Assessing Creative Awareness and Literary Writing Games in the Norwegian Context

Allen Jones
University of Stavanger, Norway

allen.jones@uis.no

Abstract: This paper reports on a survey and teaching intervention done with Norwegian students in their first (VG1), second (VG2), and third year (VG3) of high school English (16-19 years old). The goals of the project: 1. To examine Norwegian student/teacher attitudes toward creativity; 2. To design, play-test, and asses creative reading games. The study found students surprisingly open to creativity and games in education, however, there was a general wariness of assessment. As the students progressed through high school, they increasingly saw writing as something one is forced to do, and resisted sharing their writing. Almost all students saw themselves as outside the community of writers. While the novel nature of the games made for initial difficulties, this was also a motivator. The key to effectiveness was pairing theory with practice to give students a clear sense of the pedagogical goal: to develop and experience the use of creativity (divergent thinking). The use of multimodality in games (drawing) was immensely effective for student engagement and collaboration; however, it was less effective in terms of maintaining clear pedagogical goals in the time given. Finally, the most effective approach in terms of engagement was to involve students as game designers. This paper will focus on a presentation of student views on creativity followed by an assessment of the game results in light of these views.

Keywords: Games, Creativity, Teaching, Divergent thinking, Critical reading, English

1. Introduction

Divergent Thinking and Creativity: A Brief Definition

Creativity studies has placed divergent thinking at the center of creativity measurement and critical discussion. In short, divergent thinking is the mind's ability to create ideas by multiplying possible connections. Convergent thinking, on the other hand, is the ability to narrow down connections to a single "best" solution/connection. A simple way to think of divergent thinking is fluency (quantity produced) in forming surprising associations or creating interpretations from a single shape/text. A typical example from the most influential creativity test (Torrance, 1966) might be to present a series of identical circles and see how many individual drawings can be produced. A textual question might look like this: How many uses can you think of for a toothpick? While there is significant depth to this research area, including detailed ways to measure creative results, this basic definition will suffice in this context.

Many contemporary thinkers see creativity as central to society (Urban, 2007) (Enquist et al, 2008), and it is a commonplace in the digital era to see the creative model of thinking as more valuable than the encyclopedic model. Rhodes made this claim over half a century ago (1961), and it seems only more evident in an age where individuals must increasingly adapt to changes in society (Runco, 2004). As there is general agreement that intelligence is increasing in society (Kim, 2011), it would seem society is well prepared to excel in creative thinking; however, this is not the case. Creativity actually seems to be in decline (Kim, 2011).

While creativity studies have blossomed in the last decades (Corazza et al, 2022), creativity is still generally misunderstood. The designer of the most influential creativity test pointed this out long ago (Torrance, 1962). While researchers had repeatedly debunked creativity myths, the myths remained fixed in the popular mind (Rhodes, 1961). This continues as we see creatives marginalized in the classroom (Beghetto, 2007), find them categorized as disruptive forces (Torrance, 1962) (Beghetto, 2007) (Amabile, 2018), and face a public discussion of creativity framed by these myths. The most prevalent of these myths are that only certain people are creative, creativity cannot be taught, creativity is not useful, and creativity cannot be assessed (Treffinger, Isaksen, and Dorval, 2000) (Amabile, 2018) (Guilford, 1950).

Despite these myths, a variety of tools have been developed to increase creativity, from Alex Osborn who invented brainstorming in the 1950s (Baer and Kaufman, 2012), to Peter Elbow's seminal work on freewriting (1986), to Torrance's extensive work on divergent thinking (term explained below), including the most influential creativity test, the Torrance Test of Creative Thinking (Torrance, 1962) (TTCT; Torrance, 1966).

Motivating environments have also been studied extensively. Game environments have repeatedly proven to increase engagement (Bowman, 2018), and there has been extensive work done on collaborative environments, from indexing collaborative writing approaches (Lowry et al, 2004), to arguments that reveal collaboration hindering creativity as much as encouraging it (Zhang, 2022); however, environments without

judgment are the determining factor in successful motivation, as has been shown extensively in studies by Amabile (1982, 2018) and supported by other researchers (Baer and Kaufman, 2012) (Beghetto, 2007).

