

## **CREATIVITY IN HIGHER EDUCATION: THE CASE OF PORTUGAL VS. LITHUANIA**

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**ABSTRACT:** This study was intended to evaluate the creativity perception in the context of higher education by analyzing its different sub-components: - activities during classes; - students' involvement during the classes; - evaluation of the degree of creativity in the classroom; and - the creativity understanding.

The researchers designed a questionnaire to understand the different insights of students related to creativity. The study was focused on two target groups: - 1<sup>st</sup>: students from Vilnius University of Applied Sciences - Group 2: students from Porto Accounting and Business School. For a better analysis and evaluation of the results obtained in the questionnaire, the Lewis Model was used to understand in which cultural categories the countries under study would be inserted and its impact on creativity.

The statistical analysis results demonstrate that Lithuanian students show higher average results in the different sub-components of perceived creativity in higher education. However, the results indicate that the view of the concept understanding is close between Portuguese and Lithuanian students.

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The research that is presented in this paper is the first research related to creativity in education comparing Portugal and Lithuania and it could be a good base for further research of two economically similar yet culturally different countries.

**KEYWORDS:** creativity; cultural diversity; higher education; Lewis model.

## 1. Introduction

The current reality is marked by permanent innovation, with creativity being responsible for the ability of individuals to successfully implement their ideas and providing them the capacity to have a better answer to challenges and opportunities that may arise (Alencar, Fleith, & Pereira, 2017). However, the field of creativity as we actually know is the result of pioneering efforts of J. P. Guilford and E. Paul Torrance (Lubart & Georgsdottir, 2004; Sternberg, 2006).

Creativity is the key to a set of problems of diverse valences that extend from the social, economic, technological, and educational environments, where creative thinking is capable of generating advantages through beneficial solutions for humanity (Ehtiyar & Baser, 2019). This concept is important in individuals' everyday life and in the workplace, as it describes a core aspect of human adaptability (Runco, 2007). The construction of the creativity concept derives from four components: firstly, it is “a key ability of individual(s)”; in second place it “presumes an intentional activity (process)”; thirdly “the creative process occurs in a specific context (environment)” and lastly “creative product(s) must be novel (original, unconventional) and appropriate (valuable, useful) to some extent, at least for the creative individuals.” (Walia, 2019). In this sense, it is also possible to add that, tends to be seen as a complex capacity bearing on a mix of individual, situational, and cultural variables (Runco, 2004).

Several studies indicate that higher education plays a crucial role in developing students' creativity (Egan, Maguire, Christophers, & Rooney, 2017). Since the 1950's creativity in education has received a strong concern, with the main focus that education needs to prioritize the development and encouragement of creativity (Papaleontiou-Louca, Varnava-Marouchou, Mihai, & Konis, 2014). In this sense, teachers in higher education play a preponderant role, as the way they follow up on their students'

interventions influences the way and the willingness of their students to create and develop new ideas and projects (Soh, 2015). This could mean that teachers will have their own constructive definition of creativity as an important skill to be taught (Gaspar & Mabic, 2015). In brief, in the current teaching paradigm, teachers assume a strategic position in promoting the creativity of their students through their daily interactions (Soh, 2015).

The concept of creativity can also be related to cultural diversity. According to Shao, Zhang, Zhou, Gu, & Yuan (2019) creativity is “a key product of human culture and a tool for enriching culture, has an extremely intimate but complex relationship with culture”. For the same authors the culture influences creativity in three distinct ways, namely: (1) “people from different cultures or settings have distinct implicit and/or explicit conceptions of creativity”; (2) “individuals from different cultures, particularly those from individualist and collectivist cultures, show differences in preferred creative processes and creative processing modes when they are engaged in creative endeavors”; and (3) “creativity may be assessed using different measures based on culture-related contents or materials, and findings are accurate only when culturally appropriate or culturally fair measures are used.” (Shao, Zhang, Zhou, Gu, & Yuan, 2019).

This study is intended to evaluate the creativity perception in the context of higher education by analyzing its different sub-components: - activities during classes; - students’ involvement during the classes; - evaluation of the degree of creativity in the classroom; and - the creativity understanding. For a better analysis and evaluation of the results obtained in the questionnaire, the Lewis Model was used to understand in which cultural categories the countries under study would be inserted and its impact on creativity.

## **2. Literature review**

### **2.1. Creativity**

An exact definition regarding creativity lacks from the academic literature, mostly because scholars perceive creativity differently. Its subjectivity is one of the main reasons for this individuality, depending fully on the context in which it is analyzed (Colin, 2017). Defining implies setting limits and a strict definition of creativity would probably differ

from the meaning of the word “creativity” when spoken by an individual, as most views on imaginativeness do not differentiate it from related words within the class (Gotz, 1981).

