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Language Learning Games: Why, When, and How

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Abstract

A long tradition exists of using learning games in language classrooms. However, little formal research backs up this practice, and many collections of language learning games focus on vocabulary drills in behaviorist approaches. Linguistic levels are related to learning theories and this analysis is used to suggest more specific approaches to the inclusion of language learning games in classes. Additional opportunities for research are proposed.

Overview

> The problem is this: few students – less than 5% -- are able to endure the *stressful* nature of formal school training in languages. The task is to invent or discover instructional strategies that reduce the intense stress that students experience. The goal is to develop an instructional strategy that has enough motivational power to persuade 75% of students who start language study, instead of the current 15%, to continue into the third year of language training. If students get through the third year, the probability is extremely high that they will continue for advanced work.
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> (Asher, 2000, p. 2-2)

Learning games and game-like activities have a long history of use in classrooms. Activities structured as games can provide concrete practice for learners, while reducing the tension and anxiety often encountered during the learning process. Games can help with motivation, particularly cooperative games, and are easily adjusted in difficulty to reflect the learning levels of the students. Games are also a way to be sure all learners are included in the learning effort, not only a few highly motivated or extroverted students.

Language learning environments, in particular, can benefit from the use of learning games. Because games are often based on real-life activities, they offer an opportunity to practice the realistic use of language to communicate. Use of language serves an immediate functional purpose, and the tasks embedded in the game generate interest by the nature of the game and its goals. Games can be adapted to emphasize fluency, as in timed games and races, and accuracy, as in memory-based competitions and other judgments of skill. Although language used in games may be repetitive in places, there is usually also plenty of opportunity for unrehearsed use of language, as well. Games encourage learners to experiment with and explore the target language.

Because of this, it is argued that although games can be used to review existing language content, they need not be limited to this use. They can also be used to explore and acquire new language content. Certainly, they deserve a primary place in the language classroom lesson plan. As Friederike Klippel notes, “Since communicative aims are central to these activities they should not be used merely as fillers or frills on the odd Friday afternoon, but should have their place in revision or transfer lessons.” (Klippel, 1984, p. 6)

However, not all language learning games are equivalent. Some are helpful in practicing individual vocabulary words, while others involve the students in complex discourse. Still others take advantage of modern computers and their multimedia capabilities to provide rich, authentic linguistic experiences, either in the classrooms or in self-study. Although there are many reference works describing language learning games, few provide specific or helpful guidance regarding appropriate linguistic level. This article attempts to address that area in a preliminary way.

It may be useful to make a distinction between *games* and *language activities*, in that all language activities involve using language for a specific communication purpose, but a game is a type of language activity involving a competitive element and/or scoring (either of individuals or of teams). Both games and language activities encourage a more relaxed atmosphere and provide contextualization of the language elements being learned, but games add the competitive element, where as non-game language activities tend to be more cooperative. The author’s experience has been that younger learners are happy to play games, but older learners may prefer non-game language activities. This could relate to some findings in the literature that game effectiveness may be inhibited when some students refuse to participate (e.g. Huyen & Nga, 2003).

This difficulty may be in part due to the sometimes negative influence of competition on learner esteem and confidence. While competition can help to spur more effort, it can also lead to extrinsic motivation and a performance-avoidance achievement goal orientation, rather than intrinsic motivation and a mastery goal orientation, which have been shown to lead to more enduring learner benefits (Kaplan, Middleton, Urdan and Midgley, 2002).

Recent Research

Learning games and activities

The use of games to promote learning is widespread in contemporary Western education systems, and is described at length in references such as Forte (1974) and Silberg (2004). Clark Quinn, author of *Engaging Learning*, notes: "Learning can, and should, be hard fun." (Quinn, 2005, p. 11) "The evidence is that learning is most effective if it attracts the attention and interest of the learner, is obviously relevant, requires action on the part of the learner, and is contextualized so that the learner understands how and when to apply it." He later continues, "Games for learning are not just a guilty pleasure! The evidence is clear that rich environments and story lines are more engaging and more effective." (p. 15) Quinn quotes Lepper & Cordova, 1992: "adding story enhancements to mathematics instruction improved outcomes." (p. 12) He then continues:

> To put it another way, we need learning experiences that provide interesting goals set in meaningful contexts in which learners explore and act to solve problems that are pitched at the right level. Their actions should result in meaningful feedback from the world about the consequences of those actions. Further, the learning experiences should gradually increase in difficulty until learners have achieved the final level of performance and accomplished the goal. (p. 37)

Quinn describes the basic elements of engaged learning as theme, goal, challenge, action-domain link, problem-learner link, active decision making, direct choice implementation, feedback, and affect.

