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CASE STUDY OF THE THEORY OF FLOW

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Abstract

This article describes a case study conducted at a small private school in Russia. The study aimed to explore the implementation of the theory of flow in an afterschool English-as-a-Foreign-Language (EFL) experimental project. An arts-based creative project, in which the learning of English was centred around and enhanced by the process of picturebook creation and discussion, was designed and implemented for a group of 5th-grade students. The study was based on the Case Study methodology and included elements of Arts-Based Research. Multiple data sources, such as video-recording, teacher journal, visual teacher journal, student interviews, and questionnaires, were used to collect study data. The data was analyzed with the help of Inductive Content Analysis and Mixed-Methods Analysis. The study findings demonstrate that the incorporation of arts-based creative activities, such as picturebook creation and discussion, can lead early middle school students into the state of flow. All the study participants experienced the state of flow during both the process of picturebook creation and discussion, albeit in a different degree of intensity. The study findings suggest that more extraverted students and students with more highly developed imagination benefit from such creative foreign language projects more than their extroverted and less imaginative counterparts. The results of the study also suggest that the integration of creative tasks, such as picturebook discussion and creation, in afterschool foreign language (FL) projects, enhances students' motivation to studying foreign languages, lowers their FL communication apprehension, and fosters their willingness to communicate in the FL.

Keywords: Flow, motivation, case study, creativity, foreign language education.

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1. Introduction

Csikszentmihalyi (1996, 2015) defines flow as an experiential state characterized by intense focus and complete involvement which leads to improved performance on a given task. Shernoff & Csikszentmihalyi (2009) define flow as a psychological state in which one's awareness merges with the action, when one's concentration, interest, and enjoyment are at the highest, the experience itself is rewarding, or "autotelic", and is, therefore, intrinsically motivating. Flow can be present in any human activities requiring a certain level of mastery and posing a certain level of challenge. According to Egbert (2014), flow has been investigated in various activities, including dancing, surgery, reading, rock climbing, doing math, creating art, and playing videogames. Shernoff & Csikszentmihalyi (2009) emphasize that the theory of flow is inherently related to learning, whether it is learning how to play chess, or learning foreign languages. Being an "autotelic" experience, flow motivates the person "to repeat the task at a more challenging level and to use the skills gained previously to accomplish the more difficult task" (Egbert, 2014, p. 502). The "addictive" nature of flow makes it a perfect vehicle for learning.

In the context of foreign language (FL) education, flow has been found to foster FL learners' intrinsic motivation for FL studies (Csikszentmihalyi, 2015). Csikszentmihalyi (2015) argues that enhancing student motivation by making learning more engaging and enjoyable through flow-inducing activities is very useful, especially in high needs public schools. However, it is not only motivation that can improve as a result of flow experiences. Since flow "encourages people to perform the activity repeatedly […] people push themselves to higher levels of performance" (Csikszentmihalyi, 2015, p. 74). In order to maintain the flow, FL learners will seek to acquire new FL skills that will match the increasing level of challenge. Therefore, it can be claimed that flow, as the state of "optimal performance and optimal learning" (Egbert, 2014, p. 499), can contribute to successful internalization of FL input by learners.

To sum up, flow can play a highly beneficial role in FL education due to its positive influence on student intrinsic motivation and its propensity to motivate students to replicate flow-conducive activities, which helps to practice FL material and internalize it. Finally, by immersing themselves in flow-conducive activities, students can lose self-consciousness and lower the level of FL anxiety, which leads to higher communicative confidence and higher willingness to communicate in FL.

2. Problem Statement

The educational potential of flow among FL learners in public schools can hardly be overestimated. However, the reality is such that the theory of flow has been rarely used in public education to date and there is still little research on flow in FL education. The conducted literature review has shown that flow has been studied in the educational contexts of a few developed countries, such as the U.S.A., Japan, Denmark, and Finland (Andersen, 2005; Lorimer, 2015; Nakamura & Csikszentmihályi, 2014; Shernoff & Csikszentmihalyi, 2009). No applications of flow theory in education have been found in developing countries, including Russia, which became the context of this study.

