

# **5** Erasmus virtual exchange as an authentic learner experience

# Alexandra Reynolds<sup>1</sup>

## Abstract

This small-scale study draws on a higher education context where French-speaking students, in situ at Bordeaux University, participated in the Sharing Perspectives Foundation's flagship Erasmus+ Virtual Exchange (E+VE) program (2018-2019). Frenchspeaking students interacted in English on the topic of Newcomers and Nationalism via weekly webinars with non-native Englishspeaking students from other participating universities in Europe and the Southern Mediterranean region. Authenticity is a complex concept involving the degree of implication and meaning speakers give to their interactions (Gilmore, 2007; Pinner, 2016; Widdowson, 2003). The study therefore addresses the question of how participant feedback can help us to assess E+VE in terms of authenticity. The methods used to investigate this research question were the qualitative analysis of the French students' reflective journals, questionnaires, and interviews. The results show that E+VE is conducive to authentic learner experiences. This study has also enabled a definition of 'authenticity' as a transformative language learner experience in virtual exchange.

#### Keywords: France, higher education, English, Erasmus virtual exchange, authenticity.

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### 1. Introduction

Authenticity is a positive concept involving meaningfulness, credibility, and individual fulfillment (Bialystok, 2017; Sartre, 1946; Van Lier, 2014). An *authentic learner experience* is understood as a positioned stance a learner gives to his/her actions in relation to others in a specific educational context (Yanaprasart & Melo-Pfeifer, 2019). Authentic learner experiences have been used as markers of success in virtual exchange projects (Kohn, 2018; O'Dowd, 2016). Virtual exchange affords opportunities to engage in meaningful communicative situations which are intercultural and intense (on a one-to-one basis or in small groups). The research question of whether E+VE is considered as an authentic learner experience is addressed through the ethnographic study of students who participated at Bordeaux University. The paper begins by outlining the context of E+VE with a brief overview of the literature in relation to authenticity and virtual exchange, after which consideration is given to the relevance of E+VE in relation to English for Specific Purposes (henceforth ESP) learning practices.

# 2. E+VE program context

E+VE started as a two-year (2018-2020) pilot scheme funded by Erasmus+ (Helm, 2018; Helm & Van der Velden, 2019). It involved 19 universities from 13 countries, including the University of Bordeaux, and gave students the opportunity of participating in a mobility project without having to leave home by interacting in English as a lingua franca on a topic related to cultural perspectives.

During the first year of the pilot, the E+VE program, piloted by the Sharing Perspectives Foundation<sup>2</sup>, focused on the theme of *Newcomers and Nationalism*<sup>3</sup>

<sup>2.</sup> https://sharingperspectivesfoundation.com/

https://sharingperspectivesfoundation.com/programme/newcomers-and-nationalism/and https://3q6kbg2hbxl2qgocu3s6kvhkwpengine.netdna-ssl.com/wp-content/uploads/2018/06/NEWCOMERS-AND-NATIONALISM-Assignment-Manual-Autumn-2018.pdf

through ten related themes (for example *migration*, *membership*, *globalization*, and *Brexit*) as a basis for facilitated dialogue with a group of eight participating students from the partner institutions. The E+VE learning objectives involved a better understanding of *Newcomers and Nationalism* through sustained synchronic dialog in association with asynchronous tasks. The skills gained included how to accommodate to and empathize with other young people through respect and tolerance. Using technology to communicate and learn, the students developed a variety of transversal skills such as academic literacy. Permanent validity Erasmus+ digital badges rewarded these skills, accessible to future employers. At the end of the course, the students were evaluated on their participation during the webinars and project work (based on the reflective journals and filmed interviews they made of other students from their local community in Bordeaux).

