

## *Gaming and Peer to Peer Language Learning*

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### **Abstract**

With the encroaching use of online teaching material teachers have an abundance of materials available to make their lessons more effective. . This paper examines the effects of digital media, in particular gaming, in how it can assist students in second-language acquisition It indicates why students are spending more time gaming than in the language-learning classroom as the traditional roles of teachers are being partially transformed. It takes into consideration that most game sites preferred are not in a student's mother tongue, and that students who study courses, such as air transport, must have some knowledge of English to eventually work in that field. Part of its conclusions derive from a cross-sectional questionnaire distributed to groups of over two-hundred students conducted at a Czech technical university, involving five different faculties, from the first to fifth year of study. The supplementary conclusions are formed through the implementation of a game focused on air traffic control simulation, and observations which look at how students are learning from each other in a language-learning classroom

Keywords: participatory activity, power distance, uncertainty avoidance

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## **1. Introduction: gaming versus language learning textbooks**

The history of gaming is linked with the evolution of the computer and has been similarly developing as new technologies are enhancing how games basically function. It was only with the introduction in the 1970s of multiplayer games that players were able to communicate and interact with other gamers in different ways. According to 2014's Essential Facts about the Computer and Video Game Industry, gaming is also becoming more acceptable in households and about 60% of Americans play some sort of video games, and about the same percentage of increasingly involved parents believe that they have a positive role in life and learning [1]. In Scientific American Elena Malykhina has stated that almost 80% of teachers surveyed have found using video games has improved the performances of low-achieving students [2]. In contrast, schools in East Asia generally do not approve of incorporating digital gaming into their curriculums, as it is often seen as additive and not educational [3]. Moreover, the autonomy of being in a distant virtual environment may also create a milieu where people can be nasty and try to manipulate or mislead you. So, is it possible that something which is entertainment-oriented and with the potential to cause harm, can also be learning-oriented, and thus real edutainment? So, what is its attraction and why is it becoming increasingly popular mostly among young people?

Firstly, it can offer a relief from the stress of school and life in general, and according to the findings of Krashen [4] and others a second language is best learnt when anxiety is low. All you need is a net connection which is easily accessible today. Unlike traditional language learning textbooks it comes with great, graphic technologies that allow you to be competitive, co-operative or something in-between depending on your style and interest. Unlike the classroom it offers a variety of participants from across the globe. You can become involved in a participatory activity where you can be creative and can show your talent on social websites to the world, and where you can learn strategy and tactics and gain experience. And correspondingly Thorne [5] has found that if a computer game like World of Warcraft is expanded to a international exchange it leads to an increased motivation in language learning. If you play the same game repeatedly you can be constantly updated about your progress. And in addition to teaching you technical skills such as basic coding principles, you can exercise your spatial thinking, reasoning powers, memory, perception and problem-solving ability.. Like all games, they are usually more fun and enjoyable than the prescribed curriculum in a classroom, and you may be learning something although you don't realise you are learning. One school in NYC, believing in its benefits, has even integrated video games into its curriculum to help teach thinking skills. [6] In order to see if this makes the role of a teacher and language-learning textbook more obsolete in this age of increasing competing interests, we have to examine the use of gaming in the classroom, and what is happening during gaming in more detail by asking the students about their own perceptions.