James Paul Gee, linguist and educator, also emphasizes the engaging aspects of games in learning. "...learning is or should be both frustrating and life enhancing. The key is finding ways to make hard things life enhancing so that people keep going and don't fall back on learning and thinking only what is simple and easy." (Gee, 2003, p. 6) Gee offers a list of 36 learning principles in the appendix (p. 207-212) e.g. #11: "Achievement Principle: For learners of all levels of skill there are intrinsic rewards from the beginning, customized to each learner's level, effort, and growing mastery and signaling the learner's ongoing achievements."

Clark Aldrich, in *Learning by Doing* (2005), explains that there are three essential elements of successful educational experiences: simulation elements, game elements, and pedagogy elements. Simulation elements represent the real world and learner interactions with it, game elements provide entertaining and engaging elements to increase student motivation, and pedagogical elements ensure that specific learning objectives are being met.

One caveat is the need to ensure that learning games do not encourage destructive levels of competition. Kaplan et al. address the potential negative impact of "performance" goal orientation, in which learners perceive each other as competitors for grades, teachers' attention, and other resources. Instructional practices which emphasize competition and public comparison of performance can weaken student self-esteem and lower long-term achievement (Midgley et al, 1998, 2000).

Fortunately, many game formats have been devised which are principally or entirely cooperative, including the venerable “jigsaw” exercise, which was designed specifically to counter competition in the classroom. Elliot Aronson writes:

> The jigsaw classroom was first used in 1971 in Austin, Texas. My graduate students and I had invented the jigsaw strategy that year, as a matter of absolute necessity to help defuse an explosive situation. The city's schools had recently been desegregated, and because Austin had always been racially segregated, white youngsters, African-American youngsters, and Hispanic youngsters found themselves in the same classrooms for the first time.... We realized that we needed to shift the emphasis from a relentlessly competitive atmosphere to a more cooperative one. It was in this context that we invented the jigsaw strategy.
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> Aronson goes on to describe the objective criteria used to evaluate the jigsaw technique:
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> Because we had randomly introduced the jigsaw intervention into some classrooms and not others, we were able to compare the progress of the jigsaw students with that of students in traditional classrooms. After only eight weeks there were clear differences, even though students spent only a small portion of their time in jigsaw groups. When tested objectively, jigsaw students expressed less prejudice and negative stereotyping, were more self-confident, and reported liking school better than children in traditional classrooms. Moreover, children in jigsaw classes were absent less often than were other students, and they showed greater academic improvement; poorer students in the jigsaw classroom scored significantly higher on objective exams than comparable students in traditional classes, while the good students continued to do as well as the good students in traditional classes.

(Aronson, 2004)

Jigsaw exercises are some of the most commonly included examples in collections of language learning games (see, e.g. Klippel, 1984, p40-50).

Language Teaching methods emphasizing contextualized, meaningful practice

The guidelines noted above are highly compatible with contemporary practice in language teaching, particularly with Communicative Language Teaching and related approaches. H. Douglas Brown offers the following overview of Communicative Language Teaching (CLT):

1. Classroom goals are focused on all of the components of communicative competence and not restricted to grammatical or linguistic competence.
2. Language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes. Organizational language forms are not the central focus but rather aspects of language that enable the learner to accomplish those purposes.
3. Fluency and accuracy are seen as complementary principles underlying communicative techniques. At times fluency may have to take on more importance than accuracy in order to keep learners meaningfully engaged in language use.
4. In the communicative classroom, students ultimately have to use the language, productively and receptively, in unrehearsed contexts.

(Brown, 2000, p 266-267)

Richards and Rodgers (2001, p 244) report: “Mainstream language teaching... opted for Communicative Language Teaching (CLT) as the recommended basis for language teaching methodology in the 1980s and it continues to be considered the most plausible basis for language teaching today....” They describe the essential principles of CLT as follows:

- Activities that involve real communication promote learning.
- Activities in which language is used for carrying out meaningful tasks promote learning.
- Language that is meaningful to the learner supports the learning process.