# 3. Theoretical framework

Authenticity is a complex issue regarding whether a speaker considers oral and written discourse as 'meaningful' (Kohn & Hoffstaedter, 2017; Van Lier, 2014; Widdowson, 2003). Meaningful discourse expresses what a person genuinely feels and believes to be purposeful to his/her intrinsically motivated actions (Van Lier, 2014). Authenticity is also an existential position of focusing on gaining meaning from the present and not 'playing roles' (Sartre, 1946). Virtual exchange therefore contrasts with the possible (in)authenticity of simulated talk (Stokoe, 2013) which may occur in the ESP classroom, for example. The ESP classroom in France enacts English-speaking encounters among French speakers who share the same first language (French). Participating in English as a lingua franca (virtual) exchanges with other speakers of English (who do not share the same L1) therefore heightens the impression of authentic talk, rather than simulated talk (Helm, 2016; Kohn & Hoffstaedter, 2017; Pinner, 2016). In addition, current research discredits the notion of native speaker authenticity (Bolton & Kachru, 2006; Helm, 2016; Jenkins, 2015; Kohn & Hoffstaedter, 2017; Pinner, 2016). E+VE therefore validates English as a lingua franca discourse as being representative of most of the speakers of English worldwide.

Authentic talk, rather than simulated talk with other L1 speakers, is made possible due to the 'intercultural' aspect of E+VE, which is also a stated objective of the E+VE program. Interculturality is understood as an interactive relationship between people from different cultures when they come into contact (Botero, 2019). E+VE's stated objectives are in line with research which recommends a pedagogical approach to studying culture and interculturality (Kerzil, 2002).

The focus of this study is authentic learner experiences through intercultural virtual exchange. From a pedagogical perspective, Kreber et al. (2007) define authenticity around nine central tenets, of which three can be identified as relating to understandings of authentic learner experiences in E+VE (points one and three are closely related because a criticism of normativity has transformative potential):

- authenticity as a path to transformative learning;
- authenticity in relation to learner autonomy; and
- authenticity as a criticism toward normativity.

Transformative learning is key to understanding manifestations of authentic learner experiences through E+VE when learning English (Kreber et al., 2007; Yanaprasart & Melo-Pfeifer, 2019).

# 4. Methodology

The methodological framework used for this study consisted of an ethnographic study of E+VE students conducted by the author. Ethnography applies a mixed approach to data collection, including the interaction between the researcher and the participants (Hammersley & Atkinson, 2007). The data were collected from questionnaires, email correspondences, interviews, and reflective learner journals. As in Hall's (2008) study, the journals were used as the basis for further discussion with the researcher, either in person or via email exchanges.

#### 4.1. Research context

Twenty-one undergraduate and postgraduate students from science and social science disciplines<sup>4</sup> at Bordeaux University participated in E+VE on a voluntary basis in 2018. The average age of the participants was 23 and the participants' first language was French. The small number of participants can be explained by the pilot nature of the program. The specificity of Bordeaux University is that it has no arts faculty and so the students therefore study ESP as an obligatory module to develop skills related to their major discipline, and English as a global language of communication. Each discipline has their own ESP course where students discuss their specific issues; for example the chemistry majors will discuss issues relating to chemistry with their ESP teacher. In these respective ESP courses, students with L1 French will communicate in English.

High English proficiency level students were given the opportunity of taking part in E+VE instead of attending their mainstream ESP courses at Bordeaux University. Although the objective of E+VE is not to provide students with English language training, this was nevertheless how the educational managers of Bordeaux decided to use this opportunity provided by E+VE. The rationale for Bordeaux students to participate in E+VE instead of attending ESP classes was based on a combination of reasons. Firstly, E+VE estimates 130 hours of student work time (including 20 hours of facilitated dialogue). The Bordeaux educational managers decided that in addition to the typical 20 hours ESP course, the E+VE course in parallel would be too time-consuming for the students in terms of workload. Secondly, it was felt that students with high English proficiency would benefit more from E+VE (than ESP) because they could practice speaking English with students who did not share the same L1 (French). The possible benefits of interacting with students who were not enrolled in the same disciplines were also considered. This objective meant a new challenge in terms of content learning. Through E+VE, students could go beyond English as a Medium of Instruction (EMI) and ESP by learning about topics which were outside of their own discipline.

