Support Communication and Intercultural Adjustment of Exchange Students Based on the AUM Theory

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Abstract. People who have to insert and adapt themselves to a different culture than the one where they grew up usually experience feelings related to anxiety and uncertainty. This is exactly the situation of the students who decide to go abroad to continue their education or make an internship in a foreign country. The number of these students has been constantly increasing during the last years. In order to better adapt themselves to the new culture they are confronted with the Anxiety/Uncertainty Model, states that they have to manage the levels of anxiety and uncertainty in order to communicate effectively with local students and teachers. According to the literature, an effective communication and intercultural adjustment of the foreign students has a direct impact on their academic performance. Therefore, it is a relevant task to support them in this process. This work introduces a geo-collaborative application called EMHC (for Exploring My Host Country) which run on mobile devices and allows exchange students to access contextual information as well as information about cultural behavior which could help them to manage their anxiety and uncertainty levels, thus improving their ability to adapt themselves to the new cultural environment. A preliminary evaluation of the EMHC was performed with a small number of exchange students of a Business School, obtaining encouraging results.

Keywords: Geo-collaboration · Collaboration through social media · Intercultural adjustment

1 Introduction

The rise in internationally mobile students reflects growing university enrolment around the world. In 2013, over 4.1 million students went abroad to study, up from 2 million in 2000, representing 1.8% of all tertiary enrolments or 2 in 100 students globally. Central Asia, home to the most mobile student population, has experienced a steady rise in the number of students studying abroad. This group grew from 67,300 in 2003 to 165,542 in 2013, with the outbound mobility ratio more than doubling from
3.5 % to 7.6 %, [1]. This means that an increasing number of students need to acquire, experiment and practice social abilities which will help to adapt themselves to the culture of the host county. These abilities are very much the same which are required to any professional of the 21st century [2-4].

Among the abilities of the 21st century [3, 4], a very important one is the ability to communicate and interact in intercultural situations, which are the same needed by foreign students in order to achieve the intercultural adjustment in the host country. Particularly, business and management schools around the world largely agree that the development of communication, interaction, teamwork and intercultural adjustment are important competences. Due to this, they have been included in the international standards of accreditation by Association to Advance Collegiate Schools of Business (AACSB), [5]. In 2013 the AACSB [4], defined standards for undergraduate and graduate programs in for developing the following abilities: (a) communicating with others (locals or foreign) and teamwork in intercultural settings; and (b) being successful in the intercultural adjustment with the aim of acquiring knowledge and skills to perform in today’s globalized world.

Effective communication and intercultural adjustment of foreign students are full of challenges: cultural aspects associated to communication patterns, language barriers, feelings of isolation and loneliness, and even discrimination are just a few example of the experiences which hinder the communication with local people (including their teachers), achieve an intercultural foreign student may face when trying to perform successfully in the new environment [6]. According to [7], there is a positive correlation between the intercultural adjustment and the academic performance of a foreign student, which means, the better the adjustment of the student to the culture of the host country, the better will be the academic performance. Some studies suggest that having good friends with mates of the same culture as well as the foreign one help to reduce homesickness feelings [8]; also integrating a student association, fraternity or sport team positively impacts the student’s social integration and intercultural adjustment, which leads to a better academic performance [9].

For all these reasons we consider supporting effective communication and intercultural adjustment of foreign students a relevant task.

Gudykunst [10, 11], introduced his Anxiety/ Uncertainty Management (AUM) theory, which states that anxiety and uncertainty are critical factors influencing communication and intercultural adjustment. The theory states that certain levels of anxiety uncertainty are necessary in order to awake the interest of an individual to discover a new environment and culture but not high enough to scare her/him.

Based on our previous experience developing collaborative application for supporting decision [12], urban planning [13], learning activities in real contexts (situational learning) [14, 15], all them using geo-referenced information over maps, we developed an application based on the AUM theory called “Exploring My Host Country” (EMHC). The application basically supports the foreign students’ process of adaptation to the host country by providing her/him with important and accurate geo-referenced information which is contributed collaboratively by other foreign or local students. Some of this application’s characteristics are mobility (since it can run on Smartphones and Tablets), and positioning (using the device’s GPS). The main differences this platform has with other tourism-oriented social networking sites (like TripAdvisor) is
that this one stresses the communication among users, not only in terms of allowing
dialogues between two or chats between many users but also helping the user to find
contributions from people they would trust better or are more keen to ask questions. For
example, one may prefer contributions from local people while another would prefer
people of the same age, gender or nationality. Communicating with people they trust
(which may be different when searching for one or another kind of information) can
reduce the uncertainty and anxiety while trying to get acquainted with a new culture and
environment.

