Reconceptualizing the English Lounge with Maker Duty

Ryan Lege Philip Standlee Samuel Godin Jonathan McNair Erin Frazier Euan Bonner

Abstract

In this paper, the authors explore their experiences piloting a reconceptualization of the English Lounge concept using maker education principles. These sessions, known as Maker Conversation, involved learners participating in discussions while engaged in a hands-on creative activity. A total of 75 sessions were held on class days for the duration of a 15-week semester. Each facilitator shares their unique perspective of the sessions they facilitated and the lessons they learned through the process. Session facilitator experiences indicate that Maker Conversation is a meaningful alternate reconceptualization of the English Lounge concept that may be beneficial for students.

The Journal of Kanda University of International Studies Vol. 33 (2021)

Introduction

Social Learning Spaces and English Lounges

Language acquisition is a complex multifaceted process that occurs as a result of a confluence of factors taking place in varied contexts. Benson and Reinders (2011) remark that "well rounded communicative proficiency, it seems, depends to a large extent on the learner's efforts to use and learn the language beyond the walls of the classroom" (p. 2). Indeed, what takes place beyond this classroom is arguably far more important than what happens within the classroom. Acknowledging this, educators have explored many ways to expand the scope of learning outside of the classroom, often accomplishing this by helping learners develop their ability to regulate their own learning (Lee, 1998). In EFL contexts, as learners develop their self-regulated learning skills they need safe spaces to practice and apply language. Social learning spaces, defined as "purpose-built, informal physical spaces" (Matthews, Andres, & Adams, 2011, p. 107), may be a way to satisfy this need by providing spaces where learners may engage in beneficial joint inquiry (Wenger, 2000). As relationships of trust are formed through interaction in the space, communities of practice can organically form allowing for opportunities for language practice in a supportive, non-threatening environment.

Within the English language educational context in Japan, social learning spaces often take the form of informal practice spaces, commonly known as "English lounges". These spaces frequently feature environments where students can participate in free, open-ended discussions. However, this idea has been also pursued in a variety of different ways including structured activities such as conversation using speaking prompts (Chan, 2016), formalized presentations (Berman & Tada, 2018), and activities using digital tools such as iPads (Taylor, Beck, & Talandis, 2012). The unifying core of the varied English lounges is "the same goal of creating a comfortable and enjoyable learning experience to enhance learner motivation in an informal yet guided English speaking environment"

(Kanno, 2010, p. 95). At Kanda University of International Studies (KUIS), the English lounge is described as "an informal area where students can practice English in a relaxed environment" (Mynard et al., 2020, p. 15). English lounges like this draw on constructivist views, which posit that "people make sense of new information as they negotiate meaning and incorporate it into their existing schemata" (Chen & Mynard, 2018, p. 24). Learning takes place as a result of the social interaction within the spaces. Kushida (2020) notes that "when learners, working as autonomous agents, come together and interact, possibilities for learning that would not otherwise exist open up" (p. 27). However, the effectiveness of sessions in English lounges can vary wildly due to a relative lack of focus (Taylor & Wolfson, 1978). In a study of the KUIS English Lounge, Mynard et al. (2020) remark that "it was evident that beliefs, identity, and membership of a community all played a role in how learners perceived the lounge and whether they chose to engage with it or avoid it altogether" (p. 11).

Makerspaces and Maker Conversation

To address some of these issues with the English lounge concept, yet keep the core idea of an informal, relaxed practice environment, the authors looked to the examples of social learning spaces that are *not* focused on language learning for inspiration and answers. One such popular social learning space configuration, makerspaces, or physical spaces containing a variety of tools and materials for the creation and sharing of hands-on projects, can provide valuable lessons for refocusing the English Lounge concept. In 2005, the publication of *Make Magazine* sparked a culture and movement focused on creativity, design, and the do-it-yourself ethos. Makerspaces are quintessential examples of social learning spaces, which "enable people to form communities capable of reflecting upon the social significance of their activity" (Smith, 2017, p. 5). In conjunction with the physical spaces, an educational model was also developed, Maker Education, or learning