<sup>4.</sup> Distribution of students per discipline: chemistry (8), anthropology (5), psychology (2), education (2), sociology (2), health sciences (2).

#### 4.2. Data analysis

The data consisted of a post online questionnaire sent to all the participating students, to which the response rate was 71%. The focus of the questionnaires was on how the students had responded to the novelty of interacting in English with other students from other universities online. The students were asked if the course had met their expectations and whether they felt any of their English skills had improved thanks to the E+VE program. Post course on-site interviews were conducted with the researcher with five volunteer students. All the students provided a copy of their E+VE reflective journal, describing the key stages of the exchange with question prompts focusing on the exchange, such as 'Week 3: How are you settling into your group?'. The focus of each journal entry was on the weekly webinar meeting. The learner journal therefore provided most of the information regarding how students had experienced interacting in live group meetings. The chronological aspect of the learner journals, as well as the retrospection of the post course interviews, guided the readings of authentic learner experiences to be understood as a process, with a chronology from beginning to end. Throughout the duration of the E+VE course, students also corresponded with the researcher via email. The emails contained questions about the course, technical issues, and student anxieties about public speaking or thanks in relation to a positive E+VE experience.

Understandings of authentic learner experiences were accessed through the qualitative analysis of the data. The data were collected into one textual corpus and read for repeated themes. Conventional content analysis was used and the coding categories<sup>5</sup> were taken directly from the text data (Hsieh & Shannon, 2005). Pre-existing deductive hypotheses were not used as a top-down basis for analysis, instead, emergent themes were grouped according to keyword frequency and then into a number of areas related to authentic learner experiences. The themes which were identified as being representative were then mapped onto a table containing E+VE's pedagogical conditions (Table 1). The aim was to

<sup>5.</sup> Keywords and phrases identified in the data such as 'different opinions' and 'point of view' + 'change' + 'evolve' were categorized as being representative of the code 'altered worldviews', for example. Whereas keywords such as 'feeling shy', and 'feeling more confident' were categorized as being attributes of the code 'community formation'.

gain a better understanding of how authentic learner experiences related to the pedagogical activities the students were involved in.

# 5. Results and discussion

The results showed themes relating to authentic learner experiences in terms of being part of a group. The codes relating to being part of a group were coded as 'community formation', and 'altered worldviews'. As one of the main objectives was that the Bordeaux participants should also practice and improve their English, a code was created for student experiences in relation to English language use, and coded as 'English language learning'.

The study revealed that 86% of the Bordeaux participants were 'satisfied' to 'very satisfied' with the E+VE program. The high satisfaction rate can be explained by the thematic analysis of the data which showed that the E+VE was reported as an authentic learner experience on two levels. Firstly, because the pedagogical setting of the E+VE course enabled authentic interactions and a heightened sense of learner autonomy, and secondly because of what the students experienced as learners within a defined group.

#### 5.1. Authentic learner experiences and community formation

The results provide evidence of how the participants situated themselves as members of a group. All of the journal entries revealed a process of authentic learner experiences in terms of emerging community membership within the E+VE group. The journal entries recorded feelings of shyness and hesitancy in the first journal entries, to more confident statements about group membership in the final entries. Subsequently, becoming a member of an E+VE community of practice (Wenger, 1999) involved a shift from an initial position of isolation toward a position of cohesion. Group cohesion can be understood as a collective approach of 'open-mindedness', 'respect', and 'listening'. The process involved gaining confidence during meaningful and interesting interactions with others. We remind the reader that meaningful interaction is key to understanding authenticity, as discussed in the literature review. The interactions draw on the affect in relation to the participants' cumulative and shared identities.

#### 5.2. Authentic learner experiences and altered worldviews

In addition, the participants experienced 'epiphanies' about their worldviews, which further reinforced their confidence within the group:

"I think my point of view has been altered by our debates, I have found myself trying to see the bigger picture more often than before in my everyday life" (E+VE participant A, ninth journal entry).

