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## CLASSROOM STRUCTURE AND CLIMATE PREFERENCES PREDICTED BY EXTROVERSION AND INTROVERSION

The issue of personality impact on learning preferences is as old as psychology in education. The most inevitable in this influence is certainly a dimension of temperament called extroversion-introversion. Our rigid patterns of learning behavior are determined by our physiological, emotional, and cognitive preferences, which leads to the strong assumption that our choices to learn and succeed are closely linked to the personality trait. If only teachers were aware of assets and liabilities of extrovert and introvert learners, they could provide more adaptable learning environments and help them achieve much better results. This article examines the role of extrovert and introvert personality in learning a foreign language, specifically their choices of classroom structure and climate. The research sample was 90 students of SDU University, Kazakhstan. First, Eysenck' Personality Inventory (EPI) was implemented to measure two personality dimensions: extroversion and introversion. Then, the study compares the preferences of extroverts and introverts to competitive, cooperative, and individualized settings. Finally, we find out the associations of extroversion and introversion with three classroom climates such as innovation and building relationship, task achievement, and being under rigid control. The research reveals certain differences in learners' classroom structure and climate preferences predicted by extroversion and introversion. Understanding the impact of personality traits in the use of classroom structure and climate for language learning is essential for designing inclusive educational environments.

**Keywords:** extroversion, introversion, learning styles, classroom structure, classroom climate, inclusive educational environment.

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### Сынып құрылымы мен климатына деген таңдауларды экстраверсия және интроверсия бойынша болжау

Жеке тұлғаның оқу барысындағы таңдауларына әсері психологияның білім беру саласына енген уақытынан бері зерттеліп келеді. Бұл әсердің ішіндегі ең айқын және маңыздысы – адамның темпераментіне байланысты экстраверсия және интроверсия ерекшеліктері. Біздің оқудағы тұрақты мінез-құлық үлгілеріміз физиологиялық, эмоционалдық және когнитивтік ұстанымдарымызбен тығыз байланысты, бұл өз кезегінде оқу барысын таңдау мен жетістікке жетудегі жеке тұлғаның рөлін айқындай түседі. Мұғалімдер экстраверттер мен интроверттердің артықшылықтары мен әлсіз жақтарын жақсы түсінетін болса, олар оқушыларға неғұрлым бейімделген оқу ортасын ұсынып, олардың нәтижелерін едәуір жақсартуға мүмкіндік алар еді.

Бұл мақалада экстраверттер мен интроверттердің шет тілін меңгерудегі рөлі, атап айтқанда, олардың сынып құрылымы мен атмосферасына қатысты таңдаулары қарастырылады. Зерттеуге Қазақстандағы СДУ университетінің 90 студенті қатысты. Алдымен, Айзенк тұлғалық сауалнамасы (EPI) қолданылып, қатысушылардың экстраверсия және интроверсия деңгейлері өлшенді. Содан кейін, зерттеуде экстраверттер мен интроверттердің бәсекеге қабілетті, кооперативтік және дараланған оқу орталарын қалай таңдауы салыстырылды. Соңында, экстраверсия мен интроверсияның сыныптағы үш түрлі атмосферамен — инновация мен қарым-қатынас құру, нәтижеге жету, сондай-ақ қатаң бақылау — арасындағы өзара байланысы анықталды.

Зерттеу нәтижесінде оқушылардың сыныптағы атмосфера мен оқыту әдістеріне қатысты таңдауларында экстраверсия мен интроверсияға байланысты айтарлықтай айырмашылықтар бары анықталды. Жеке тұлғалық ерекшеліктердің тіл үйрену барысындағы сынып құрылымы мен климатқа әсерін түсіну — инклюзивті білім беру ортасын жобалауда маңызды рөл атқарады.

**Түйін сөздер:** экстраверсия, интроверсия, оқу стильдері, сынып құрылымы, сынып климаты, инклюзивті білім беру ортасы.

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### Структура класса и климатические предпочтения, прогнозируемые по экстраверсии и интроверсии

Проблема влияния личности на предпочтения в обучении исследуется со времен применения психологии в образовании. Важным является изучение темперамента, экстраверсии-интроверсии. Устойчивые модели поведения в обучении определяются физиологическими, эмоциональными и когнитивными предпочтениями, что приводит к весоному предположению, что наш выбор обучения и достижения успеха тесно связан с чертами личности. Если бы учителя знали о преимуществах и недостатках экстравертов и интровертов, они могли бы обеспечить более адаптивную учебную среду и помочь им достичь гораздо лучших результатов.

В статье рассматривается роль экстравертов и интровертов в изучении иностранного языка, в частности, их выбор структуры класса и влияние на климат. Выборку исследования составили 90 студентов Университета СДУ (Казахстан). Сначала был использован опросник личности Айзенка (EPI) для измерения экстраверсии и интроверсии. Затем в исследовании сравниваются предпочтения экстравертов и интровертов в конкурентной, кооперативной и индивидуализированной обстановке. Наконец, выявлена взаимосвязь экстраверсии и интроверсии с тремя типами атмосферы в классе, такими как инновации и построение отношений, достижение результатов и жесткий контроль. Исследование выявило определенные различия в предпочтениях учащихся в отношении атмосферы в классе и используемых методов обучения, обусловленные экстраверсией и интроверсией. Понимание влияния личностных качеств на использование структуры класса и климата для изучения языка имеет важное значение для проектирования инклюзивной образовательной среды.

**Ключевые слова:** экстраверсия, интроверсия, стили обучения, структура класса, климат в классе, инклюзивная образовательная среда.

#### Introduction

A lot of studies agree that if students are aware of their personality type, this knowledge will facilitate the growth of their natural strengths and motivate them to learn in their comfortable zone. Similarly, teachers will benefit from such awareness, since they can consciously choose methods, enhance teacher-student communication by recognizing individual differences of their learners.

Inspired by long observations Swiss psychiatrist Carl Jung (1923) finally introduced extroverts vs introverts as primary personality types. His explanation highlighted the distinction in their attitude to process information, derive energy to feel good and self-realize. Thus, introverts recharge and reflect by spending time alone, while extroverts engage in social interactions and gain energy from external stimuli. His theory was not completely supported due to the lack of empirical evidence.