## **2. Examples on how gaming has been implemented in the classroom**

Although initially not involving virtual, collaborative communities, the first online games for English language learning were equipped with self-correcting mechanisms, which indicated to learners where they were going wrong. For a list of these some of these tried and tested sites you can see 25 Terrific Online Games for English Language Learning [7]. In a way it is similar to learning a language from a textbook with the keys in the back, but with more attractive graphics and sound, and also seems to have the teacher-student interface removed. It wasn't until a little later on that online gaming involving direct and indirect language learning put the human factor back on a digital basis. We can look a number of successes in using it to enhance a whole range of subjects. For example, James Hinton [8] has asserted that the MMORPG commercial game Civilization IV is useful in teaching ancient world history. And there is Minecraft for the teaching of biology and Portal 2 for teaching how scientific processes work. More specially in regards to language learning Sandra Rogers [9] has outlined the benefits of using model language support and problem based learning for increasing vocabulary and motivation, finding EverQuest2, The Sims and a Nori School Education Game more tailor-made to students' individual needs, especially if supplemented with ESL material. And Peterson [10] has attributed the use of Computer-Aided Language Learning (CALL) for students taking more responsibilities in their educational interactions and in being more engaged in target language dialogue. As an illustration of how gaming is becoming more part of the curriculum at higher education institutions one can look at a course offered to language teachers by Georgia Tech [11].

## **3. A Questionnaire on peer to peer learning**

With increasing development in teaching technology there has recently been more discussion on the place of peer to peer learning, which contends that students would be more interdependently active in the learning process if the proper conditions were provided. One way to test this is to examine how students approach learning by seeking out their opinions on the effectiveness of lectures and tutorials or lab exercises in smaller groups. And to focus on how both instructors and the students are contributing to the learning process. To do so a cross-sectional questionnaire (see Appendix A), where it was possible to check more than one answer and add comments, was distributed to 250 students from five faculties from the first to fifth year of study at a technical university in the Czech Republic.

Since the Middle Ages lectures have been used in higher education to instruct students on the fundamentals of a subject. Over the years the ways of presentation and interaction have been somewhat modified as new approaches to education and teaching aids have developed. So the students were asked to analyze their current, perceived effectiveness. Under the category of "What do you do when you don't understand a teacher during a lecture?" (Tab 1) according to frequency of response twice as many students stated they would rather ask another student than ask the lecturer in front of the larger group (up to 200 students). Some of the reasons given why are that students don't want to stand out as it would be in any other large

gathering scenario, and the reasons they gave included it was due to laziness, indifference and claims of humbleness, and it depended on the situation and teacher and their comfort with the situation. A number of students mentioned being too shy, while some others wrote they didn't want to interrupt the lesson or "waste a teacher's time with a petty question." Others mentioned that it was due the lack of time or the fact they were sitting too far away to be heard. Some students blamed themselves for a lack of understanding and commented that they should have been informed from previous lessons and maybe had a lapse in concentration. Part of the reason could be that according to Hofstede and other sociologists Czechs have been perceived as having a highly relativist culture [11], meaning that they believe there are few absolute answers in life. And also due to their high rating on the respect for power distance scale they are perceived to be less likely to directly express their queries or comments to someone considered superior compared to some other cultures.

Table 1: see Appendix A Question 1

When a lecture is not clear what do you do?	Frequency of response
Ask the lecturer to explain	70
Ask another student for help	154
Forget about it	10
Find the answer on-line	46

Lab exercises and tutorials or seminars have a more recent history and are set up to be more interactive and give in more detail the topics introduced during the lectures. When referring to a similar situation of not understanding as in the first part of the questionnaire, but in a much smaller room with smaller groups (15 - 20) the opposite response was indicated in that more than twice the students would ask the teacher, and much smaller numbers would forget about it or find the answer on-line. (See Table 2) Under the comments a few students mentioned that teachers/tutorial assistants don't like being disturbed or one that wrote that some teachers are not good for help.

Table 2: See Appendix A Question 2

When a tutorial topic isn't clear what do you do?	Frequency of response
Ask the teacher to explain	192
Ask another student for help	84
Forget about it	6
Find the answer on-line	20

The traditional ways of learning through lectures, lab exercises of tutorials were preferred to individual study although according to the frequency of response about one third of the students wrote they would (also) prefer to do their research or learn on-line. (see Table 3) Nevertheless, one must keep in mind that most students do not know any other form of instruction and could not really personally compare their experience with a different learning format. We can also extrapolate on this in that

according to Hofstede and others most Czechs are wary of situations or organized activities which are not clear (uncertainty avoidance) and that students live in a culture which less individualistic than other cultures promoting peer to peer learning more [12].

