Fluency in Play
Computer Game Design for Less Commonly Taught Language Pedagogy

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Preface

*Fluency in Play* was made possible by a generous grant from the Center for Educational Resources in Culture, Language, and Literacy, a Title VI U.S. Department of Education National Foreign Language Resource Center that supports the educational community and the nation by providing resources and research focused on culture, language, and literacy in less commonly taught languages. In keeping with this mission, and the Center’s more specific goals of developing and disseminating teaching materials and strategies based on new technologies, *Fluency in Play* was written to provide K-16 teachers with an introduction to designing and building computer games for the foreign language classroom.

At the heart of the book is the fact that computer games make excellent teaching tools. They combine two of the fundamental processes of new language acquisition—play and exploration—with the power and pleasures of fun. Computer games are also dynamic, scalable, and ductile; they can be drawn out and shaped to fit an infinite number of classroom sizes, subjects, and settings. Computer games are thus ideal for foreign language instruction, especially when that instruction involves less commonly taught languages, which are notorious for being difficult to learn quickly and efficiently at the intermediate and advanced levels of proficiency.

*Fluency in Play* is meant as both an introduction and a prompt, that is, as an overview of the process of educational computer game design and a provocation to language teachers excited about the pedagogical possibilities of that process. It is not hard to envision the interesting, ground-breaking, and useful language games a little elbow grease could produce, and we hope that *Fluency in Play* will serve as a guiding and animating force for teachers interested in that kind of production.
Introduction

Fluency in Play is an introductory and accessible guide for teachers of strategic languages who are interested in harnessing the educational power of computer games. It is built on three touchstones: (1) Know well your teaching objectives; (2) Be familiar with changes in best teaching practices; (3) Understand the processes by which good learning games are created. These touchstones are essential for Computer Game-Based Learning (CGBL) because using computer games to teach is not always easy, nor is it something to be done cavalierly. While there are numerous advantages to such a high tech pedagogy—novelty, deep immersion, interactivity, and multimodal learning among them—there are also numerous possibilities for undermining these advantages through poor planning, poor execution, and the creation of edifying but boring games.

TOUCHSTONE #1: KNOW YOUR TEACHING OBJECTIVES
Because building a computer game—even a simple one—can be quite challenging, it is vital to have well-defined teaching objectives. Here are some examples of how your raisons d’être might be phrased:

- An Arabic proverb states “There is something good in every delay” (Idris). Our game will show players how this folk wisdom is commonly deployed to assuage anxiety in a variety of social and professional contexts in Saudi Arabia.
There is a significant stigma in the Arab world associated with jobs that involve physical labor (e.g., construction, sanitation, and so on). Our game will explain how this stigma often plays out in language through euphemisms and circumlocution, and will help players learn ways to interpret and respond appropriately.

Our game will teach players that Arabic speakers sometimes metaphorically equate humans to animals, and that subject-verb agreement in such cases is non-standard.

Our game will reinforce the fact that Arabic allows for free word order, and that this liberty does not necessarily make for poorly phrased sentences.

Once your teaching objectives have been clearly articulated, it will be much easier to conceptualize a set of best teaching practices to help you realize them. *Nota bene:* Multivalent teaching objectives generally result in complex game development projects. If you are new to CGBL, consider starting with a simple game built around a modest and achievable teaching objective. Take a lesson hard learned by the commercial game industry: Better to have a very successful, inexpensive, and simple game (e.g., Microsoft's *Geometry Wars*) than a complex and unfinished flop (e.g., Majesco's *Kengo: Legend of the 9*).

**Touchstone #2: Be Familiar with Changes in Best Teaching Practices**

It was perhaps once possible for teachers of all kinds to develop teaching routines they could stick with for decades. No longer. As computer technologies infuse both the classroom and the lives of teachers, researchers, and students, the techniques by which all
fields are taught and learned are quickly becoming as evanescent as the latest hardware or software. It is thus essential for teachers to stay aware of the always changing best practices of their fields. This is especially true for less commonly taught language teachers interested in computer game-based pedagogies: Not only do present day languages such as Arabic, Turkish, and Korean themselves change everyday, but so too do computer game aesthetics, physical interfaces, and play mechanics.