The word “creativity” is derived from the verb “to create” which, in any context given, means “to bring into existence”, “to produce”, “to cause”, “to design” (Merriam-Webster, 2020; Gotz, 1981). The verb itself implies that something, either tangible or intangible, must appear in order to be created (Bujor & Avasilcai, 2016; Walia, 2019). The concept may also represent according to Pavlovic & Maksic (2019), the capacity that allows building new and appropriate works.

The author Runco (2007) adds that the creativity concept requires discretion – “deciding when to construct original interpretations and when to conform instead” and intentions – “which reflect the values that motivate creative efforts as well as the capacity to construct original interpretations of experience”.

However, according to Lubart & Georgsdottir (2004) and Cropley (2011) research, the creativity concept may be applied in three different contexts, namely: processes, personality traits and results. Thus, one can consider that the creativity concept is a creative process that leads to the creation of a product or is an effect or result - dependent of a person or a process (Cropley, 2011). In this sense, the same author establishes the classic approach to creativity based on three P's – person, process, and product. It is also considered the fourth P - press, which can act as a facilitator or a blocker of processes inherent to creativity.

The development of creativity in higher education is dependent on an institutional culture that assigns value to its creativity and all its forms of expression in the various valances, overcoming the traditional barriers inherent to academic development (Alencar, Fleith, & Pereira, 2017).

The development of creativity in students is fundamental for two reasons. First, creativity in the current era is recognized as the engine of the digital economy, and in another perspective, innovation and current technological advances have implied a change in the teaching paradigm, and it is essential that higher education institutions find new ways to keep up with current trends (Papaleontiou-Louca, Varnava-Marouchou, Mihai, & Konis, 2014). Within this context, in the figure below, can be seen the nine conditions necessary for teachers to foster creativity in students (Soh, 2015).



Figure 1: Conditions for teachers promote creativity in students.

Source: Soh (2015).

## 2.2. Cultural diversity

In literature there are several definitions of the concept of cultural diversity, which is a debatable and open-ended term. Overall, the concept refers to the coexistence of a set of knowledge, beliefs, customs, religions, ethnicities, sexual orientations, among others, which extends to the reactions of individuals to this reality and the way people live together (Lin, 2019).

However, according to Mazur (2010) research, diversity is defined as “which differentiates one group of people from another, along primary and secondary dimensions”.

The first dimension is referent to the primary influences on an individual's identity, namely: gender, ethnicity, race, sexual orientation, age, and psychological or physical characteristics. This dimension is responsible of the basic personal self-image as well as the perception and understanding of global worldviews, having the greatest impact on the individuals' workplace and society (Mazur, 2010).

The secondary dimension is more intangible, to the extent that it exerts a variable influence on the individual identity and gives greater relevance to the primary dimension. This dimension includes several variables, which extend from academic background, geographic location, religion, family status, work experience, organizational role to

communication style, among others. It can be considered that this dimension is reflected in the self-esteem and self-definition of the individual (Mazur, 2010).

### 2.3. The Lewis Model – Behaviour Dimensions

The author Lewis (2019) established a model, which has been called Behaviour Dimensions, where proposed a tripartite division of cultural categories, namely: linear-active, multi-active and reactive. The characteristics of each cultural category can be analyzed in Table 1.

<b>Linear-actives</b>	<b>Multi-actives</b>	<b>Reactives</b>
<ul style="list-style-type: none"> <li>- task-oriented;</li> <li>- highly-organised planners;</li> <li>- may complete action chains by doing one thing at a time;</li> <li>- linear agenda.</li> </ul>	<ul style="list-style-type: none"> <li>- emotional;</li> <li>- loquacious;</li> <li>- impulsive people;</li> <li>- importance of family, feelings and relationships;</li> <li>- like to do things at the same time;</li> <li>- poor followers of agendas.</li> </ul>	<ul style="list-style-type: none"> <li>- good listeners;</li> <li>- rarely initiate action or discussion;</li> <li>- prefer to listen to and establish the other's position then react to it.</li> </ul>

Table 1: Characteristics of each cultural category.

Source: Lewis (2019).

In figure 2 below, it presents the cultural types of each country according to Lewis Model.