(Richards & Rodgers, 2001, p 223). Richards and Rodgers go on to describe Task-Based Language Teaching (TBLT) as a logical development of CLT. They report the key assumptions, as summarized by Feez (1998):

- The focus is on process rather than product.
- Basic elements are purposeful activities and tasks that emphasize communication and meaning.
- Learners learn language by interacting communicatively and purposefully while engaged in the activities and tasks.
- Activities and tasks can be either:
    - Those that learners might need to achieve in real life;
    - Those that have a pedagogical purpose specific to the classroom.
- Activities and tasks of a task-based syllabus are sequenced according to difficulty.
- The difficulty of a task depends on a range of factors including the previous experience of the learner, the complexity of the task, the language required to undertake the task, and the degree of support available.

Richards and Rogers then describe a "task": "Although definitions of task vary in TBLT, there is a commonsensical understanding that a task is an activity or goal that is carried out using language, such as finding a solution to a puzzle, reading a map and giving directions, making a telephone call, writing a letter, or reading a set of instructions and assembling a toy." (p. 224)

This understanding of a "task" and task-based language teaching nicely supports a model in which task-based games, with support, are used as a primary learning mechanism.

Language learning games and activities

The tradition of using games in learning extends to language learning, particularly in CLT and related approaches. Richards and Rodgers (2001, p. 169) report, "A variety of games, role plays, simulations, and task-based communication activities have been prepared to support Communicative Language Teaching classes. These typically are in the form of one-of-a-kind items: exercise handbooks, cue cards, activity cards, pair-communication practice materials, and student-interaction practice booklets."

Unfortunately, very little specific research is available to support this practice. Richards and Rodgers (p. 224) observe:

> Because of its links to Communicative Language Teaching methodology and support from some prominent SLA theorists, TBLT has gained considerable attention within applied linguistics, though there have been few large-scale practical applications of it and little documentation concerning its implications or effectiveness as a basis for syllabus design, materials development, and classroom teaching.

The long, often iterative development process of many language learning games might be considered a form of action research: Dorry (1966, p. v) writes, "In this book, I have assembled language-practice games which I have been using for years in my teaching of English as a second language." Wright, et al (1983, p. vii) continue this tradition:

> We have worked with teachers from many countries since the first edition of *Games for Language Learning* was published. We have discussed with teachers their experience of using the book. Their very positive feelings have been encouraging to us. Equally

> valuable have been their perceptive observations and practical suggestions for improvement.... We are delighted, therefore, to have the opportunity to produce a new and enlarged edition.

Klippel, writing in 1984, also remarks: "Most of the activities in this book have been developed in the last five years and tried out in several versions..." (p.1).

In at least one case, more formal action research into the use of language learning games has been carried out. Huyen & Nga (2003) observed the differences between language learning game use in selected classrooms and attitudes toward learning in control classes. The authors noted that the students generally found the atmosphere in the classes which used games more relaxed and conducive to learning. Anecdotal evidence provided by the teachers supported the proposition that the students were learning vocabulary more quickly in the game environment than by using more "traditional" methods. Of the 20 students surveyed, 18 expressed the belief that the games were "one of the most effective ways of learning vocabulary." (np.) However, the authors also noted that confusion can occur if games are not explained well enough, and further problems can occur if some members refuse to participate, especially if teams have been formed and it becomes difficult for the remaining team members to compete in games which are organized on competitive lines. The fast and informal pace of games also makes it difficult to enforce use of the target language, though the authors refer to research suggesting that this may not be a serious concern.

Huyen & Nga conclude that "...games contribute to vocabulary learning if they give students a chance to learn, practice and to review the English language in a pleasant atmosphere." They cite the relaxed atmosphere, friendly competitive environment, and contextualization of vocabulary as advantages of learning games in language teaching

environments. They caution, however, that games be selected with care, to match the specific needs of the learners in the classroom setting in which the games will be used.

Despite the scarcity of formal research, many authors in the literature do link language acquisition and play, especially games. Wright, et al. (1984 **) note:

> Games help and encourage many learners to sustain their interest and work. Games also help the teacher to create contexts in which the language is useful and meaningful. The learners *want* to take part and in order to do so must understand what others are saying or have written, and they must speak or write in order to express their own point of view or give their information.