Even were these changes not so rapid, best teaching practices would still be a moving target. What language teacher, for instance, has not had the experience of discovering an excellent technique—one that both improves language skills and raises student morale and interest—only to discover that several students in the class actually hate it? Likewise, it is the rare teacher who has not at one point overheard a student say “I learned more in my two-week vacation than I did in three years of coursework.” Alas, such vicissitudes of language teaching and learning make it impossible to develop an absolutely authoritative “Best Practices” guide, and yet if one paints with a broad enough brush, patterns for particularly effective teaching do emerge. Such was the realization of the American Council of Teachers of Foreign Languages (ACTFL) when they were tasked in 1993 by the Bush administration to generate a consensus document detailing the best practices for teaching foreign languages to U.S. students. Their findings, now published in a 3rd Edition of the *Standards for Foreign Language Learning* (*SFLL*), indicate in general terms what kinds of experiences are most likely to help students learn a foreign language deeply.

Specifically, *SFLL’s “Five C’s of Foreign Language Education”*—Communication, Cultures, Connections, Comparisons, and Communities—provides a set of categories (and standards for those categories) into which a variety of practical, detailed, and
methodologically sound pedagogies can be grouped. Among the best practices that stem from these categories are:

1. Put students into situations where they must interact with fluent speakers about a variety of subjects and that require them to articulate their opinions and feelings.

2. Ask students to engage in realistic one-way situations with the foreign language, for example, watching television or reading a newspaper. Ideally, these situations will be of immediate interest to the student.

3. Have students present information in the foreign language to an audience, both orally and in writing.

4. Help students see how cultural practices (e.g., social hierarchies, rituals, specialized knowledge) influence the writing and speaking of the foreign language, then provide opportunities to practice the language in some of these situations.

5. Provide students with the chance to see how the foreign language lends a unique perspective to the study of other subjects and opens up opportunities to understand subjects other than the foreign language itself. For example, Arabic study could be enriched by investigating both how 16th Century Greek mathematicians incorporated Arabic geometrical research, and by studying ancient
Arabic mathematical ideas themselves.

6. Encourage students to discern the linguistic and cultural differences between the foreign language and their own, then have them practice the foreign language in situations where these differences have real communicative consequences.

7. Create opportunities for students to employ their developing foreign language skills in the world beyond school and to see how their emerging foreign language abilities can be useful throughout life.

Unquestionably, SFLL indicates one set of best practices—or at least gestures toward such practices. In fact, it is difficult to look at the list of standards the ACTFL sets out and not have one’s imagination stirred to invent new curricula and new institutional structures to host them.

Because Fluency in Play is devoted to outlining educational techniques that tend in their own way to stir teachers’ imaginations, it is important to note that imaginative, enthusiastic teaching without a rigorously developed foundation of concrete standards and assessment protocols is just another educational gimmick. Indeed, some scholar-teachers (e.g., Badawi; Eisele) see abstract standards such as those set out by the ACTFL as largely responsible for the plethora of ill-considered, impractical, and ultimately ineffective pedagogies in foreign language classrooms where the U.S. State Department’s so-called Category III “superhard” languages are taught (Ryding 15). John Eisele summarizes many of the criticisms of the ACTFL—raised particularly concisely by the editors of the Handbook for Arabic Language Teaching Professionals in the 21st
First, there is no mutually agreed upon standard/model of what represents native speaker proficiency. Without a standard notion of what an “authentic” situation actually is, testing becomes difficult because it is unclear exactly what one is testing for. Secondly, the availability of testing types varies widely. Although there are many achievement style tests, as well as some proficiency and placement style tests, there are few self-assessment tests available, nor are there opportunities for peer feedback or sufficient numbers of task-based activities. Thirdly, [...] language teachers need a “frame of reference” for measuring language use in social contexts.... (197)

Given that the SFLL is largely based on the implied assumption that there is a shared understanding of what constitutes “native proficiency” and “authentic situations,” these criticisms certainly ring true. Nevertheless, the ACTFL’s standards do offer strategic language teachers something useful: a general rubric under which to develop comparably general pedagogical goals.

