

## Autonomous Learners' Metacognitive Awareness Development with the Help of Trello Board

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### **Abstract**

*This article focuses on the necessity and inevitability of organization of ESL students' self-work with the help of free online platform Trello Board. The authors point out that the use of such information and communication technology as Trello Board increases learners' metacognitive awareness of self-regulation and self-assessment in ESL. The authors also indicate the facilitation of active feedback between ESL learners and their instructor as well as peer-review. The authors share their experience of the use of Trello Board in the educational ecosystem of Bolashak Academy in Kazakhstan. According to the authors, Trello Board provides a broad range of features to control students, maintain their level of motivation, and develop their collaboration in various project works or academic writing tasks.*

**Keywords:** *Trello Board, metacognitive awareness, self-regulation, self-assessment, autonomy, feedback.*

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## **1. Introduction**

The modern educational process involves the teacher-student interaction, peer-review, and students' autonomy. The context of contemporary education makes students actively participate in the educational process, get involved in all types of assessment, determine the specifics of learning, based on their needs and interests. University rating system considers higher education ESL students' self-work as an essential part of the entire educational process and, therefore, allocates at least 50% of the total amount of all academic hours to it.

In the development of students' self-work, teachers are looking for new innovative ways by the attraction of information and communication technologies to develop learners' metacognition for maintaining motivation, foster reflective thinking, and self-regulation. However, any teacher should thoroughly pick the suitable technology; otherwise, the wrong choice would cause such inconveniences as a lack of time to adopt a chosen technology to working autonomously as well as constantly changing requirements. Furthermore, not all technologies may become immediately introduced and should be understood not only as a means to surprise or an extraordinary product creation but also as a way of efficient performance control and teacher-student or peer communication.

## **2. Literature Review**

Foreign-language students' self-work involves the research and design of works that should be carried out, working out the material that should be covered, or picking the additional material on the passed topic to elaborate on them. However, without the direct participation of the teacher, supervising the process of independent training of students, self-work is not efficient because even the most diligent students need control, recommendations, right planning, estimation of the quality of the found sources and systematization of all information. Also, the homework should be timely checked and commented to help students be on track. Otherwise, students' motivation will decrease as well as little self-regulation and critical thinking skills will be developed.

Students' self-work involves setting goals and selecting relevant sources through the internet as well as assisting in students' self-reflection and providing feedback on peers' works. It, consequently, leads to analysis and evaluation related to Bloom's Taxonomy proposed by Benjamin Bloom in 1956 of the 20th century as the classifier of six levels for the structuring of educational purposes while designing lessons and scoring systems (Bloom, 1956). Having taken Bloom's findings as a basis, two researchers Apaydin and Hossary (2017) linked "metacognitive instructional techniques" with "students' self-awareness and performance, which has immediate practical implication for student learning and success." So, learners' metacognition cannot be developed without the help of teachers'

instructions, and as Wei (2008) claims, learners' autonomy development depends on teacher's role not only in teaching language but also in cultivating students' metacognitive awareness. Wei (2008) also adds that learner's autonomy is not shaped in the classroom but when working independently with the help of skilled teachers' support and guidance.

Meanwhile, Pombriant (2013) argues that students, who learn subjects without teachers, soon start suffering from the lack of motivation because nobody can inspire or encourage. In other words, nothing can substitute personal presence of a teacher and his or her contribution to the educational process (Pombriant, 2013). Additionally, some analysts ensure that learning exciting things assisted by teachers' presence and timely measures directed to explanation and clarification does not require any gaming elements, whereas boring or difficult subjects will hardly ever be fulfilled even with various badges or other appraisal forms (Stamford, 2012). So, students' metacognition can hardly be developed without the assistance of more experienced and qualified specialist. At the same time, according to Ajideh (2009), autonomous learning and metacognitive awareness can be interconnected and suggested as essentials for teaching and learn foreign languages only if the teaching approach meets learners' assumptions and expectations.

Unfortunately, for the last several years, researchers have indicated the severe crisis in education caused by the rise of interest to different games. According to infographics of Knewton Project, annually, 1,200,000 students drop off colleges and universities because of the lack of interest in the educational process and chosen subject. At the same time, each human spends three billion hours a week for playing computer games. Moreover, five million people allocate forty-five hours a week to engage in online arcades and strategies. At the same time, students suffer from their unwillingness to spend time at the computers for their learning purposes but for playing games or chatting in social nets. Hence, teachers should find an efficient instrument to help overcome the crisis in education connected with the unwillingness of students to be taught due to the extinction of interest and desire but using their passion to the elements of gamification such as colorful marks, deadline set, and visualization of the process of implementation of self-work tasks.