Later, British psychologist Hans Eysenck (1967) contributed to C. Jung's theory with biological explanation. He believed that extroverts and introverts learn and adapt to the environment by showing different activation of nervous system. According to Eysenck cortical arousal level in extroverts is low,

as the result, they seek pleasure and excitement from social interaction when they learn. Conversely, introverts seek such learning situations where their high cortical arousal level can be reduced, so they avoid much excitation. Thus, if our nervous system requires a balance between excitation and inhibition, extroverts and introverts have to approximate such balance to feel good and safe.

Among various personality types extrovert and introvert learning styles have gained a lot of research interest in educational realm. According to Cain (2013) majority of teachers agree that the ideal student is an out-spoken extrovert. As the result, a quiet and thoughtful introvert does not perceive school as positive. Moreover, teachers tend to grade students on class participation, which is more convenient for extroverts, who are willing to answer questions by raising their hands and volunteer to lead a group discussion. Introverts, however, being well-prepared often read from notes during presentations and get lower grades for this. Cuddy (2012) states that a large portion of the students' assessment at Harvard is influenced by the frequency of students' forceful talks, a well-suited method for an extrovert. Still, a shy introverted award-winning graduate managed to impress the other students in class.

Similarly, there is a misleading tendency among teachers to treat extraversion and introversion in FL class. Some studies maintain that extroverts are better language learners since they are more assertive and adventurous, others have found that success in language learning does not depend on high extroversion level. Extroverts are people oriented and learn through intuition and interaction with others, they are willing to take conversational risk but dependent on outside stimulation. Meanwhile, introverts tend to learn analytically in a planned and organized way, they are concentrated and self-sufficient. However, they need to process ideas before speaking and avoid linguistic risks in a conversation (Ehrman & Oxford, 1989).

Therefore, it is suggested that differential learning tendencies demonstrated by extroverts and introverts will definitely impact their motivation and participation in a range of classroom activities proposed by a teacher. They will also show different sensitivity towards the method these activities are performed, for example, in a cooperative, competitive, or individualized way. In addition, these activities may focus on innovative learning process or concentrate more on the task achievement, which will attract extroverts and introverts to a different extent, as well. Thus, we can confidently attribute extroversion and introversion to learning styles in their function, since they perceive, process and interact information with different preference.

In this respect, the study has a purpose to find out the correlations between extrovert/introvert learning styles and three classroom structures: competition, cooperation, and individualized; and discover and explain the links between extrovert/introvert learning styles and three classroom climates: innovation and building relationship, task achievement, and rigid control.

It is evident, that foreign language teachers should inspire both extroverted and introverted students to make the most of their learning by implementing different methods and activities, which suit their students' preferences.

### Literature review

Specific assets and liabilities obtained by extroverts and introverts will definitely attract different modalities of learning, namely: cooperative, competitive and individualistic learning structures. All three produce different goals. For example, cooperative learning develops positive interdependence between students since learners work together to accomplish shared learning goals (Johnson & John-

son, 2001). However, competitive learning structure emphasizes negative interdependence between students because some students strive to outperform others to achieve a goal. Individualized learning lacks any type of interdependence, so all students work independently to achieve goals. The outcomes of each student have no influence on the outcomes of other students (Hilk, 2013).

Overall, research findings in this area agree that extroverts tend to thrive in cooperative, social learning environments, while introverts often prefer independent, reflective learning (Stewart, 2019). These preferences can influence how they approach tasks, seek help, and manage their learning process.

Ahour (2014) compared competitive and cooperative structures and their effects on reading comprehension of introvert and extrovert EFL learners. The results revealed that extroverts in the cooperative setting outperformed extroverts in the competitive setting, which proves their interpersonal strength – to work better in a group. On the contrary, introverts were more successful than extroverts in the competitive setting. This means that introverts tend to concentrate well on the task achievement and are better readers than extroverts. In addition, competitive learning does not match the personality of extroverts. In this respect, it is anticipated that extroverts demonstrate better performance via in-group competition, while introverted people achieve more via in-group cooperation (Benteaa & Anghelachea, 2012).

Although extroverts' social skills help them communicate well in class discussions (Cheng and Funham, 2003), introverts may feel insecure to do so without preparation (Murberg, 2010), showing their willingness for independent speeches. Despite this limitation, teachers are encouraged to develop risk taking in introverts by creating quiet places and chances to work in small and familiar groups. Hence, cooperative learning may improve introverts' self-esteem and encourage their social commitment (Tuovinen et al., 2020). At the same time, seeking more interactive meaning in vocabulary acquisition, risk-taking extroverts do not show as much accuracy as introverts, meaning that extroverts should be involved in self-reflection activities provided by individualized structure (Rajik, 2022).

Different attitudes towards individualistic modality of learning demonstrated by extroverts and introverts were examined in the study dedicated to autonomous learning (Savitri, 2021). It was discovered that learning English individually generates boredom in extrovert students. Therefore, they devote much less time on autonomous learn-

ing. Instead, cooperative learning motivates their participation and improves their achievements. On the contrary, introverts feel positive about learning independently, devote more time to autonomous learning and can sit still for hours to practice themselves. They find it essential for their success in FL. As the result, they benefit more from receptive skills such as reading and listening (Yulianti, 2019; Shidiq & Oktaviani, 2022).

Another study about developing communication skills in FL class (Afriyanti Yusuf et al., 2024) suggested individualized speaking assessments for introverted learners as a means of enhancing their engagement. They should be allowed to use voice notes and video to speak their minds. On the other hand, extroverted students with their sociable nature were recommended as peer tutors to enhance teamwork.

As far as innovation, task achievement, and rigid control learning environments is concerned, extroverted and introverted foreign language learners often exhibit different preferences.

When it comes to innovation, extroverts are naturally more open to experimenting, welcome innovative methods in language learning, especially those involving social interaction and group activities. Their favourite classroom activities are brainstorming sessions, collaborative projects, and using technology to connect with others. Meanwhile, introverts prefer to explore new ideas and technologies independently, passively and choose fewer topics, perhaps through solitary research or experimentation. They might be more drawn to innovative tools that allow for quiet, focused work, like personalized learning software or language learning apps. Thus, although both extroverts and introverts enjoy trying new things, they approach innovative setting differently (Shehni & Khezrab, 2020).