Table 3: See Appendix A Question 3

What is your preferred way of study	Frequency of response
Going to lectures	90
Going to lab exercises or tutorials	130
Doing on research	50
Learning on-line	46

Placed in a similar situation and asked their response if a fellow student also stated something that was not clear or disagreed with most students wrote they would ask the other student to explain further or tell what they think in almost in equal number.(see Table 4) Very few would keep their opinions to themselves or feel the need to call upon the teacher for guidance.

Table 4: See Appendix A Question 4

What do you do if you disagreed with a student?	Frequency of response
Ask him/her to explain	156
Tell him/her what you think	147
Keep it to yourself	15
Include the teacher in the discussion	4

Although most students found the lessons interesting they still suggested ways on how to make the lessons more attractive or effective. All students filled in the part on how to make the lessons more interesting, and mostly urged more teacher-student interaction, more on-line support and better prepared teachers in their frequency of response. (see Table 5 ) About one-fifth wrote that it really depended on themselves and one-sixth called for less class time and more student- oriented activities. Focusing on the comments one student even wrote that teachers only teach what they have to and others wrote that teachers needed better attitudes or to needed to be happier. Other individual comments were complaints that students were repeating what they had already learnt at secondary school, and that more specialized study was needed as well as more activities to develop creativity.

Table 5 See Appendix A Question 5

How could lessons be more interesting?	Frequency of response
More student/teacher interaction	82
More visuals/on-line support	74
Better prepared teachers	50
It really depends on me	38
Less class time/more student-centered activities	30
More group activities	28

Despite the fact that consultation hours are provided to individually aid students who seek further explanation or guidance, most students don't visit teachers during their consulting hours, which they are informed about at the beginning of the semester. (see Table 6) Most students who take advantage of them are mostly post-graduate students who have to discuss their dissertation work and thesis and project work individually with a supervising teacher. As to why most students don't consult a teacher directly during consulting hours, most of the comments related to not having enough time or not needing extra help. Some comments again referred to shyness or some personal objections. One wrote he/she would only visit a teacher as a last resort.

Table 6: See Appendix A Question 6

Do you go to consultation hours?	Frequency of response
Yes	66
No	178

Although not wanting to take advantage of a more in-depth study of a subject, from the responses of the students it seems most are generally satisfied with the traditional form of learning in a classroom. And in regards to the effectiveness of using the format of a lecture, which critics see as a promoter of passive learning, and depends both on the teacher and the student, most students would prefer to seek information from another student rather than consult a teacher. As students have indicated tutorials seem more beneficial, and due to numbers and organization one would have to focus on smaller groups to realistically implement any sort of effective student-oriented learning. There doesn't seem a widespread urge to introduce much peer to peer learning, which may be influenced by the fact that according to the findings of Hofstede and others Czechs are only mildly individualistic, but more importantly have a high score in uncertainty avoidance. This means that most students would be uncomfortable without a clearly structured teacher -guided curriculum. Therefore if used, it should be used only partially in and outside the classroom to supplement lessons.

#### 4. Peer to peer learning and gaming

Peer to peer or student to student learning is big on collaboration, in which a main objective is to develop a number of communication skills to facilitate learning.

Largely exemplified by STAD (Students to Teams - Achievement Divisions) learning and jigsaw learning, where students assemble puzzles together, these methodologies have been shown to reduce differences in mixed ability classes, and focus on each student's readiness, interest and ability. In regards to gaming, Andrea Nugent [13] specially mentions her positive experience in enhancing learning when students form guilds with other unknown students. Co-operative learning in gaming, whether students are in the same room or not, present students with challenges where they can feel more comfortable in formulating questions, doing project work and brainstorming creating a forum where positive interdependence is assured while still maintaining individual accountability for a teacher's assessment. In practice, any type of student pairing or grouping, largely based on knowing a student's strength and weaknesses should be relatively regular to develop routines and trust, but not dampen enthusiasm. This can enforce learning and enable students to find many of the answers themselves and from each other while developing their social, cognitive and memory skills. No matter however a teacher divides up a class, the effectiveness of gaming mostly depends on how thoroughly a teacher is able to monitor a class and to establish rules, and to be best able to tie together gaming with the objectives of the study curriculum.