The Journal of Kanda University of International Studies Vol. 33 (2021)

through the completion and sharing of different hands-on projects (Ryan, Clapp, Ross, & Tishman, 2016). Learning by engaging in a creative act is a widely accepted approach in the STEM (Science, Technology, Engineering, Mathematics) fields (Honey & Kanter, 2013; Johnson, Peters-Burton, & Moore, 2016; Bevan, 2017), and recent research has explored the applicability of the approach to fields such as humanities and language acquisition. Van Lier and Walqui (2012) argue that integrating "language, cognition, and action deeply and coherently" is an important opportunity for educators (p. 7). Maker education often focuses on the collaborative nature of the creative process, based on the core assumption that projects developed with others are of a higher caliber than those developed in isolation. As a result, makerspaces lead to the formation of communities (Taylor, Hurley, & Connolly, 2016) and operate within constructivist principles of learning, just like social learning spaces.

At KUIS, the authors have been exploring how maker principles can be employed to enhance language learning in our context. The core purpose of maker education research at KUIS is to encourage language and transferable skills growth by providing situated language learning experiences that inspire curiosity, originality, and an interest in STEAM (Science, Technology, Engineering, Arts/Design, and Mathematics) fields. The English Lounge, KUIS' informal social learning space, is an ideal lab for exploring the affordances of maker education. In 2019, the authors decided to explore the viability of a maker education-inspired version of the English Lounge. For the duration of a 15-week semester, five teachers volunteered to facilitate a weekly 70-minute session of what the authors called *Maker Conversation*. Each weekday, a different teacher chose materials that could be used for a creative project and facilitated a session. Some projects were more structured, while others were free form, however, they shared the common purpose of creating a new avenue for student interaction while stimulating student's curiosity in subjects and topics in the STEAM fields. The backgrounds, training, interests, and skills

of each facilitator were quite varied, leading to a wide variety of activities. Over the course of the semester, the group gained important insights about the nature of integrating maker principles into a language learning environment. Hereafter, each facilitator will share their unique experiences and takeaways gained from their 15 Maker Conversation sessions. Following their experiences, the authors will explore implications and future directions of research.

Maker Conversation Facilitator Experiences

PJ's Experience: I Tried to Make a Dance Dance Revolution Game and Learned Through Failing

Tinkering is the marriage of play and learning, and it also happens to be at the heart of maker learning (Clapp, et al., 2016; Martinez & Stager, 2019). Yet, when a few students and I were in the midst of the creationial throes, wildly laboring for an idea, I wasn't thinking about pedagogy at all. What was going through my mind was how fun it would be to see our creation "come alive." The idea was ambitious: build a mechanism that allowed students to play "Dance-Dance Revolution" (https://bit.ly/3lo4pfa) by using a stomping pad made from common cardboard, stripped CAT-5 cable wires, a microcontroller called a "MakeyMakey," and an open-source programming language called "Scratch." Using the program and the controller, students could make their own dancing game and play it on the giant screen in our English language lounge for all to see. Although it never came to life, the project provided useful insights into student agency and resilience, both of which are reported as important contributions to language learning in makerspaces (Alley, 2018; Kajamaa & Kumpulainen, 2019).

Learning a new skill can be intimidating. Especially if it involves science and electricity. Even more so if it involves English. Yet, once students understood the concept and the tools involved in our project, they traded in fear for curiosity. I sent them about

The Journal of Kanda University of International Studies Vol. 33 (2021)

the work by showing them the cardboard that needed cutting, wires that needed stripping, conductive materials that needed gluing, and connections that needed mending. They toiled and tinkered and talked. They said things such as, "Where are you from?" and "How did you do that?" and "Where do you work?" Half of the language focused on the activity at hand, collaborating work and ideas, the other half on chit chat, but nobody seemed to notice or mind. For the students, this wasn't a lesson or a project for a class, but rather a low stakes learning opportunity. Learning centered around how they managed the activity and interacting with one another. Other students seemed hesitant to participate. One time a pair of students came by to investigate, and I showed them the idea. They stated that they lacked knowledge and skills to help out. I replied, "That's ok. I am not sure if it will work, but let's try." Although they joined the activity, I am not sure they were convinced that their contributions were meaningful.