Similarly, both personality types can be high achievers, but excel in different tasks. For example, extroverts choose presentations, group discussions, and role-playing which involve interaction and stimulate their arousal level. They may be more comfortable taking risks and experimenting with language in front of others. At the same time, introverts excel in tasks that allow for in-depth analysis and reflection, such as writing essays, translating texts, or analyzing language patterns. They may prefer tasks that allow them to work at their own pace and focus on accuracy. Also, they tend to make fewer errors than extroverts in memory tasks (Trotsiouk et al., 2016). Recent studies conclude that introverted FL learners are not only better essay writers than ex-

troverts (Qanwal & Ghani, 2019), but also produce better content, mechanics, vocabulary (Boroujeni et al., 2015), and language construction (Zainuddin & Halili, 2016). Therefore, introverts learn more effectively when their ability to concentrate on the task and their self-sufficiency are at work.

The question of control during the learning process is also treated differently by these personality dimensions. Extroverts feel more comfortable taking control over the learning process, become a leader in group activities, and are more likely to seek help from others when needed. Introverts, however, allow themselves to be under control and enjoy classroom structured learning with a teacher as a guide (Yulianti, 2019); still, manage their own learning process overall. In terms of strategies and preparation, they favour direct learning strategies (Asrawaty et al., 2022), and excel in flipped classes (Khodabandeh, 2021).

Observably, a balanced approach, which will cater to different learning styles, is often beneficial for all learners.

It can be concluded that there has been significant research on the role of extroversion and introversion in skill-based learning of a foreign language. However, less consideration has been taken to how these personality types achieve success, why they are drawn to certain classroom modalities and learning climate; finally, choose different teachers who meet their personality requirements. The present study aims to address this gap by exploring distinct sensitivity of extroverted and introverted FL learners towards cooperative, competitive, and individualized structures; and examining their strengths in innovative, task achievement, and being under control classroom climates. As we can confidently attribute extroversion and introversion to learning styles in their function, the findings of this research will carry out valuable insights into how teaching methods and activities in the classroom can be leveraged to the best advantage of both types of learners. Understanding the impact of personality traits in the use of classroom structure and climate for language learning is essential for designing inclusive educational environments.

## Materials and methods

The study is aimed at investigating the specific assets and liabilities obtained by extrovert and introvert foreign language learners attracted to three different modalities of learning, such as cooperation, competition and individualized; and three classroom

climates, namely: innovation/building relationship, task achievement and being under rigid control. Therefore, the study has the following stages and objectives:

- To measure extroversion and introversion in the recruited participants by using Eysenck Personality Inventory;

- To collect two groups: more extroverted vs more introverted participants and exclude the ambiverted;

- To describe key features, benefits and drawbacks of competitive, cooperative, individualized, innovative/building relationship, task-achievement and rigid control learning environments;

- To conduct a self-designed survey on personal preferences towards 6 described learning environments: competition, cooperation, individualized, innovation/building relationship, task achievement, and rigid control;

- To statistically analyze and compare the differences between extroverted and introverted groups towards 6 described learning environments;

- To employ Pearson correlation to measure the strength of linear relationship between extroverted learning style and their most favourite learning environments; and introverted personality and their top preferences in learning environments;

- To find out whether the research hypotheses are proved /disproved;

- To summarize a teaching approach predicted by the findings of the study

In order to complete the research tasks effectively the following research questions and hypotheses were proposed:

1. Are there any relationships between extroversion/introversion and preferences to cooperative, competitive, individualized learning settings? It is hypothesized that extroverted students will be more motivated to learn a foreign language in a cooperative classroom structure, whereas introverted students will be more attracted to individualized classroom setting. Extroverts will show less interest in competition than introverts.

2. Are there links between extroversion/introversion and preferences to innovation/building relationship, task achievement, rigid control classroom climates? It is hypothesized that extroverted foreign language (FL) learners will find innovation/building relationship climate the most enjoyable, whereas introverted students will be most comfortable with task achievement. Being under rigid control will be

the least popular learning environment for both extroverted and introverted FL learners.

3. Is there any correlation between most favourite structure and climate in extroverted and introverted learners?

Participants: The study was conducted at SDU University, Kazakhstan. A convenience sampling of 90 pre-service undergraduate English language teachers was selected from Education and Humanities faculty, Two Foreign Languages Department. The participants' age varied between 19-23 years old. They were all involved in Educational Psychology Course during the academic year.

The research study is descriptive and exploratory as it reveals certain differences in FL learners' classroom structure and climate preferences predicted by extroversion and introversion. A quantitative study was conducted with EPI (Eysenck Personality Inventory), a self-designed survey 'Students' Preferences to Classroom Structure and Climate' and Pearson correlation.

The first research instrument, Eysenck Personality Inventory, is structured on a Likert scale and presents 57 questions related to the way you feel and act. Extraversion-Introversion and Neuroticism-Stability are two important personality traits that can be measured with this valuable tool. There are three scores under the test consideration. The 'lie score' (0-9) detects how honest you were in your responses. The 'E score' measures the level of your Extroversion, with more than 50% – Extrovert, with less than 50% – Introvert. The 'N score' determines your emotional stability/neuroticism. The results can be used with an educational purpose explaining how personality traits can impact learning behaviour and relationships with peers and teachers.

The next tool used by the study is called 'Students' Preferences to Classroom Structure and Climate'. After the pre-service teachers had passed the topic "Classroom management. Classroom structure and processes" in the Educational Psychology course and obtained the result in EPI (Eysenck Personality Inventory), they completed the following chart(see Table 1):

As the result, two charts were submitted by the participants: one is for extroverts' choices and the other is for introverts' preferences. These results were finally analyzed statistically and graphs were constructed to visualize the differences between extroverted and introverted groups towards the researched learning environments.

**Table 1***Students' Distribution of Preferences to Classroom Structure and Climate according to Temperament*

Classroom structure and climate variables	Student's distribution of preference (100%) (a participant's sample)	Personality according to EPI : E/I
1. I would prefer Cooperative /CPR Vs Competitive/CMP structure	CPR 70 CMP 30	E
2. I would prefer Cooperative /CPR Vs Individualized/IND structure	CPR 55 IND 45	E
3. I would prefer Individualized/IND Vs Competitive/CMP structure	IND 65 CMP 45	E
4. I would prefer Innovation/relationship/ INR Vs Task achievement/TA climate	INR 65 TA 35	E
5. I would prefer Innovation /relationship /INR Vs Under control/UC climate	INR 75 UC 25	E
6. I would prefer Task achievement/TA Vs Under control/UC climate	TA 70 UC 30	E

*Source / Note: This table was compiled by the authors based on the analysis of materials.*

In order to quantify and verify both strength and direction of linear relationship between extroverted/introverted results and their top preferences towards 6 different learning environments Pearson correlation was used. It ranges from -1 to +1, indicating either negative linear correlation, or positive linear correlation. The strength of correlation is considered weak with values of  $r$  ranging between 0.2-0.39, 0.40-0.59 as moderate, and strong and very strong associations are demonstrated by such values as 0.6-0.79 and 0.8-1, accordingly.