## **5. The transitional role of a teacher**

This does not mean that a teacher is always central stage. In a classroom, a committed teacher plays multifaceted roles which include that of an information provider, organizer, assessor and prompter. And at the same time the new tools of technology and transforming educational environments are affecting how much time students are willing to devote to traditional learning scenarios. For example Sylvén and Sundaquist [14] studies have found that serious gamers are reading fewer books. Nevertheless, perhaps in reaction to limiting access to gaming in schools, Chik [15] sees that language learning is being passed on to wider extra-curricular communities who take on the roles of language teachers, and thus are generally depriving students of some purposeful learning guidance and of being corrected.

Since the time of American educator John Dewey there have been many arguments for both teacher and peer to peer learning in regards to having things under control, and in having students becoming more independent especially in the own decision-making. The argument is by having students work together it could provide a way to keep students more interested in what they are doing.

One can go all the way back to Socrates to question the real role of a teacher. Inevitably, by allowing at least part of a lesson to be devoted to student-oriented gaming -learning activities a teacher consciously forsakes his/her role as mostly as imparter of information and becomes that of more of a facilitator or prompter.. As H. Brown Douglas [16] has found success in language learning largely depends on the rapport teachers establish with students. It can also give a better chance to examine how engaged students are in dealing with the challenges and problems in grasping a foreign language even if there may not be many opportunities to practice grammar [17].

If implemented with intelligence combining gaming with an emphasis on peer to peer learning can be more effective and interesting than focusing only on more traditional forms of teaching and learning. As to methodology, Jeffrey Froyd [18] gives tips on how to gradually switch from a teacher-oriented level at a higher education institution. By taking on the role of an enhancer, a teacher, also becomes a type of participant in the lessons, using questioning strategies while able to correct serious misconceptions in grammar, spelling and pronunciation, empowering students and allowing them to focus more on their own social interaction, creative abilities and on thinking critically.

## **6. Gaming and peer to peer learning: A practical example**

So if students seem to be learning from each other directly or indirectly during gaming, and if there is some desire for more student oriented learning allowing a teacher to take on a more secondary role why not try to partially put it in practice during a weekly lesson? For about 20 years the Institute of Transport of the VŠB - Technical University of Ostrava has provided instruction focused on specialized English for the subject Air Transport. To help those interested in aviation study, technology has increasingly allowed it to be possible to partially supplement tutorials with visual aids and gaming software. Among the many games available, we can look at one variant of an Air Traffic Controller game focused on Instrument Flying Rule conditions downloaded by the teacher because of its emphasis on speaking. Before full implementation, it was most important to emphasize to the students that safety has the utmost consideration and that correspondence should most of all be standardized and clear. It was also good to remind students that both controllers and pilots are working together as a team, but in the ultimate situation the final decision on what to do falls on the pilot. This game was set up in thirty minute blocks as part of a lesson where students were initially primed in which vocabulary and phrases would be used during different phases of air traffic movement, such as take-off/landing, in-flight situations, meteorological conditions, emergency procedures and taxiing. This regular format allowed both the teacher and students to mention, check and record the common human communication errors that result in most airplane accidents, between pilots and air traffic control, in written and spoken form, mostly involving common hearback and readback errors.

With closer examination we can now look at how well the four basic language skills (reading, writing, speaking, listening) were exercised during various phases of the pilot-controller correspondence and draw conclusions from teacher observation and student feedback.

