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IS CREATIVITY EASIER WHEN IT IS STRUCTURED?

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Abstract

Approaches supporting collaborative generation of ideas identify a significant correlation between all four P elements of creativity. Ideating or generating ideas demand diverse and original ideas, elaboration and possibilities, risk-taking and curiosity. The framework of the research is based on the analysis of literature and qualitative research methods, i.e. comparative content analysis according to emic perspective. In the study, the focus is on one of the 4 P components – Press and on unstructured creativity model that is used to generate ideas and later on assess creativity output. The aim of the study is to evaluate whether it is better to keep things focused and organized to assure more qualitative or creative outcomes and to refer to the previous research and diversity. The possibilities to foster creative and original problem solutions applying unstructured creativity model and the Creative Platform process model are presented and discussed.

Keywords: structured and unstructured creativity, idea generation, creative platform, stimuli.

Introduction

Personal and professional success in today's world is mostly related to personal characteristics such as intellectual abilities, extrinsic or intrinsic motivation, openness to experience, and the ability to generate original ideas. Creativity helps to adapt to the social, economic, technologic, cultural, and other changes operating in nowadays societies. Taking in consideration the importance of creativity, one of the main questions for higher education institutions is how to foster students' creativity to increase their chances of success in labor market. What are the main creativity facilitators? According to Creative Platform methodology group-work, group diversity and highly structured ideation sessions are of great importance. In order to investigate these creativity related patterns a longitudinal research was designed. This article discusses two stages of a longitudinal research focusing on comparison of results obtained applying highly structured, moderated, and strictly task oriented ideation sessions with the results obtained applying unstructured ideation sessions.

The main research questions of the paper can be formulated as follows: 1) Does stimulating environment (creative **p**ress) facilitate creativity? 2) Is creativity enhanced when problem solution session is highly structured and task oriented? In order to answer these research questions a challenge was formulated, the same challenge was presented in 7 independent idea generation sessions for 30 subgroups of participants (N=104). During the first research stage there were 4 highly structured ideation sessions held (N=46) and during the second research stage there were 3 unstructured ideation sessions held (N=58). Comparative content analysis according emic perspective was applied.

Theoretical Background

With reference to the previous authors article *Do differences make a difference? The case based on creativity platform,* creativity is typically defined as either the *ability* to produce work that is original and useful (Barron, 1988; MacKinnon, 1962; Guilford, 1967), a valued *novelty* (Sternberg, Kaufman, 2010) or the *process* through which new and useful ideas are generated (Dawson, Andriopoulos, 2014, p. 9, Kao, 1989). Majority of the concepts involve the production of something applicable yet innovative

or unusual that is valued and recognized. J. P. Guilford's idea of divergent thinking is another widely used concept of creativity. Divergent thinking comprises idea generation from given information, with an emphasis on wide assortment and amount of ideas involving fluency, flexibility, originality, and elaboration (Guilford, 1950; Torrance, 1974; Paulus, 2000). *Fluency* of ideas or number of responses produced by an individual is considered to be a central aspect of creative thought and best measured by simply calculating overall output. As it has been pointed in a number resources, real idea generators are nearly always extremely fruitful of ideas, insights and solutions to the problem. Fluency emphasizes quantity of ideas over quality (Guilford, 1950; Torrance, 1974; Byrge, Hansen, 2014). Cognitive *flexibility* or variety of responses is best defined as the ability to take a risk, cross boundaries by which a problem is surrounded and strategically consider multiple of other possibilities. Flexibility allows multiple perspectives of problem solving and encourages openness, courage, playfulness, rigidity and individual differences. Many studies indicate that heterogeneous groups from diverse knowledge, gender and cultural backgrounds increase not only flexibility and the number of perspectives to the group but also higher quality of ideas (Torrance, 1974; Meador, 1997; Gautam, 2012). *Originality* is interchangeable with creativity and involves innovative and unusual sometimes even strange aspects. The uncommonness of creative output is doing what others are not doing, sometimes breaking taboos of community and showing the uniqueness (Paulus, 2000; Runco, 2014; Byrge, Hansen, 2014). With reference to Blair and Mumford (2007), originality is necessary but not sufficient for creativity. It follows that contrarianism for the sake of originality may lead only to diverging from usual or accepted standards and not to creativity. *Elaboration* provides building on existing ideas - adding more ideas or details to the primary idea. Elaboration implies developing an existing product rather than transforming it into absolutely new one (Guilford, 1967; Byrge, Hansen, 2014; Demetrikopoulos, Pecore, 2016).