Finally, the seemingly avant-garde use of chance associations in the creative process has recently shown great promise (Ross and Vallé-Tourangeau, 2021) (Mastria et al, 2022). In these studies, disconnected or distracting information infuses divergent thinking patterns into the creative process and triggers concrete gains in creative solutions.

While these pieces of the creativity puzzle have been explored, we have yet to study what happens when we combine these successes into a pedagogical approach aimed at critical reading and writing, particularly in the Norwegian context. This study assessed student and teacher views of creativity, then examined the potential of *game-based*, *collaborative*, *association-based, divergent-thinking* activities to create an understanding of creativity skills and to motivate a prolonged engagement in reading and thinking critically about literary texts.

Research questions:

RQ1. How open is the Norwegian high school environment to creativity?. 1

RQ2. Can divergent-thinking writing games motivate creativity and engagement in critical reading?

The project had four phases:

- First, student attitudes toward creativity were explored through a pre-game survey and discussion.
- Second, brainstorming and freewriting tools were used to train students in the theory and practice of divergent thinking.
- Third, a game-based approach was used to explore motivation, the effectiveness of collaboration, and the usefulness of association (both chance and directed) as a method to motivate in-depth, interactive, and critical reading.
- Finally, two comparisons were made:
    - multimodality (drawing) games versus purely textual games.
    - a teacher-driven game-based approach versus a student-as-game-designer approach.

2. The Study

Over the course of three months in the spring semester of 2022, the researcher conducted preliminary observations, a survey, a three-class teaching intervention (4.5 hours total), and verbal and written feedback sessions with 66 Norwegian high school students in first year (VG1: 31 students), second year (VG2: 18 students), and third year (VG3: 17 students) English classes (ages 16-19). The teaching intervention included discussion, game-testing sessions, and feedback sessions. The data collected included passive and active (teaching) observation, teacher interviews and discussion, a student survey that included written feedback and discussion, game results, games developed by students, and a series of post-activity questionnaires for student feedback and evaluation of the process and the games.

Pre-Game Questionnaire

The pre-game questionnaire (see figure 1) was administered to 66 students (VG1:31/VG2:18/VG3:17) and focused on five areas of inquiry:

1. Exploring students' relationship to the myth of the exclusivity of creativity (questions 6 and 7).
2. Measuring student self-identification as "logical"/math-based thinkers vs. "creative" thinkers (questions 1 and 10).
3. Assessing student views on the importance of creativity/games in education (questions 2, 6, and 8).
4. Identifying students' relationship to professional/serious creativity (inclusion/exclusion) (questions 3, 5, and 7).
5. Determining the level of collaboration students have experienced (questions 4 and 9).

		1	2	3	4	5	
1	I love numbers						I love writing
2	Games aren't important for learning						Games are very important for learning
3	I know a writer personally						I don't know any writers
4	I don't like sharing my writing						I love sharing my writing

		1	2	3	4	5	
5	I see myself in stories I read						I don't see myself in stories I read
6	Inspiration cannot be taught						Inspiration can be taught
7	Poets are like everyone else						Poets are special people
8	Creativity isn't a serious school subject						Creativity is as important as math in school
9	I usually write alone						I usually write in a group
10	I like clear answers						I like creative answers

Figure 1: Pre-Game questionnaire

Students were asked to rank themselves on the spectrum from 1-5. After filling out the survey, there was a half hour full-class discussion as well as written feedback. The written feedback questions were as follows:

- How do you see yourself in terms of creativity?
- Even if you aren't creative, what's a creative thing you have done?

The goal of these two questions was to contextualize student answers and to discover what things beyond writing (the focus of the questionnaire) students saw as creative.

Expectations based on creativity myths: 1. Boys would self-define as loving numbers over writing, with girls the opposite; 2. Students overall would see games as unimportant for learning; 3. Students would be outside the community of writers; 4. Students would be extremely wary of sharing their work and would rarely have worked collaboratively; 5. Students would see inspiration as something special that cannot be taught and poets/writers as special, naturally gifted people; 6. Students would prefer "clear" answers over "creative" ones. 7. Students would see only art as creative.

