysis of Grammar and Syntax Correctness and Accuracy of Translation</p>	<p>Linguistic + Translation</p>	<p>-Analyze the translations by comparing them to the original.          -Define the grammar and syntax inaccuracies and/or mistakes.          -Evaluate the level of the meaning distortion and the distortion in conveying the communicative purpose of the text.</p> <p><b>For Example:</b></p> <p><b>The Original:</b> “<u>A study of bilingual children finds</u> that when <u>children</u> learn any two languages from birth <u>each language</u> proceeds on its own independent course, at a rate <u>that</u> reflects <b>the quality of the children's exposure to each language.</b>”</p> <p><b>Google Translate:</b> «<u>Изучение двуязычных детей показывает</u>, что, когда <u>дети изучают</u> любые два языка с рождения, <u>каждый язык исходит</u> из собственного независимого курса со скоростью, <u>которая отражает качество воздействия детей на каждый язык</u>».</p> <p><b>Yandex Translate:</b> «<u>Изучение двуязычных детей показывает</u>, что, когда <u>дети изучают</u> любые два языка с рождения, <u>каждый язык проходит</u> свой собственный независимый курс со скоростью, отражающей <b>качество воздействия каждого языка на детей</b>».</p> <p><b>Comments:</b> This step is especially effective while studying the grammar peculiarities of the English language on the example of translating from Russian into English.</p> <p><b>For Example:</b></p> <p><b>The Original:</b> «Тотальный диктант – ежегодная образовательная акция в форме добровольного диктанта для всех желающих. Ее цель – показать, что быть грамотным важно для каждого человека».</p>

		<p><b>Google Translate:</b> “Total dictation is an <b>annual educational action</b> in the form of a voluntary dictation for everyone. Its goal is to show that being literate is important for everyone.”</p> <p><b>Yandex.Translate:</b> “Total dictation is <b>annual educational action</b> in the form of a voluntary dictation for all comers. Its goal is to show that being literate is important for every person.”</p>
3) Looking for the Best Equivalent or Lexical Choice	Linguistic + Translation + Information and Technological	<p>-Compare the original with each translation; draw conclusions about the equivalence and translation quality.</p> <p>-Compare the translations with each other; draw conclusions about the most acceptable equivalent from those offered by neural-based online translators.</p> <p>-Try to find equivalents in bilingual dictionaries, including <a href="http://multitran.ru">http://multitran.ru</a>, <a href="http://multilex.ru">http://multilex.ru</a>, <a href="http://poliglos.info/">http://poliglos.info/</a>, <a href="http://www.oxforddictionaries.com/">http://www.oxforddictionaries.com/</a>, Yandex Dictionaries, <a href="https://glosbe.com/">https://glosbe.com/</a>, etc. and in specialized dictionaries (e.g. in case with neologisms and phraseology);</p> <p>-Draw conclusions about the most adequate lexical choice.</p> <p><b>For Example:</b></p> <p><b>The Original:</b> “A <b>study</b> of <b>bilingual children</b> <b>finds</b> that when <b>children</b> learn any two languages from birth <b>each language proceeds on</b> its own independent course, at a rate <b>that</b> reflects <b>the quality</b> of the children's exposure to each language.”</p> <p><b>Google Translate:</b> «<b>Изучение двуязычных детей показывает</b>, что, когда <b>дети изучают</b> любые два языка с рождения, <b>каждый язык исходит</b> из собственного независимого курса со скоростью, <b>которая отражает качество воздействия детей на каждый язык</b>».</p> <p><b>Yandex.Translate:</b> «<b>Изучение двуязычных детей показывает</b>, что, когда <b>дети изучают</b> любые два языка с рождения, <b>каждый язык проходит</b> свой собственный независимый курс со скоростью, отражающей <b>качество воздействия каждого языка на детей</b>».</p>
4) Consultations	Information and Technological +Motivational	<p>-When it’s exceptionally difficult to define the meaning (e.g. in case with neologisms, phraseology, etc.), it’s logical to go for help to professional translators’ online communities (e.g. ‘City of Translators’, (<a href="http://www.trworkshop.net/job/">http://www.trworkshop.net/job/</a>).</p> <p>-Conduct an active discussion of choices for a neologism meaning in the classroom by means of active and interactive methods (brainstorming, ‘ping-pong method,’ case study, presentation method, etc.).</p>
5)Optimization of Translator’s Activity	Linguistic + Translation + Information and Technological	<p>-Create the terminological glossary to the original and the translation under analysis by means of different computer programs.</p>
6) Translation itself	Linguistic + Translation + Information and Technological	<p>-Do the translation of the original text.</p> <p>-Use Translation Memory (TM) tools and glossaries.</p>

7) Reflexion	Reflexive+ Motivational	<ul style="list-style-type: none"> <li>-Draw conclusions about drawbacks, incorrectness, inaccuracy and mistakes on the basis of the original and translations analyses.</li> <li>-Make a report about the drawbacks or incorrectness that is singled out, their reasons and ways of getting rid of them.</li> <li>-Deepen knowledge about the essence and the content of the translator’s activity; go for satisfaction in its results.</li> <li>-Critically assess the results of translator’s activity.</li> </ul>
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It’s necessary to emphasize that the attempt to use online translators as one of the tools of developing translator’s competence of translation students does not substitute the traditional methods of work, but only add to them.