A widely recognized and accepted concept of creativity, called the '4P' model, is based on the assumption that it involves several dimensions. Rhodes (1961) and other researchers (Brown, 1989; Davis, 2004; Kozbelt et.al., 2010) have identified four P components, perspectives or dominant factors of creativity: 1. ***Creative person*** - the center of any creative endeavor. Creative person uses personality-related traits, intellectual abilities, intrinsic and extrinsic motivation, habits, values and passion to create something new. In analyzing creative individuals, researchers identify the following personality traits that are related to creative result: risk-taking, self-confidence, broad-mindedness, ambiguity, need for achievement, proactivity, independence and openness (Dawson, Andriopoulos, 2014, Sternberg et al., 2010). 2. ***Creative process*** - the procedure used by the creative individual to develop the product. Wallas indicates five stages of the creative thinking processes: preparation (when the creative person formulates the problem and gathers all the facts essential for finding new solutions.), incubation (when although the problem is left for a while, unconscious thought process is still involved in creative thinking), intimation (when the individual gets a feeling that a solution to the problem is on its way), illumination or 'aha (eureka)' experience (when the creative ideas occur suddenly and the vague thing becomes clear), and verification (when the solution is made, the idea is elaborated and applied) (Herrmann, 1989). 3. ***Creative press (or environment)*** - the environmental factors facilitating creative achievements. As Rhodes (1961) emphasized, creativity is a phenomenon where a creative person develops new products, with implicit cognitive thinking, and where there is an *environment* that stimulates the creation. While some researches (Zhu, 2014; Lewis et.al, 2005), understand environment as a place, where the person or creator is or where the process takes place, Soliman (2005) argues that the environment refers to the organizational culture, open and honest internal communication, future orientation, autonomy, resources and best practices. According to this perspective, there should be an interaction and cohesion between the 4 Ps aspects. *4.* ***Creative product*** - outcome or result of the creative process. Many creativity theorists advocate that outcome or result of creative process is necessary to be considered original, unique,

valuable, and novel (Jonathan A. Plucker, et.al., 2004; Twila Z. et.al., 1988). The figure 1. below illustrates the interaction of the four P components of creativity.

