

INTROVERTED AND EXTROVERTED STUDENTS' PERCEPTIONS OF EMERGENCY REMOTE LEARNING

Christine Pemberton

Kanda University of International Studies

ABSTRACT

The communicative language learning classroom caters to extroverted students who thrive on social interaction. Introverts generally learn better through independent analysis and reflection and can struggle to keep up in social learning environments. However, the sudden advent of emergency remote teaching due to the 2020 pandemic changed the way language classes were delivered. Classes that were meant for a face-to-face context were adapted into synchronous and asynchronous online lesson formats, lessening the amount of social interaction required of students. This study examines how introverted and extroverted students experienced emergency remote learning (ERL). A pilot survey was used to determine students' personality type and their perceptions of the ERL experience. Results showed that introverts were more comfortable with asynchronous online lessons than synchronous ones, opposite to extroverts. This tentatively indicates the potential benefit of integrating some online components into language learning courses in the future. However, more investigation on a larger scale is needed.

INTRODUCTION

The typical language classroom today is based on a communicative approach and requires a great deal of social interaction. Research has shown that this style of learning is suitable for extroverted students, but introverts can struggle to adapt to and even be adversely affected by the demands of an active learning environment (Green, 2018). The 2020 pandemic created an unexpected need to switch to emergency remote teaching (ERT), obliging language teachers at many universities in Japan to experiment with using synchronous and asynchronous online classes. While the sudden switch was not an ideal situation, it did create more opportunities for the autonomous learning activities that introverts desire. It also created an opportunity for teachers to think differently about how language lessons could be carried out in the future. The aim of this paper is to explore ways in which to do this.

LITERATURE REVIEW

Introverts and extroverts in the language classroom

The terms "introvert" and "extrovert" were originally coined by Carl Jung (Jung, 1924/2016). The two personality types are distinguished by how they restore energy. Extroverts gain energy through social interaction, while introverts find socializing with large groups to be an energy drain. This is due to genetic rather than environmental reasons, specifically the fact that

introverts have a higher baseline of cortical arousal and are more sensitive to dopamine than extroverts (Eysenck, 1967). As such, extroverts are “underaroused” and seek stimulation by turning to the outside world, while introverts are “overaroused” and turn inward to restore energy (Briggs Myers, 1998).

This difference in the way energy in introverts and extroverts is restored creates distinct ways of engaging with the world. Compared with extroverts, introverts are able to stay on task for longer because they take in and process information before acting on it, and they often continue to process information even after extroverts have moved on. Introverts also tend to be more introspective and excel at communicating through writing rather than speaking. Though introverts may be seen as “asocial,” they tend to be good listeners and enjoy long, in-depth conversations, whereas extroverts may be seen speaking with a variety of people in a short period of time (Condon & Ruth-Sahd, 2013). Thus, introverts restore energy not only through isolation but by connecting with small groups of trusted individuals on a deeper level (Dembling, 2012).

Introverts and extroverts have distinct ways of engaging in the language classroom. Extroverts have an edge over introverts in an active learning environment because they get energy from social interaction (Green, 2018). Introverts, however, perform better with input-based instruction (Altunel, 2015), require more time to process and reflect on information, and prefer to observe before participating (Green, 2018). They have been shown to do well with alternative means of participating such as electronic response systems, which are more introspective in nature than verbal communication (Sawang, O’Connor, & Ali, 2017). While introverts may be able to adapt to the demands of an active learning classroom to some extent (Condon & Ruth-Sahd, 2013), “if a student’s personality and learning environment do not fit, the possibility exists that academic performance and learning could suffer” (Green, 2018, p. 31). Due to their differing experiences in the traditional classroom, introverts and extroverts may also experience ERT differently, as will be explored in this study.

The Eysenck Personality Questionnaire

The Eysenck Personality Questionnaire is a psychological testing tool that measures three dimensions of personality: extroversion/introversion, neuroticism, and psychoticism. The first of the three is the focus of this study and measures if respondents are more extroverted (social, impulsive, and outgoing) or more introverted (reserved, quiet, and controlled) (Educational & Industrial Testing Service, n. d.). The questionnaire also includes a lie scale, which calculates respondents’ tendency to select more socially acceptable answers, allowing less truthful participants to be eliminated. The present study uses a shortened, 24-item version of the original questionnaire called the Abbreviated Form of the Revised Eysenck Personality Questionnaire, or EPQR-A (Francis et al., 1992).