Reflecting back, there were some important lessons about student agency and resilience hiding in these experiences. First, it is important not to underestimate the fear of failure. Transformative agency (Kajamaa & Kumpulainen, 2019), or learning to think, "I can do it," is as important as the learning activity itself, and it is even better when this type of agency is demonstrated from a near peer role model (Dörnyei & Murphey, 2003). Second, the project or task itself should be approachable, bite size, and fun for the students. Large projects without a clear goal or model may create anxiety or disinterest (refer to Jonathan's section, "The Benefits of Makerspace for Managing Foreign Language Anxiety" below). Long running projects are fine for class, but not optimal for pick-up activities. Finally, "character building" can be facilitated as one teacher stated by "Doing something in the process of practicing patience, resilience, [and] perseverance..." (Clapp, et al. 2016). However, we have to help facilitate these notions into successful activities for the students. As Gonzalez (2015, June 10) suggested, we as teachers need to "eat our dog food," meaning that we should do the same work that we ask our students

to do; that way we can better understand the challenges they face and guide them through the experience. While my previous successful maker projects didn't add up to a win this time, they make the path for future endeavors clearer.

Sam's Experience: Building Language and Contraptions in Small Groups

Working with students during Maker Conversation sessions allowed me to play with the idea of vocabulary building while engaging in three main creation activities. While Gadomska (2015) found that Lego activities in particular can be an effective task-based language learning tool, I wanted to use Meccano and clay as well. The small group sessions, often one to two students only, allowed me to really communicate with each student and engage in a way that would be difficult in a traditional classroom.

The sessions would normally start out with questions about events that have happened since we last saw one another, as most of the students were regulars. After catching up, we would work together to devise an approach to the activity that I had prepared for us, conversing while working with the creative tool in front of us, such as the previously mentioned Lego, Meccano, or clay sets.

This time used for creating provided many nonverbal interactions, which are important for second language interaction (Belhiah, 2005). The verbal communication and nonverbal interaction that occurred while building with the Lego blocks, the Meccano, or the clay helped expand our understanding of what each other person wanted to say and build vocabulary. By sometimes literally building what we wanted to say, we were able to discuss ideas that may have not come up if we did not have these materials in front of us. If we were building a house, vocabulary related to houses would occur such as windowpane, closet, roof tile. If we were building a vehicle with Meccano, vocabulary related to not just vehicles, but our building tools would arise - screw, bolt, wheel hub, steering wheel. I found that these words were more specific and detailed than

what would normally be discussed in a casual conversation. Action verbs were used frequently with clay - smooth, mold, stick, wrap, etc. Being able to show the student what these words meant was useful in explaining the various meanings.

While the number of students in my Maker Conversation sessions was lower than expected, this made it easier for me to discuss what we were building and to create a comfortable atmosphere for the students. Often the sessions had no more than two participants, sometimes only one. This created an atmosphere where it was easy to build rapport with the student. Tsui (1996) stated that in order to create a conductive atmosphere for students to learn in, it is critical to establish a good relationship. With the same participant coming back regularly, the conversation became more and more comfortable. Maker Conversation puts a focus on creating with the students, and when the session is small enough, it is incredibly easy to give them enough attention. This with the good rapport provided an effective language learning environment I believe.

I believe that because Maker Conversation allows students to create using creative tools such as clay, Lego, or Meccano in small groups, these sessions have the ability to bring out vocabulary that normally would not occur in casual conversation or conversations in the classroom as frequently. Maker Conversation also allows smaller, interpersonal conversations and lessons to transpire in conjunction with the creation activities, leading to an easier time building rapport with these students.