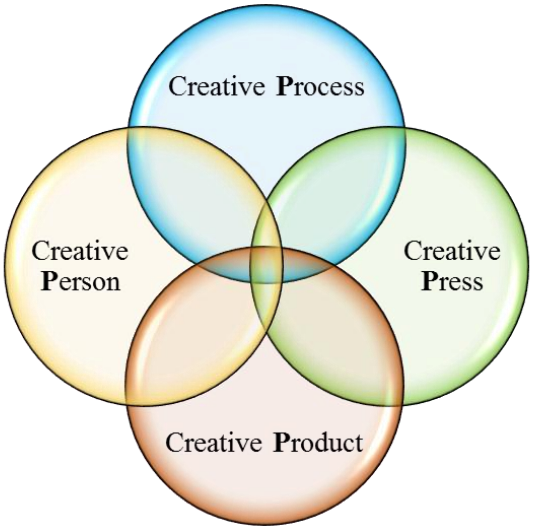

Figure 1. *The interaction of the four P components of creativity.*

Focusing on the Creative **P**ress component - not only the relationship between people and the environment but also *the situation* and how it affects creativity, creativity specialists support two different views. Promoters of creativity as an unstructured activity, where the environment for creative process should be as uncontrolled as possible emphasize autonomy and freedom. Noone should constrain the creative press neither by tasks structure nor time. Unstructured collaboration, where creative people are left on their own to come up with ideas is an important facilitator of creativity. A high degree of autonomy and time to work on the problem without distraction increase intrinsically motivated participants' creativity (Csikszentmihalyi, 1996). Although many scholars see creativity as an unstructured activity or activity with some degree of structure, others claim that there is a number of reasons for introducing restrictions and focus. Task and even sub-task structure, trainings, and effective leadership can improve teams' creativity (Sauber, Tschirky, 2006). Structured creativity or group collaboration generating ideas suggest rules that are put in place to help guide results or creative products (Plucker, Beghetto, 2003; Paulus, Nijstad, 2003). Some idea generation sessions have strict restrictions on the types of groups of idea generators - researchers suggest that idea generation in *diverse* groups is much more effective and creativity ultimately derives from social processes - group work and collaboration are the foundation of creativity (Jarboe, 1999; Paulus, Nijstad, 2003). Byrge, Hansen (2009) strongly believe that optimal to have as many different kinds of mental books (participants with different knowledge, cultural background, of different age, gender, etc.) as possible in the group, hence giving the group various solutions to choose from.

One of the methodologies that focuses on the 4P model of creativity, is the Creative Platform methodology that was upheld theoretically and practically by the thesis of dr. Christian Byrge Malmkjær Sørensen "Conceptualisation of Creativity Practices through Action Research: The case of Creative Platform at Aalborg University" and by scientific and practical activities of his colleagues and himself that were carried out on the international level (Byrge, Hansen, 2009). The methodology is meant to develop creativity during regular practical tasks and encourages students to contribute fully, helping each other in order to make creativity an involuntary reflex. Creative press or environment requires confidence, deep concentration, motivation and knowledge. With reference to Byrge, Hansen (2014), on the Creative Platform it is significant to be 100% focused on the task. Any task or subtask that is not the

focus of the process should be removed from the creative people both in terms of responsibility and in terms of thinking. Strict instructions from the mentor on how to do, what to do, and how to cooperate should structure the ideation session.

While the previous research of the authors reviewed a rich assortment of creative solutions developed under the Creative Platform methodology that is very structured, the data used in this research was collected after unstructured idea generation sessions.

Research Design and Method

In this paper the first two stages of a longitudinal research on various creativity patterns are presented. Some first research stage results were already discussed by the authors (Macerauskiene, Turcinskaite-Balciuniene, 2017), but the second research stage results have never been published. The results of the two research stages are compared and presented in this paper aiming to assess the effect of structured idea generation sessions compared to unstructured idea generation sessions.

The first research stage was organized in 2016 spring and autumn and there were four highly structured ideation sessions processed according to the Creative Platform methodology (Byrge, Hansen, 2009). In total 46 participants from 8 different countries participated in four strictly structured task oriented idea generation sessions (see Table 1).

Table 1. *Sample of the first research stage.*

Date	*Structured ideation session (participants)*	*Nationality (participants)*	*Gender*	*Age*	*Socio-economic status*	*Subgroups (participants)*
26/04	Teaching staff, International Week guests (8)	International: Lithuanian (1), Belgian (2), Dutch (2), Latvian (1), Finish (1), Italian (1)	Mixed: 1.1. Females 1.2. Mixed (1 male and 3 females)	Mixed	Teaching staff	1.1.1. (4) 1.1.2. (4)
26/05	Students from Georgia (14)	Georgian (14)	All subgroups mixed	19-23	Higher education students from various study fields	1.2.1.(4) 1.2.2. (4) 1.2.3. (3) 1.2.4. (3)
21/09	Teaching staff (8)	International: Lithuanian (6), Portuguese (2)	Mixed: 3.1. Females 3.2. Mixed (1 male and 3 females)	Mixed	Teaching staff	1.3.1. (4) 1.3.2. (4)
30/09	Teaching staff (2) Students (12^{th} formers) (14)	Lithuanian	Mixed	Mixed, mainly 17-18	Teaching staff (Psychology, History), Secondary education pupils	1.4.1.(4) 1.4.2. (4) 1.4.3. (4) 1.4.4. (4)

The participants of the first research stage were randomly distributed into subgroups and had no earlier experience of working together. Since the diversity aspect was very important, most of the

subgroups were mixed by the criteria of gender, nationality, age and socio-economic status (Macerauskiene, Turcinskaite-Balciuniene, 2017):

1) according to gender – groups of females or mixed gender groups;
2) according to age or socio-economic status – groups mixing teaching staff with higher education students or pupils;
3) according to cultural or educational background - international and one nationality groups.