### ***Listening***

The listening aspect involved more teacher intervention than needed for the other language learning skills. Although the readability of the frequency was constant within one or two classrooms, besides similarities between certain words such as "want" and "won't" (it is recommended to use "will not") and "lose" and "loose", it was noticed that students had some problems recognizing some phrasal verbs which

are not that common in aviation terminology, such as "run up" (warm up an engine), confusing "push up" with "pull up" (meaning to pull the throttle towards oneself after landing), and in particular the words "go ahead" meaning to speak and not to move forward. Other findings included the leaving out of prepositions, such as in the phrase "Hold short (of) runway 04" and "according (to) weather conditions", and hearing "cleared to take-off" instead of "cleared for take-off". A possible explanation for this is given by a study at The University of Southern Bohemia which cites examples of difficulties native speakers of Czech sometimes have in catching small connection words and prepositions. due to the inflection of their own language [19].

### ***Reading***

Students can practice the reading aspect of language learning while gaming largely through perusing introductory instructions and being informed what to do next when moving on to higher levels of advancement. And it was both during the listening and reading parts that the students said they had learnt the most. Among the new vocabulary gained were words such as "galley" and "fume", and new synonyms such as "orbit" instead of "circuit", "adverse" instead of "bad", "fly-by-wire" instead of "electronic", "furnish" instead of "equip" or "supply" and some new terms such as "dead reckoning", "lean fuel mixture" and "to bleed air": It should also be noted that there was also some confusion with aviation terminology when coming upon words with multiple definitions such as "pitch" (the longitudinal movement of an aircraft or the position of the propeller), "hold" (cargo space, or to stay in the same position), "flare" (a signal gun or the approach angle of landing) and "roll" (moving on the runway before and after a flight or the banking movement of an aircraft).

### ***Writing***

Data links, with which some standard messages can be automatically sent or created, are becoming more and more used as a safeguard against verbal communication loss in real aviation situations. Similarly student gamers are periodically required to contact each other electronically depending on the game used where they are required to write in instructions or responses, Most of these tasks required short responses and most spelling errors (mostly spotted by the teacher again) were connected to mixing up similar words such as "except" for "expect", "sealing" for "ceiling" (the height of the clouds) "altitude" (flight level) for "attitude" (the airplane's position), "circle" instead of "circuit", and "breaking" instead of "braking". Other errors reflecting the difficulties of the non-phonetics of the English language and what students are used to hearing were with the misspellings "heigth", "weigth", "wind sheer", "fuel reminder", "maintainance", "intension" and "missfiring", and using "advice" for "advise". "Wilco" meaning "I will comply" was spelt "Willco" and the message transmitted when a plane is lost from the controller's screen for more than thirty minutes INCERFA was written UNCERFA. (probably a mix-up with the word uncertainty).

## *Speaking*

Among the spoken mistakes uncovered were for example saying "period" instead of "decimal" in giving as frequency or QNH reading, "inbound" instead of "outbound", confusing "ascend" with "descend", not announcing a fuel emergency, using past participles instead of simple continuous forms such as passed instead of passing, telling a pilot "to turn right" instead of "to turn left" or using a simple present statement (turns left) instead of the imperative form (turn left) and using "nine" instead of the standardized aviation appellation "niner". Also most students used the standard pronunciation of "three" and "thousand" when they should be the standard aviation pronunciation "tree" and "tousand". Despite this students were also relatively good in spotting when non-standard phraseology was not used. They pointed out the misuse of the term "alright" instead of using proper terms such as "roger" or "affirm". They also spotted a controller using the phrase "Forget it" instead of "Disregard".

Generally, among the most common errors detected by both the teacher and students were confusions due to call signs, pilot expectations and frequency changes, resulting in such things as altitude deviations, less than standard separation, giving the wrong aircraft accepted clearance, operational errors and heading and track deviations. Also of interest students were more amenable to take correction from the teacher in most cases, and from other students when errors did not involve phrases but numbers such as those used for flight levels, airspeed and headings. Only once or twice per four classroom periods did students catch their own mistakes and correct themselves without prompting from another student or the teacher.