### Results and discussion

Research task: To measure extroversion and introversion in the recruited participants ( $n=90$ ) by using Eysenck Personality Inventory (table 2); to identify two separate groups for the research: more

extroverted vs more introverted participants and exclude the ambiverted.

From the results obtained in Eysenck Personality Inventory two study groups with the same quantity of participants were accurately selected, which allowed 72 out of 90 students to continue their participation in the study (table 2).

According to H. Eysenck these natural strengths and weaknesses described in Table 3 are based on biological factors, and a certain type of nervous system inherited by extraverted and introverted learners will definitely affect their ability to learn a foreign language and adapt to different learning environments, which this paper chose for analysis.

Research task: To illustrate the key features, benefits and drawbacks of competitive, cooperative, individualized, innovative/building relationship, task-achievement and rigid control learning environments (tables 4 and 5).

**Table 2***Number of Extroverts and Introverts*

Extroverts (<60% E score)	Introverts (>40% E score)	Ambiverts ( around 50% E score) + the 'lie score' is above 5
36	36	18

*Source / Note: This table was compiled by the authors based on the analysis of materials.*

**Table 3***Assets and Liabilities of Extroverted and Introverted FL Learners*

Extroverts	Introverts
Natural Strength: Willing to take conversational risk. Allowable Weakness: Dependent on outside stimulation and interaction.	Natural Strength: Concentration, self-sufficiency. Allowable Weakness: Need to process ideas before speaking leading to avoidance of linguistic risks in conversation.

*Source/Note: Assets and Liabilities of Myers-Briggs Types (Ehrman , 1989)***Table 4***Benefits and drawbacks of competitive, cooperative, individualized FL classrooms*

Classroom setting	Benefits	Drawbacks
Competition	1.helps those who do well; 2.promotes speed; 3.increases motivation for competitive persons; 4.fosters personal intellectual growth; 5.good for passing exams and high achievements	1.promotes egoistic and social comparison orientation in learners; 2.negatively impacts learners with low self-esteem; 3.leads to a sense of inferiority in young learners if it is connected with failure; 4. some students do not know how to compete
Cooperation	1.facilitates with mixture of ability level and large groups; 2.develops positive interdependence and individual accountability; 3.promotes face-to-face positive interaction; 4.good motivation for extraverts; 5.fosters team spirit and social skills; 6.improves self-esteem of some individuals with poor self-esteem.	1.produces general achievements; 2.won't produce autonomous, self-directed learners; 3. focuses more on the process not the result, especially exams; 4. some students learn individually better
Individualized	1. everyone can gain a reward of some kind; 2.success is attributed to effort 3.develops personal strategies; 4.concentration on learning process; 5.motivates those with mature learners who can compare one's present level of performance with previous achievements	1.lacks social development; 2.there can be struggling learners who need support; 3. some students learn via interaction better

*Source / Note: This table was compiled by the authors based on the analysis of materials.*

It is evident that all three classroom structures can be used successfully by FL teachers if they clearly see when, why 'yes' and why 'no' situations for each of these environments in order to meet the learners' needs.

As regards competition, it can really attract high language achievers. However, generally, students have different levels of academic achievement. Thus, the success of those who do well can undermine sincere efforts of low achievers. Moreover, if teachers continuously reinforce students for correct answers only, such strategy can cause high language anxiety, associated with fear of making mistakes. However, when you learn a foreign language, you should take risk to communicate in the language.

Cooperative setting has a lot of advantages for FL learners, especially for students with interpersonal intelligence, who are 'people smart'. There are five essential principles which teachers can follow in order to organize group work successfully: positive interdependence, individual accountability, face-to-face positive interaction, the development of social skills, and regular group processing (Johnson, R.T & Johnson, D.W., 2001). On the one hand, a group can help a student with poor self-esteem, on the other hand, students who perform well individually may not benefit much in getting accurate results working collectively.

Individualized learning works well with students who are good at intrapersonal intelligence or

‘myself smart’. Such students are focused on self-improvement and develop their personal strategies to achieve success in learning. In addition, they do not want to compete with others, because they tend

to compare their current achievements with previous results. This helps them make a real personal progress. Every student can get a certain reward at each lesson independently (table 5).

**Table 5**  
*Benefits and drawbacks of innovative/building relationship, task achievement, under rigid control FL classrooms*

Classroom climate	Benefits	Drawbacks
Innovative/building relationship	1.promotes interest and learner satisfaction in the subject; 2.creates conditions for personal and social growth;	does not facilitate traditional achievement score
Task achievement	fosters high achievement	does not foster creativity and morale
Under rigid control	Sometimes works well with reluctant demotivated students	1.produces dissatisfaction 2.debilates social and academic growth

Source / Note: This table was compiled by the authors based on the analysis of materials.

It is obvious that innovative and building relationship climate is associated with humanistic and social interactionist approaches in teaching. The importance of language is in interacting with people (Vygotsky, 1978). And according to A.Maslow and C.Rogers, major humanistic theory psychologists, building relationship provides a sense of belonging and encouraging students to think and create will develop their cognitive and aesthetic needs. Both innovation and interaction involve feelings and emotions, develop the whole person and allow for choice and self-initiative (Wang,2024).