Jonathan's Experience: The Benefits of Maker Conversation for Managing Foreign Language Anxiety

In my experience as a teacher in the English Lounge, I've noticed a few anxietyrelated issues that inhibit participation. When I've talked to students about this, they have expressed a reluctance to participate in English conversations due to feeling awkward and not knowing the other students in the session. These types of negative feelings are examples of foreign language anxiety, which Horwitz, Horwitz, and Cope (1986) describe as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to [...] language learning arising from the uniqueness of the language learning experience" (p. 128). I believe that Maker Conversation offers an opportunity to reduce these negative feelings through collaboration and hands-on activities.

More specifically, students have spoken negatively about silence during conversations, appraising it as inherently awkward and a reflection of their lack of fluency. Silence has many functions, many of which are positive or neutral, such as providing learners time to plan their speech (Maher & King, 2020). Even when we speak with friends in a shared first language, silence is such a normal part of our social lives that it generally passes by unnoticed, yet simply explaining this to students may not change their deeply internalized negative appraisals of silence. During Maker Conversation, however, students have something to do with their hands, such as painting a picture, that may reduce their feelings of discomfort when there is an inevitable pause in the conversation. There are a couple of benefits to this. First of all, the maker activity may allow students to "save face," even if the only person they need to save face for is themselves. They can attribute the silence to focusing on the task, as opposed to having a limited vocabulary. The other benefit is that the activity provides a topic of discussion that all participants immediately share. If I'm with a group that has few things in common, we still have our activity that provides material for discussion, such as how to do something, the experience of making, or talking about the products of what we make, such as a 3D pen design. These benefits are not limited to students. Even as a teacher, I have felt less pressure to keep the conversation going nonstop during the sessions for the reasons described above. The whole experience feels much more natural and enjoyable.

Another important element of Maker Conversation for reducing anxiety is collaboration between peers and the teacher. Using a structured cooperative learning intervention in an English for Academic Purposes course, Nagahashi (2007) found that collaboration and cooperation reduced negative feelings about interacting in a foreign language in class. I have observed this to be the case during maker sessions as well. In one simple yet very successful maker activity adapted from cartoonist Lynda Barry (2019), students collaborated to create characters and comics under strict time constraints. For example, students have 3 minutes to create the next panel in a comic, and then they pass it to the next person to continue the story until we have several one-page comics. The time limits were important in this activity because it reduced expectations of having "high quality" drawings or concerns about language errors. By the end of the first round, students who normally never interact were talking and laughing about what they had created. Through having a shared goal and the novelty of not knowing how the final product would turn out, we were able to quickly build bonds, which led to spontaneous conversations that normally do not happen in the English Lounge.

By providing hands-on, collaborative activities, I believe Maker Conversation has the potential to lower barriers to participation related to anxiety as well as build bonds between participants. By promoting these aspects of maker education across campus, we may be able to encourage more students to join in.

Erin's Experience: Play through Art

One of the most important ideas that I explored during my Maker Conversations was the idea of play. Play is often overlooked, especially in contexts focused on standardized testing, but the Maker Conversation sessions are a perfect place to explore how play can affect language learning. Research has suggested that "playful experimentation" through imagination, creation, play, sharing, and reflection (creative learning spiral (Resnick, 2018, p.11) may lead to more creative expression, which in turn may lead to a more authentic language production. This is what led me to focus on the

idea of creative expression through play to elicit language production.

My duties focused on play primarily through the utilization of the "A" or the arts of STEAM. Art is a very personal way in which an individual can express themself. Also, art allows the creator to subjectively interpret their world (Sousa & Pilecki, 2018). This perspective could aid a language learner in expressing concepts that are more emotional and cognitively harder to convey. Using these theories, I did several art projects with the learners that required them to work together, communicate more, and to think outside the box. One such project was when the learners worked together to create a collaborative paper mural. The larger image of the mural had been divided into smaller squares and labeled with black and white (negative space) and color (positive space), so the learners did not know what the final image would look like. I asked the learners to draw pictures and create patterns that they felt represented them. The only rule was they had to follow the labeled black and white and colored areas. The learners had to imagine and create a way to communicate meaning about themselves through an image alone, which many of them felt was taxing as they created some very abstract pieces. However, we discussed what the learners' squares meant to them which led to some very personal and emotional stories. This mural was very large and the creation of it took about two duties, but by the end the learners had created a piece of art that reflected the group's identity.