The rest of the paper is organized the following way: Sect. 2 reviews the relevant
literature about collaborative applications using geo-referencing in order to state that
this problem has not been tackled using this approach yet. It also shows the relevance
of geo-localized information to improve the communication. Section 3 explain the
AUM theory in detail, especially how it is used to overcome the intercultural adjust-
ment of people living in a foreign culture. Section 4 uses the axioms of the AUM
theory in order to identify the basic design principles and functionalities of the EMHC
application. Section 5 describes the application in detail. In Sect. 6 we present a pre-
liminary evaluation of the application and Sect. 7 concludes the paper.

2 Geosocial Media and Collaboration

According to [16], a Geographic Information System (GIS) is viewed as an inherently
interdisciplinary endeavor in which disciplines operated with a variety of scientific
paradigms. It may involve collaborative exploration or mapping meaningful represen-
tations and/or interpreting geographically related data, or making geospatial decisions
collaboratively in various situations like crisis management [17], decision making [12],
collaboratively planning [13], collaboratively defining strategies [18], or conducting
collaborative educational activities by geo-referencing information in authentic contexts
and physical locations, where students can establish significant cognitive relationships
between what was understood inside the classroom and what is visualized in a real
context [13–15, 19]. Among the wide range of self-stated purposes for the GIS initia-
tives examined, Elwood et al. [20] discerned three primary groupings: initiatives pri-
marily oriented toward mapping user-contributed information (geovisualization, 14 %);
initiatives oriented toward capturing, compiling, and integrating geotagged content, data
generated through location-based services, and geo-locational information for place
names (geoinformation, 51 %); and initiatives that allow users to share geo-located
media with others in their professional or social networks (geosocial, 35 %).

Budathoki and Haythornthwaite [21], showed in a comprehensive study which
criteria increase the contributor motivation in geosocial media projects; they identified
intrinsic motivations as altruism, recreation, learning/personal enrichment, self-
expression; and extrinsic motivations as social reward/relations, career, personal rep-
utation, community.

According to [22], the ubiquitous usage of location-enabled devices, such as
smartphones, allows citizens to share their geographic information on a number of
selected geosocial media applications over maps in online portals, in order to mark and
annotate the geographical characteristics or to add geographic location information to
photographs, videos, audio, etc. The use of multiple geosocial media sources for information extraction and knowledge generation in various application domains is a challenging task, both in terms of data management and analysis and in terms of knowledge production. Croitoru et al. [23], states there is a growing interest to apply these technologies to social and politics.

Form the analysis of the reviewed literature we can conclude there is growing interest for geospatial media applications which are developed for various contexts, purposes and scenarios. In some cases they are meant for specific purposes and in other they are designed for general use, like Waze and Foursquare. These applications use georeferenced information over maps and make frequently use of the Global Positioning System (GPS) of mobile devices. The information that should be conveyed (for whatever purpose) is stored in order to be used in a place (the same one or another) describing the place where something interesting is located or something happened. We consider that geo-localization information adds value to the shared information which can be used for an effective communication in the scenario of intercultural adjustment of foreign students having to adapt themselves to a new physical and cultural environment.

3 AUM: Anxiety/Uncertainty Management Theory

AUM theory has been applied to improve communication quality of people adjusting themselves to life in new cultures, [10, 11]. It has also been applied to improve cross-cultural interpersonal and intergroup relationships, to characterize cultural-dependent communication styles [11], and for studying cases of exchange students at schools [24].