The second research stage was organized in 2017 September and there were three unstructured ideation sessions processed modifying **p**ress (environment) factor and reducing subgroup diversity as well as introducing variation with group size element. In total 58 similar age group students participated in idea generation sessions mostly Lithuanians, studying at the same institution within similar studies field (Tourism Management and Hotel and Restaurant Business). The major focus was on reducing the diversity of subgroup members, proposing unstructured ideation sessions and not supplying with additional stimulation during the idea generation process. In total 18 subgroups composed from 2 to 4 members each (see Table 2).

Table 2. *Sample of the Second Research Stage.*

Date	*Unstructured ideation session (participants)*	*Nationality (participants)*	*Gender*	*Age*	*Socio-economic Status*	*Subgroup (participants)*
20/09	Third year Tourism Management students studying in Lithuanian (17)	Lithuanian (17)	Unisex and mixed: 5.1. Females 5.2. Females 5.3. Mixed (2 females and 1 male) 5.4. Males 5.5. Females	20-22	Higher education students, 1 study field	2.5.1. (4) 2.5.2. (4) 2.5.3. (3) 2.5.4. (3) 2.5.5. (3)
26/09	Third year Tourism Management students studying in English (12)	Lithuanian (11); Bangladesh (1)	Unisex and mixed: 6.1. Males 6.2. Females 6.3. Females 6.4. Females 6.5. Mixed (1 male and 1 female) 6.6. Mixed (1 male from Bangladesh, 2 females and 1 male from Lithuania)	20-23	Higher education students, 1 study field	2.6.1.(2) 2.6.2. (2) 2.6.3. (2) 2.6.4. (2) 2.6.5. (2) 2.6.6. (2)
28/09	Third year Hotel and Restaurant Business students studying in Lithuanian (27)	Lithuanian (27)	Mixed: 7.1. Mixed (2 males and 2 females) 7.2. Females (4) 7.3. Females (4) 7.4. Mixed (2 males and 2 females) 7.5. Females 7.6. Females 7.7. Mixed (2 males and 1 female)	19-23.	Higher education students, 1 study field	2.7.1. (4) 2.7.2. (4) 2.7.3. (4) 2.7.4. (4) 2.7.5. (4) 2.7.6. (4) 2.7.7. (3)

During both stages the participants were working on the same challenge: "Rethink a bench in a park" with some major differences. In the first research stage Creative Platform methodology was applied: the process was controlled by two lecturers ensuring a very clear structure of the process. Each ideation session lasted for 90 min. starting with a few Red Carpet exercises (a ritual in which participants get onto the Creative Platform) and then a challenge presentation and idea generation individually for the first 30 min. and ending up with idea generation in pairs, selection of idea in groups, idea development in groups, and preparation for presentation (40 min.). Whereas in the second research session one lecturer provided with a flipchart paper and a set of 10 different colour felt tip pens. The participants were asked to form subgroups from 2 to 4 members each depending on the size of the whole group. The subgroups were formed according to personal affiliation and friendship, no random subgroup formation processes undertaken. Therefore, the participants certainly had earlier experience of working together in the same subgroups. The instruction was provided to design an innovative park bench within 40 min. and to present it afterwards. All subgroups had the possibility to find the best suiting place for the working time. Most subgroups stayed in the classroom, only 2 groups left the classroom. The process of ideation was unstructured, where students were left on their own to come up with ideas autonomously.

In addition to ideation process (un)structuration, another important difference between the two research stages was that all participants of the first research stage ideation sessions were provided with the same 14 stimuli (see Fig.2), but nobody participating in the second research stage.

