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# THE USE OF ADAPTIVE LEARNING SYSTEM FOR ASSESSMENT OF FOREIGN LANGUAGE PERFORMANCE

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## Abstract

Knowing major foreign languages such as English has currently become very crucial especially for students aspiring to work at international companies. It is for this reason that many students tend to take courses or study foreign languages, especially business English at college or university. Thus, students come with specific expectations and targets, which must be achieved at the end of the course. This therefore makes it very relevant to work out mechanisms to facilitate, support, and promote the teaching and learning of foreign languages to enable learners attain their fullest potentials and reach their expected targets. Hence, this paper defines and justifies the need to adopt adaptive learning system like big data and other assessment processes capable of stimulating and boosting students' interest, which would lead to better performance. Our analysis revealed that the creation of individualized learning and learning, and this improves students' performance in foreign languages. Thus, it imperative for policy maker and other authorities to encourage the development of individualized learning system to improve teaching and learning as well as the performance of students

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## 1. Introduction

Assessment is a crucial instrument in teaching and learning of any discipline or courses, hence assessment (evaluation) is used to describe a set of processes, procedures, and events that are adopted to attain different targets and purposes. Assessment for learning is becoming very common and there are currently a lot of advocates for its development (Black & Wiliam, 1998). Assessment helps in personising and individualising learning processes and activities of various disciplines and courses, especially foreign languages. Thus, this requires the setting of learning goals and interests based on which the assessment is done. Assessment for learning mostly revolves on the approach that learners must have a great amount of interest in what they study or are studying. Thus, the development and implementation of assessment for learning processes enables individual students to track the progress made on their targets, this assists learners to analyse their results and develop various enabling factors or processes needed to guide them towards their overall study objectives. In business communication, the learning of foreign languages comes with different but well-defined goals such as making presentations and contract negotiations in Business language, filing of financial reports, writing of Economic reports, and so on (Malyuga & McCarthy, 2018; Malyuga & Tomalin, 2014; Malyuga et al., 2016).

Thus, learning goals and objectives should overtly be defined and made know to students and learners must be afforded the opportunity to evaluate and analyse their progress to help make revisions and adjustments on how to achieve the set goals. This process is often referred to as formative assessment that involves the teacher's feedback to learner, which helps in identifying and overcoming of one's weaknesses by providing the opportunity of redefining or redirecting of opportunities, strengths, etc. And this type of assessment can be carried out at any given time during the learning period. Some proponents of assessment for learning argue that one of the crucial elements that impacts positively on teaching and learning activities is when students know what is expected of them, which facilitates the achievement of better results (Ausubel, 1968). To attain this, it would be imperative to adopt contemporary technology such as adaptive learning systems like big data in assessment for learning activities. The relevance of technology in promoting teaching and learning processes and its capacity to provide the platform for assessment of learners inspired this research.

## 2. Problem Statement

According to Bloom (1984) a study, which analysed the performance of learners, revealed that the disregard by teachers to take into account the variations of students' learning abilities leads to false distribution of students' performance, thus this does not reflect the accurate results of these learners. As such there is the need to individualize learning processes to cover different learning abilities of students with various strengths and weaknesses. The personification or individualization of learning activities comes with a lot of advantages such as the ability of the instructor to promptly identify or spot errors of students in their theoretical and practical assignments, which offers him the opportunity to explain and make follow-ups if necessary (Guskey, 2010). This form of assessment is described by Bloom (1984) as feedback and corrective processes, and these two actions have since been adopted as standard terms in

assessment for learning processes. Hence, Bloom is described as the proponent and pioneer of formative assessment

conception that combines feedback and instructional corrective methods. Whereas formative assessment are two main terms used to describe the activities used by instructors and their learners in the achievement of their expected objectives and targets. However, assessment usually involves the processes adopted by teachers and/or students to track and evaluate their results in a particular discipline, which requires the provision of feedback (information) necessary for the adjustment or modifications of teaching and learning activities. Thus, Black and Wiliam (2004) suggests that an assessment method becomes formative if the results are adopted and used to modify the future teaching and learning activities of students. Hence, formative is used to define the development, adoption, and implementation of assessment information, which is used to improve teaching and learning, and as far as this paper is concerned the performance of students in foreign languages.