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To date, quantitative methods have been predominantly used in the studies of flow, specifically participant-recall surveys and Experience Sampling Method (ESM). Recall surveys ask participants about their experience once they have finished the task. In ESM, which has been used most extensively, respondents have to complete a 35-item questionnaire at random moments throughout the day, when signaled by a paging device. However, Csikszentmihalyi (1996, 2015) warns against the use of pure quantitative measurements, such as surveys or scales. Egbert (2014) argues that, as with other theories of motivation, "there is no objective way to measure flow precisely" (p. 508). Participant recall alone, according to Egbert, does not provide "sufficient evidence to capture flow experiences" (p. 508). Instead of using quantitative measurements, Andersen (2005) used qualitative research methods when studying flow in Japanese and Scandinavian schools. He employed the "flow observation form", in which the researcher conducted classroom observations and rated flow based on observable flow components, such as absorption, concentration, and interest, which was followed and supplemented by unstructured student interviews. For the purposes of the current study, I decided to use qualitative methods, in order to fill in the existing gap in the research of flow in FL education.

3. Research Questions

In order to investigate flow and its benefits in the context of Russian FL secondary school education, I designed an experimental after-school EFL project, in which English was taught implicitly, within a series of lessons based on arts-based creative activities. The designed and implemented creative activities centred around the creation of picturebooks (Zapata, 2015) in the English language by a group of 5th grade school students, followed by collaborative classroom discussions of picturebooks, including visual images and story plots, in the target FL. Taking into consideration the goals of this study and the existing research gaps, the main research question guiding my study was the following:

How can the activity of picturebook creation foster flow in an L2 classroom, particularly in the EFL setting?

The main research question had two sub-questions:

1. Can flow occur during the activity of picturebook creation?
2. If yes, what are the dynamics of flow in such a context?

4. Purpose of the Study

Creativity has been found to play the crucial part in children's learning (Cahnmann-Taylor & Zhang, 2017; Kilianska-Przybylo, 2012; Tanggaard, 2015; Vygotsky, 2004). Vygotsky (2004) underscores the importance of creativity and imagination in human life and maintains that all human beings have access to the creative ability called imagination. Although the role of creativity has begun to be regarded as "central to language learning and language teaching" (Kilianska-Przybylo, 2012, p. 72), in the majority of developing countries creativity in education remains mostly neglected (Zapata, 2015).

One of the main goals of the current study was to establish if the creative activities, involved in the process of picturebook creation, would lead the students into the state of flow. Another goal was to determine if the flow of picturebook creation would transfer into the discussion phase of the lessons and

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positively affect the students' willingness to communicate in the FL. Finally, the study aimed at analysing the dynamics of flow in the context of a creative after-school project in order to provide insights for other creative FL educators on (1) how flow can be achieved in a FL classroom with the help of creative activities; (2) how flow can be sustained in a FL classroom for a long period of time, such as a semester; (3) what difficulties may arise in the implementation of such a project; and (4) whether or not all the students would experience flow and benefit from the creative activities of such a project.

5. Research Methods

In order to answer my research questions, I conducted a study based on a specially designed afterschool arts-based FL project. The participation in the project was voluntary and the project was implemented during the Spring semester of 2016 in a small private school of a large industrial Russian city. Ten 5th-grade students volunteered to participate, with three of them eventually dropping out, so the final number of participants was 7. In this project, students were to read and discuss famous English and American picturebooks under the researcher's guidance and create their own picturebooks in English, using it as the language of interpersonal classroom communication. This picturebook-creation project became the basis of this case study, which generated data that was later analysed with the help of Inductive Content Analysis (Creswell, 2014). In order to answer the first sub-question, I needed to collect such empirical data in my experimental classroom that would provide evidence that the study participants were (or were not) in flow during the learning activities. Such methods of data collection as journaling, video-recording of class meetings, and interviews with participants were used, as they allowed to detect students' concentration, interest, merging of action and awareness, control, and other components flow (Csikszentmihalyi, 1996). Each student's level of flow in the experimental classroom was analysed with the help of qualitative methodology (Mannay, 2016). Following Cahnmann-Taylor & Zhang's (2017) and Galman's (2017) suggestion to use the medium of art in studies of the effects of arts, I also utilized elements of visual journaling in order to enhance the authenticity of findings. For this purpose, I made extemporaneous pen-on-paper sketches of the study participants, while they were working on their picturebooks.