Pre-Game Questionnaire: Results

Surprisingly, the pregame questionnaire found that both boys and girls in this sample see creativity and games as important for learning, especially in their second and third year; however, this view of creativity was disconnected from school writing, and almost all students saw themselves as outside the community of writers. As students progressed through school, they increasingly saw writing as something one is forced to do, and increasingly resisted sharing their writing. At the same time, a majority of students thought inspiration/creativity was a necessary and teachable skill, and this belief increased as students progressed. Thus, students saw creativity as a key to their education, but they did not associate this goal with school or school writing. Finally, a significant number of students saw creativity as a risk when linked to assessment.

Pre-Game Questionnaire: Quantitative Data and Discussion

The graph below represents scores averaged for all students, (decimals rounded up at .5). Note that higher numbers signify movement toward one answer on the spectrum. See detailed data below the graph.

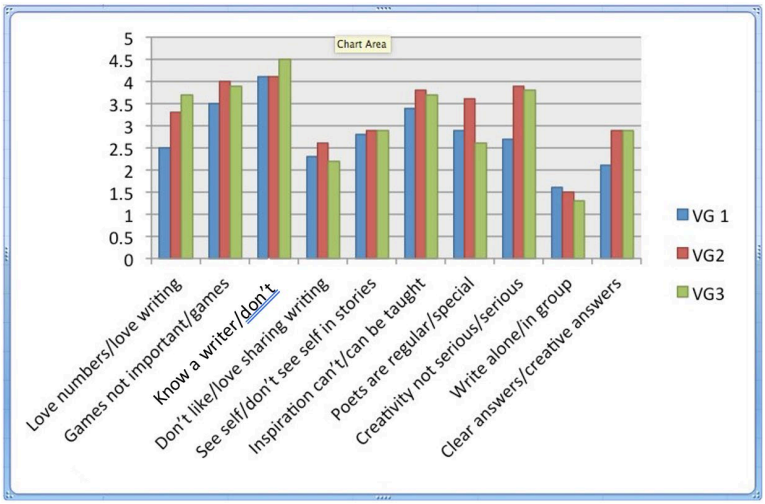

Figure 2: Pre-Game questionnaire answers for all students

The detailed scores below are listed as follows: VG1 → VG2 → VG3.

1. Love numbers/love writing: 2.5 → 3.3 → 3.7
    a. Notice the clear increase as students progress VG1 to VG3. English is required in VG 1 and selected in VG 2 and 3, which may affect the data on interest moving from VG 1 to 2.
    b. In VG 1, girls (3.2) were significantly more interested in writing than boys (1.8).
2. Games not important/games important: 3.5 → 4→ 3.9
    a. Importance of games increased as students progressed.
    b. Overall boys saw games as more important than girls.
        i. Girls: 3.3 → 3.8 → 3.8
        ii. Boys: 4→ 4.3 → 4.4
3. Don't know a writer/know a writer: 4.1 → 4.1 → 4.5
    a. In discussion, it was revealed only a single student knew a writer (1.5%).
    b. 100% of the students knew an engineer.
4. Don't like/love sharing writing: 2.3 → 2.6 → 2.2
    a. This was closer to the middle than projected.
    b. Note: the word "love" is used rarely in Norway and is considered an absurd exaggeration.
5. See self/don't see self in stories: 2.8 → 2.9 → 2.9
    a. Girls see selves *less* in stories as progress to VG3: (2.7 → 2.7 → 3.1)
    b. Boys see selves *more* in stories as progress (3.2 → 3.1 → 2.6)
    c. This is a large topic that merits more detailed inquiry.
6. Inspiration can't/can be taught: 3.4 → 3.8 → 3.7
    a. Overall students saw inspiration as highly teachable. This was a surprise for the researcher when compared to research on creative myths and decades of teaching observation. This may partially be the influence of Norway's pragmatic, egalitarian ("Janteloven") culture.
7. Poets are regular/special: 2.9 → 3.6 → 2.6
    a. VG2 class scored significantly higher than the other classes, especially the boys.
        i. VG2: girls: 3.5; boys: 3.8.
    b. This seems contradictory as VG2 boys also scored highest on "inspiration can be taught". It seems logical that if poets are special/different, this is natural as opposed to taught. However, the VG2 score still sits in the middle range (3), so it is only high when assuming that creative myths, studied mostly in the U.S., hold true in Norway. Creativity myths merit a wider quantitative survey across Norway.
8. Creativity not serious in school/as important as math: 2.7 → 3.9 → 3.8
    a. There was a significant increase across the board as students progressed.
    b. Note these surprisingly radical comments on this question from the qualitative feedback:
        i. VG2 boy: "Creativity is useful in every job, and throughout life, whereas math is only in some career paths."
        ii. VG2 girl: "Since not everyone likes math and wants to work with math later in life, people should be able to learn about something else that's not useless for their future."
9. Write alone/in group: 1.6 → 1.5 → 1.3
    a. Scores and discussion showed little collaborative or group writing, save for a few involved in "sequential single-author writing", in which writing is divided and involves a minimal amount of interaction (Lowry, Curtis, and Lowry, 2004).
10. Clear answers/creative answers: 2.1 → 2.9 → 2.9
    a. There was a general movement toward creative answers, though this question was a bit of a trick question to elicit student challenge of this dichotomy in discussion. One VG2 student did challenge it in written feedback and discussion.
        i. VG 2 boy: "…why do you separate logic and creativity when the most creative solutions come from logical thinking?"
    b. There was a clear movement toward creative answers for boys: 1.5 → 2.6 → 3
    c. Note that there was a lack of clarity on this question's relationship to assessment, the major creativity killer. Fear of assessment may account for the low scores. However, as shown below, when a majority of students self-identify as not-creative, creative tasks may not initially motivate them.