As we see the situation—admittedly from the distance of another field—both the ACTFL and its more pragmatic critics offer insights that can be connected and made useful for computer game-based language learning. For the purposes of developing a first-year college Mandarin course, for example, a set of encouraging but vague precepts may well be unhelpful, perhaps even deleterious. For the purposes of designing a piece of software for use in such a course, however, the SFLL’s categories can provide teachers
who are unused to meshing instructional goals and unfamiliar instructional technologies with a reassuring pedagogical framework within which to work.

From this perspective, the SFLL functions as a set of guidelines not for the teaching of strategic languages at an institutional level, but at the individual instructor level. In this smaller arena, the ACTFL’s standards mitigate the criticisms rightly leveled by the editors of the Handbook for Arabic Language Teaching Professionals in the 21st Century and others because the “standards” come to reflect only what an individual teacher means by “authentic situations” and “native proficiency.” The individual teacher who decides to build a computer game for her Korean language class can use the SFLL standard “Students understand and interpret written and spoken language on a variety of topics” as a kind of educational game design scaffolding: if the students are able to understand the dozen or more written and spoken clues to reach the end of a game based on the story of Dangun Wanggeom, then they will have sufficiently demonstrated—in this particular instance—their ability to “understand and interpret written and spoken language on a variety of topics.” [Nota bene: There is a summary of the ACTFL standards in Appendix A.] Assessing learning—and, concomitantly, pedagogy—at this level of specificity is relatively straightforward, and if teacher and institutional standards are synched from the start, making assessable connections between specific classrooms and institutional objectives should be comparably straightforward.

One of the most important advances in teaching foreign languages in recent years—especially in the teaching of those languages considered particularly difficult due to their diglossicity and/or complex written form—is the confirmation that spoken and written language should be taught simultaneously. It has only been in the last decade or so, for example, that institutions have begun to accept
the idea that students of Arabic ought to be taught both a colloquial Arabic dialect (e.g., Iraqi, Egyptian) along with the Fusha (standard written Arabic). Prior to this, students studied one or the other and might well do so for years. In this context, a number of teaching techniques have emerged recently that seem to promise at least modest increases in student vocabulary, grammatical and syntactic sophistication, and comfort in engaging real-life foreign language situations. Among these are:

- Thinking aloud exercises (Abdalla 2005; Newell and Simon; Olson, Duffy, and Mack; Loxterman, Beck, and McKeown.);

- Adopting foreign language teaching techniques that parallel the ways native speakers learn their language. Teaching case markings in Arabic very early on, for example (Mansouri);

- Implementing the ubiquitous technologies of students (e.g., Internet, word processing, e-mail) into the curriculum (Madhany; Alosh, Elkhafaifi, and Hammoud);

- Using well-designed computer applications for teaching everything from vocabulary to social interaction (Cushion; Shaalan; Bäbler);

- Immersion experiences (Abdalla 2006; Johnson and Swain);

- Creating classroom environments and teaching materials that assuage learner anxiety by creating a sense of community and camaraderie (Elkhafaifi).
In our experience of designing and building computer games that are both fun and educational, we have found that all of these best practices can be implemented successfully into teacher-designed or teacher/student-designed projects. In subsequent chapters, we will explain the rudiments of game development, outline the basic principles of language game design, and introduce a variety of development tools for turning designs into playable games for students. Throughout, we will invoke the "best practices" for foreign language teaching discussed above to show the versatility and limitations of building less commonly taught language games for the classroom.

**TOUCHSTONE #3: LEARN HOW GOOD GAMES ARE MADE**

The bulk of *Fluency in Play* is devoted to helping explicate this touchstone in particular, not because it is more complex than the first two, but because it is the one that foreign language teachers tend to have the least familiarity with and most questions about. A few observations are in order here, however, because some readers may also be relatively unfamiliar with the considerable body of research that verifies a fundamental fact upon which this touchstone and this book more generally rests, namely, that computer games always teach multiple things in multiple ways.