Task achievement climate suggests the use of behavioristic approach in teaching. Students who are more conforming than creative, those who have a very good ability to memorize, follow the

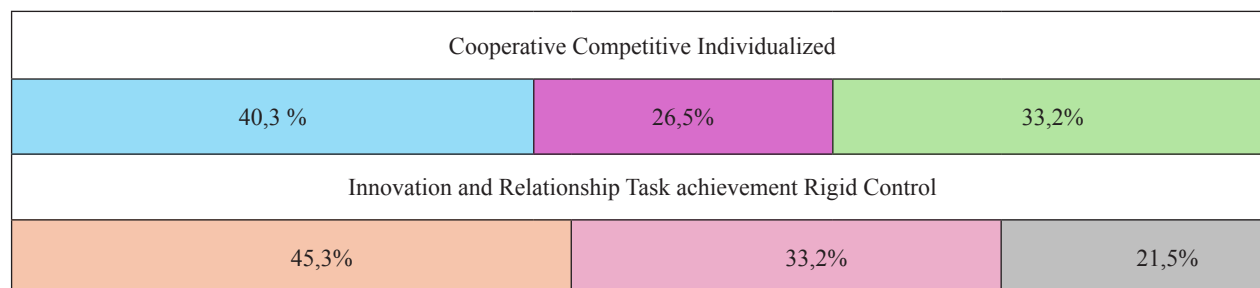
rules, and more extrinsically motivated prefer task achievement classroom. Such climate welcomes accuracy rather than fluency, and focuses on results rather than process.

Finally, rigid control climate represents an extreme form of behaviorism, where rules, accuracy, deadlines are compulsory. Critical thinking and learners’ emotions are not considered, and rewards and punishments are applied pedantically.

Having described these 6 learning environments, which are widely used in a FL classroom, the next research task can be employed and hypotheses verified.

Research task: To statistically analyze and compare the differences between extroverted and introverted groups towards 6 described learning environments (figure 1).

**Figure 1**  
*Extroverts priorities in classroom management (MEAN)*



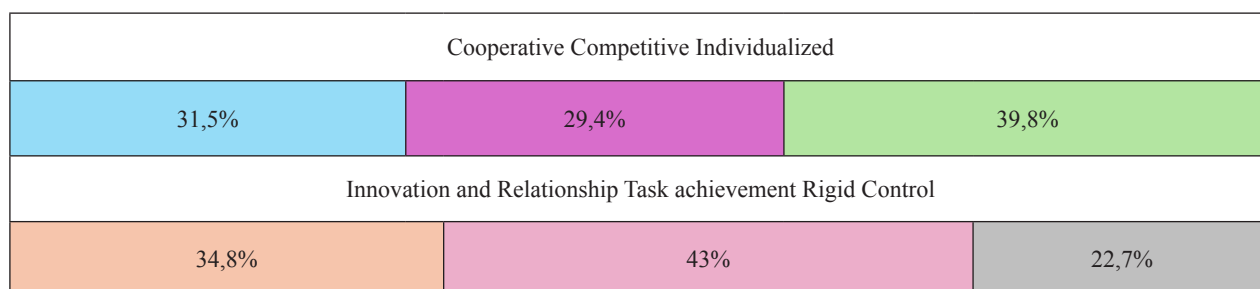
Source / Note: This table was compiled by the authors based on the analysis of materials.

According to the results in Figure 1 the dominant preferences in classroom environments for extroverted FL learners are found in cooperation (40,3%) and innovation/building relationship (45,3%). Individualized and task achievement classrooms are equally respected with 33,2%. Competition (26,5%) and rigid control (21,5%) are regarded by extroverts as the least helpful and enjoyable.

Introverted FL students demonstrate different preferences (Figure 2). Compared to extroverts, the

strongest interest is shared towards individualized, with almost 40%, and task achievement classrooms (43%). Also, introverts' moderate enthusiasm is expressed in cooperation and innovation/building relationship, with nearly 32% and 35% accordingly. It can be observed only 2% difference rates between cooperation and competition, which means competition can also moderately arouse introverts. The rigid control atmosphere is the most disliked by introverts (22,7%).

**Figure 2**  
Introverts priorities in classroom management (MEAN)



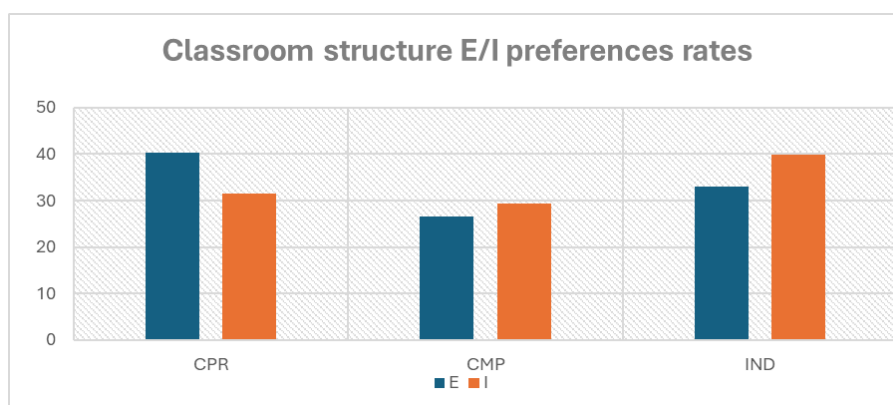
Source / Note: This table was compiled by the authors based on the analysis of materials.

Research question: Are there any relationships between extroversion/introversion and preferences to cooperative, competitive, individualized learning settings?

Research hypotheses: Extroverted students will be more motivated to learn a FL in a cooperative classroom structure, whereas introverted students will be more attracted to individualized classroom setting. Extroverts will show less interest in competition than introverts (figure 3).

Comparing the preferences between extroverts and introverts in classroom structure (Figure 3), the highest difference is observed in the attitude to cooperative learning (10%), followed by individualized structure (7%); the smallest distinction is found in competition (3%). Cooperation is a top preference for extroverts, while individualized learning suits best for introverts. Both share dislike to competition, though introverts tolerate this setting better.

**Figure 3**  
Extrovert/introvert FL learners' preferences to cooperative(CPR), competitive(CMP), and individualized(IND)classrooms



Source / Note: This table was compiled by the authors based on the analysis of materials.

Thus, extroverted students are found to be more motivated to learn a FL in a cooperative classroom, whereas introverted students appeal more to individualized classroom setting. Extroverts reveal less interest in competition than introverts. Our hypotheses are proved.

Research question: Are there links between extroversion/introversion and preferences to innovation/ building relationship, task achievement, rigid control classroom climates?