Feedback Questions

1. How do you see yourself in terms of creativity? (only clear answers of "creative"/"not creative" were counted; students writing "in the middle" gave .5 points to each side):
    a. Clearly see self as creative: VG 1 → VG 2 → VG 3
        i. Notice boys increase and girls drop *significantly* in their self-evaluation as creative.
            1. All:
                - 59% → 44% → 41%
            2. Girls:
                - 67% → 40% → 36%
            3. Boys:
                - 27% → 50% → 50%
2. Ranked list of top things students sees as creative (number of students listing a topic):
    a. VG1: art (7), writing (6), food (3).
    b. VG2: stories (3), drawing (2).
    c. VG3: art (5), writing (5), music (3), dancing (2), food (2).
        i. Note that in each class, students held traditional/reductive notions of creative activity. Research in the U.S. reveals that students overwhelmingly see creativity as pertaining solely to art (Treffinger, Schoonover and Selby, 2021). Food appeared as the only surprise here.
    d. This restricted notion of creativity can negatively affects motivation and self-identificaiton, as the VG2 girl below notes:
        i. "I think I can in some ways be creative, but I feel like it is hard for me to be creative in the sense of what others make, for example poems, movies, stories etc."
    e. However, when forced by the question, students named an extensive list of creative activities: VG1 (14), VG2 (25), VG3 (24). The leap after VG1 suggests that self-identifying "creative" students select English over other subjects.

Qualitative Data VG1

1. Creativity as "childish"
    a. 21% of VG1 students associated creativity with childhood; however, zero students self-identifying as creative felt this way.
3. Creativity and motivation/assessment
    b. The fear of assessment as a detriment to creativity was quite marked in discussion and feedback:
        i. VG1 student (NA gender): "I would say I am creative, but school doesn't really grade you for creativity."
        ii. VG1 student (NA gender): "I can be sometimes (when I'm not forced to be)."

Qualitative Data VG2

1. Creativity as disruptive/"childish"
    a. In discussion and in the written results, this was evident. For example, one student wrote a poem on sex that, while appropriate to the task, could challenge many teaching environments. The following comments also demonstrate how creative spaces can instigate provocative topics:
        i. VG2 boy on creative activities:
            1. "I built a homemade bong for vaping, from a soda can."
            2. "I'm creative in a way that I'm really good at lying on the spot, finding ways to do less work."
    b. Students at all levels gave feedback that creativity was neither taught nor encouraged at school except in childhood. Here is a VG2 girl who self-identified as not creative:
        i. "I am more able to be creative on my spare time, than at school."
2. Motivation and creativity
    a. Extensive research and practice has found motivation as a key to creativity (Baer and Kaufman, 2012) (Amabile, 1982, 2018) (Glaveanu, 2017). Student comments reflected this.

i. VG2 boy: “I see myself creative when I’m having fun or if I’m interested in whatever I’m doing. While I am bored I usually don’t care so much, which is the reason why I’m not creative.”