"I think the way in which my thoughts have evolved from the beginning of the program has surprised me the most (E+VE participant B, seventh journal entry)".

By epiphanies, we understand a sense of meaningful self-awareness accompanied by a change of worldview. This included increased tolerance and inter-relational sensitivity (Helm & Van der Velden, 2019). Kreber et al. (2007) would refer to such epiphanies as being representative of authenticity as a path toward transformative learning. This process culminated in the participants describing being better prepared to engage on the topic of immigration in the future, for example.

# 5.3. Authentic learner experiences and English language learning

As E+VE was offered as an alternative to ESP classes, the students were invited to make comparisons between the two programs. Overall, the participants positioned their attitudes to E+VE in relation to their past English language learning experiences as ESP students because that was what they had experienced before. The E+VE online facilitated sessions were different to the ESP classroom. Firstly, in a French higher education ESP classroom one can expect to find one teacher and up to 36 students. In E+VE facilitated

sessions, there were up to eight students and two facilitators who did not act as either ESP or EMI teachers, but as prompters to further talk. Secondly, each participating student was from a different higher education setting, and the students did not share an L1. Finally, the students did not overall discuss their specialized academic topic of study, but a more general and topical subject of international and political interest (namely *Nationalism and Newcomers*). The only 'frustration' (see Table 1) related to not being able to have physical contact with the members of their E+VE group.

The differences between ESP and E+VE are reflected below.

"I did virtual exchange this semester. It was a very enriching experience and a good change from our normal classes" (E+VE participant, questionnaire responses).

"I would like to say that [E+VE] was an excellent experience. Because we were really immersed in a social context with people of different nationalities, it was easier to progress in our language skills. And this is different from traditional classes that seem quite repetitive (presenting an article orally or a scientific subject)" (E+VE participant, questionnaire responses).

"In [E+VE] you are on your own, but you have to do it. You cannot hide. You owe it to the other people to participate" (E+VE participant, questionnaire responses).

All of the students claimed E+VE had helped them to improve their English skills. This is because they could interact more with non-French speakers, and in smaller groups than in their ESP classroom.

"In class there is always someone who can speak for you. In class, there is one question [from the teacher] and one answer. In the virtual class there is one topic but lots of questions" (E+VE participant, interviews).

"I feel I made a lot of progress. My English improved a lot" (E+VE participant, interviews).

#### 5.4. Authentic learner experiences and pedagogical conditions

The pedagogical conditions of the E+VE program, summarized in Table 1, are recognizable to those already familiar with virtual exchange projects.

Table 1.	Setting the pedagogical conditions for authentic learner experiences
	in E+VE

INTERACTION (SYNCRONOUS)	AUTONOMY and RESPONSABILITY	NEW COMMUNITY	PEDAGOGY	THIRD PLACES	HOMEWORK (ASYNCHRONOUS)
Use English	"The program requires a lot of investment and commitment. There is no teacher to check up on you "	Gain confidence	Student-led	Staying at home	Interviewing a peer
"Speak more openly "		Make friends: "I met people I would never have met"	Topic-focused	"No other environment"	"The diary is something you do to get grades"
Small groups (8)		Greater diversity of members	L1 not spoken	Frustration	
"Putting my English into practice"	"I want the others to feel that I am listening to them and that I care about what they are saying"	Personal histories	Project based		
"Speaking		"The video interviews brought other people into the project"	"My English improved a lot"	Neutral meeting place	"The content was excellent"
with a button"		"You can feel really close to someone without ever meeting them"	Good grades		

The course provides moments of synchronous interaction and moments of quiet asynchronous study. As in other telecollaborative work, the pedagogy is driven by a motivation to encourage student autonomy and responsibility. The exchange should also result in meeting new people and therefore give learners access to a new community. The specificity of the E+VE program is its strong topic-focused content (here *Nationalism and Newcomers*) which the students are invited to focus on at all times. The 'third places' refer to both the online meeting place but echoes the notion of 'third (language) space' (Kramsch, 2006), as the language used during these moments is a shared, but new and evolving, English as a lingua franca. The themes deduced from the data analysis were mapped onto the E+VE pedagogical model (in Table 1). For example, the students focused on language learning especially through synchronous interaction, and referred to a sense of community without physical closeness in the categories labeled 'new community' and 'third place'. The E+VE pedagogical conditions which are associated with authentic learner experience themes are summarized in Table 1.