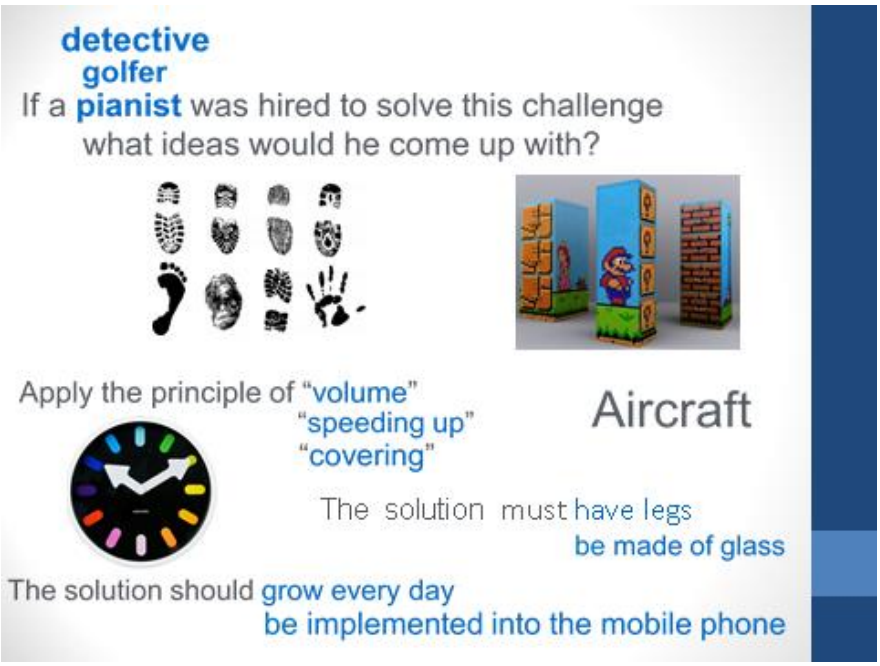

Figure 2. *The stimuli used in the first research stage ideation sessions. (Macerauskiene, N., Turcinskaite-Balciuniene, A., 2017)*

In both research stages 20 min. were devoted for the presentations (from 5 min. to 10 min. for the presentation of each subgroup) and participants were not allowed to use electronic devices, as mobiles phones, computers, and watches are considered to be the biggest barriers for one's creativity.

As a result, every subgroup worked out a set of ideas for improving a bench in a park and proposed a flipchart presentation. Then according to emic perspective (Buckley et al., 2014; Eckensberger, 2014;

Zhu, Bargiela-Chiappini, 2013) the results were analyzed assessing the originality of graphical presentation and textual description of ideas. Originality is linked to the rarity of ideas and innovativeness compared with what the majority of participants proposed. Moreover, every idea was analyzed linking it to the stimuli material, asking participants to comment on how they came up with one or another solution. Average numbers of original results were compared between ideation sessions, subgroups and research stages.

Research Findings

All subgroups presented their future park benches in 90 min. sessions. In annexes a descriptive table representing all ideas is provided. In both research stages there were 104 participants working in 30 subgroups and there were presented 150 propositions how to improve a bench in a park. Some ideas with some kind of variations were presented repeatedly, therefore out of 150 propositions there were 56 various types of ideas determined and 30 ideas were considered to be original according to emic perspective (see Annexes and Table 3).

Table 3. *Average numbers of original ideas generated in sessions.*

	Ideation sessions / number of subgroups in session	*Average of ideas*	*Average of original ideas*	*No original idea presented*
Highly structured first research stage (52 types of ideas/14 original)	Creativity oriented IW guests / 2	3.5	2.5	33% (4 out of 12 subgroups)
	Georgian students / 4	5.3	1.25	
	International teaching staff / 2	4	0	
	Lithuanian pupils with teachers / 4	4	1	
Unstructured second research stage (98 types of ideas/12 original)	Third year Tourism Management students studying in Lithuanian / 5	5.3	0.8	39% (7 out of 18 subgroups)
	Third year Tourism Management students studying in English / 6 pairs	4.5	0.5	
	Third year Hotel and Restaurant Business students studying in Lithuanian / 7	6.3	1.29	

Analyzing the list of all ideas proposed by participants (adding up every repeatedly proposed idea, i.e. if some 3 groups proposed a tool box under a park bench, this idea was counted three times), it appears that in average around 20% of ideas were original and 80% of ideas were examples of common thinking. The least original ideas were related to *adding a roof above a park bench* (13 cases – 5 from the first research stage and 8 from the second research stage); *integrating a USB port and power sockets* (12 cases – 4 from the first research stage and 8 from the second research stage); *providing with free or not free WiFi* (11 cases – 3 from the first research stage and 8 from the second research stage). These ideas were mentioned at least by one subgroup in every ideation session except the session with International Week guests who were creativity oriented and more informed about the creativity issues. Also quiet popular improvements were seen in *softening a park bench* either the sitting area or backrest area or the whole bench (6 cases proposed only by second research stage participants students); similar idea was about *a bench able to change the shape and to adapt to the body*; then it was considered *heating option* when it is cold; *a bench made of natural materials*; and *a bench with the possibility to listen to the music* provided by some kind of mechanism integrated (5 cases each).