Colin Baker (2000) reports, "Young children learn languages as naturally as they learn to run and jump, paint and play. Young children are not worried by their language mistakes, nor about not finding the exact words.... Language acquisition is a by-product of playing and interacting with people." Baker thus links the learning of languages with natural child activities such as play. Shameem and Tickoo (1999, p. vii-viii) write, "Learning takes place – even if incidentally – while the students are engaged in a self-motivating activity. They are having fun and interacting socially (in pairs, in small groups, or with the whole class) to perform a task and reach a satisfactory outcome." McCallum (1980, p. ix) notes,

> When one considers the importance of communicative competence in the target language, a major goal of all language acquisition, and the need for spontaneous and creative use of that language, one recognizes the significant role of word games in achieving these objectives. Students, in the informal atmosphere of game play are less self-conscious and therefore more apt to experiment and freely participate in using the foreign language.

Granger (1982 **), describing the use of language learning games in the classroom, emphasizes the focus on student-centered learning: “Students will participate in lively, active lessons where *they* do most of the talking, and not the teacher.” Granger also stresses the more natural and less self-conscious use of language in classroom games and describes the desired friendly, cooperative atmosphere. Clark (1982, p. 1) suggests that games: “...are best used to review or practice words and sentences that have already been introduced. In a limited way, however, the games can be used to introduce new bits and pieces of language – especially vocabulary items and idioms.”

Yao & McGinnis, in their Chinese-specific handbook *Let’s Play Games in Chinese* (2002 **) offer the following summary:

> Perhaps the best thing that can be said about these games for learning Chinese is that they are an extremely entertaining way to use the language. It is the word ‘use’ that is of paramount importance. There are numerous ways by which we can assess a student’s ability to use the target language, be it memorized dialogues or written compositions. Yet these very means of purportedly promoting a student’s progress in fact inhibits a portion of the student population. It is that portion that, intimidated by the pressures of a *graded* activity, may find the chance to freely practice without pressure, and to practice very well indeed, while playing these games.

While most books of language learning games are simply collections of recipes collected over the years, often from a variety of sources (see Table 1 for a summary of language learning game collection texts), some authors go on to further describe abstract features such games should contain. Pauline Gibbons (2002) offers the following principles when designing group work (including games) for language learning:

- Clear and explicit instructions are provided
- Talk is necessary for the task (i.e., there is an information gap)
- There is a clear outcome for the group work
- The task is cognitively appropriate to the learners
- The task is integrated with a broader curriculum topic
- All children in the group are involved
- Students have enough time to complete tasks
- Students know how to work in groups

(Gibbons, p. 21-26)

Klippel (p. 4) also stresses the need for an information gap or opinion gap in communicative exercises, and describes the requirement for active learning at some length.

> Learning is more effective if learners are actively involved in the process. The degree of *learner activity* depends, among other things, on the type of material they are working on. The students' curiosity can be aroused by texts or pictures containing discrepancies or mistakes, or by missing or muddled information, and this curiosity leads to the wish to find out, to put right or to complete. Learner activity in a more literal sense of the word can also imply doing and making things; for example, producing a radio programme... forces the students to read, write and talk in the foreign language as well as letting them 'play' with tape recorders, sound effects and music. Setting up an opinion poll in the classroom... is a second, less ambitious vehicle for active learner participation; it makes students interview each other, it literally gets them out of their seats and – this is very important – it culminates in a final product which everybody has helped to produce.

Further devices to make learners more active are games..., fun and imagination... and group puzzles....” (p. 5-6)

Additionally, Klippel echoes Aronson in his recognition of important non-cognitive objectives in the language learning process. “The impact of foreign language learning on the shaping of the learner’s personality is slowly being realized. That is why foreign language teaching – just like many other subjects – plays an important part in education towards *cooperation* and *empathy*. (p. 5-6)

Not everyone agrees on this emphasis on language output during instruction. Rod Ellis reports research evaluating input-based vs. output-based instruction, which may indicate that input-based is more effective than output-based instruction (including production-focused games) for many learners. (Ellis, p. 84) However, this finding is disputed (see Gibbons, 2002, p. 15 for a summary of relevant research).

Levels of language, learning implications

Collections of games and activities typically describe entries in terms of appropriate skill level, time to complete, materials needed, etc. (see Table 1). However, a review of the collected games shows that while some are linguistically and cognitively complex, others are simply vocabulary drills in game-like settings. This suggests that further categorization of the games may be advisable for maximum effectiveness.