### **3. Hypothesis**

In this regard, favorite among testing engineers and developers web technology Trello Board was chosen as a way to facilitate the assigned for students' self-work fulfillment of tasks and effective control in the educational space of the university. Copyright, as of October 17, 2016, fixed the form of students' self-work organization on Trello Board before used for project management (Kalizhanova, A.N. et al., 2016).

Such Trello Board's features as fragmented information and access to the new content only after the consolidation of the already learned; an optical reflection of students' progress and synthesis of new skills, were expected to strengthen learners' interest and motivation. They should also make learners self-evaluate their abilities for further learning and allocate time to complete assigned tasks (Figuroa, 2015). Hence, Trello Board seemed to be entirely coincided with students' needs and allowed creating various courses in line with the annual curricula (see Figure 1).



*Figure 1. This figure demonstrates one of the classes designed by the teachers*

The elements of gamification were expected to help students cover the most prominent part of target material during their self-study – more than a half of a total amount of all academic hours in the first semester.

For the students from other districts or regions, Trello Board was expected to solve the issue of management and control of homework assignments that had to be fixed efficiently by English teachers and university authorities; otherwise, the allocating for self-study hours would have been wasted, and students would have taken that as a given.

#### **4. Objectives and Methods**

The following research took place in the Private Institution Bolashak Academy and Karaganda State University named after academician E.A. Buketov, which three teachers had been first among local educators, who decided to introduce the Trello Board in the educational ecosystem for full-day and part-day students (Kalizhanova, A.N. et al. 2016). The study aimed for thorough examining of Trello Board effectiveness for ESL students' metacognitive awareness of autonomy development. The total number of ESL learners involved in the study equaled 18 four-year grade graduates, divided into two groups of 9

persons each – the control and the experimental respectively. The control group consisted of ESL learners, who checked their homework assignments at the beginning of each class and get the tasks from the instructor by email. The students of the experimental group were invited to join ESP C1 (Critical Thinking Reading and Writing), where all self-work tasks had already been organized in weeks with set deadlines and colorful marks for each week designation.

## 5. The Flow of the Experiment

Trello Board attracted students of the experimental group to join the particular course, designed by their teachers for self-work realization. Once joined, students could create new cards independently, comment on each other's tasks, prolong deadlines, and receive comments from teachers even staying at home. Invitations for students to join the board were sent by e-mail, after which each student, following the link, had to register on the site [www.trello.com](http://www.trello.com) to become a participant of the course, developed by the teacher. Trello board allowed monitoring all spectrum of students' work, either in class with the teachers or at home independently, without any additional financial contribution from all parts involved in the educational process. The system of creating as many cards with various topics as needed made the process of studying productive and time-friendly because all necessary for covering themes could be arranged on one board with scheduled dates for checkups and final tests.

Trello Board elements of gamification were implemented through creating checklists, colorful marks, and deadlines where the color of the card changed as students approached the scheduled date of submitting the assignment (see Figure 2).

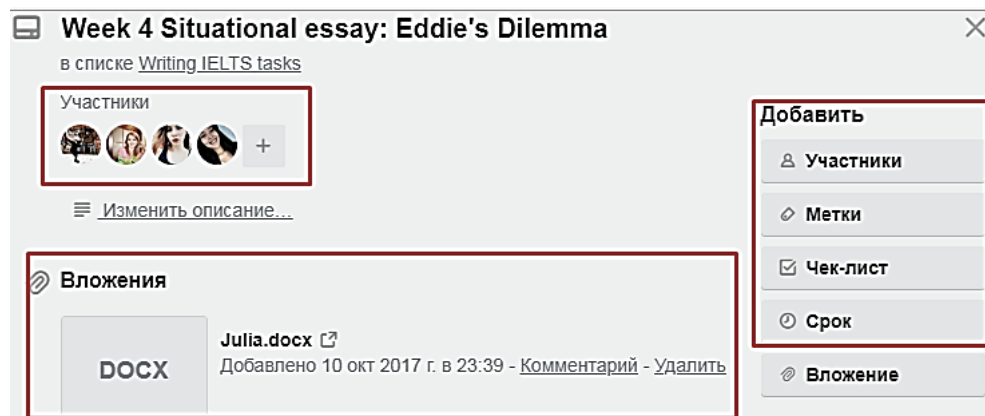
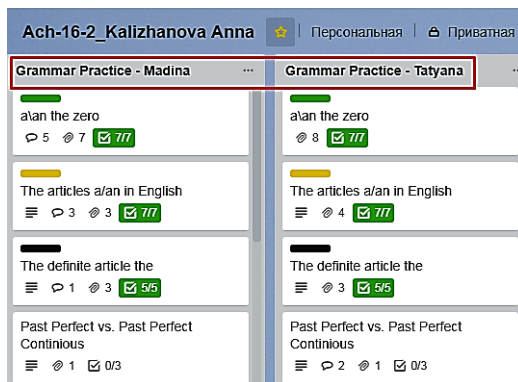


Figure 2. This figure demonstrates the elements of gamification implementation of the educational process on Trello board.