Comparing the two research stages, it appears that the result of the first research stage is far better than the one obtained during the second research stage. During the first research stage in total there where

52 ideas proposed and 14 of them appeared to be original (27%), 33% of subgroups did not propose any original idea, whereas during the second research stage in total 98 ideas were proposed and only 16 of them were original (16 %), 39% of subgroups did not propose any original idea. These results could be attributed either to the group diversity effect or it could indicate the importance of structure for the creativity processes. Since the focus is on originality of the ideation session results, rare ideas are of greatest interest and further will be analyzed more thoroughly.

First of all comparing general results from the first and the second research stages, better results are obtained within the first research stage subgroups that participated in highly structured ideation sessions and were provided with stimuli: 12 subgroups presented 29 different types of ideas (average 2.42 per subgroup) and 14 of these ideas were original (average 1.17 per subgroup and 48% original ideas); whereas compared to second research stage results – 18 subgroups presented 40 different types of ideas (average 2.22 per subgroup) and 16 ideas were original (average 0.86 per subgroup and 40% of original ideas). The average of original ideas per subgroup is 1[1]. The best result is observed in the session with creativity oriented guests of International Week – 2.5 original ideas per subgroup. This result could be explained by the diversity factor as well as the fact that participants were teachers working in higher education sector and interested in creativity. The worse result is observed in another session with higher education teachers. The diversity was also ensured but the participants weren't interested in creativity topics and accomplished the task only formally, therefore they did not present a single original idea. The results ranging from 0.8 to 1.29 ideas per subgroup are quiet similar and close to the average of 1 idea per subgroup. In all these cases diversity is lower compared to the previous two groups and this result should be explained by **p**ersonal factors of participants. Finally, the result of 0.5 creative idea per subgroup could be explained by the fact that in this session participants worked within pairs and it might have been the biggest obstacle to develop a creative result. Further analysis of group size effect is needed. When the results of this particular session removed, then second research stage results are 12 subgroups presenting 35 different types of ideas (average 2.9 per subgroups) and 13 of these ideas were original (average 1.1 per subgroup and 37% of original ideas). This result is still worse than the one obtained within structured ideation sessions.

The improvements integrated from 2 to 14 distinct ideas per subgroup. The lowest average of ideas is observed in creativity oriented International Week guests session: participants were highly task oriented and produced mostly original ideas. Higher education students (especially participating in unstructured ideation sessions) present more ideas. They present more often common thinking examples for innovative and original solutions.

Based on emic approach, the analysis of the results was oriented only to the participants-specific solutions without analyzing any creative solution of a bench improvement available online or in any other sources. Four major types of original ideas were detected: a) additional original functions, b) networking solutions, c) technological improvements, d) wild and artistic solutions (see Table 4). In both research stages original solutions were proposed for every of these types.

Table 4. *Regrouped original ideas for the future bench development.*

	Original ideas from the first research stage	*Original ideas from the second research stage*

[1] Calculated (2.5+1.25+0+1+0.8+0.5+1.29)/7=1,05

Additional original functions	1.1.1. Translating bench 1.1.1. Filled with helium and floating 1.4.4. A bench recording sounds from environment	2.6.1. Rocking chair option; motivating inscriptions 2.7.4. A tablet popping out for table functions 2.7.6. Next to a bench a sink with running water to wash hands 2.7.7. Solar energy used to change the position of backrest
Networking solutions	1.1.2. Matching people on a particular bench by phone application 1.2.2. Phone application indicating free benches	2.5.5. A bench-circle for friendship and communication
Technological improvements	1.2.2. Growing mushroom type roof 1.2.2. Medical equipment for blood pressure and heart rate	2.6.5. Lifting mechanism 2.5.1. SOS button integrated 2.7.1. Interactive wall behind to make interesting photos 2.7.2. Bean bag chair type with heating, conditioning, massage 2.7.3. Cable car type bench hanging in a tree
Wild and artistic solutions	1.1.2. Made of bricks from games 1.4.2. Swinging tree-house type bench accessed by climbing a rope 1.2.3. Possibility to make graffiti paintings	2.5.2. Childish design of mushroom type bench integrated into environment