According to [10], strangers have uncertainty about host’s attitudes, feelings, beliefs, values and behaviors. Strangers need to be able to predict which of several alternative behavior patterns hosts’ will employ. Strangers also need to be able to explain hosts, attitudes, feelings and behaviors. Whenever strangers try to figure out why hosts behaved the way they did, strangers are engaging in explanatory uncertainty reduction. When strangers communicate with hosts, strangers not only experience uncertainty, they also experience anxiety (usually based on negative expectations, is the affective (emotional) equivalent of uncertainty). Anxiety is the tension, feelings of being uneasy, or apprehension strangers have about what will happen when they communicate with hosts. To adjust to another culture, strangers do not want to try to totally reduce their anxiety and uncertainty. At the same time, strangers cannot communicate effectively with hosts if their uncertainty and anxiety are too high. If uncertainty is too high, strangers cannot accurately interpret hosts’ messages or make accurate predictions about hosts’ behaviors. When anxiety is too high, strangers communicate on automatic pilot and interpret hosts’ behaviors using their own cultural frames of reference. Also, when anxiety is too high, the way foreigner people process information is very simple, thereby limiting their abilities to predict hosts’ behavior. When uncertainty is too low, strangers become over-confident that they understand hosts’ behaviors and do not question whether their predictions are accurate. When anxiety is too low, strangers are not motivated to communicate with hosts. If strangers’
anxiety is high, they must cognitively manage their anxiety to communicate effectively and adjust to the host cultures. Managing anxiety requires that strangers become mindful (i.e., think about our communication and continually work at changing what we do in order to become more effective). Mindfulness is the way that in-group members and strangers can reduce their anxiety and uncertainty to optimum levels. When strangers have managed their anxiety, they need to try to develop accurate predictions and explanations for hosts’ behaviors. When strangers communicate on automatic pilot, they predict and interpret hosts’ behaviors using their own frames of reference. When strangers are mindful, in contrast, they are open to new information and aware of alternative perspectives, and they can make accurate predictions.

In AUM theory, managing uncertainty and anxiety are the “basic causes” of strangers’ effective communication with hosts and intercultural adjustment, while “superficial causes” influence the amount of uncertainty and anxiety foreign people experience. The amount of uncertainty and anxiety strangers experience in their interactions with hosts is a function of many superficial causes; e.g. self-concepts, motivation, reactions to hosts, social categorization, situational processes, and connections with hosts. Figure 1 provides a summary of the basic theory.

AUM theory presents 96 axioms explaining the “superficial causes” and how they affect or relate to the “basic causes” (i.e. anxiety and uncertainty), [10]. The next section explains how “basic causes” and some axioms of the “superficial causes” have been used as fundamental design principles of EMHC.

![Diagram](image-url)  
*Fig. 1. A schema of the basic AUM theory proposed by [10].*
4 Design Principles of EMHC Based on AUM Theory

The design principles of EMHC identified in this section are based on the “basic causes” and “superficial causes” of the AUM theory. EMHC has been designed with the aim of facilitating the generation of geo-referenced contextualized and relevant information. This information will be shared by the foreign and local students in order to maintain the levels of anxiety and uncertainty of foreign students at adequate levels to achieve the intercultural adjustment.

Table 1 shows the most relevant axioms of the AUM theory which were used to state the principle designs of EMHC, and consequently, identify the relevant functionalities (RF), which are described in detail in Sect. 5. From our point of view other axioms could also have been selected to be associated with design principles and functionalities.

Table 1. “Basic causes” and “superficial causes” axioms of the AUM theory [10], used to state the design principles of EMHC classified as relevant functionalities (RF) described in Sect. 5. “Basic causes”: Ax. 38, 29, and 40 for “anxiety, uncertainty, mindfulness and effective communication”. “Superficial causes”: Ax. 66(19) for “Social Categorization of Hosts”, Ax. 26, 27, 28 and 30 for “Situational Processes”, Ax. 34, 35, 36 and 37 for “Connections with Hosts”.