Current views of CGBL are perhaps best contextualized in terms of work on computers and learning more broadly. Over the past fifty years, interest in and experimentation with the pedagogical possibilities of personal and industrial computing have proliferated across academic, industrial, and governmental sectors. Some scholars, in fact, argue that there is an almost organic connection between the human brain and computer technologies (Clark; diSessa), which may in part explain why computer-based training has become commonplace in corporate and governmental offices, university classrooms, manufacturing plants, military training facilities, and elsewhere.
CGBL understandably represents an important subfield of computers and learning because it articulates the aforementioned brain/computer connection with one of the fundamental ways human beings learn—through play. Sociologists, cognitive psychologists, and anthropologists have long argued that play is key to the apprehension and acculturation of survival and social skills (Caillois; Huizinga; Sutton-Smith). As sociologist Johan Huizinga so elegantly notes, “The great archetypal activities of human society are all permeated with play from the start[:]…law and order, commerce and profit, craft and art, poetry, wisdom and science…[a]ll are rooted in the primaeval soil of play” (5). CGBL thus promises to harness technological development in the service of augmenting an essential learning modality (Malone; Prensky 2002 and 2001).

This promise has not gone unfulfilled. CGBL has proven effective over a broad range of fields, from nursing (Black and Goodman), public health (Bosworth; Roubidoux, Chapman, and Piontek), and psychological and cognitive development (de Lisi and Wolford), to science education (Leddo), literacy (Gee 2003), and language learning and retention (Herselman). In fact, computer games are such good teachers that there is a fair bit of unease regarding some of the things commercial games seem to teach (Colwell and Payne; Ellis; Emes; Funk and Buchman; Griffiths 1999).

Current views of CGBL and its efficacy may be summarized as follows:

1. Fun is integral to learning—especially adventurous learning (Bisson and Luckner)—and games excel at producing fun;

2. Computer games can make excellent teaching tools (Betz; Blake and Goodman; Kafai; Vasterling, et al),
but prohibitive development costs (Gee 2005) and concerns over content have impeded the medium’s widespread adoption in classrooms;

3. Games teach multiple things in multiple ways, making it difficult to distill definitive data on the possibilities and limits of the technology (Dorman; Greenfield, et al.; Griffiths 1999 and 2002; Mitchell and Savill-Smith; Randel et al).

The general sense of CGBL is thus one of guarded excitement. In the words of James Paul Gee:

I believe that we can make school and workplace learning better if we pay attention to good computer and video games. This does not necessarily mean using game technologies in school and at work, though that is something I advocate. It means applying the fruitful principles of learning that good game designers have hit on, whether or not we use a game as a carrier of these principles (2005, 6).

As a field that is ceaselessly experimenting with, theorizing about, and applying both new and established concepts relating to learning and play, computer game development now has half a century of experience behind it. Over the years, a plethora of documentation has been published from virtually every perspective within the game industry concerning how to make good games, from animators and illustrators, to computer programmers and industrial designers, to mathematicians and musicians. Throughout this book, we draw deeply from such texts in ways that we hope will clarify how successful teaching games are designed and built.
CONCLUSION

Our basic objective in writing this book is to help foreign language teachers think about ways to inexpensively design and implement less commonly taught language learning games. The idea is to show how readily available tools can be used to create: 1) dialogues among game characters and players; 2) texts such as documents, journals, maps, and other game clues; and 3) language and culture puzzles that advance a game’s narrative. That said, it is unfortunately beyond the scope of this volume to detail all of the intricacies of language game design and development—the variety of game types, pedagogical objectives, and linguistic idiosyncrasies is too great to allow such a component. We do hope, however, that our numerous and varied examples will go a long way in helping you successfully plan and execute your own games.

One additional clarification: we are not less commonly taught language teachers. We do, however, have considerable foreign language study experience, and have familiarized ourselves with the scholarship in a variety of fields related to less commonly taught language pedagogy. We have also consulted with a number of scholar-teachers of less commonly taught languages, and been guided by them at every turn. This guide draws on our expertise as scholars and developers of games and game-related pedagogies. As with nearly every aspect of game development as well as teaching, collaboration is key to making good projects great. In the collaborations that percolate through this book, we hope you find new techniques and resources to parlay your foreign language teaching expertise into innovative computer game-based pedagogies.