Assessment for learning sometimes referred to as formative assessment is any processes of assessment, which is aimed at promoting and improving students' performance in foreign languages. Thus, the activities of this form of assessment vary from other forms of evaluation mostly used for accountability or ranking performances and/or certification of competences (Forgor, 2021). Thus, an assessment process becomes formative if the activities adopted provides the required information (feedback) on teachers and students for the promotion and betterment of teaching and learning of foreign languages. This form of assessment helps teachers and students to assess one another and creates the platform (feedback) required for understanding and adjustment of their teaching and learning activities. Thus, to achieve the objectives or goals of teaching and learning of foreign languages there must be adequate feedback on the progress (performance) of learners based on which amendments on the ways lessons are instructed could be made to avoid failures. Harlen and Deakin-Crick (2002) espoused that learning is unpredictable activity, however, formative assessment could directly boost students' interest in the course, stimulate their aspirations and readiness to learn, and this can be achieved using adaptive for learning systems that helps in individualising learning processes. Thus, Schwanke (2020) thinks that the guidance and steps in teaching motivates and encourages learners to amass their energy and interest towards learning processes, which can be attained after successful assessments (the generation and adoption of its outcomes) for the improvement of the performances of students. Despite the fact that the terms formative assessment or assessment for learning was hardly adopted, however, the role and need to use assessment schemes to promote teaching and increase the efficacy of learning processes is widely studied (Malyuga, 2016: Malyuga & Orlova, 2016).

To achieve of assessment for learning processes, it is imperative to adopt and link it up with adaptive learning systems (technologies) such as education big data. The collection of education big data leads to the attainment of up-to-date, realistic, comprehensive, extensive, and genuine results since the method assessment, dispensation, and implementation are wide, rational, and personised (Xianmin, 2015). Thus, the use of adaptive for learning system makes teachers to ascertain students' learning capacity that helps in personizing learning using education data. Hence with big data teachers can focus on the individual learning strengths, forecast learning outcomes, detect shortcomings, and identify other necessary factors for learning. Adaptive learning system is a crucial tool for students to attain and acquire

the knowledge and competences outlined in the course through the use of creative practices and thinking in problem solving (Huzi, 2012). Qiang (2015) argued that education big data provides students the necessary materials and resources as well as services for individual students to adjust and improve their learning and performance.

Hence, Suleimanova (2020) thinks that the essence of this type of learning is to generate an individualised learning ecosystem, which is strategically created based on the personized learning capacities of students.

The need to improve and promote students' foreign language performance using adaptive learning system for assessing teaching and learning inspires this study since the assessment provides the opportunity to evaluate teachers and students to develop comprehensive feedback for the achievement of desired targets, objectives, aspirations, and attributions.

#### 3. Research Questions

The progress made by students in terms of intellectual and practical development, moral development, and the current level of knowledge serves as the gratitude to the efforts of teachers and instructors (Kohlberg, 1964; Perry, 1981). Thus, all necessary steps must be adopted towards the achievement of these learning goals. For instance, Ausubel (1968) argued that factors such as the provision of information on the course content in advance supports teaching and learning and he also revealed in his study that students' results are influenced by their understanding of the assessment timetables and standards. Formative assessment processes help to identify and establish the weaknesses or difficulties encountered by individual students, and this provides the teacher the opportunity to adjust by offering clarifications and/or explanations on individual cases, hence the regular development and use of assessment processes improve the performance of students (Guskey, 2010). Thus, it is hypothesized that regular assessment and implementation of feedback therein promotes teaching and learning and improves performance of students by reaching their learning potentials.

Adaptive for learning system promotes teaching and learning, thus improve the results of students since it supports the collections, analysis, and adoption of the feedbacks from assessment (Huzi, 2012), which could facilitate the creation of individual learning space or medium given the specificities of the student. Hence, it is assumed that adaptive learning system like big data creates personalized learning platform that impacts positively on learning outcomes.

The creation of individualized learning space for students in foreign languages improves the psychological well-being of students, which boosts the interest and readiness in the language, and this enables them to reach their overall learning goal and potential (Harlen & Deakin-Crick, 2002). Thus, this leads to the assumption that the individualisation of learning processes of a foreign language influences teaching and learning, which consequently promotes and improve the overall performance of students.