## 6. Findings

As the participants of the one-academic-year-long experiment aimed at evaluating the effectiveness of the step-by-step action plan offered by us we invited two groups of translation students of Tula State University.

In Control Group (CG – 83 students) we built the teaching process in accordance with the traditional method of teaching ‘Practical Translation Course.’ It’s quite possible that the students in this group use online translators, although uncontrollably and out of hand, with no method under it.

In Experimental Group (EG – 85 students) at every class during two semesters, translation students dealt with extra teaching aids (selected by us) such as authentic texts and/or their fragments supplied with the step-by-step action plan on how to work with online translators (Table 1). All the extra teaching aids were in line with semester theme plan. Authentic texts and fragments for translation were selected in such a way that they contained different examples of translation choices in the frames of a translation theme studied.

To define the components of translator’s competence we used the method of expert assessment (experts were Tula State University translation teachers and employer’s representative from different translation agencies).

To define the translation component we used the assessment of a written translation. A number of criteria were used such as: translation cohesiveness (full / not full translation of key information); negotiation of translation difficulties (stereotyped thinking / creativity in looking for translation choices); appropriateness of translation choices (appropriate / inappropriate translation transformations), etc.

To define the linguistic component we used the tests approved by the Academic Office of Tula State University with open-ended and closed questions about lexical and grammar aspects that came into the spotlight while analyzing the translations generated by online translators.

To define the information and technological component we the method of expert assessment by means of content-analyses of the results of the students’ translation activity and simply by conversation with them according to a number of criteria: the ability to search for extra information to do the translation; the skill to work with online dictionaries (including the specialized ones); the skill to work with TM-tools and to form a thematic glossary, etc.

To define the reflexive component the expert group analysed the self-assessment questionnaire about the translation results which revealed the level of development of the reflexive skills, the ability to use self-assessment and self-evaluation of translation activity. As an extra tool we also used the questionnaire to define academic attainments by Elliot and Murayama (2008).

To define the motivational component we used the modified method ‘Motivation to professional activity’ by Rean (1999) together with the results of the questionnaire and conversations with translation students.

To assess the level of uniformity of the experts’ opinions quantitatively we used the Kendall’s concordance coefficient that gave use rather good validity (Kendall & Babington Smith, 1939).

To check the uniformity of multivariable data that we got during the experiment we used MANOVA (multivariate analysis of variance). This method shows the level of importance for each dependent variable and how it can influence on each of the separate variables (Arens & Leiter, 1985).

By means of MANOVA we compared the influence of different qualitative factors and their combinations on the values of quantitative variables that we got by means of comparing average values of variables (in tables). Thereafter, the final uniformity and consistency in the values of variables speaks about the validity of data that we received in the experiment.

The results of the pre- and post- experimental check-up of translator’s competence in CG and EG are shown in Table 2.

To express the levels of translator’s competence components in %, we used the following scale: beginner level – 0-40%, low level – 41-60%, medium level – 61-80%, high level – 81-100%.

**Table 02.** Experiment Results

Component	Pre-Experimental Check-Up		Post-Experimental Check-Up	
	CG Level	EG Level	CG Level	EG Level
Translation	64	65	72	81
Linguistic	68	66	77	82
Information and Technological	55	56	62	74
Reflexive	58	58	64	69
Motivational	60	63	66	73

In EG we noticed well-developed skills of making thematic glossaries by means of computer programs, together with the skills of conveying the semantic equivalence of the translated text / fragment, translating terminology and using translation transformations.

It’s worth mentioning that in written translations made by EG there were less mistakes connected with word-for-word translation.

The aggregate coefficient of translation quality in EG in comparison with CG is 12% that speaks in favour of the attempt to introduce the step-by-step action plan to develop translator’s competence on the



basis of the most popular online translators Google Translate и Yandex.Translate into the translation classroom.

Translation teachers noticed that students in EG were oriented towards deepening their knowledge about the process of translation and they had the urge for finding and self-analyzing their mistakes in order to get rid of them in the future.

## 7. Conclusion

Having analyzed the results we got it seems quite logical to sum up the practical recommendations for translation teachers working with 'digital natives' who study the aspects of Practical Translation Course:

- it's desirable to accentuate the attention of translation students on a direct correlation of using online translators and enriching their vocabulary under a specific method;
- it's rational to use online translators when the aim is justified by a didactic context;
- it's recommended to use the text received as a result of using online translators for analyses and correction of grammar, lexical, syntax, stylistic, cross-cultural and other mistakes;
- it's desirable to continue working on the method of using online translators in a translation classroom taking into consideration even more aspects such as the initial level of language proficiency, specific purpose of translation, final educational goal, etc.