With the aid of a multimodal form of expression, the learners that took part in my Maker Conversation sessions seemed to be more open to discussing a wider range of topics and needed less teacher prompts to continue a conversation. It seemed that while they were focusing on making the art, they worried less about if they were grammatically correct and the conversation flowed more naturally than that of a typical "English Lounge" session. This was especially true when we were making braided bracelets. Once the learners got the hang of the sequencing of the threads, the braiding was pretty mindless and the learners continued to have deeper conversations then what I had previously

experienced. It was like the distraction of doing something with their hands was able to relax the learners and removed barriers to communication.

I really felt that the learners enjoyed their time at my Maker Conversation sessions. There was a notable positive mood shift as they created pieces of art to express themselves both through language production and visual representation of abstract ideas. Being able to experiment with 'play' not only through art but also language, really helped the learners feel more comfortable in exploring ways of expressing themselves that typically would not be found in a language classroom.

Euan's Experience: Visibility, Approachability and Creativity

When I first started thinking about what form my sessions would take, I decided early on there were three important considerations. The main goal of Maker Conversations was to provide an environment for students to practice open-ended conversation whenever they wanted. This meant the space needed to be highly visible, the activities needed to be very approachable, and the students needed to be able to express themselves creatively.

The Maker Conversation space needed to be set up within the English Academic Support Area on campus. This was an area already full of other English practice opportunities such as the English Lounge, a speaking practice center, a writing center, and a presentation practice area. It was key that I set up my maker sessions in a highly visible location with a distinct purpose and boundaries, as while most other support areas worked on a reservation system, Maker Conversation would need to attract students who happened to be passing by. With this in mind, I set up my sessions in a clearly visible raised space, configured like a miniature cafe, at the top of a large stairway leading up from the main ground floor entrance.

Considering approachability, I needed activities that looked interesting at a glance, but were novel or unique enough to encourage students to approach the space to learn more. I also purposefully chose not to have more than one kind of activity at a time, to encourage students to sit together and work on similar projects. This aided in larger group conversations centered around a shared vocabulary related to the available activity.

The final consideration, expressions of creativity, was necessary in order to sustain student interest in the space over longer periods, both within single sessions and over the course of the semester. If students were able to work on something while they talked that required their own creative flair, they would be able to discuss ideas with other participants. This would help sustain conversations, and students would take away a finished product at the end that could serve as a kind of advertising for Maker Conversations when they show it to their friends.

After some experimentation with other activity types, I eventually discovered that 3D printing pens were the best combination of approachability, uniqueness and creativity. These pens, which dispense a small amount of heated plastic that could be drawn into shapes, were easy for students to understand and start using, while simultaneously being unique and something most had never tried before. The plastic filament was cheap, as were the pens themselves, consisting of nothing more than a heater and a dispenser. This allowed us to buy pens for each participant. Students enjoyed making 2D & 3D keychains, little houses, models and more and were able to take each creation away with them. The only drawbacks to the 3D pens were their need for electricity outlets and the long cables did detract from their ease of use.

The total number of students remained fairly constant at 1-3 participants per session, and I feel that taking the time to consider what factors were important in maximizing participation did help make the space somewhat successful. Determining the best location for visibility within the space and selecting activities that were unique and approachable may seem like obvious considerations. However, keeping them in mind helped make decision making easier and may have contributed to the relative success of having at least

some students participate in the space in most sessions.

Conclusion

Maker Conversation has been an interesting and informative experience for each of the 5 facilitators who participated. By examining the experiences together as a whole, it is possible to identify the presence of some common threads linking each of the 5 experiences. The first common theme is the value of providing an alternative avenue for communication with students. The addition of a tactile activity as the focus of each session not only was a catalyst for situated language use, but may have helped students feel more comfortable participating in the sessions. There was also the added benefit of integrating activities and principles from the STEAM fields, fields which are not traditionally integrated with language learning. Language is an integral component of all disciplines and can easily transcend artificial barriers imposed by institutional departmentalization and the separation of disciplines.