The alignment of authentic learner experiences with the E+VE pedagogical setting therefore shows that E+VE is consistent with other virtual exchange programs which have proven to facilitate authentic learner experiences (Kohn & Hoffstaedter, 2017). These themes were identified with a five-point model through which authentic learner experiences manifested themselves through E+VE.

- engaging in meaningful and transformative interaction using English as a lingua franca;
- topic-focused study on a theme which is relevant to students as global citizens;
- learner autonomy and responsibility;
- an emerging sense of belonging to an online E+VE community; and
- interacting in a third (neutral) place.

As a result, authenticity in E+VE can be understood as a positive, existential, and positioned learner experience. In this case, authenticity, as an E+VE learner experience, was positioned against other learning environments, such as ESP and disciplinary EMI, which may involve simulated and teacher-led contexts (Helm, 2019). It must nevertheless be stated that this project involved invested participants, who enrolled on a voluntary basis. It was these students who described their authentic learner experiences as involving meaningful online interactions with other invested students from diverse backgrounds.

### 5.5. Subsequent ongoing studies in E+VE at Bordeaux University

Eight of the participating students of this present study were Chemistry majors. There had been initial concern that stepping so widely outside of their disciplinary field would be challenging for these students. On the contrary, the results of this ethnography study revealed that the participating students welcomed the opportunity of widening their English language competence to English for sociocultural purposes (Master, 1997). The interest of widening the scope of English language skills to beyond the scope of ESP has been the basis for subsequent ongoing studies at Bordeaux University<sup>6</sup>, specifically in the field of ESP (Hoskins & Reynolds, in press).

# 6. Conclusion

The current findings of this small-scale study are in keeping with the general findings of the E+VE impact report (Helm & Van der Velden, 2019). Most of the Bordeaux participants were satisfied to very satisfied with the E+VE program. This positive result can be explained because E+VE was found to be an existential learner experience involving new and meaningful exchanges with other students online.

<sup>6.</sup> The second study of E+VE Bordeaux participants is currently underway (2019-2020). In the second year of this pilot study, 45 science majors have enrolled on the programme.

The study results in the development of a five-point model which identifies the conditions through which authentic learner experiences can be accessed through E+VE, namely: (1) meaningful and transformative interaction, (2) topic-focused and student-led pedagogy, (3) student autonomy and responsibility, (4) developing a sense of community, and (5) interactions which occur in a third (neutral) place. The questions arising for future research are based on better understandings of the relationship between E+VE and Erasmus exchanges, but also of the added attraction of E+VE (in relation to ESP and EMI) where students are seeking more authentic contexts where they can improve a variety of language skills.

# References

- Bialystok, L. (2017). Authenticity in education. In Oxford research encyclopedia of education. Oxford University Press. https://doi.org/10.1093/acrefore/9780190264093.013.168
- Bolton, K., & Kachru, B. B. (2006). World Englishes: critical concepts in linguistics. Routledge.
- Botero, A. (2019). Approche interculturelle dans l'enseignement du français: de la théorie à la praxis. Voces y Silencios. Revista Latinoamericana de Educación, 10(1), 144-164. https://doi.org/10.18175/vys10.1.2019.11
- Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language Teaching*, 40(2), 97-118. https://doi.org/10.1017/s0261444807004144
- Hall, G. (2008). An ethnographic diary study. *ELT Journal*, 62(2), 113-122. https://doi. org/10.1093/elt/ccm088
- Hammersley, M., & Atkinson, P. (2007). Ethnography: principles in practice. Routledge.
- Helm, F. (2016). Facilitated dialogue in online intercultural exchange. In R. O'Dowd & T. Lewis (Eds), *Online intercultural exchange: policy, pedagogy, practice*. https://doi. org/10.4324/9781315678931
- Helm, F. (2018). The long and winding road... Journal of Virtual Exchange, 1, 41-63.
- Helm, F. (2019). EMI, internationalisation, and the digital. *International Journal of Bilingual Education and Bilingualism*, 3, 314-325. https://doi.org/10.1080/13670050.2019.1643823
- Helm, F., & Van der Velden, B. (2019). Erasmus+ virtual exchange : intercultural learning experiences : 2018 impact report. https://op.europa.eu:443/en/publication-detail/-/ publication/a6996e63-a9d2-11e9-9d01-01aa75ed71a1