## 4. Purpose of the Study

This study seeks to define the essence of assessment and to evaluate the role of adaptive learning system in achieving the core objective of assessing students, particularly the attempt to improve the future performance of students and the attainment of expected goals in learning foreign languages

## 5. Research Methods

To achieve the research goals of this study, this paper uses quantitative research to assess and analyse teaching and learning activities of students learning foreign languages at RUDN University based on the hypotheses defined herein. Various assessment methods are designed and implemented by teachers or instructors through different ways such as formal assignment, practical and case study, etc based on the structure and objectives of the course. To achieve the objective of this study, a survey was conducted among 296 respondents, who study at least one foreign language at RUDN University, and gender composition was female (69.8%) and male (30.2%). The descriptive statistics are presented in table 1.

Variables	1		Maximum	Mean	Std. deviation	
Understanding of course content and assessment criteria	296	1.000	3.000	1.281	0.593	
Assessment feedbacks	296	1.000	3.000	1.115	0.407	
Adaptive learning system	296	1.000	3.000	1.323	0.733	
Adaptive learning system	296	1.000	3.000	1.177	0.543	
Individualized learning space	296	1.000	3.000	1.271	0.589	
Effective teaching and learning	296	1.000	3.000	1.208	0.579	
Improved performance	296	1.000	3.000	1.281	0.593	

#### Table 1. Descriptive data

Source: Author's own computation

## 6. Findings

The data collected was analysed using Pearson correlation (table 2) to determine the interrelationship among the variable. It was revealed that all variables except the creation of individualized learning space have positive correlations. Subsequently the analysis of variations as tested using least squares regression method. Given the significance level of 5 percent the results revealed by the explanatory variables are statistically significant and reliable. The p-value and F-statistics of .0003 and 3.405, respectively justifies the significance and the reliability level of the regression results.

Variables	Understanding of course Content and assessment criteria	Assessment feedback	Adaptive learning system	Individualized learning space	Teaching and learning	Better Performance
Understanding of course content and assessment criteria	1	091	017	.105	.322	.226
Assessment feedbacks	091	1	019	045	.177	.121
Adaptive learning system	017	019	1	.066	.064	.063
Individualized learning space	.105	045	.066	1	152	119
Effective teaching and learning	.322	.177	.064	152	1	.172
Improved performance	.226	.121	.063	119	.172	1

#### Table 2. Pearson correlation results

Source: Author's own computation

The results reveal that the assessment feedbacks and the creation of individualized learning space promote improved performance of students in foreign languages. This supports the findings in the studies of Guskey (2010) that emphasised the role of personised learning environment and Harlen and Deakin-Crick (2002) that argued for the need for assessment as well as its role in attaining expected learning objectives. Hence, individualized learning platforms help students to adapt and enjoy learning activities and make them aspire for higher performance. Assessment and the feedback therefrom on the other hand helps to identify the potential of individual learners and generates the required information on the shortcomings, barriers, and weaknesses of students for adjustments.

## 7. Conclusion

Global integration and associated with it international business makes it necessary to learn foreign language for various purposes like activities on the internet, tourism, studies, job, and so on. However, students study foreign languages to boost their resumes to increase their chances of job opportunities in international companies, which mostly required the use of one or more major foreign languages. The promotion of effective teaching and learning of foreign languages is there very crucial to help students attain their aspirations in their studies of foreign languages. This therefore makes formative assessment is very relevant as feedbacks from these processes create the basis for development, adjustment and implementation of workable and practical teaching and learning activities that support and improve students' performances in foreign languages. The research results on the survey data on students of RUDN University justifies and defines the need for regular assessment and the adoption of adaptive learning system to achieve the set goals through the development of individualised learning space or platforms, which helps in the identification, verification, and correction of mistakes as well as the motivation to reach specific potentials or targets. Thus, the adoption of adaptive learning system in the assessment of students facilitates the achievement of desired goals and the attainment of better performances. It is therefore imperative for authorities to develop and implement efficient teaching and

learning processes using adaptive learning system, which supports the formative assessment and generates the necessary feedback for improvements in foreign language performance.

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