Furthermore, through a retrospective look at some of the challenges and difficulties experienced when conducting Maker Conversation sessions, the researchers have been able to draw out valuable lessons that will shape the future of maker activities. The importance of selecting accessible spaces and activities is a recurring theme in facilitator experiences. The type of activity pursued during a session was also a key factor in determining whether a session would successfully draw and engage students. Overall, Maker Conversation has been a successful exploration of a novel way to interact with students. Building on the lessons learned from this pilot, the researchers hope to expand and continue to study this unique reconceptualization of the English Lounge.

References

- Alley, W. (2018). Makerspaces as constructivist language environments. *MEXTESOL Journal*, 38(4).
 - http://www.mextesol.net/journal/index.php?page=journal&id_article=4451
- Barry, L. (2019). Making Comics. Drawn & Quarterly.
 - https://drawnandquarterly.com/making-comics
- Belhiah, H. (2005). The partnership between vocal and non-vocal aspects of language use in ESL tutorials: A conversation analytical approach [Unpublished doctoral dissertation]. University of Wisconsin, Madison.
- Berman, S. J., & Tada, M. (2018). Multifaceted active Learning through lunch hour Japanese food presentations: Procedures, outcomes, and lessons learned. *TELES Journal*, *38*, 157-166. http://ci.nii.ac.jp/naid/40021600516/en/
- Bevan, B. (2017). The promise and the promises of Making in science education. *Studies in Science Education*, 53(1), 75-103.
 - https://doi.org/10.1080/03057267.2016.1275380
- Chen, A., & Mynard, J. (2018). Student perceptions of the English Lounge after a layout change. *Relay Journal*, 1(1), 221-235.
- Clapp, E. P., Ross, J., Ryan, J. O., & Tishman, S. (2016). *Maker-centered learning:*Empowering young people to shape their worlds. John Wiley & Sons.

 https://www.wiley.com/en-us/Maker+Centered+Learning%3A+Empowering+Young+People+to+Shape+Their+Worlds-p-9781119259701
- Dörnyei, Z., & Murphey, T. (2003). *Group dynamics in the language classroom*. Cambridge University Press. https://doi.org/10.1017/CBO9780511667138
- Honey, M., & Kanter, D. E. (2013). Design, make, play: Growing the next generation of STEM innovators. Routledge. https://doi.org/10.4324/9780203108352

- 神田外語大学紀要第33号
- The Journal of Kanda University of International Studies Vol. 33 (2021)
- Horwitz, M.B., Horwitz, E.K., & Cope, J.A. (1986). Foreign language classroom anxiety. The Modern Language Journal, 70(2), 125-132.
 - https://doi.org/10.1111/j.1540-4781.1986.tb05256.x
- Gadomska, A. (2015). Using Lego blocks for technology-mediated task-based English language learning. *Teaching English with Technology*, 15(2), 120-132. https://files.eric.ed.gov/fulltext/EJ1140583.pdf
- Gonzalez, J. (2015, June 10). Dogfooding: How often do you do your own assignments? *Cult of Pedagogy*. https://www.cultofpedagogy.com/dogfooding/
- Johnson, C. C., Peters-Burton, E. E., & Moore, T. J. (2016). STEM road map: A framework for integrated STEM education. Taylor and Francis.
- Kajamaa, A. & Kumpulainen, K. (2019). Agency in making: Analyzing students' transformative agency in a school-based makerspace. *Mind, culture, and activity, 26*(3), 266-281. https://doi.org/10.1080/10749039.2019.1647547
- Kanno, K. (2010). An English speaking space outside the classroom: the English lounge at Soka Women's College. *Journal of Soka Women's College*, 41, 95-117. http://ci.nii.ac.jp/naid/40018784865/en/
- Kushida, B. (2020). Social learning spaces. In Mynard, J.. Burke, M., Hooper, D., Kushida, B., Lyon, P., Sampson, R., & Taw, P. (2020). Dynamics of a social language learning community: Beliefs, membership and identity (pp. 23-47). Multilingual Matters. https://www.multilingual-matters.com/page/detail/Dynamics-of-a-Social-Language-Learning-Community/?k=9781788928892
- Lee, I. (1998). Supporting greater autonomy in language learning. *ELT Journal*, 52(4), 282-290. https://doi.org/10.1093/elt/52.4.282
- Maher, K., & King, J. (2020). Observing anxiety in the foreign language classroom: Student silence and nonverbal cues. *Journal for the Psychology of Language Learning*, 2(1), 116-141. https://jpll.org/index.php/journal/article/view/maher king