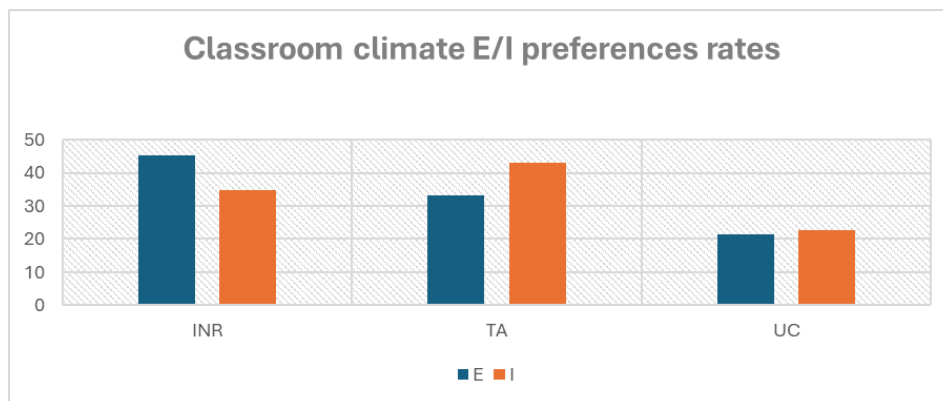
Research hypotheses: extroverted FL learners will favour innovation/building relationship climate the most, whereas introverted students will enjoy task achievement climate best. Rigid control climate will be addressed by both extroverted and introverted FL learners as the least popular.

Similarly, extroverts and introverts exhibit distinct inclinations to classroom climates (Figure 4). Innovation/building relationship and task achievement climates share 10% difference rates. Rigid control has only 2 % difference, both groups experience equally low interest. Innovation/building relationship appears top preference for extroverts, while task achievement is a priority climate for introverts. Both groups are demotivated by rigid control climate.

Thus, extroverted FL learners are mostly attracted by innovation/building relationship climate, whereas introverted students really welcome task achievement climate. Both groups avoid being under rigid control. Our hypotheses about the climate preferences are also supported (figure 4).

**Figure 4**

*Extrovert/introvert FL learners' preferences to innovative/building relationship (INR), task achievement(TA), and under rigid control (UC) classrooms*



*Source / Note: This table was compiled by the authors based on the analysis of materials.*

One of the research questions was related to the correlation between most favourite structure and climate in extroverted and introverted learners. The study revealed cooperation and innovation/building relationship as dominant priorities for extroverts, and individualized setting and task achievement climate as top preferences for introverts. Table 6 introduces outcomes of the Pearson correlation analysis performed on the extroverted (n=36) and introverted group (n = 36).

Data analysis presents weak negative but statistically significant correlation between cooperative learning structure and innovation/building relationship climate in extraversion participants. This means that the higher is the willingness of

extroverts to cooperate in the classroom, the less desire develops to innovate. This works backwards as well. This can be explained by the benefits and drawbacks of cooperative setting and innovation/building relationship climate. Though both environments attract extroverts, cooperative learning may not always deal with creativity and innovation. That was the reason for extroverts to give the highest preference among all 6 environments to innovation/building relationship climate. They want to interact and build relationship via innovative methods, with the help of intuition and emotional experience. In this case their arousal level is certainly energized, they get a lot of pleasure, and learning becomes productive.

**Table 6**

Correlation analysis results for top preferences in extroverts and introverts (Pearson's  $r$ )

I	E
0,856 ***	-0, 252 *
Individualized classroom structure	Cooperative classroom structure
Task achievement climate	Innovative/building relationship climate

Source / Note: This table was compiled by the authors based on the analysis of materials.

Note: \* $p < 0.05$ ; \*\* $p < 0.01$

Data analysis for introverts shows a different correlation. It is a very strong positive correlation between individualized structure and task achievement climate. This means that if the desire of introverts to work individually is strong, the preference for task achievement grows. It works strongly positive the other way too. It is evident that effort, personal strategies, concentration on learning process, no distraction are the introverts' strengths which allow them finally gain high rewards in task achievement climate. If extroverts are people and process oriented, introverts are task and result ori-

ented. That is why they welcome competition and rigid control more than extroverts because these environments provide good conditions for success in grades too.

### Implication in teaching

Research task: To summarize a teaching approach predicted by the findings of the study

In terms of teaching a foreign language the findings of this research can open a wide perspective to experiment with a variety of activities preferred by extroverts and introverts. In educational context, cooperation, competition, and individualized classrooms can be effectively used as parts of instructional activities and help students increase motivation and performance. In order to maximize interest and productivity in learning a foreign language and reach both personalities teachers, for example, can combine cooperative learning with task achievement climate; or individualized instruction with innovative approach; or competition with building relationship. Different skill-based tasks from the textbook can be adapted to foster cooperation, competition, or individual learning. Some popular FL activities predicted by extroverts and introverts are included in Table 7.

**Table 7**

FL classroom activities predicted by extroverts and introverts

Classroom	Pro Extroverts activities	Pro introverts activities
Cooperative + Innovative + task achievement	<p>Group projects: Students work together on an assigned project to research, plan, and present a topic by creating a poster, giving a presentation, producing a short video;</p> <p>Team-Based Quizzes: Students work in teams to answer quiz questions collaboratively, either in writing or orally;</p> <p>Web Quests: Students work in groups to research a topic online using pre-selected websites.</p>	<p>Role-play scenario in pairs;</p> <p>Review each other's work;</p> <p>Think-Pair-Share: Students create a question and discuss it with a partner, write the arguments and predict solutions;</p> <p>Information Gap Activities: Students work in pairs, describe a picture, solve a puzzle, or complete a dialogue with each partner having different information needed to complete a task.</p>