The second sub-question, "What are the dynamics of flow in such a context?" suggested that the intensity of students' flow in the experimental arts-based project needed to be examined and rated at various points in the semester, as the ratings would show the positive or negative dynamics of flow over the course of the study. Two kinds of ratings were designed for this purpose – the teacher/researcher's ratings and students' self-reported ratings, both administered at three points of the study: beginning, middle, and end. The teacher-researcher created qualitative composite profiles of each student's flow and quantitatively rated the intensity of their flow on the basis of the key qualitative profile characteristics, ranking them on a scale from 0 – 100. The participants' self-ratings were gathered with the help of a questionnaire. The combination of the teacher ratings and students' self-ratings added validity to the findings. Thus, a mixed methods data analysis paradigm (Creswell, 2014), combining both qualitative and quantitative methods, was utilized in this study.

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6. Findings

Each student's participation in the study was carefully analysed as an individual case study. The analysis of the individual cases allowed the researcher to affirmatively answer the main research question and conclude that student flow does occur in the process of picturebook creation introduced in an experimental afterschool L2 teaching project. The data analysis shows (see Table 01) that two of the seven study participants (Sasha and Grisha) experienced a High level of flow during both the creative and discussion parts of the lessons, especially in the middle and final stages of the project. Dima experienced flow of a lower intensity (Medium/High level), with his flow being more pronounced during the discussion phase. Two other participants (Kolya and Leva) experienced flow of a Medium level during both phases and their flow also intensified during the second part of the project. The cases of Nikita and Alesha only showed a Low level of flow, which was manifested in the middle and end of the project.

Table 01. Flow analysis summary

Participants[1]	Teacher ratings			Student self-ratings			Overall assessment of flow
	Start	Middle	Final	Start	Middle	Final	
Sasha	50	100	100	74	87	93	High
Grisha	50	100	100	72	95	97	High
Dima	50	75	75	71	85	90	Medium/High
Kolya	60	50	65	66	75	81	Medium
Leva	30	60	65	57	71	76	Medium
Nikita	25	40	50	55	58	71	Low
Alesha	0	30	30	58	65	71	Low

The conducted analysis also suggests that even students with low levels of artistic skills (e.g., Dima) and FL skills (e.g., Alesha) can experience flow in an arts-based FL program. However, it is students with better developed drawing ability and FL skills (e.g., Sasha and Grisha) achieve higher levels of flow. The results of the analysis confirm one of the major tenets of the flow theory (Csikszentmihalyi, 1996, 2015), stating that the balance between the levels of the task's challenge and the person's skill is the key predictor of flow.

The analysis of data collected from multiple data sources suggests that flow was not a stable phenomenon experienced by students on a permanent basis – rather, it proved to be a dynamic, fluctuating state, which increased in intensity over the course of the semester. Although the participants experienced flow of different levels of intensity (see Table 01), the overall flow intensity was found to have increased in each student's case from the beginning of the project to its end. This finding allows the researcher to answer the first research sub-question in the following way: once achieved, flow tends to increase in intensity in a FL project based on picturebook creation.

The analysis of the study data suggests that flow can be achieved and fostered in an arts-based afterschool FL program. It is of even more importance for creative FL educators to establish how flow can be fostered in a creative FL classroom, or what factors are crucial for fostering student flow. The findings pertaining to the second research sub-question helped to identify the main factors contributing to student flow in such a context.