Teachers could follow their students' ongoing and summative progress, provide feedback and comments, and organize peer-review interaction and cooperation where any board participant or a teacher could be easily reached any moment despite the physical location. The mentioned above Trello Board features made the process of learning more intensive, motivating, and engaging that allowed the students to move further in their self-learning. Trello board assisted in building students' autonomy by providing a space for teachers' creativity by assigned for self-study material organization at one place. The teachers decided to focus on speaking and listening ESL activities; therefore, they organized grammar practice as a homeschooling system, creating cards with grammar topics for self-practice (see Figure 3).



*Figure 3. The figure demonstrates the organization of grammar practice for students.*

Trello Board provided not only a metacognitive awareness of learners' autonomy but also such higher order thinking skills or HOTS as analysis, evaluation, and synthesis (Bloom, 1956). The students managed to allocate their time to one or another task accomplishment and further self-work planning by analyzing strengths and weaknesses. Moreover, peer-review and mutual collaboration developed the learners' capability of evaluating peers that, in turn, improved the ability to synthesize (Bloom, 1956). For example, the task to work on a particular listening topic, according to Bloom's Taxonomy, was for lower thinking skills' production (Bloom, 1956). However, teachers asked students to record their voices while shadowing or repeating after the native speaker, submit the tracks to the Trello board, and evaluate each other's recordings for accent, fluency, or accuracy; therefore, the activity turned into HOTS oriented.

## **6. Results and Criticism of Trello Board**

Interestingly, almost all students of the experimental group rejected Trello Board as a comfortable working instrument, claiming that they would better to work as the control

group students. The students of the experimental group complained about the necessity to enter the Trello Board website required the password that had often been forgotten. Interestingly, the generation born with mobile phones in their hands and spent all their time on Instagram and other social nets found challenging to work on the web-platform. At the same time, the students of the control group asked teachers to assign self-work tasks on Trello Board too, indicating an excellent visual effect from the availability of all material at one place. Nevertheless, when, in three months, the groups traded areas, the situation repeated: the students of former experimental group regretted leaving Trello Board, whereas the ones of previous control group started complaining about difficulties with password memorization and necessity to enter the Trello Board website.

Although the teachers considered Trello Board as excellent for facilitating the educational process and making it more entertaining and autonomous, they did not expect that such a distant approach requires even more control from their side because students tended to cheat having been tempted by things provided by Trello. For instance, learners could mark checklists as done without spending time on the task; therefore, the teachers had to return some traditional forms of control such as tests or discussions in the classroom. This fact proved that visual elements could easily tempt both students and teachers to start using them everywhere without any point (Zaino, 2013).

## **7. Discussion**

Nevertheless, the teachers of Bolashak Academy' example with Trello Board and its exciting features proved the possibility to succeed in achieving high educational results if it is used in moderation under adequate control from the side of educational authorities. Thanks to Trello Board, the teachers could remove computers from English classes devoting all class time to discussing and debating various topics while working with the experimental group. At the same time, the use of Trello Board as a connection between the learners and the teachers improved both personal and professional mutual attitude and relationships: the students highly accepted the teachers' credibility due to latter's dedication to the learners' self-work. Moreover, the teachers' hard work and 24/7 communication with the students made the last more responsible for their self-work than before the experiment. So, Trello Board was recognized as a fantastic tool for metacognition development because it made possible to regulate students' self-work more efficiently due to the interconnection of interactive approach and such traditional forms as a teacher's presence and teacher-student collaboration.

The educators' expertise was spread among different departments of their university to provide students with the more qualitative organization of self-practice with or without teachers' presence in the classroom. Moreover, the same teachers organized the flow of the

project Creation of Trilingual Electronic Dictionary of Biological Terms with Linguacultural Components within the framework of grant funding of the Kazakhstani Department of Education on Trello Board and helped all Project participants join for their active mutual collaboration for the next three years.

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