Brown suggests that different theories and methods of learning may be applicable to different levels of language, e.g. behaviorism may adequately account for the level of learning of very young children, involving one or two word utterances, while sentence and discourse level use of language may require cognitivist and functionalist models of learning, respectively

(Brown, 2000). Expanding from this, we might note the following levels of language use and learning:

1. Phonetics and phonology; pronunciation
2. Morphology and vocabulary
3. Syntax; grammar
4. Semantics and Idiomatic usage
5. Discourse and pragmatics; conversation

This sort of taxonomy is also supported multiple other references, such as the SIL International Glossary of linguistic terms (SIL 2004) and even the Wikipedia (2005). Although the ordering of this list is not strictly linear, in general, earlier items on the list are more amenable to simple activities using behaviorist methods, whereas the later items on the list will require more complex activities using more cognitivist, functionalist, and constructivist methods. It will be important to categorize games and activities appropriately to create the proper emphasis on all communicative levels.

It is critical to move past the simple, behaviorist-based activities into cognitivist and especially constructivist activities, even at early stages of the language learning process. Research indicates that constructivist learning results both in better short-term retention and in better long-term transfer (Mayer, 1999, reported in Reigeluth II**, p. 146). John Keller further offers strategies such as "To increase curiosity, guide students into a process of question generation and *inquiry*" (p. 405) and "To enhance achievement-striving behavior, provide opportunities to achieve *standards of excellence* under conditions of *moderate risk*." (p. 408) "To satisfy the need for affiliation, establish *trust* and provide opportunities for *no-risk, cooperative interaction*." "The cooperative activity... may take the form of nonevaluative activities that allow

the expression of warmth and responsiveness or the genuine acceptance of others as persons. ....'play' activities... can serve this function...." and finally "Interest is more likely to be maintained if the students *engage in activities* that allow them to act on their curiosity by exploring and manipulating their environment." (Keller, in Reigeluth I**, p. 399, italics in original.) All of these suggestions are compatible with the use of learning games. But which games should we emphasize, and at what point in the learning process?

Pedagogical and Practical Teaching Implications

Levels of language, types of learning games and activities

As noted above, different levels of language will be best supported by different types of learning activities, including games. The following guidelines are suggested when choosing or designing games, based on the analysis above:

Phonetics, phonology, and pronunciation: Activities which require learners to focus on individual sounds (recognition and production) are needed. Phonetic "bingo" games emphasizing linguistically distinct (L1/L2) phonemes are most helpful here. Flashcard games contrasting minimal pairs of words may also be helpful. "Tongue twisters" may also be used as entertaining activities, with or without a competitive element.

Morphology and vocabulary: This is where most existing language game references are strong. Games which focus the learners' attention on individual words and meanings are appropriate. "Memory" games such as additive sentence repetition games ("I'm going to the store and I'm going to buy an apple, a banana, some cherries...," etc.), most flashcard games, Scrabble™, television quiz show format games, etc. can all be used at this level.

Syntax and grammar: At this level, learners are asked to begin to construct phrases and sentences using acquired vocabulary. Many "jigsaw" type games, in which learners each have

some information which must be shared in simple question-and-answer formats, are ideal at this stage. Customized sentence-level versions of games similar to Scrabble™ may also be used.

Semantics and idiomatic usage: Games to help learners at this level need to be focused on shades of meaning, and the range of meanings appropriate for each word or phrase. One excellent example is Apples to Apples Junior™. This edition of this popular game uses a simplified vocabulary which works well for beginning and intermediate learners of English. Additional language cards and cards for specific vocabulary can be created using customizable card sheets available from the manufacturer. The publisher notes:

> The Apples to Apples Junior games are perfect for students who are learning English. A teacher can preview the card set and remove any cards that might not be appropriate for the language level of the students. Because of the discussions that take place as part of the judging, students have opportunities to ask questions and learn about the meaning of words. The synonyms on the green Apple cards also help students develop their vocabulary.
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> (Out of the Box Publishing)

Note that flashcards created for vocabulary-level games can be adapted for use at the semantic level using similar rules to those provided with existing commercial games.