Additional stimulation generated some differences when the first research stage subgroups proposed some stimuli related ideas that were not proposed by the second research stage subgroups:

1) a bench filled with helium and floating (stimulus “aircraft”);

2) a bench made of bricks from games such as domino, chess, cards, monopoly; a bench gathering groups for different games (stimulus a picture with Super Mario);

3) a phone application “match maker”; indicating free benches in the area (stimulus “the solution should be implemented into the mobile phone”);

4) a bench with wheels; a bench with control stick to move (stimulus “the solution must have legs”);

5) a growing mushroom type roof (stimulus “the solution must grow every day”);

6) graffiti painting option (stimulus a picture of foot and hand prints);

7) playing piano type bench (stimulus “if a pianist was hired to solve this problem what ideas would he come up with?”);

8) a clock integrated and indicating time or waking up (stimulus a picture of a clock);

9) a bench recording surrounding nature sounds (stimulus “if a detective was hired to solve this problem what ideas would he come up with?”).

On the other hand, Tourism Management and Hotel and Restaurant Business students participating in unstructured ideation sessions without additional stimulation also proposed a wide list of original ideas that were not mentioned by the participants of structured sessions:

1) a bench designed for children with mushroom type roof and insect decorations (one subgroup member was studying art and was leading idea generation process);

2) a circle-type bench for friendship – people sitting on this bench are facing each other and communicate (the idea was born watching a simple bench through the window and searching for the best place to work within subgroup);

3) motivating inscriptions on the bench (students always need motivation to accomplish tasks);

4) lifting mechanisms (experience of being in cable car or sitting on 5D entertainment moving sofas);

5) an interactive Instagram wall behind the bench to change the background and make some photos (personal experience);

6) sun batteries for various functions (personal experience);

7) a sink with running water to wash hands; a table type plate popping out when needed to put a sandwich or a cup of coffee (Hotel and Restaurant Business students subgroup).

Therefore, additional stimulation and creative **p**ress might lead to some original solutions, but it is not necessary – group diversity and personal inner resources are more important factors for creativity.

Conclusions

Two stages of a longitudinal research on various creativity patterns were accomplished and a data basis of 30 ideation cases was compiled enabling the comparison of creativity results obtained in highly structured and unstructured sessions.

People working on some innovative and creative solutions might develop about 80% of common thinking ideas; therefore, it is important to facilitate creative processes when original result is needed.

It is important to keep in mind that highly structured, moderated, and task focused ideation sessions are more productive than unstructured ones.

Additional stimulation and creative **p**ress (environment) for ideation sessions might be helpful but it is not necessary for obtaining original results, since participants are able to use any environment elements or personal experience in the process of creative ideation.

According to the results, the least productive session was with international teaching staff members lacking motivation and lacking need for achievement; as well as session where challenge was met by students working in pairs, further analysis of group size effect and personality effect on original ideation results is needed.

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Annexes. *Descriptive table representing all ideas of different target groups.*