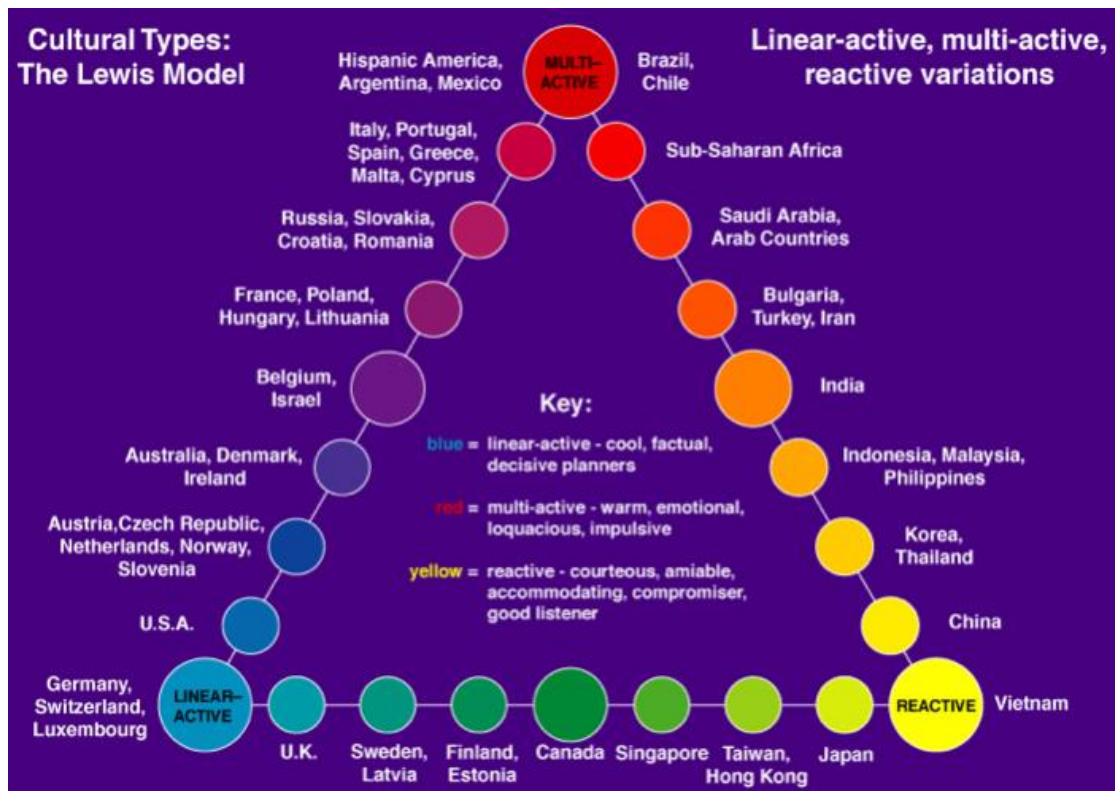


Figure 2: Cultural types of each country according to Lewis Model.

Source: CrossCulture (2020).

### 3. Methodology

The definition of the questionnaire model used to understand the different dimensions of creativity in higher education was structured from a research paper defined in the literature by Gaspar & Mabic (2015). The different creativity sub-components under study and the respective items used in the questionnaire are present in Appendix.

Prior to the dissemination of the questionnaires for data collection, a pre-test was carried out to evaluate the present items, by identifying possible difficulties in their interpretation and understanding and to obtain possible suggestions for improvement.

The researchers focused on two target groups: - Group 1: students from Vilnius University of Applied Sciences - Faculty of Business Management and - Group 2: students from Porto Accounting and Business School - Porto Polytechnic, to explore the different perceptions of creativity at different institutions of higher education. Given the target group, all the respondents were in the age group between 19–25 years.

The questionnaire was designed in English because most Portuguese and Lithuanian participants can easily understand English. It was composed of 36 questions and four total sections. The first group of questions evaluated the rate of practicing specified activities related to creativity. The second section of questions was related to evaluating the rate of students' involvement during the class. The third group was related to expressing a degree of agreement with a set of statements about creativity in the classroom, while the fourth section of statements offered participants the possibility to choose one or more definitions of the creativity concept. According to the literature used for the construction of the questionnaire, all the items were evaluated by a Likert scale between 1 to 5, reflecting the following response options: 1 - Totally disagree; 2 - Disagree; 3 - Indifferent; 4 - Partly agree; 5 - Agree.

Given the need for better analysis and evaluation of the results obtained through the questionnaires to justify the differences between Portugal and Lithuania, the Lewis Model was used, which establishes the Behavioural Dimensions according to the cultural typologies of the different countries.