Qualitative Data VG3

1. Creativity as “childish”
    a. This VG3 girl noted the embarrassment surrounding creativity due to judgment and the sense that creativity is childish/disruptive.
        i. “I loved to write when I was younger. I often made up stories, but the interest disappeared as I grew older. Me and [female friend] also had a blog and Youtube account, but that's embarrassing.”
2. Motivation and creativity
    a. Students felt that school does not connect skills to creativity, which lessens motivation. Note this VG3 boy’s view:
        i. “I see myself as a bit over average creative, but usually feel like I don't have the skills to utilize it.”
    b. However, this VG3 girl argues that mandatory creativity lessens motivation, though it may stem from fear of assessment:
        i. “I…find it difficult to be creative when I'm being forced to do so.”
    c. This VG3 girl echoes these sentiments and connects them to creativity as “childish”:
        i. “I think I used to when I was little. Maybe 'til I turned 14. But the pressure of school has turned every type of creative work into something that has to be done.”

3. Pre-Game Teacher Feedback on the use of Creative Games

All three teachers saw establishing a “free” (non-judgmental) space as fundamental for developing student writing, and each had previously tried versions of free or semi-free writing with some success. At the same time, all three named sharing as a challenge to this free space, both in the past and as something expected in the games. Peter Elbow calls the management of this tension between open supportive spaces and assessment “embracing contraries” and sees it as key writing pedagogy (1986). The VG1 teacher noted that this lack of freedom was internalized, especially with her more advanced students who “seem to censor their writing”, particularly in the early stages. Despite valuing this freedom, the VG3 teacher noted that the pressure of exams and curriculum left little time for “this kind of work”. Thus, even a teacher who sees the importance of creative pedagogy does not feel she has the tools to integrate it.

All three teachers hoped the games would help students develop more creative writing practices. The questionnaire mirrored this need, showing that as students progressed, they self-identified as increasingly less creative. Before the questionnaire, the VG3 teacher noted that her students mostly self-identified as “not creative” and argued that this set up a nervousness about success that, in turn, affected interest in creative activities. While the myth of creativity as a “childish” endeavor was present in all levels of the questionnaire, of the three teachers, only the VG3 teacher specifically noted this. She added to this that the absence of a creative view of writing was detrimental to student success: “The students start as creative and curious writers in first grade and end up finding writing a struggle by the time they come to upper secondary school.” All three teachers foresaw clearly explaining the goals and rationale of the games to students as a possible challenge, a sign of the novelty of the approach and the disconnect between students and creative practice.

4. Pre-Game Creativity Training

The interventions were done in succession (VG3, VG1, V2) so that the approach could be tested, improved, and compared. While the games at each level were different (geared to the texts and needs of each individual teacher), the pre-game training was the same series of divergent skill builders. This training also functioned to clarify pedagogical goals, something the study found fundamental to building student motivation.

An exploration of freewriting types was used as a divergent thinking/writing skill builder and also to clarify the goals of the games. First a spectrum was explained running from divergent thinking (explained as the creative/writer part of the brain that loves to create/write and doesn’t judge) and convergent thinking (the judge/editor who assesses what has been created). Then a series of freewriting exercises (not in this order) were used to explore this notion, including the notion of chance as a tool in divergent thinking, something “word bomb” did with surprisingly successful results in terms of motivation. Note to users: the only rule in

basic freewriting is that a practitioner cannot stop. One student simply wrote potato repeatedly. This radical openness is necessary to open a non-judgmental space.