Distance learning and emergency remote teaching

While emergency remote teaching (ERT) may take place online, it is not to be confused with online learning. Online learning courses are carefully constructed, taking into consideration the different dimensions and options needed to create a robust “ecosystem” of co-curricular

resources to support learners. ERT, on the other hand, is “a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances” (Hodges et al., 2020, p. 6). While a typical online learning course takes six to nine months of development, ERT courses can require a shift from all face-to-face to all online in a matter of weeks. It is therefore important to distinguish between the two modes because, while they do share some similar qualities, one cannot be considered representative of the other.

Distance learning in general bears some stigma as being inferior to face-to-face education (Bawa, 2020). Students have been shown to prefer face-to-face lessons to online ones due to greater instructor support (Smith Jaggars, 2014) and interactive capacities (De Veas et al., 2020). However, Bawa (2020) argues that the value of ERT cannot be judged in the same way as online learning because it shares some of the features and practices of face-to-face learning while being delivered in a remote context. It is therefore important to understand student perceptions of ERT in particular as its own unique experience.

Regarding student experiences with ERT, learners in a study by Bawa (2020) found the experience to be very difficult due to the increase in responsibility that they were forced to undertake in managing their own learning. However, this did not lead to a negative impact on students’ grades but instead forced them to work more conscientiously than usual in order to push through the course. According to Bawa (2020, section 4.2, para. 2), “In the context of learning, students are significantly more engaged and concentrate much harder when presented with unique, unprecedented challenges in their learning.” It seems that students were able to succeed academically not in spite of but because of the adverse circumstances created by the pandemic.

Previous studies have examined student perceptions and performance in online courses. In a study by Rush (2015), many students stated that the best aspect of distance learning was its flexibility, while its worst aspect was the sense of isolation from the educational community. Students most commonly named increased contact and communication along with better access to resources as the aspects that would most improve their experience. However, more autonomous learners may have less of a need for communication and vice versa (Moore, 2013). In another study of a one-off asynchronous lesson delivered to students in an otherwise all face-to-face EFL course, students found the asynchronous class to be less motivating and said that it failed to provide opportunities for language output (De Veas et al., 2020). Regardless of their perceptions, there is some evidence that students’ performance is not affected by the mode of delivery (online or face-to-face) but that cumulative GPA is a greater predictor of success (Wilson & Allen, 2011).

While online learning and ERT each have general advantages and disadvantages, their impact on introverted and extroverted students in particular has been largely unexplored. The sudden advent of ERT in 2020 has provided an opportunity to understand how learners’ personality impacts their perceptions of ERT as a mode of learning. Insight gained from this experience may inform the potential benefit of including some online components in language learning courses in the future.

METHODS

This study utilized a mixed-methods approach in the form of a pilot survey given to students that included both closed- and open-ended questions to gather both quantitative and qualitative data.

Participants

Participants in the study were 15 freshman English majors with varying English ability levels. All of the students had participated in ERL for one full school year and had experienced few or no classes on campus. Students participated in both synchronous and asynchronous online lessons (roughly a 50-50 ratio in the author's classes).

Instrument

All data for the study was collected through a survey given to students at the end of the school year. The survey included items about both personality and online learning experience. The personality items were based on the EPQR-A (Francis et al., 1992). Answer options were changed from the original yes/no format to a Likert scale to account for the varying intensities of human experience. Some questions were reworded slightly in order to make them easier for learners to answer. Otherwise, the questionnaire was left intact.

For the online learning section, students were required to agree or disagree with statements about their learning experience using a Likert scale from 1-5. Multiple choice answer options were also provided for one question about the frequency of seeking speaking practice opportunities. Some optional open-ended questions were also included at the end to allow for a more qualitative understanding of students' experiences.