<table>
<thead>
<tr>
<th>Axioms</th>
<th>EMHC design principles</th>
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<tbody>
<tr>
<td><strong>Ax. 38.</strong> An increase in our ability to gather appropriate information about hosts will produce an increase in our ability to accurately predict their behavior</td>
<td>RF2. RF3. RF4. RF5. The generated, shared or commented information about customs of local people together with the search functionalities should improve the capacity to predict the behavior of local people</td>
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<tr>
<td><strong>Ax. 39.</strong> An increase in our ability to describe hosts’ behavior will produce an increase in our ability to accurately predict their behavior</td>
<td>RF2. RF3. RF4. The information generated by local and foreign people regarding the behavior of local people will improve the prediction ability of foreigners about the behavior of locals</td>
</tr>
<tr>
<td><strong>Ax. 40.</strong> An increase in our understanding the host culture’s stocks of knowledge will produce an increase in our ability to manage our anxiety and our ability to accurately predict hosts’ behavior</td>
<td>RF2. RF4. RF6. The information contextualized with geo-localization (through check-in functionality, see Sect. 5) along with brief explanations to better understand the meaning of certain customs in specific places will lower the anxiety of foreign students</td>
</tr>
<tr>
<td><strong>Ax. 34.</strong> An increase in the quantity and quality of our contact with hosts will produce a decrease in our anxiety and an increase in our ability to accurately predict their behavior</td>
<td>RF2. RF4. RF6. The generation, review, classification of the geo-referenced and making comments about the published information should produce a decrease in our anxiety and an increase foreign students’ ability to accurately predict their behavior. The check-in functionality should increase the precision and therefore the quality of the information</td>
</tr>
<tr>
<td>Axiom</td>
<td>EMHC design principles</td>
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<td><strong>Ax. 35.</strong> An increase in our interdependence with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF1, RF2, RF3, RF4.</strong> Creating sessions where students can share information with locals, as well as generating and reviewing, rating, and alert other students about the comments associated to the information decrease anxiety and an increase confidence in predicting locals’ behavior</td>
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<tr>
<td><strong>Ax. 36.</strong> An increase in the intimacy of our relationships with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF4, RF6.</strong> The comments made to the information posted by other local or foreigners may serve to express personal points of view increasing the intimacy of the relationships</td>
</tr>
<tr>
<td><strong>Ax. 37.</strong> An increase in the networks we share with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF1, RF2, RF3, RF4.</strong> Sharing information with locals and other foreigners will promote foreign students to be part of local networks, promoting positive and active attitudes among them</td>
</tr>
<tr>
<td><strong>Ax. 66(19).</strong> An increase in our understanding of similarities and differences between our culture and host’ culture will produce an increase in our ability to manage our anxiety and our ability to accurately predict their behavior</td>
<td><strong>RF2, RF3, RF4.</strong> The shared information concerning cultural patterns could in some cases allow comparing and evaluating similarities between local and foreign customs</td>
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<tr>
<td><strong>Ax. 26.</strong> An increase in the complexity of our scripts for communicating with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF4.</strong> The information about behavior patterns of local people posted by locals will offer foreign students scripts for communicating with hosts</td>
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<tr>
<td><strong>Ax. 27.</strong> An increase in the informality of the situation in which we are communicating with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF4.</strong> Comments associated to the geo-referenced information posted by local and foreign people will allow an informal communication between them which should decrease in anxiety and an increase in confidence in predicting their behavior</td>
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<tr>
<td><strong>Ax. 28.</strong> An increase in the cooperative structure of the goals on which we work with hosts will produce a decrease in our anxiety and an increase in our confidence in predicting their behavior</td>
<td><strong>RF1, RF2, RF3, RF4.</strong> The information shared between foreign and local students generates a collaborative process, expected to result in an increase in the confidence of foreign students in predicting locals’ behavior</td>
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<tr>
<td><strong>Ax. 30.</strong> An increase in the percentage of members of our culture present in a situation when we interact with hosts will produce a decrease in our anxiety</td>
<td><strong>RF1.</strong> Collaboration (through creating, commenting, and sharing information) between users identified as coming from the same country; will allow exchange students decrease their anxiety, as they share their experience with members of their own culture</td>
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however, they would not generate other functionalities than those already identified and therefore are not mentioned in this paper.

4.1 Content of the Generated, Shared and/or Commented Information

EMHC will contain geo-referenced information about the host city about attractions, such as places to stay, restaurants, entertainment, transport, services, shopping, etc.; on which it is expected to describe (both by foreigners and the local) how to proceed in certain circumstances, explain basic communication patterns, reporting specific locations, make recommendations, etc.

By accessing this information, foreign students will be aware of the existence of relevant aspects to know in order to predict the behavior of local people. Foreign and local students can comment on the geo-referenced information iteratively and openly share it with all members invited to a session. Members of a session are invited by the creator of the session which may be foreign or local students. In EMHC, users can create multiple sessions for various purposes, each of which may have different members; for example, to share information on local customs, recreational areas, recommended to eat, of aspects related to studies or general purpose sites.

While posting comments, EMHC users can create alerts for specific persons who they think will be interested in that post. Comments with alerts can be used to address questions to certain people or share information with foreign students which they know are interested in the information posted. Through comments to the geo-referenced information, foreign students can meet their levels of awareness and/or understanding of what usually happens or do in certain places, achieving mindfulness; i.e. foreigners achieve optimal levels of uncertainty and anxiety leading to their intercultural adjustment.