Discourse and Pragmatics: Finally, students need to have opportunities to combine all the previous levels in less structured and rehearsed settings. Activities which emphasize creative use of language are needed at this level. Good examples include storytelling, roleplaying, and authoring and producing skits. More complex "jigsaw" games are also excellent at this level. Published games which incorporate these elements include *Mission to Arabic* (discussed below) *and Once Upon a Time*™, a storytelling card game by Atlas Games:

> When used as a classroom tool, *Once Upon a Time* encourages those for whom English is a second language to improve their reading and comprehension of common terms. It also requires interaction between players, forcing students to speak in English to tell their story while presenting that practice in an enjoyable format. The same can be said for foreign language classes that use the French, Italian, German, or Spanish translations of *Once Upon a Time*.
>
> (Atlas Games, 2005)

Customizable card sets are also available for *Once Upon a Time*, allowing custom sets containing specific vocabulary or additional languages to be created. Again, flashcards created for vocabulary level games may be adapted for similar use at this level with the addition of "story ending" phrases. This may also offer a chance to incorporate cultural elements from the target language by selecting story endings from traditional folk tales in that language.

Classroom games vs. computer-based games

In addition to the issue of learning theory and linguistic level, the past decade has brought about radical changes in technology, making new options available to language learners in the form of multimedia language learning software. How do these new options factor into our decisions about which games to select and incorporate into language learning programs?

Ehsani & Knodt (1998), describing language learning game software, make many of the same points as writers describing classroom-based games: "Apart from being more fun and interesting, games and task-oriented programs implicitly provide positive feedback by giving students the feeling of having solved a problem solely by communicating in the target language." Brown notes that CLT as an approach can be difficult for non-fluent speakers of a language to

implement as instructors, but also suggests that technological supports may help such instructors by providing rich, authentic sources of language exposure and practice.

Aldrich, Gee and Quinn all advocate the use of computers to provide more engaging and realistic learning opportunities. Tim Boswood extends this general use of multimedia computers in learning to the language learning process in *New Ways of Using Computers in Language Teaching* (Boswood, 1997), noting: "...educational/entertainment ('edutainment') software, such as SimCity Classic (and the other Sim- packages) and the Carmen Sandiego series, can stimulate vocabulary and fluency development through contextualized practice." This practice is available outside of the classroom, offering a way to extend the learning time beyond the few hours scheduled per week in a typical language-learning program. Computerized feedback may also be more consistent than that provided by human instructors or tutors (Macnamara, **), and a computerized tutor is certainly less likely to grow tired or frustrated correcting repetitive learning mistakes than a human.

However, Boswood also notes: "These programs provide only the context for practice: they often present new language in an inaccessible form, so students may only practice at their own level of competence, fixing their own mistakes." (p. 201). Regrettably, many computer-based language learning games, like their classroom-based counterparts, are essentially vocabulary drills with game elements tacked on. And while multimedia software has offered many options for practicing listening and reading, and can accept typed input in alphabetical languages, spoken language and handwritten input have proved more problematic. Eskenazi (1999) supports the use of technology in pronunciation training, but notes that existing feedback systems are often inadequate and unhelpful to learners, especially the common, but simplistic "record and compare" systems (e.g. that used in *Triple Play Plus/SmartStart*, recommended in

Boswood, p. 243, but now out of print). Zhang (1998) provides a review of Chinese language learning software packages available at the time of his writing, and is generally supportive of the capability of software to aid in learning speech skills, though he also criticizes existing feedback mechanisms.

Beyond the difficulty in providing feedback to written and spoken language, single-player computer games offer only limited forms of social interaction. At best, players can "interact" with artificial intelligence based characters in pre-programmed situations. More commonly, no simulated social interaction is attempted, and the learner simply plays elaborate versions of solitaire memory games and speed drills.

Fortunately, computer and game technology continues to advance. Ehsani & Knodt (1998) note that improvements in speech recognition technology offer many possibilities for second-language speech training, provided the limitations of the existing technology are kept in mind. They suggest that activities which offer limited or predictable domains of vocabulary and other linguistic features will be most successful. Hardison (2004) provides support for the use of technology in improving prosody, and includes an extensive bibliography of research supporting the use of technology in language learning. Meanwhile, new game development tools and platforms (e.g. Unreal Technology, 2005, Second Life, 2005) are beginning to make high-level game development more feasible. Unreal offers sophisticated programmable "robots" with which to interact in the game, and Second Life offers multilingual support in an extensive "virtual world" in which players (or learners) can meet other people also connected to the world in real time, and interact with other learners, instructors, or simply native speakers of the target language using text, gesture, and (via voice over IP technology), voice. Even the use of simpler tools such as wiki systems combined with interactive voice response technology can provide

branching conversation-like interaction (Mobile TikiWiki, 2005). As online learning in general becomes more popular and more mature as a learning environment, technology is continuing to provide more sophisticated tools with which to learn and teach.