Data analysis

When analyzing the quantitative data, three students who averaged above 3 on the lie scale were deemed to be unreliable and were removed from the study, leaving 12 remaining participants. Each remaining respondent was labelled as "more introverted" or "more extroverted" according to whether their average response fell below or above 3 on the personality scale. For both of these personality trait groups, the average score and the standard deviation for each of the online learning questions was calculated. The answers for the prompt, "I found opportunities to practice speaking English outside of class" were totaled (rather than averaged) and analyzed separately because of the multiple choice answer format.

For the open-ended questions, students' responses were read and coded by grouping the same or similar responses together. The number of students who gave each response within each personality trait group was counted in order to compare differences between groups. Some individual answers were also examined in more detail in order to get a deeper insight into students' personal experiences.

Students' responses to the survey were used to answer the following research questions:

1. How do personality factors correspond to students' comfort level with synchronous lessons?
2. How do personality factors correspond to students' ability to learn independently through asynchronous lessons?
3. How do personality factors correspond to students' ability to deal with social isolation?
4. How do personality factors correspond to students' tendency to seek out practice opportunities outside of class?

RESULTS

Scaled question responses

Students' attitudes toward each aspect of ERL, according to personality trait, are shown in Table 1.

Table 1: Average response for each learner personality trait (scale of 1 (lowest) – 5 (highest))

Personality Trait	N	Comfort with Sync Lessons	SD	Comfort with Async Lessons	SD	Difficulty with Async Lessons	SD	Desire to Meet Classmates	SD	Enjoyment of Working Alone	SD
More Introverted	4	2.75	0.05	4.25	0.96	1.75	0.96	4.75	0.05	3.75	1.26
More Extroverted	8	3.38	1.33	2.75	1.28	2.63	1.06	4.5	0.93	3.13	0.64

The results indicate that students' tendency toward introversion or extroversion was linked to varied perceptions of ERL on average. Extroverts were much more comfortable with synchronous lessons than introverts, while the opposite was true with asynchronous lessons. Neither group indicated much difficulty with asynchronous lessons, though extroverts had more difficulty than introverts. Both groups had a strong desire to meet classmates, with introverts showing a slightly stronger preference. Introverts and extroverts both expressed an enjoyment of having increased time to work alone, with introverts enjoying this more on average.

Next, the frequencies with which students sought opportunities to practice speaking English outside of class are shown in Table 2. One student, who was more introverted, did not answer this question on the survey and is therefore not included.

Table 2: Students' frequency of practicing speaking outside of class

Personality Trait	N	Number of Responses in Each Personality Trait Group				
		Never	A Few Times a Year	1-3 Times a Month	Once a Week	Several Times a Week
More Introverted	3	1	1	0	0	1

More Extroverted	8	1	0	2	3	2
------------------	---	---	---	---	---	---

Overall, extroverts tended to seek out speaking opportunities more frequently than introverts, though one introvert did practice speaking several times a week.

Open-ended question responses

The results for the open-ended survey questions reveal that generally the same answers were popular amongst the majority of students, with some variation in relation to personality traits.

The first open-ended question was, "What did you like about taking synchronous lessons?" See Table 3 for the distribution of students' responses according to personality traits.

Table 3: What students liked about taking asynchronous lessons

Personality Trait	N	Time Flexibility	Feel More Relaxed	Understand Content Deeply	Nothing	No Answer
		Number of Responses in Each Personality Trait Group				
More Introverted	4	3	0	1	0	0
More Extroverted	8	4	2	0	1	1

The flexible timing of asynchronous lessons was the most popular answer, especially among more introverted students. Some students also remarked that they felt more relaxed or could understand content more deeply in these lessons. One more introverted student felt that comprehension was easier without the time constraints of synchronous learning and that asynchronous lessons allowed for deeper absorption of the material. According to this student:

It is easy to review the content of the class because the content remains in some form. I can spend more time on the parts that I feel I don't understand, which improves my understanding more than synchronous learning. I can spend as many hours as I want on assignments until they are due, which allows me to submit higher quality assignments. In the case of assignments that had to be submitted in class (synchronous classes), I was not able to work on them in depth, and most of them were not beneficial to me because I was too busy trying to get through the class. Therefore, non-synchronous classes are superior to simultaneous classes in terms of class comprehension. (translated from Japanese)

Next, students were also asked, "What did you dislike about taking asynchronous lessons?" See Table 4 for their responses.