Classroom	Pro Extroverts activities	Pro introverts activities
Competitive + innovative + task achievement	<p>Speed Quizzes: Students answer questions in teams, with points awarded for correct answers;</p> <p>Game Shows: Turn lessons into a game show format with teams competing to answer questions;</p> <p>Charades or Pictionary: Students act out or draw vocabulary words or phrases for their team to guess;</p> <p>Brainstorming Battles: Teams compete to generate the most ideas related to a specific topic or question;</p> <p>Debates: Students can debate a topic in teams, to practice persuasive language skills.</p>	<p>Speed Quizzes: Students answer questions individually, multiple-choice or short-answer questions with points awarded for correct answers;</p> <p>Timed Tasks: Students race against the clock to complete a task, such as translating a passage or writing a short story;</p> <p>Vocabulary Races: Students compete to see who can correctly define or use the most vocabulary words;</p> <p>Contests: Organize competitions for the best essay, presentation, or creative writing piece.</p>
Individual + innovative + task achievement	<p>One-Minute Papers: Students write a brief summary of what they learned or a question they still have after a lesson and exchange with peers;</p> <p>Vocabulary Building: Students create flashcards, use vocabulary apps and present a lesson;</p> <p>Creative Writing: Students write stories, poems, or journal entries based on prompts or their own ideas and read them to the class;</p> <p>Online Resources: Students utilize free online resources like YouTube channels, language learning websites, or educational podcasts to learn at their own pace and focus on their specific learning needs and then present the findings to peers.</p>	<p>Self-Paced Learning Modules: Students work through online or offline materials at their own speed, focusing on areas where they need more practice;</p> <p>Personalized Projects: Students choose a project that aligns with their interests and learning goals, such as creating a blog, designing a website, or writing a short story;</p> <p>Entry Tickets/Exit Tickets: Students complete short tasks at the beginning or end of a lesson to assess their understanding and tailor future instruction;</p> <p>Independent Reading: Students choose books or articles at their reading level and engage in silent reading, followed by discussions or written reflections.</p>

Source / Note: This table was compiled by the authors based on the analysis of materials.

By carefully choosing activities and adapting them to different learning styles and needs, teachers can foster both individual growth and collaborative learning in the FL classroom.

### Conclusion

The purpose of the current study was to explore the links between extrovert/introvert learning styles and three classroom structures: competition, cooperation, and individualized; and find out the relationship between extrovert/introvert learning styles and three classroom climates: innovation and building relationship, task achievement, and rigid control. It was revealed that extroverted and introverted foreign language learners differ in their preferences to classroom environments. Compared to introverts,

extroverts are highly motivated to learn a foreign language in a cooperative setting with innovative/building relationship climate. They want to learn through interaction via innovative methods, with the help of intuition and emotional experience. In this case their energy level is aroused enough, they gain a lot of pleasure, and learning improves. Conversely, introverted FL students' strongest interest is demonstrated towards individualized and task achievement classrooms, which proved a very strong positive correlation. The higher preference for individualism, the stronger desire for task achievement. It works strongly positive the other way too. Obviously, introverts' concentration and self-sufficiency reward them in task achievement climate. If extroverts are people and process oriented, introverts are task and result oriented.

Interestingly, what makes introverts really passionate, extroverts consider just fine. In opposite, extroverts' most thrilled classrooms become introverts' optional environments. What unites extroverted and introverted foreign language learners is their attitude to competition and rigid control classrooms. Both are not attracted to such learning modalities much. However, extroverts show less interest in competition than introverts. Notably, being under rigid control is the least popular learning environment for both extroverted and introverted FL learners.

The findings support H. Eysenck's biological theory about a certain type of nervous system inherited by extraverted and introverted learners, which will definitely affect their ability to learn a foreign language and adapt to different learning environments. Being different in stimulation and inhibition levels of their nervous system, extroverts and introverts have to develop their comfortable response to varied learning tasks and methods. As the result, they perceive, process and interact with information differently, which allows them to implement their natural strengths to learn a foreign language. In order to maximize interest and productivity in learning a foreign language and reach both introverts and extroverts, it is recommended to combine cooperative learning with task achievement climate; or individualized instruction with innovative approach; or competition with building relationship.

As regards methodological limitations of the research, the future studies should increase the sample

size of both extroverted and introverted foreign language learners, who can be selected from various walks of life, including age and gender differences. This strategy can improve the generalizability of the findings.

In addition, a longitudinal study can be recommended in order to provide comprehensive evidence on the consistency of the investigated relationships between extrovert/introvert learning styles and classroom structure and climate preferences.

Finally, further examination may implement a rigorous qualitative research method to collect the data and obtain a more detailed comparative analysis, which can be used in pedagogical practices. Such exploration will certainly contribute to the effective and more inclusive language instruction for both extroverts and introverts.

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The authors declare no conflicts of interest.

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*Zhamilya Makhambetova: Data Curation, Formal Analysis, Visualization, Writing – Review & Editing.*

### References

- Afriyanti Yusuf, Muziatun, Sartini T. Miolo (2024). English teacher strategies in teaching extrovert and introvert students in junior and senior high schools in Gorontalo to develop communication skills. *International Journal of Research and Review*, 11(1), 636-647. DOI: <https://doi.org/10.52403/ijrr.20240172>
- Ahour, T. (2014) The comparative effect of using competitive and cooperative learning on the reading comprehension of introvert and extrovert EFL learners. *Advances in Language and Literary Studies*, 5(4), 206-215. DOI: 10.7575/aiac.alls.v.5n.4p.206
- Alagić, M. (2022). Extroversion and Introversion in Second Language Acquisition. *MAP Education and Humanities*, 2(2), 22-29. <https://doi.org/10.53880/2744-2373.2022.2.2.22>
- Asrawaty, A., Massud, B., & Imansari, N. (2022). The interplay of personality factors and language learning strategies in developing speaking skill. *Journal Basis*, 9(1). <https://doi.org/10.33884/basisupb.v9i1.5474>  
Available at <https://dash.harvard.edu/entities/publication/73120378-a7e3-6bd4-e053-0100007fdf3b>
- Benteaa, C., & Anghelachea, V. (2012). Comparative aspects concerning the effects of extraversion on performance in a cognitive task in competitive and cooperative conditions. *Procedia – Social and Behavioral Sciences*, 33, 558 – 562. <https://doi.org/10.1016/j.sbspro.2012.01.183>
- Boroujeni, A., Roohani, A., & Hasanimanesh, A. (2015). The impact of extroversion and introversion personality types on EFL learners' writing ability. *Theory and Practice in Language Studies*, 5(1), 212 DOI: 10.17507/tpls.0501.29