4.2 Format of the Information to Be Generated, Shared and/or Commented

The geo-referenced information will be delivered in capsules of information, e.g. a microblogging style, in order not to overwhelm students with long texts, which could cause even more anxiety. EMHC implements a reward system since users will be asked to rate the usefulness of information with a scoring system. It is expected that this feedback will motivate local and foreign users to use of the application. The geo-referencing of information will be assisted by the use of GPS devices where the application runs. Also, the geo-localized information to be shared may be associated with the record that it was produced in the same place through the “check-in” option. This option is implemented because information generated with the “check-in” option has a greater context value than the geo-referenced information produced remotely, as it has a record that can be associated with greater veracity and accuracy.
5 Description of the EMHC Application

EMHC application has been developed with HTML5, thus users only need a device (Smartphone, Tablets) with any browser and an Internet connection to run it. Users may generate a geo-referenced information at the same place (using mobile devices) or remotely (using desktop computers, notebooks or laptops). After the information is published by its author, all users participating in the session can see, associate comments and/or rate it. The application has been designed for supporting foreign exchange students at a Business Faculty in a University.

This section describes the six relevant functionalities (RF) of EMHC, which were derived using the “basic causes” and “superficial causes” of the AUM theory described in the previous section.

RF1. Create Sessions. In EMHC users may participate in a public session which has been foreseen to be managed by staff members dedicated to support foreign people in an institution, which in the case of our scenario is the office in charge of supporting exchange students. Staff members publish information of general interest for these students like locations of important services, where to buy at convenient prices, or where are the students’ amusement quarters. Foreign or local students may create

![Image of EMHC interface](image_url)

**Fig. 2.** The EMHC interface as shown when running on a Tablet, Desktop Computer, Notebook, or Laptop. The figure shows the georeferenced places over the map and the associated information of each one on the table listing them at the right. The green mark on the map displaying the label “bank” means the user has currently selected it. (Color figure online)
sessions for special interests, like for students speaking a certain language or practicing a certain sport, or a certain hobby to share information about that. Figure 2 shows a session called “Interchange Students” (written on the label at the upper-right corner of the map shown by the application’s interface) which contains information created by the support staff for a prelaminar evaluation of the application.

**RF2. Generating Geo-Referenced Information.** Users may create geo-referenced marks, regions or paths on a map corresponding to locations of interest with information to share with all members of a session. The added information added should contain at least a title. An associated description and images are optional. The published information may also be associated to one or more categories accommodation, restaurant & coffee, commerce, culture, sports, entertainment, foreign, family, finances, properties, religion, health, security, public services, transport, tourism, public utility, volunteering.

It is possible to “fine tune” the location of marks when they are close to a Street thanks to Google-Maps’ Street-View. By activating Street-View (inside the application) users can see 360° images of the streets and the buildings nearby, including the mark that they have put on the map, which can be conveniently moved to pose it on a certain building entrance, statue, corner, bench, etc. thus giving in this way more context information to the post.

![Fig. 3](image.png)

**Fig. 3.** The EMHC interface as shown when running on a Tablet, Desktop Computer, Notebook, or Laptop. The figure shows a polygon geo-referencing an area currently selected by the user. At the right the information associated to this element is displayed: title (“korean ghetto”), a description (“watch out”), and a couple of comments emitted by other users. The stars allow users to rate the contribution assigning 1 to 7 stars. In this case it has 0 starts, which means it has not been rated yet.
Fig. 4. View of EMHC user interface running on a Smartphone. The figure left shows information searching options. The figure at the right shows a path with a sequence of three entries labelled “Museums Sequence”. The points are labeled with the numbers 1, 2 and 3 showing the order of the sequence.

In order to geo-reference regions the user can chose circles, polygons, rectangles or lines. However, these are not shown on Google-Maps’ Street-view. Figure 3 shows a geo-referenced polygon. In order to increase the quality and quantity of the shared information it is also possible to use polylines to geo-references of places (see Fig. 4). This option is useful when there is the wish to inform about a tourist route or recommend a way to go from one place to another.

RF3. Reading Geo-Referenced Information. By default, all geo-referenced inputs made by users of the current session are displayed as a list (see the right side of Fig. 2). When clicking over the name of an item of this list, the geo-referenced element is immediately displayed on the map with green color and a label on it (as shown with “bank” on Fig. 2), centering the map on the geo-location of the selected element and zooming to show the element and its surrounding context. The list can be shown in three different ways: (a) the list contains all entries showing their title, author, creation date, rating obtained and category to which it belongs (see the list of places geo-referenced to the right of the interface EMHC in Fig. 2), (b) the list contains only those elements created by the user showing their title, creation date, number of times all users visited the geo-referencing, the assigned rating, the number of comments made, and whether it was created with the check-in functionality; (c) the list contains all elements created by all users in the current session, showing title, creation date, the number of times that all user visited the geo-referencing, the average rate, the number of comments received by all users, and whether it was or not created with the check-in functionality.
For the three variants the lists may be ordered by any of the attributes shown, that is, the title, date, rating, comments received, etc.