Some students stated it is better to do this type of activity with people who share the same first language and that they had more difficulties in understanding when exposed to specific dialects from around the world when listening to recordings from various airports or in-flight recordings. Also connected to this, some sought the teacher out to verify the pronunciation of words pronounced differently in American and British English such as "direct" or "via". To give an overview of the above findings we can look at the series of logs which were completed during and after 30 minute-block sessions, and are enough in quantity to give us an idea on the effectiveness of peer to peer learning. They were used while supplementing regular tutorials in Aviation English, during which students periodically exchanged roles and were corresponding in a readback-hearback loop in one or two classrooms (using microphones). In the following tables you can compare the frequency of contributions and observations of both the teacher, mostly conveyed after the exercise, and students, mostly during the exercise.[ See Tables 7 - 10].

Table 7: List of Errors Recorded on February 1, 2017

Type of error	Teacher	Other Students	The Student Him/Herself
Readback Errors			
Similar call signs (3 times)	X (3 times)	X(2 times)	-
Wrong heading	X	-	-
"Cleared to" instead of "for"	X	-	-
Saying inbound and not outbound	X	X	X
Saying "want" instead of "will not"	-	X	-
"no" vs "negative"	X	-	-
Hearback Errors			
Wrong runway in use	X	-	X
Wrong altimeter setting	X	-	-
Wrong airspeed for separation	X	X	-
Using "nine" incorrectly	-	X	-
Giving the wrong heading	X	-	-
Using "ignore" and not "disregard"	X	X	-
Giving the wrong flight level	X	-	-
(via)	-	(X)	-
New vocabulary			
fly-by-wire, furnish, flare, to bleed air, to equip,	-	-	-
Spelling mistakes			
Heighth, maintainance, circle vs circuit	X	-	-

Table 8: List of Errors Recorded on February 8, 2017

Type of error	Teacher	Other Students	The Student Him/Herself
Readback Errors			
Wrong runway in use	X	X	-
QNH (pressure level) incorrect	X	X	-
Using "period" instead of decimal	X	-	-
Confusing "lose" and "loose"	X	-	-
Incorrect clearance	X (2 times)	X	X
(direct)		(X)	
Hearback Errors		-	-
Using "forget it" instead of "disregard"	X	X	
Saying Maximum Take-"Of"	X	-	-

Type of error	Teacher	Other Students	The Student Him/Herself
Weight			
Wrong frequency in use	X	X	-
Saying "three" and not "tree"	X	X	-
Confusing "fill" and "fuel"	X	-	-
Saying "won't" instead of "will not"	X	-	-
Wrong heading given	X	-	-
Similar call sign	X	X	-
New vocabulary			
Dead recognizing, roll (on the runway), adverse weather			
Spelling mistakes			
Fuel reminder, weight	X	-	-

Table 9: List of Errors Recorded on February 15, 2017

Type of error	Teacher	Other Students	The Student Him/Herself
Readback Errors			
Giving no readback at all	X	X	-
Confusing "altitude" and "attitude"	X	-	-
Hold short (of) -not used	X	-	-
Wrong number of POB (persons on board)	X	X	-
Saying advice instead of advise	-	-	-
Wrong flight level in descent	-	X	-
Hearback Errors			
Wrong transponder code given	-	X	-
Saying "thousand" not "tousand"	X	X	-
"pitch" understood incorrectly	X	X	-
Wrong airspeed indicated		-	-
Saying "engine run out" instead of "engine run up"	X	-	-
Using "All right" and not "Roger or Affirm"	X	X	-
Confusing "push up" with "pull up"	X	-	-
Not using the imperative form "Turn left" but "turns left"	X	X	-
New vocabulary			
Orbit, pitch (of propeller)	-	-	-
Spelling mistakes			
Missfiring, wind sheer, breaking	X	-	-