Table 4: What students disliked about taking asynchronous lessons

Personality Trait	N	Not Motivating/ Boring	Lack of Classmate/ Teacher Support	Loneliness/ Desire to Meet Classmates	Wi-Fi Problems	Nothing	No Answer
More Introverted	4	0	0	2	1	1	0
More Extroverted	8	3	3	1	1	0	1

In this case, answers centered mainly on the isolated nature of asynchronous lessons and included feeling bored or unmotivated, having a lack of support from classmates and teachers, and feeling lonely or wanting to meet classmates. Wi-Fi problems were also mentioned. The former two aspects were especially prevalent among more extroverted students.

Next, students were asked, “What did you like about taking synchronous lessons?” Answers are shown in Table 5.

Table 5: What students liked about taking synchronous lessons

Personality Trait	N	Interacting with Classmates and Teacher	Easy to Get Ready for Class	Practicing Speaking Skills	Less Nervous	Longer Learning Time	No Answer
More Introverted	4	1	1	0	1	1	0
More Extroverted	8	4	2	1	0	0	1

Students listed benefits including the ability to interact with others, the ease of getting ready for class, the chance to practice speaking, being less nervous than in face-to-face lessons, and having a longer time to learn than in asynchronous lessons. The benefit of interacting with others was more popular among extroverted students. One more introverted student felt that speaking in front of others was less nerve-wracking online than in face-to-face lessons. The student remarked:

I was less nervous speaking on Zoom than in face-to-face class. Even with the camera on, I didn't feel nervous. For me, who is completely new to English presentations, I was glad that I was able to have a cushion by giving presentations and remarks on Zoom rather than suddenly in face-to-face lessons. (translated from Japanese)

The next question was, “What do you dislike about taking synchronous lessons?” Replies are shown in Table 6.

Table 6: What students disliked about taking synchronous lessons

Personality Trait	N	Wi-Fi Problems	Other	No Answer
		Number of Responses in Each Personality Trait Group		
More Introverted	4	0	4	0
More Extroverted	8	3	4	1

Students gave such a wide variety of responses that, other than Wi-Fi problems, they mostly were not possible to group into different categories. Answers included:

Introverts

- feeling nervous
- confusion when different people speak at the same time
- some students blaming poor Wi-Fi connections in order to cheat
- being required to get up early

Extroverts

- difficulty keeping up with the pace of the class
- difficulty concentrating
- not knowing who is looking at you
- being required to talk when not wanting to do so

While answers varied, it appears that some students found synchronous lessons disorienting, stressful, or confusing. There were no clear differences between introvert and extrovert groups.

Next, students were also asked, “What types of English activities did you take part in outside of class?” Their responses are displayed in Table 7.

Table 7: Speaking activities students did outside of class

Personality Trait	N	None	Talking with Teachers	School Events/ Activities	Talked with Foreign Friends	No Answer
		Number of Responses in Each Personality Trait Group				
More Introverted	4	3	1	0	0	0
More Extroverted	8	3	2	2	1	1

Six of the 12 students surveyed said that they did not participate in any speaking activities outside of class. This was especially common among the more introverted students. Those who did seek out practice opportunities did so by talking with teachers, participating in school activities, and/or talking with foreign friends.

The last question was, "If you felt lonely or isolated during this school year, how did you deal with it?" Table 8 shows students' responses.

Table 8: How students dealt with loneliness and isolation

Personality Trait	N	Talked with Friends or Family	Talked with New Friends at School	Focused on Hobbies	Didn't Feel Lonely	No Answer
		Number of Responses in Each Personality Trait Group				
More Introverted	4	2	1	2	0	0
More Extroverted	8	4	1	1	1	1

Students' most common way to deal with the isolation of ERT was to talk with their friends or family. Other answers included talking with new friends made at school and focusing on hobbies. One extroverted student said that they did not feel lonely. In addition, one student who was more introverted said that having group work with other students that required meeting outside of class was a valuable way to get to know classmates. In this student's words:

In each class, there were presentations, group work and pair work, and the teachers decided the members of these groups. As a first year student, it was painful to be assigned to a pair because I didn't have any acquaintances or friends yet, but I was grateful that the teachers did so. I was also able to make friends and keep in touch with them outside of class and ask for advice as we completed assignments in those small groups. Since we were only able to meet at the university once, we were not able to get to know each other any better, but the work was a good opportunity for us. (translated from Japanese)

DISCUSSION

This section will further explore the results in the context of the research questions posed as well as address the study's limitations.