**RF4. Commenting on, Rating and Alerting about Contributions.** For entering a comment associated to a certain geo-referenced element it must be selected either using the list or the map. Comments may include pictures. The length of the comments is limited in order to avoid having large entries which would discourage people to read them. All users of the session may comment and/or answer to previous entered comments (see right of Fig. 3). Contributions can be rated with 1 to 7 stars, with 7 being the highest score according to the usefulness and accuracy of the information provided. The rate shown for each entry corresponds to the average of all ratings received.

Optionally, alerts may be sent to one or more users of the session every time a user posts a comment. These alerts are reported to the receiver user with a number on the menu item icon with the shape of an envelope (see Fig. 3); which when activated, displays a list of all received alerts (which are marked with a number corresponding to the number of alerts received). By choosing one of these alerts, all information corresponding to the associated element is displayed, along with its location on the map.

**RF5. Information Search in EMHC and Google-Maps.** Searching for contributions having certain information which the user is looking for may be done in two ways: (a) by navigating on the map, supported by zoom-in and zoom-out options; that is, a search for geo-referenced elements by location; (b) through the simple and advanced search options which implement a query-by-example interface allowing the search based on the entries’ attributes like author’s user name, gender, nationality, language (or languages) that the author speaks. It also possible to search for contributions made within a range of dates (see EMHC interface on the left of Fig. 4).

**RF6. Check-in Functionality and Comments.** The check-in option can be optionally used by a user in order to communicate she was in (in case of areas) or very near (in case of marks and lines) the position of a geo-referenced contribution. It can also be used to by a user to communicate that she was on site when making a comment associated to a geo-referenced contribution. When the check-in button located at the bottom of EMHC is pressed, the generated geo-referenced contribution acquires the geographical location information of the place where this was created.

## 6 EMHC Initial Evaluation

There are several dimensions in which this tool could be evaluated, such as usability and suitability, but also from perspectives such as technology adoption. Of course, it is also a matter of available resources, since a comprehensive evaluation may be very expensive [25].

An opportunity for initially trying and evaluating EMHC was an international school organized by the Faculty of Economics and Business of the University of Chile in Santiago in 2016. A large number of graduate students from a variety of countries attended that school. So, it appeared natural to test a system prototype with those students.
Therefore, a few days after the students had arrived to Santiago, they were invited to a session in which the system was presented. Then, the students could play with EMHC installed in some computers. Finally, they were asked to fill a questionnaire. Five students from Europe, two from North America and one from Asia answered the questionnaire. We analyze their answers below.

Half of the students felt they had some difficulties to interact with people from the host country. This confirms one of the assumptions of our research. By contrast, all the respondents found “easy” or “very easy” to interact with their classmates.

Concerning their initial opinions on the prototype, 3 students answered the application had some value, 3 said the application should be useful, and one student said it would be very useful. All students also said they would read contributions made by peers. However, about half of the students did not think they would make contributions.

Another question concerned the utility of the geographic localization of comments. There were four options to answer: very useful, somehow useful, not too useful, a nuisance. About half of the students answered “very useful” and the other half said it was “somehow useful”.

Finally, the questionnaire had a space for giving open opinions. Some of the students mentioned they would have liked to have the phone version of the system available (they just tried the PC prototype). One student mentioned the system should look similar to other systems (like Google reviews or TripAdvisor) in order “not to discourage people who are not tech friendly”; we see here a technology adoption oriented advice.

All in all, the respondents had a positive initial evaluation of the prototype. However, we should take into account they are young educated adults, who typically are users of technology. The results could have been different with senior adults, for example. On the other hand, perhaps senior adults would have more anxiety about a foreign country than young adults. We certainly need additional evaluation and with the smartphone version as well.

7 Conclusions

The reviewed literature shows there is transient problem with people arriving to visit a new country: the anxiety and difficulties concerning the relationships with local people at the beginning. Different culture, language, way of interaction, etc. are typical barriers to a relaxed life during that period. We propose a technological support based on a kind of social network: people in similar situation sharing their tips on how to visit a city. People who have already passed the same experience can also join the network as well as good willing hosts. The design of our technological support, EMHC, incorporates geo-localization as a way of simplifying and making comments and suggestions more visually-oriented.

The initial evaluation of the tool shows a group of graduate students in a situation like the target of this research found it appropriate and useful. However, further validation is needed and with other types of visitors.

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