[1] All the participant names are pseudonyms, in accordance with the IRB requirements.

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The qualitative analysis of the study data suggests that flow experienced by students in the arts-based project was positively influenced by the following factors: *(1) sufficiently high challenge of creative activities and their relevance; (2) students' control over the classroom activities; (3) difference of the after-school class from regular classes; (4) introduction of new creative tools and activities; and (5) atmosphere of egalitarian community of collaborators that emerged in the classroom*. It is therefore suggested that these factors should be taken into consideration in designing and implementing similar arts-based FL projects.

Figure 01. Students' stiff postures and indifferent gazes show their low level of flow.

One of the important findings of this study is that creative activities of relatively higher challenge, in which children could actually create and express themselves (picturebook creation) were more conducive to flow that those of lower challenge and based on reproduction (copying the teacher's drawings). According to the analysis of study data, students were not in flow during the first five lessons due to the low challenge of drawing activities introduced in the beginning of the project (see Figure 01).

This finding supports Csikszentmihalyi's (1996, 2015) claim that higher challenge and higher skills were necessary for flow, as opposed to Schmidt & Savage's (1992) observation that leisure activities of low challenge could be equally conducive to flow. As the students became "engrossed" in the actual process of creating their own picturebooks and writing captions for them in English, their flow became obvious (see Figure 02). This finding suggests that the picturebook creation activities, more complex in nature than the simple copying of the teacher's drawings, in which the students were involved during the initial lessons, is considerably more conducive to flow.

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Figure 02. The participants eagerly draw and exchange coloured pencils, thus exhibiting a high level of flow.

The findings also suggest that the flow experienced by students during picturebook creation activities transfers into students' FL speaking and can positively influence students' willingness to communicate in FL. This aspect, however, is beyond the scope of the current article and will be elaborated on in the future reports.

7. Conclusion

The experimental after-school teaching project, in which seven Russian EFL elementary school students, under my guidance, were creating their own picturebooks and discussing popular picturebooks in English, demonstrated that FL learners of this age can be introduced into the state of flow with the help of picturebook creation activities and that flow transfers from the creative part into the discussion part of the lessons. A series of 20 arts-based EFL lessons have been designed for this project and implemented as an elective after-school class in a 5th grade classroom of a Russian secondary school. The participants began experiencing flow starting from Lesson 6. Initially students experienced flow only during the process of picturebook creation (Lessons 6 – 8) but gradually, starting from Lesson 8, individual students also began to experience flow during English speaking activities, such as picturebook discussions. The intensity of flow continued to steadily grow, with more participants experiencing flow both during the creative and speaking activities. Eventually, by the end of the project (Lessons 15 – 20), all the study participants were experiencing flow, which grew in intensity and reached its peak in the final lessons.

It was established that students with better artistic skills and more vivid imagination, as well as more extraverted students were more susceptible to flow in a creative FL classroom where learning activities centred around picturebook creation. Consistent with previous research (Egbert, 2014; Schmidt & Savage, 1992; Zapata, 2015), it was established that the feeling of control over class activities was almost as important for flow as the balance between skill and challenge. However, even the students with mediocre drawing abilities experienced flow due to the creative activities, which suggests that such arts-based projects can be beneficial practically for all students.

The study findings strongly suggest the advisability of implementing such arts-based creative projects in secondary school FL education, as they enhance student motivation to study foreign languages, foster their willingness to interact in the FL, and decrease the level of their FL anxiety.

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However, it must be noted that picturebook creation can be more appealing for younger school children (Grades 1 – 5), whereas older children (Grades 6 – 11) might find such activities less absorbing, due to the challenges of puberty age and the growing self-doubt (see Vygotsky, 2004). Therefore, it still needs to be explored in more depth what genres of creative activities can be more appealing for older school children, including (but not limited to) composing poetry, short stories, rap songs, comic books, etc. in a foreign language.

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