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## References

- Aladyshkin, I., Kulik, S., Michurin, A., & Anosova, N. (2017). Information Prospects For Socio-Cultural Development: Contradictory Grounds *RPTSS 2017 International Conference on Research Paradigms Transformation in Social Sciences, The European Proceedings of Social & Behavioural Sciences EpSBS, Vol. XXXV*, 19-25. doi: 10.15405/epsbs.2018.02.3
- Arens, H., & Leiter, Ju. (1985). *Mnogomerny Dispersionny Analiz [Multivariate Analysis of Variance]*. Moscow: Finance and Statistics. [in Rus.].
- Beeby, A., Ensinger, D., & Presas (2003). *PACTE Building a Translation Competence Model. Triangulating Translation: Perspectives in Process Oriented Research*. Amsterdam: John Benjamins.
- Bylieva, D., Lobatyuk, V., & Rubtsova, A. (2017). Smartmob: evolution from flashmob to smartcity element *RPTSS 2017 International Conference on Research Paradigms Transformation in Social Sciences, The European Proceedings of Social & Behavioural Sciences EpSBS, Vol. XXXV*, 225-235. doi:10.15405/epsbs.2018.02.26
- Bylieva, D., Lobatyuk, V., & Rubtsova, A. (2018). Homo Virtualis: existence in Internet space. *SHS Web of Conferences 44, 00021 (2018) CC-TEESC2018*. doi: 10.1051/shsconf/20184400021.
- Elliot, A.J., & Murayama, K. (2008) On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology, 100(3)*, 613-628. doi:10.1037/0022-0663.100.3.613.

- Evseeva L., Obukhova J., & Tanova A. (2017). Network technologies and the new perception of communication. *4th International Multidisciplinary Scientific Conference on Social Sciences and Arts. SGEM. Book 6, Vol.1*, 57-64. doi: 10.5593/sgemsocial2017/hb61/s7.07.
- Gambier, Y., & van Doorslaer, L. (2010). *Handbook of translation studies*. Vol I. Amsterdam, Philadelphia: John Benjamins.
- Gashkova, E., Berezovskaya, I., & Shipunova, O. (2017). Models of self-identification in digital communication environments. *RPTSS 2017 International Conference on Research Paradigms Transformation in Social Sciences, The European Proceedings of Social & Behavioural Sciences EpSBS, Vol. XXXV*, 374-382. doi:10.15405/epsbs.2018.02.44.
- Jones, C., & Healing, G. (2010). Net generation students: Agency and choice and the new technologies. *Journal of Computer Assisted Learning*, 26(5), 344-356. doi: 10.1111/j.1365-2729.2010.00370.
- Kendall, M. G., & Babington Smith, B. (1939). The Problem of m Rankings. *The Annals of Mathematical Statistics*, 10 (3), 275-287. doi: 10.1214/aoms/1177732186.
- Lane, R., & Bansal, A. (2017). *An adaptive machine translator for multilingual communication. Infrastructure for Collaborative Enterprises. WETICE 2017*.
- Lenartovich, Y.S., & Ivanova V.I. (2017) *Podgotovka Buduschikh Bakalavrov Lingvistiki k Professionalnoy Perevodcheskoy Deyatelnosti [On How To Prepare Future Bachelors of Linguistics To Professional Translator's Activity]*. Tula: TulGU. [in Rus.].
- Ramati, I., & Pinchevski, A. (2018). Uniform multilingualism: A media genealogy of Google Translate. *New Media and Society*, 20(7), 2550-2565. doi: <http://doi:10.1177/1461444817726951>.
- Rean, F.F. (1999). *Psikhologiya Izucheniya Lichnosti [Psychology of Character Research]*. Moscow: Mikhailov. [in Rus.].
- Rourke, A., & Coleman, K. (2010). *Knowledge building in 21st century: Learners, learning and educational practice*. The Australasian Society for Computers in Learning in Tertiary Education.
- Seljan S., Tucaković M., & Dunder I. (2015) Human Evaluation of Online Machine Translation Services for English/Russian-Croatian. In Rocha A., Correia A., Costanzo S., Reis L. (Eds.) *New Contributions in Information Systems and Technologies. Advances in Intelligent Systems and Computing, Vol. 353*. (pp. 1089-1098). Cham, Switzerland: Springer. doi: 10.1007/978-3-319-16486-1\_108.
- Shipunova, O., Berezovskaya, I., Gashkova, E., & Ivanova, T. (2017). The boundaries of semantic barriers in intercultural communication. *4th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM2017, Book 2, Vol.1*, 371-378. doi:10.5593/sgemsocial2017/hb21/s06.046.
- Thomas, Y.A., & Srinivasan, R. (2016). Emerging shifts in learning paradigms-from millenials to the Digital Natives. *International Journal of Applied Engineering Research. Vol. 11, Issue 5*, 3616–3618.