- Hoskins, L., & Reynolds, A. (2020). Implementing E+VE at the University of Bordeaux within English for specific purposes courses. In F. Helm & A. Beaven (Eds), *Designing* and implementing virtual exchange – a collection of case studies (pp. 179-190). Researchpublishing.net. https://doi.org/10.14705/rpnet.2020.45.1125
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288. https://doi.org/10.1177/1049732305276687
- Jenkins, J. (2015). Repositioning English and multilingualism in English as a lingua franca. *Englishes in Practice*, 2(3), 49-85. https://doi.org/10.1515/eip-2015-0003
- Kerzil, J. (2002). L'éducation interculturelle en France : un ensemble de pratiques évolutives au service d'enjeux complexes. *Carrefours de l'éducation*, 14(2), 120-159. https://doi. org/10.3917/cdle.014.0120
- Kohn, K. (2018). Towards the reconciliation of ELF and EFL: theoretical issues and pedagogical challenges. In N. C. Sifakis & N. Tsantila (Eds), *English as a lingua franca in EFL contexts* (pp. 32-50). Multilingual Matters. https://doi.org/10.21832/9781788921770-005
- Kohn, K., & Hoffstaedter, P. (2017). Learner agency and non-native speaker identity in pedagogical lingua franca conversations: insights from intercultural telecollaboration in foreign language education. *Computer Assisted Language Learning*, 30(5), 351-367. https://doi.org/10.1080/09588221.2017.1304966
- Kramsch, C. (2006). The multilingual subject. International Journal of Applied Linguistics, 16(1), 97-110.
- Kreber, C., Klampfleitner, M., McCune, V., Bayne, S., & Knottenbelt, M. (2007). What do you mean by "authentic"? A comparative review of the literature on conceptions of authenticity in teaching. *Adult Education Quarterly*, 58(1), 22-43. https://doi. org/10.1177/0741713607305939
- Master, P. (1997). ESP teacher education in the USA. Teacher Education for LSP, 22-40.
- O'Dowd, R. (2016). Emerging trends and new directions in telecollaborative learning. *Calico Journal*, 33(3), 291-310. https://doi.org/10.1558/cj.v33i3.30747
- Pinner, R. S. (2016). *Reconceptualising authenticity for English as a global language*. Multilingual Matters.
- Sartre, J. P. (1946). L'existentialisme est un humanisme. Nagel.
- Stokoe, E. (2013). The (in) authenticity of simulated talk: comparing role-played and actual interaction and the implications for communication training. *Research on Language & Social Interaction*, 46(2), 165-185. https://doi.org/10.1080/08351813.2013.780341

- Van Lier, L. (2014). Interaction in the language curriculum: awareness, autonomy and authenticity. Routledge. https://doi.org/10.4324/9781315843223
- Wenger, E. (1999). Communities of practice: learning, meaning, and identity. Cambridge University Press.
- Widdowson, H. (2003). *Defining issues in English language teaching*. Oxford University Press.
- Yanaprasart, P., & Melo-Pfeifer, S. (2019). Students' perceptions of authenticity of plurilingual non-native teachers in multilingual higher education settings: an exploratory and comparative case study of Geneva and Hamburg. *European Journal of Higher Education*, 9(3), 327-342. https://doi.org/10.1080/21568235.2019.1597749



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