- Cain, S. (2013). *Quiet: The Power of Introverts in a World That Can't Stop Talking*. New York, NY: Broadway Books. Available at <https://www.goodreads.com/book/show/8520610-quiet>
- Cheng, H., & Furnham, A. (2003). Personality, self-esteem, and demographic predictions of happiness and depression. *Personality and Individual Differences*, 34(6), 921-942. DOI:10.1016/S0191-8869(02)00078-8
- Cohen, M., Young, J., Baek, J., Kessler, C., Ranganath, C. (2005). Individual differences in extraversion and dopamine genetics predict neural reward responses. *Brain Research. Cognitive Brain Research*, 25(3), 851-61. DOI: 10.1016/j.cogbrainres.2005.09.018
- Cuddy, A., Wilmuth, C., Carney, D. (2012). *The Benefit of Power Posing Before a High-Stakes Social Evaluation*. Harvard Business School Working Paper, No. 13-027.
- Ehrman, M. E., & Oxford, R. L. (1989). Effects of Sex Differences, Career Choice, and Psychological Type on Adult Language Learning Strategies. *Modern Language Journal*, 73, 1-13. <https://doi.org/10.1111/j.1540-4781.1989.tb05302.x>
- Eysenck, H. J., & Eysenck, S. B. G. (1963). *Eysenck Personality Inventory (EPQ, EPI)*. APA Psychology Tests. <https://doi.org/10.1037/t02711-000>
- Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire*. London: Hodder and Stoughton [https://en.wikipedia.org/wiki/Eysenck\\_Personality\\_Questionnaire](https://en.wikipedia.org/wiki/Eysenck_Personality_Questionnaire)
- Eysenck, H.J. (1967). *The biological basis of personality*. Thomas, Springfield, IL (1967) Google Scholar
- Fishman, I., Ng, R., Bellugi, U. (2011) Do extraverts process social stimuli differently from introverts? *Cognitive Neuroscience*, 2(2), 67-73. DOI:10.1080/17588928.2010.527434
- Hilk, C. (2013) Effects of cooperative, competitive, and individualistic learning structures on college student achievement and peer relationships: a series of meta-analyses. A dissertation submitted to the faculty of the graduate school of the University of Minnesota. <https://conservancy.umn.edu/server/api/core/bitstreams/d484edf9-acfb-418e-ae59-010722bfce7a/content>
- Johnson, R., & Johnson, D. (2001) *An Overview of Cooperative Learning*. Published Electronically, <http://www.clrc.com/>.
- Jung, C. G. (1923). *Psychological types: Or the psychology of individuation*. Harcourt, Brace. Available at [https://archive.org/details/psychological\\_types](https://archive.org/details/psychological_types)
- Khodabandeh, F. (2021). Investigating the effectiveness of augmented reality-enhanced instruction on EFL learners' speaking in online flipped and face-to-face classes. *Language Teaching Research* 1–20. <https://doi.org/10.1177/13621688221110991>
- Murberg, T. (2010). The role of personal attributes and social support factors on passive behaviour in classroom among secondary school students: a prospective study. *Social Psychology Education*, 13, 511–522. <https://doi.org/10.1007/s11218-010-9123-1>
- Octaviani, S., Jumariati, J., Elyani, E., Nasrullah, N. (2023). Learners' personalities and language learning: a literature review. *Ideas: Language Teaching and Learning, Linguistics and Literature* ,11(1), 218 – 231. <https://doi.org/10.24256/ideas.v11i1.3672>
- Qanwal, S. & Ghani, M. (2019). Relationship between introversion/extroversion personality trait and proficiency in ESL writing skills. *International Journal of English Linguistics*, 9(4), 107-117. DOI:10.5539/ijel.v9n4p107
- Rajik, J. (2022). Second language lexical acquisition: the case of extrovert and introvert children. *Psychology and Education: A Multidisciplinary Journal*, 4(4), 414-423. <https://doi.org/10.5281/ZENODO.7087757>
- Savitri, W. (2021). Autonomous learning practices of extrovert and introvert EFL learners. *Journal of English Educators Society*, 6(2), 293-299. DOI:10.21070/jees.v6i2.1501
- Shehni, M. C., & Khezrab, T. (2020). Review of literature on learners' personality in language learning: focusing on extrovert and introvert learners. *Theory and Practice in Language Studies*, 10(11), 1478–1483. <https://doi.org/10.17507/tpls.1011.20>
- Shiddiq, S., & Oktaviani, L. (2022). Extrovert vs introvert: investigating students' characteristics in relation to students' English proficiency. *Proceedings of the International Conference on Literacy and Education*, 2(1). DOI: <https://doi.org/10.33365/jeltl.v3i1.1709>
- Siska, W. (2025). Language learning strategies used by the extrovert and introvert students at the third years' students of STIT-NU Sakinah. *Riwayat: Educational Journal of History and Humanities*, 8(1), 243-250. DOI: <https://doi.org/10.24815/jr.v8i1.43697>
- Stewart, J. (2019). Supporting introverted students. *BU Journal of Graduate Studies in Education*, 11(1), 47–50. Google Scholar
- Sugiura, M., Kawashima, R., Nakagawa, M., Okada, K., Sato, T., Goto, R., Sato, K., Ono, S., Schormann, T., Zilles, K., Fukuda, H. Correlation between human personality and neural activity in cerebral cortex. *Neuroimage*, 11(5) 541-546. DOI: 10.1006/nimg.2000.0564
- Trotsiouk, N., Klein, J., Kilman, K., Davidson, M., Dodd, D., Aleksandruk, E., Cate, K. (2016). Are Introverts Smarter Than Extroverts? Department of Psychological Science. University of North Georgia. <https://core.ac.uk/download/pdf/236065274.pdf>
- Tuovinen, S., Tang, X., Salmela-Aro, K. (2020). Introversion and social engagement: scale validation, their interaction, and positive association with self-esteem. *Frontiers in Psychology, Educational Psychology*, 11. | <https://doi.org/10.3389/fpsyg.2020.590748>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Massachusetts: Harvard University Press. <https://csieme.us/documents/Example-Annotated-Bib.pdf>
- Wang, L. (2024). A review on humanistic psychology and its application to education. *Lecture Notes in Education Psychology and Public Media*, 36(1), 91-96 DOI: 10.54254/2753-7048/36/20240429
- Yulianti, N. (2019). Introversion Personality and Students' Reading Comprehension. *Indonesian Journal of Integrated English Language Teaching*, 4 (2). <https://doi.org/10.24014/IJIELT.V4I2.6668>
- Zainuddin, Z., & Halili, S. H. (2016). Flipped Classroom Research and Trends from Different Fields of Study. *The International Review of Research in Open and Distributed Learning*, 17(3). <https://doi.org/10.19173/irrodl.v17i3.2274>

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