Perhaps one of the most ambitious and impressive technology-based language learning tools developed to date is The Tactical Language Project, being developed at U.S.C.'s Center for Research in Technology for Education Dr. Lewis Johnson and Dr. Hannes Vilhjalmsson, in cooperation with the Special Operations Command (Wertheim, 2004). In the product *Mission to Arabic*, players interact with a language coach and the inhabitants of a Middle Eastern village, attempting to complete assigned objectives diplomatically using the local language. Speaking, listening, nonverbal gestures, and social context are all incorporated into scenarios in which success depends upon the ability of the learner to acquire and use local language and customs. The initial renditions of this "game" were considered so effective, it is now required training for many service personnel being stationed in the Mid-east, and versions to support additional languages (including different variants of Arabic) are now in development.

It may, however, be found that the most popular and "fun" methods of language study are not the most effective. This would echo research in the effects of media on learning (Salomon, 1984). If language learning games are considered too "easy," their effectiveness may be reduced. On the other hand, technology-based games may offer the ability to adjust the difficulty level to the most optimum level for the learner. Research in this area more specific to language learning may need to be identified or conducted.

Additional Advice

Taking all these factors into account, the following general advice may prove helpful to instructors preparing game and activity oriented lesson plans for the first time:

- Vary the games used over time - even the most fun game will become boring if overplayed.
- Vary the linguistic level, even for beginners. Language learners should very quickly be able to participate in syntax/grammar level games and even simple discourse games using restricted vocabularies and sample phrase guides, and their sense of accomplishment in completing meaningful tasks in the target language can provide immense satisfaction and motivation for continued study (Wright, et al.; Ehsani & Knodt; Gibbons, etc.).
- Where possible, have students create their own game components. Their creations may not be as polished as those in professionally published commercial games, but the act of creating game components tying together words in the source and target language, as well as images and other elements, is inherently constructivist.
- Encourage students to create their own games, as well. The level of analysis required to create game rules based on linguistic features deepens the learners' understanding of the target language and of the structure of languages in general.

Conclusion

In the process of developing in-class activities, the author has found that games and language activities are both highly useful not only for learning isolated vocabulary, but also for expanding into the realms of sentences and discourse, depending on the design of the game in question. Simple vocabulary games like Bingo and Concentration help learners with isolated vocabulary, but do not increase overall communicative competence in themselves. More sophisticated "memory chain" games in which each student adds to the sentence of the student previous can help build sentence competence, but the more subtle elements of discourse are not

addressed. Finally, in elaborate role plays and "jigsaw" games, in which the students either compete or work cooperatively to solve a language task such as constructing dialogue for an everyday situation or resolving a more structured mystery with clues, true discourse elements such as greetings, politeness phrases and idioms can be incorporated. Our goal needs to be to find games and learning activities which address all three levels of learning. Existing commercially published games, carefully selected or adapted and used with consideration for their language learning properties, can greatly aid busy teachers in activity development.

What many of the studies and "recipe collections" reviewed in this article lack is the rigor to be able to confidently support and extend these conclusions to other populations. Huyen and Nga conducted action research, with the lack of formality, loose controls, and short timeline implied in that format. The support provided in other activity collection texts is even less rigorous. What is still missing, as far as a preliminary literature review has indicated, is a well-designed and controlled study establishing the effectiveness of language activities/communicative tasks as compared to other methods of teaching language, such as vocabulary drill or dialogue recitation.

Future research opportunities might attempt to more rigorously measure the following properties of language learning games in general and the early inclusion of games from higher-order linguistic levels in particular:

- Increased achievement
- Group identity and lowering of "language ego" barriers
- Better enrollment and retention in upper level classes
- Mastery achievement goal orientation
- Productive fluency or accuracy changes related to game use

- Advantages specific to the proposed "linguistic level" categorization of the games

It is easy to believe that at the very least students will be motivated to stay engaged with the subject more readily in an activity-oriented environment, but the case needs to be made conclusively that the games can provide more benefit than distraction, to encourage broad policy changes in language learning programs.

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