Research questions

How do personality factors correspond to students' comfort level with synchronous lessons?

Students who were more extroverted showed a stronger preference for synchronous lessons than their counterparts. This may be due to the fact that synchronous online lessons mimic the face-to-face active learning classroom and therefore have similar conditions such as less time to reflect and observe and more time spent engaging in social interactions. These aspects have been shown to be challenging for introverts (Green, 2018), and the introverts in this study are no exception. However, these results indicate that including more synchronous lessons in online courses could make them more satisfying for extroverts who tend to rely on socio-affective strategies to learn language (Wakamoto, 2009).

Although this study did not seek to compare synchronous online and face-to-face lessons, one introverted student stated that synchronous online lessons were less stressful than face-to-face lessons when it came to speaking and giving presentations. It may be helpful to further explore the use of synchronous online lessons as a way to ease student anxiety when doing communicative activities.

How do personality factors correspond to students' ability to learn independently through asynchronous lessons?

Asynchronous lessons were more comfortable for students who were more introverted. Students generally did not find asynchronous lessons very difficult, but they were more difficult for those who were more extroverted. These results are unsurprising given that introverts tend to use more cognitive strategies when learning a language (Kayaoglu, 2013). They may feel depleted by the social aspects of active learning and prefer to use their energy on analyzing, memorizing, and problem solving. In this study, introverted students in particular named "time flexibility" as the best aspect of asynchronous lessons, which is in accordance with their desire for more time to process and reflect on information (Green, 2018).

How do personality factors correspond to students' ability to deal with social isolation?

Feeling isolated is a common issue with online students (Rush, 2015). The students in this study expressed a strong desire to meet their classmates. At the same time, both personality trait groups indicated, on average, positive feelings about having more time to study alone than usual. These feelings were slightly more positive among introverted students. Students also found a variety of ways to deal with feeling isolated, though it is unclear from the results how these strategies correspond with personality traits. The findings indicate that meeting classmates in person is a valued aspect of language education for students, but having some asynchronous classwork is also appreciated by students who want more time to absorb the material.

How do personality factors correspond to students' tendency to seek out practice opportunities outside of class?

Only half of students sought opportunities for speaking practice outside of class, and extroverts in particular tended to practice more frequently than introverts. In previous studies, students have named lack of opportunities for language output as a downside of online learning (De Veas et al., 2020). Based on the present study's results, it is apparent that certain students do not find ways to practice speaking if not required to do so in class, even when the school provides them through extracurricular activities. According to Rush (2015), students who struggle with isolation also tend to have a higher perceived difficulty with accessing information and resources. It is recommended that online learning or ERT language programs not only offer ample speaking practice opportunities but also teach students how to seek those opportunities outside of class or even to require them to do so for class credit.

Limitations

The findings of this study cannot be generalized to a larger population due to the very small number of respondents. This is merely a pilot study meant to explore the need for a larger-scale investigation into the intersection of personality and ERT.

CONCLUSION

Until recently, typical language learning contexts in Japan have consisted solely of face-to-face lessons. The advent of ERT as a result of the 2020 pandemic has created the opportunity to explore how language learning works online, offering insight into how online learning could be utilized in the future. Given how much personality impacts students' experiences of language learning in a typical face-to-face active learning classroom, it is valuable to examine whether incorporating some online learning components into typically face-to-face programs could benefit certain types of students.

This study has measured students' perceptions of their experience of online learning and explored how these perceptions relate to personality traits. The results indicate that personality may impact students' ERT experience. Introverted students in particular may benefit from having at least some online course components (both synchronous and asynchronous) in order to better match their learning style and comfort level. However, teachers should be aware of the danger of losing opportunities for speaking practice if utilizing too many asynchronous lessons. More research is needed to determine a balance of face-to-face and online lessons that could best accommodate all personality types and their diverse needs.