- Martinez, S. L., & Stager, G. (2019). *Invent to learn: Making, tinkering, and engineering in the classroom* (2nd ed.). Constructing Modern Knowledge Press.
- Marlowe, B. A., & Page, M. L. (2005). *Creating and sustaining the constructivist classroom* (2nd Ed.). Corwin Press.
- Matthews, K. E., Andrews, V., & Adams, P. (2011). Social learning spaces and student engagement. *Higher Education Research and Development*. https://doi.org/10.1080/07294360.2010.512629
- Mynard, J., Burke, M., Hooper, D., Kushida, B., Lyon, P., Sampson, R., & Taw, P. (2020)

 Dynamics of a social language learning community: Beliefs, membership and identity.

 Multilingual Matters.
 - $\frac{https://www.multilingual-matters.com/page/detail/Dynamics-of-a-Social-Language-Learning-Community/?k=9781788928892$
- Nagahashi, T.L. (2007). Techniques for reducing foreign language anxiety: results of a successful intervention study. *Akita University Liberal Arts Basic Education Annual Report*. https://iss.ndl.go.jp/books/R000000004-18766551-00
- Resnick, M. (2018). Lifelong kindergarten: Cultivating creativity through projects, passion, peers, and play. MIT Press.
- Ryan, J. O., Clapp, E. P., Ross, J., & Tishman, S. (2016). Making, thinking, and understanding: A dispositional approach to maker-centered learning. In K. Peppler, E. R. Halverson, & Y. B. Kafai (Eds.) *Makeology, Volume 2: Makers as learners*.
- Smith, A. (2017). SWPS 2017-10 (June) Social Innovation, Democracy and Makerspaces Editorial Assistance. Ssrn.
 - https://doi.org/10.13140/RG.2.2.30640.35843
- Sousa, D. A., & Pilecki, T. J. (2018). From STEM to STEAM: Brain-Compatible Strategies and Lessons That Integrate the Arts (Second ed.). Corwin.

- 神田外語大学紀要第33号
- The Journal of Kanda University of International Studies Vol. 33 (2021)
- Taylor, B. P., & Wolfson, N. (1978). Breaking down the Free Conversation Myth. *TESOL Quarterly*. https://doi.org/10.2307/3585788
- Taylor, C., Beck, D., Hardy, D., Omura, K., Stout, M., & Jr, G. T. (2012). Encouraging students to engage in learning outside the classroom. *LD SIG Realising Autonomy Conference Proceedings (Learning Learning)*.
- Taylor, N., Hurley, U., & Connolly, P. (2016). Making community: The wider role of makerspaces in public life. Conference on Human Factors in Computing Systems -Proceedings. https://doi.org/10.1145/2858036.2858073
- Tsui, A. (1996) Reticence and anxiety in second language learning. In P. Bailey, D. Nunan and M. Swan (Eds.), Voices from the language classroom: Qualitative research in second language education (pp. 145-167). Cambridge University Press.
- Van Lier, L., & Walqui, A. (2012). Language and the common core state standards.

 Understanding Language: Commissioned Papers on Language and Literacy Issues in the Common Core State Standards and Next Generation Science Standards.

 https://ell.stanford.edu/sites/default/files/pdf/academic-papers/04-Van%20Lier%20Walqui%20Language%20and%20CCSS%20FINAL.pdf
- Wenger, E. (2000). Communities of Practice and Social Learning Systems. *Organization*, 7(2), 225-246. https://doi.org/10.1177/135050840072002