#### **4. Results and discussion**

After collecting all the results from questionnaires, it was found that the sample consisted of 100 respondents - 50 Portuguese students and 50 Lithuanian students. The data in this section were analyzed using Microsoft Office Excel 2016 and the results are expressed in averages. As stated in the methodology, the questionnaire was composed of four sections related to creativity, so the research results will be presented in the same way.

##### **4.1. Specified Activities Related to Creativity**

The first group of items were related to the evaluation of specific activities during classes over the teaching process. The Portuguese and Lithuanian students evaluated a set of specific activities that take place during a teaching class, analyzing for this purpose the role of teachers in this context. The results obtained can be verified in the table below.



Table 2: Results related to average answers about practicing specified activities during classes.

Statement	Average		Difference of Averages
	Lithuanian	Portuguese	
Teachers appreciate imaginative and unusual ideas.	4,42	3,39	1,03
Teachers appreciate the unusual questions.	4,24	3,21	1,03
Teachers allow students to express their creativity.	4,40	3,11	1,29
Teachers use case studies from real world as learning tools.	4,12	3,01	1,11
Teachers show their creativity.	3,88	3,00	0,88
Teachers provide learning situations in which there are no correct answers.	3,80	2,62	1,18
Teachers are questioning all known in theory to encourage student thinking.	4,14	3,56	0,58
Teachers encourage students to develop self-confidence to work in unpredictable situations.	4,34	2,90	1,44
Teachers are friendly to different new solutions and accept different opinions.	4,22	2,98	1,24
Teachers encourage communication between and with students.	4,26	3,03	1,23
<b>Total</b>	<b>4,18</b>	<b>3,08</b>	<b>1,10</b>

Source: Own elaboration.

The evaluation of Portuguese and Lithuanian students regarding creativity in the teaching process performed by teachers, present in Table 2, shows that there is a statistically significant difference in opinions on each item indicated.

In most statements, Lithuanian students made a better assessment than Portuguese students. Based on the average results of the first group of the questionnaire, it can be seen that there is a significant difference in creative activities in Portuguese (3,08) and Lithuanian (4,18) teaching.

While Portuguese students report that teachers question theoretical knowledge to encourage students' thinking (3,56), Lithuanian students indicate that their teachers' value creative and unusual ideas (4,42). Through the analysis of the differences between Lithuanian and Portuguese students' means, it is still possible to see that the smallest difference is present in the following item: "Teachers are questioning all known in theory to encourage student thinking". On the other hand, the greatest discrepancy between the

averages of the answers is verifiable in the encouragement by teachers to allow students to express their creativity.

#### 4.2. Students' involvement during classes

The second group of statements evaluated the frequency of students' involvement during the classes. The results are presented in Table 3.

Table 3: Results related to average answers about students' involvement during the classes.

During the course, students are encouraged to:	Average		Difference of Averages
	Lithuanian	Portuguese	
Participate in a constructive discussion.	4,22	3,68	0,54
Express their own ideas.	4,26	3,31	0,95
Give new solutions of problems.	4,24	3,58	0,66
Give constructive suggestions.	4,12	3,45	0,67
<b>Total</b>	<b>4,21</b>	<b>3,50</b>	<b>0,71</b>

Source: Own elaboration.

Following the results obtained in the first group of items, the Portuguese and Lithuanian students evaluated in a differential way their involvement in classes. The difference obtained between both is due to the lesser use of creativity in specific classroom activities in the Portuguese context.

While Portuguese students indicate that constructive discussions are promoted in the classroom context (3,68), Lithuanian students on the other hand, state that they are encouraged to express their own ideas (4,26). However, Portuguese students indicate a lower degree of expression of their ideas (3,31) and Lithuanian students indicate less encouragement to develop constructive suggestions (4,12).

Through the analysis of the differences between Lithuanian and Portuguese students' means, it is still possible to see that the smallest difference is present in the participation of constructive discussions (0,54). Nevertheless, the greatest discrepancy between the averages of the answers is verifiable in the expression of students' ideas (0,95).

### 4.3. Degree of creativity in the classroom

The third group of statements was related to the degree of creativity in the classroom. The results of students' answers are presented in the table below.

Table 4: Results related to average evaluation of degree of creativity in the classroom.

Statement	Average		Difference of Averages
	Lithuanian	Portuguese	
Students should be encouraged to be creative.	4,46	4,17	0,29
Lessons need to be oriented towards new methods of learning.	4,36	4,19	0,17
Teachers are the main instigators of students' creativity.	3,84	3,58	0,26
Creativity of students depends on the characteristics of teachers.	3,62	3,47	0,15
All student perceptions/experiences of a problem should be considered.	4,08	3,64	0,44
It is more important to communicate with students than to lecture planned material.	3,92	3,39	0,53
Each problem has a unique solution.	4,16	3,25	0,91
To successfully pass the exam the student needs to answer the question exactly as it is stated in literature.	2,78	3,01	-0,23
Students can have their opinion about a problem that is completely different from teachers' opinion.	4,08	3,03	1,05
<b>Total</b>	<b>3,92</b>	<b>3,52</b>	<b>0,40</b>

Source: Own elaboration.