Groups and subgroups / Ideas	Creativity oriented IW guests		Georgian students				International teaching staff		Lithuanian pupils with teachers				Third year Tourism management students studying in Lithuanian					Third year Tourism management students studying in English (subgroups in pairs)						Third year Hotel and Restaurant business students studying in Lithuanian						
	1.1.1	1.1.2	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.4.1	1.4.2	1.4.3	1.4.4	2.5.1	2.5.2	2.5.3	2.5.4	2.5.5	2.6.1	2.6.2	2.6.3	2.6.4	2.6.5	2.6.6	2.7.1	2.7.2	2.7.3	2.7.4	2.7.5	2.7.6	2.7.7
Floating with helium	O																												
Changing shape/adapting	+				+			+													+			+					
Changing colour	+			+						+										OS									
Translator	O																												
Made of bricks from games (domino, chess, cards, monopoly…)		O																											
Gathering groups for games		O																											
Phone App "match maker"		O																											
Glass roof/ umbrella roof			+		+		+	+			+				+	+				+				+		+	+	+	+
Massage option					OS																	+		+					
Wheels to move/control stick (moving)			+		+						+																		
USB/power sockets			+		+			+	+				+		+	+		+		+				+			+	+	
Music			+		+			+					+														+		
Hooks for bags or dogs			O																										
Scrolling surface to keep clean				+			+								+							+							
Phone App for free benches				O																									
Medical equipment for blood pressure, etc.				O									O																
Growing mushroom type roof				O																									
A tool box under the bench					+		+																	OS					
(Free) WiFi					+				+		+				+	+		+		+				+	+		+	+	
Graffiti painting option					O																								
A piano type						+						+																	
(Alarm) clock saying the time						+						+																	
Recycling/natural materials								+	+	+							+									+			
Changing temperature									OS									+						+			+	+	
Hanging on a tree										OS															OS				
Entering by climbing the rope										O																			
Swinging/rocking										O								O											
A building with separate rooms in a tree										O																			

Groups and subgroups / Ideas	Creativity oriented IW guests		Georgian students				International teaching staff		Lithuanian pupils with teachers				Third year Tourism management students studying in Lithuanian					Third year Tourism management students studying in English (subgroups in pairs)						Third year Hotel and Restaurant business students studying in Lithuanian						
	1.1.1	1.1.2	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.4.1	1.4.2	1.4.3	1.4.4	2.5.1	2.5.2	2.5.3	2.5.4	2.5.5	2.6.1	2.6.2	2.6.3	2.6.4	2.6.5	2.6.6	2.7.1	2.7.2	2.7.3	2.7.4	2.7.5	2.7.6	2.7.7
Recording nature sounds												O																		
Colourful															+	+						+								
Lights for decoration													+												+					
Light inside or aside													+			+		+		+			+						+	
Integrated ashtray													+		+															
Integrated cup holder													+		+			+							+					+
Integrated to the nature or tree (around)														+													+			
Childish forest type decoration with insects														O																
Mushroom type roof around the tree														O																
Infrared heater																+							+		+					
Soft sitting or backrest area																+				+		+	+		+					
With chessboard integrated																+														
A trash bin aside																+														
Recycling trash bins integrated																		+					+							
Circle type to face each other, to make communication and friendship																	O													
Motivating inscriptions																		O												
Supports for foot																		+					+						+	
Curved backrest																			+											
Lifting mechanism to go up and down																						O			O					
Interactive Instagram wall behind																								O						
Bean bag type																									O					
Sun energy collectors/ batteries																									+		+	+		+
Conditioned surface when needed																									O					
Cable cars type benches 5EUR/day																										O				
Closed space with walls from transparent glass to shaded																										O				
A table type plate pops out activated																											O			

Groups and subgroups / Ideas	Creativity oriented IW guests		Georgian students				International teaching staff		Lithuanian pupils with teachers				Third year Tourism management students studying in Lithuanian					Third year Tourism management students studying in English (subgroups in pairs)						Third year Hotel and Restaurant business students studying in Lithuanian						
	1.1.1	1.1.2	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.4.1	1.4.2	1.4.3	1.4.4	2.5.1	2.5.2	2.5.3	2.5.4	2.5.5	2.6.1	2.6.2	2.6.3	2.6.4	2.6.5	2.6.6	2.7.1	2.7.2	2.7.3	2.7.4	2.7.5	2.7.6	2.7.7
A sink with running water to wash hands																												O	
Backrest changing position																													O
	Research stage 1: 27% of original ideas (52 ideas/14 original); average of 1.17 original idea per subgroup(14/12); variety of ideas 29/12=2.42 types of ideas per subgroup												Research stage 2: 16% of original ideas (98 ideas/16 original); average of 0.89 original idea per subgroup(16/18); variety of ideas 40/18=2.22 types of ideas per subgroup																	

Labels:
O – original idea
OS – original idea in the research stage