Type of error	Teacher	Other Students	The Student Him/Herself
vs braking action			

Table 10: List of Errors Recorded on February 23, 2017

Type of error	Teacher	Other Students	The Student Him/Herself
Readback Errors			
Wrong flight level understood	X	X	-
Wrong separation given	X	-	-
Not announcing a fuel emergency	X	X	-
Entering wrong taxiway	X	-	-
According without "to"	X	-	X
Wrong aircraft accepts clearance	X	X	-
Hearback Errors			
In wrong sequence to land	X	-	-
"Go ahead" understood as "move forward" and not speak	X	X	-
Confusing weather BECOMING and TEMPO	X	-	-
Confusing "ascend" with "descend"	X	X	-
Saying turn left instead of right	X	-	-
Using PAN PAN PAN instead of MAYDAY in emergency	X	X	X
Using "Repeat" instead of "Say Again"	X	X	-
Taking off without clearance	-	X	-
New vocabulary			
Galley, fume vs smoke, hold	-	-	-
Spelling mistakes			
Maintainace, intension, WILLCO, UNCERFA	X	-	-

As you can see from the tables all three target groups contributed something to the exercise in various ways. Although the gaming exercise was repeated with slight variations in regards to the number of pilots and controllers, it was the teacher playing a somewhat subordinating role in trying to gauge the contribution of peer to peer learning, who most often spotted errors the students didn't. In contrast the participating or observing students usually immediately spoke up when they detected something wrong, and mistakes were mostly corrected but sometimes repeated. One can see that allowing students to rely on themselves during focused gaming has a partial role to play in enhancing motivation, learning new vocabulary and making the classroom more fun, but it seems that no matter what facilitating role the teacher has,

students will mostly tend to defer to his/her decisions and observations in the long run.

## **7. Conclusions**

Improving one's proficiency in a foreign language, whether it be reading, writing, listening or speaking, can depend on how much time is spent using it on-line. And it mostly depends on whether a student is spending time conjuring spells or exterminating virtual enemies, or directly or indirectly learning how an engine works, or using a mouse to place oneself behind a cockpit control column.

As the questionnaire on peer to peer learning has indicated due to personal and cultural reasons there isn't a great call for change in the traditional teaching structure. However, as also indicated students believe there is still room for improvement and more student-oriented activities. As shown in the gaming exercise focused on aviation, a teacher can enhance a lesson from time to time by stepping back and allowing the students themselves to reinforce and clarify responses and find the answers themselves. It also gives them a chance to feel more comfortable and confident in second-language speaking activities, which can create momentum to promote student-oriented learning in and outside the classroom. It also allows the teacher and students to be guides in the learning process, which can prevent mistakes from being repeated and reinforced, as there are no standard, corrective measures when playing games in a second language outside the classroom.

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## Appendix A Questionnaire on Peer to Peer Learning

1 What do you do when you don't understand a teacher during a lecture (with a large student group)?

a) ask him/her to explain b) ask another student for help c) forget about it d) find the answer on-line

Other (please explain):

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If not a) why don't you ask the teacher for help?

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2 What do you do when you don't understand a teacher during a tutorial/lab exercise? (with a smaller group)?

a) ask him/her to explain b) ask another student for help c) forget about it d) find the answer on-line

Other (please explain):

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If not a) why don't you ask the teacher for help?

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3 What is the best form of learning for you?

a) going to lectures b) going to tutorials/lab exercises c) doing the readings/research myself d) learning on-line

Other (please explain):

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4 What do you do if another student says something which is not clear or you disagree with?

a) tell him/her what you think b) ask him/her to explain more c) keep it to yourself

5 How to make university lessons more interesting for you?

a) more student/teacher interaction b) more visuals/on-line support c) better prepared teachers

d) it really depends on me e) less class time and more student-centred activities/assignments

f) more group activities

Other (please explain):

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6 Do you ever visit teachers during their consulting hours? Yes No

If yes, why

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If no, why

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