- Freewriting with eyes closed (most divergent on the spectrum)
- Freewriting with random word ("word bomb") dropped in (divergent + chance association)
- Freewriting (middle divergent)
- Freewriting with trigger phrase "I remember" (most convergent, as memory directs it)

These activities were successful motivators, but there was considerable improvement in their use in the games as each iteration simplified/clarified the concepts represented. The terms divergent/convergent were termed too specialized, so in the first iteration (VG3) the term "creativity" was used. Creativity myths undermined the specialized use of this term, so in the second iteration (VG1), "reading like a writer" was used. This was even less successful, so in the third iteration (VG2), "creative mind" was used. This was the most effective in clarifying for students that the goal was to motivate them to understand and develop divergent thinking. Each iteration also increasingly centered students as game testers and designers which improved student motivation.

5. Textual Game Mechanics

The study found that most of the game mechanics were more useful for teachers designing games than for students. Here is the original list presented to students:

- **Juxtaposition:** finding the connection between distant terms.
- **Erasure:** erasing part of a text to make new meaning**.**
- **Replacement:** replacing parts of a text to explore new meanings.
- **Reordering:** reordering a text to explore possible meanings.

After the first two iterations (VG3 and VG1), it was clear this list created an unmanageable cognitive load for students. "Juxtaposition" was the only mechanic deemed useful for student exploration and study, as it was the central game mechanic and most clearly connected to divergent mechanisms. In divergent thinking, the stranger a juxtaposition (increased distance between the terms in the analogy), the more flexible and original it is, in other words, more creative (Baer et al, 2012). As the pursuit of this strangeness/distance seemed inappropriate to students at first, it was key to explain how this represented "creative mind". This distance then became an acceptable goal. This was particularly effective as it provided a clear overarching goal for games that did not Test Well.

Game one: Replacement (VG3)

The teacher selected Olive Senior's poem "Colonial Girls' School" as part of a unit on postcolonialism. A key to replacement work is use the form of the original to help students create new juxtapositions in their own rewrite. As Senior's poem was semi-formal, the researcher paired it with John Agard's formal, postcolonial poem "Flag" and students built an analogy poem using both sources. They then compared their use of the term to Senior's use. As the original poem was very serious and provocative, the replacement ended up exploring issues of racism, sex, language, body image, and alcohol use.

Game Two: Multimodal Reordering (VG1)

In this game the teacher picked two stories, Ernest Hemingway's "The Killers" and Leslie Marmon Silko's "Tony's Story". The class was split in two teams to index one of the stories into major events, draw these events, then trade the drawings with the other team. The other team used the drawings to invent a story, then the original and invented stories were compared. While this game motivated the students and encouraged creative storytelling, the time spent on drawing meant less time for attention to the original text, the final comparison, and a clear exploration of how this represented divergent thinking.

Game Three: Analogy Riddle (VG2)

This was the most successful game in terms of engagement, collaboration, and the use of juxtaposition as a tool in critical reading and thinking. The teacher chose Hemingway's "Hills Like White Elephants", and students selected two terms, one unknown to their audience. The student then wrote a riddle of five associational clues that lead to the unknown term. Students ran their game through three play-tests with different students, modifying clues each time. Students continued to play after the bell, one even chasing the researcher down to play. This game asked students to find commonalities between two terms in the text. This ability to pursue

analogies is at the heart of the critical reading we do in literary studies. The game also asked students to explore their own relationship and understanding of the terms they took from the text. Exploring this relationship is a key method for helping students position themselves in terms of the text and also sits at the heart of creating a critical relationship to the text. Finally, the iterative game-testing created an emphasis on audience and revision that are key skills in critical writing.

6. Conclusions

Students across the board found freewriting engaging and as the concept of "creative mind" was clarified students were increasingly able to connect the divergent thinking goals established in freewriting to the games themselves. Overall, the students enjoyed the novelty and freedom of the games, however, students had trouble seeing the point of some of the games without this clarification of "creative mind" as an overarching goal. This demonstrates the usefulness of including students in pedagogical theory. Teaching the game mechanics was too complex, but they were useful as tools to develop and revise the games. This is promising as it represents a concrete set of tools for the teachers, who all wrote that they wanted creative teaching tools. While the multimodal approach moved students away from reading the text as closely as the other games, it did succeed in creating high interactivity between teams, collaboration within teams, and confident student sharing of stories. As teachers identified sharing as a major obstacle to establishing a creative space, this aspect of the multimodal approach shows much promise. Overall, the "analogy riddle" game was the most engaging due to the student investment as game designers and the iterative testing that created collaboration, engagement, and made it the most interactive of the games. It also created the most critical thinking about the original text, as students had to find creative connections between two terms, a skill at the heart of close reading and critical thinking. In other words, creating a game by comparing two terms in the text pushed students to think deeply about the terms' meanings in the text, in relationship to each other, and in relationship to the student themselves. This critical positioning of a term is vital as students advance in their critical thinking about texts. In future research, it would be useful to try these games on the same text and compare student results to see how they differ in producing divergent thinking, engagement, and in-depth reading/critical thinking.