REFERENCES

Altunel, V. (2015). *The impact of extroversion and introversion on language learning in an input-based EFL setting* (Corpus ID: 53702619) [Masters thesis, University of Kansas]. Semantic Scholar. https://kuscholarworks.ku.edu/bitstream/handle/1808/21595/ALTUNEL_ku_0099M_14242_DATA_1.pdf?isAllowed=y&sequence=1

Bawa, P. (2020). Learning in the age of SARS-COV-2: A quantitative study of learners' performance in the age of emergency remote teaching. *Computers and Education Open*. <https://dx.doi.org/10.1016%2Fj.caeo.2020.100016>

Briggs Myers, I., Kirby, L. K., & Myers, K. D. (1998). *Introduction to type: A guide to understanding your results on the MBTI instrument* (6th ed.). CPP, Inc.

Condon, M., & Ruth-sahd, L. A. (2013). Responding to introverted and shy students: Best practice guidelines for educators and advisors. *Open Journal of Nursing*, 3(7), 503-515. <http://dx.doi.org/10.4236/ojn.2013.37069>

De Veas, K., Frazier, E., Jurns, K., Asquith, S., Lege, R., & Lyon, P. (2020). In class or online? Investigating student perceptions of asynchronous online lessons. *Literacies and Language*

Education: Research and Practice. https://kuis.kandagaigo.ac.jp/eli/publications/wp-content/uploads/2020/12/deVeas_et-al_Autumn2020.pdf

Dembling, S. (2012). *The introvert's way: Living a quiet life in a noisy world*. TarcherPerigee.

Educational and Industrial Testing Service. (n.d.). Eysenck Personality Questionnaire - Revised (EPQ-R). Edits. <https://www.edits.net/products/epq-r/>

Eysenck, H. J. (2006). *The biological basis of personality*. Routledge.

Francis, L. J., Brown, L. B., & Philipchalk, R. (1992). The development of an abbreviated form of the Revised Eysenck Personality Questionnaire (EPQ-R-A): Its use among students in England, Canada, the U.S.A. and Australia. *Personality and Individual Differences*, 13(4), 443-449. [https://doi.org/10.1016/0191-8869\(92\)90073-X](https://doi.org/10.1016/0191-8869(92)90073-X)

Green, R. L. (2018). *Breaking the silence: A phenomenological study of introverted undergraduate students' experiences in the active learning English classroom* [Doctoral dissertation, Liberty University]. Doctoral Dissertations and Projects. <https://digitalcommons.liberty.edu/doctoral/1918/>

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). *The difference between emergency remote teaching and online learning*. EDUCAUSE Review. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>

Jung, C. (2016). *Psychological types* (2nd ed.). Martino Fine Books. (Original work published 1924)

Kayaoglu, M. N. (2013). Impact of extroversion and introversion on language-learning behaviors. *Social Behavior and Personality: An International Journal*, 41(5), 819-826. <http://dx.doi.org/10.2224/sbp.2013.41.5.819>

Moore, M. G. (2013). The theory of transactional distance. In M. G. Moore & W. C. Diehl (Eds.), *Handbook of distance education* (pp. 66-85). Taylor and Francis. <https://www.routledgehandbooks.com/doi/10.4324/9781315296135-4>

Rush, P. (2015). Isolation and connection: The experience of distance education. *International Journal of E-Learning and Distance Education*, 30(2). <https://doi.org/10.4000/dms.2509>

Sawang, S. O'Connor, P., & Ali, M. (2017). Using technology to enhance students' engagement in a large classroom. *Journal of Learning Design*, 10(1), 11-19. <http://dx.doi.org/10.5204/jld.v9i3.292>

Smith Jaggars, S. (2014). Choosing between online and face-to-face courses: Community college student voices. *American Journal of Distance Education*, 28(1), 27-38.
<https://doi.org/10.1080/08923647.2014.867697>

Wakamoto, N. (2009). *Extroversion/introversion in foreign language learning: interactions with learner strategy use*. Peter Lang.

Wilson, D., & Alan, D. (2011). Success rates of online vs. traditional college students. *Research in Higher Educational Journal*, 14, 1-9. <https://eric.ed.gov/?id=EJ1068796>