References

Amabile, T. M. (1982) "Children's artistic creativity: Detrimental effects of competition in a field setting", Personality and Social Psychology Bulletin, Vol. 8, pp. 573-578.

Amabile, T. M. (2018) *Creativity in Context.* Routledge, New York.

Baer, J. and Kaufman, J. C. (2012) *Being Creative Inside and Outside the Classroom: How to Boost Your Students' Creativity—and Your Own*, Sense Publishers, Rotterdam.

Beghetto, R. A. (2007) "Creativity Research and The Classroom: From Pitfalls to Potential", in *Creativity: A Handbook for Teachers*, A. Tan (Ed.), World Scientific, London, pp. 101-115.

Bowman, N. D. (2018) *Video Games: A Medium that Demands our Attention.* Routledge, New York.

Corazza, G. E., Agnoli, S. and Mastria, S. (2022) "The Dynamic Creativity Framework; Theoretical and Empirical Investigations", European Psychologist, Vol. 27, No. 3, pp. 191–206.

Elbow, P. (1986) *Embracing Contraries: Explorations in Learning and Teaching.* Oxford University Press, Oxford.

Enquist, M., Ghirlanda, S., Jarrick, A. and Wachtmeister, C. A. (2008) "Why does human culture increase exponentially?" Theoretical Population Biology, Vol. 74, No. 1, pp. 46–55.

Glaveanu, K. P. (2017) "Creativity and Wonder", *Journal of Creative Behavior*, Vol. 53, No. 2, pp. 171-177.

Guilford, J. P. (1950) "Creativity", American Psychologist, Vol. 5, pp. 444-454.

Kim, K. H. (2011) "The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking" *Creativity Research Journal,* Vol. 23, No. 4, pp. 285–295.

Lowry, P. B., Curtis, A., and Lowry, M. R. (2004) "Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice", *The Journal of Business Communication*, Vol. 41, No. 1, pp. 66–99.

Mastria, S., Agnoli, S., Corazza, G. E., Grassi M. and Franchin L. (2022) "What inspires us? An experimental analysis of the semantic meaning of irrelevant information in creative ideation", *Thinking & Reasoning*, Vol. (ahead of print), pp. 1-28.

Rhodes, M. (1961) "An analysis of creativity." *Phi Delta Kappa*, Vol. 42, pp. 305–310.

Ross, W. and Vallée-Tourangeau, F. (2021) "Catch that word: interactivity, serendipity and verbal fluency in a word production task", *Psychological Research,* Vol. 85, No. 2, pp. 842–856.

Runco, M. A. (2004) "Creativity" *Annual review of psychology*, Vol. 55, pp. 657-687.

Torrance, E. P. (1962) *Guiding Creative Talent,* Prentice-Hall, New Jersey.

Torrance, E. P. (1966) *Torrance Tests of Creative Thinking.* Personnel Press, Princeton, N.J.

Treffinger, D. J., Isaksen, S. G. and Dorval, B. (2006) *Creative Problem Solving: An Introduction*, Prufrock Press, Waco.

Treffinger, D. J. Schoonover, P. F. and Selby, E. C. (2021) *Educating for Creativity and Innovation : A Comprehensive Guide for Research-Based Practice,* Routledge, New York.

Urban, K. K. (2007) "Assessing Creativity: A Componential Model", in *Creativity: A Handbook for Teachers*, Tan, A. (ed.), World Scientific, London, pp. 167-184.

Zhang, M. (2022) "A re-examination of pair dynamics and L2 learning opportunities in collaborative writing", *Language Teaching Research*, Vol. 26, No. 1, pp. 10-33.