Following the students' assessment of the degree of creativity in the classroom context, it can be seen that Portuguese and Lithuanian students have similarities in the way that creativity should be understood and provided during classes.

The analysis of the results shows that for Portuguese and Lithuanian students, the statement with the lowest average of the questionnaire refers to the item "To successfully pass the exam the student needs to answer the question exactly as it is stated in literature", which demonstrates that teachers promote critical thinking on their students. On the other hand, while for Lithuanian students the item with the highest average refers to

encouraging their creativity (4,46), for Portuguese students the classes need to be oriented to new learning methods (4,19).

The difference of averages between Lithuanian and Portuguese students shows a greater discrepancy in the item: "Students can have their opinion about a problem that is completely different from teachers' opinion." (1,05). However, it can be seen that there is a greater proximity between the students of both countries regarding the opinion that the creativity of students is dependent on the characteristics of their teachers (0,15).

#### 4.4. Creativity understanding

The fourth section of the questionnaire allowed participants to choose between one or more definitions of the creativity concept, using multiple choices. The results of the students' understanding of the creativity concept are presented in Table 5.

Table 5: Results related to average creativity understanding of respondents.

Creativity Meaning	Average		Difference of Averages
	Lithuanian	Portuguese	
Thinking outside the box.	4,44	4,25	0,19
Search beyond the obvious.	4,44	4,43	0,01
Seeing the world in different ways.	4,38	4,54	-0,16
Adaption of the things that someone else invented.	3,62	3,31	0,31
Do things that others have done before, but in a different way.	4,06	3,86	0,20
See unusual connections between existing things/concepts.	4,20	3,92	0,28
Be curious.	4,24	3,92	0,32
Explore and discover new and unknown.	4,36	4,13	0,23
Critically reflect on the current world.	4,24	3,96	0,28
Adapt to existing frameworks.	3,38	3,07	0,31
Take the risk.	4,26	4,09	0,17
Analyze.	4,10	3,94	0,16
Experiment.	4,44	4,35	0,09
<b>Total</b>	<b>4,16</b>	<b>3,98</b>	<b>0,18</b>

Source: Own elaboration.

In the table identified above, it can be seen that Lithuanian students associate the concept of creativity with the ability to "Thinking outside the box." (4,44); "Search beyond the obvious." (4,44) and "Experiment." (4,44). In the same sequence, the Portuguese students refer to the concept as "Seeing the world in different ways." (4,54). The answer with the lowest average result for students of both countries, refers to the item: "Adapt to existing frameworks.", which is an expectable result since the adaptation to existing structures is not related to the creativity concept.

The analysis of the differences between the averages in the understanding of the creativity concept presents the smaller discrepancy between students from both countries, which corroborates that there is a similar comprehension of the concept for Portuguese and Lithuanian students.

#### **4.5. The Lewis Model – behavior dimensions**

For a better analysis and evaluation of the results obtained in the questionnaire, was used the Lewis Model represented by the Behavior Dimensions, which determine to which cultural type the individuals of a country are inserted.

Based on the previous literature review, it is possible to determine that Portugal belongs to a set of multi-active countries. This means that Portuguese people are more talkative, very emotional, impulsive, people-oriented, like to do all the things at one time, who puts feelings before facts. On the other hand, Lithuania's positioning in the Lewis' Model is somewhere between linear-active and multi-active type. This can be interpreted that Lithuanians are also emotional, but hardly conceal feelings, are job-oriented and always interconnected to facts. They are very talkative, but rarely interrupt.

The analysis of Portugal and Lithuania through the Lewis' Model, shows that there are differences between individuals, particularly in terms of their relationships, actions, and experiences. Although they are positioned in the Lewis' Model relatively close, the differences in individuals are notorious.

In this follow-up, it may be considered that the emotional, sentimental, and multi-tasking character of Portuguese people is limited in the creative area in the context of higher education, since creativity usually implies the ability to concentrate and plan. Thus, differences in the results of the sub-components of creativity under study may

represent the levels of differences from the cultural point of view between Portugal and Lithuania.

## **5. Conclusions**

This research consisted of an analysis of the concept of cultural diversity, through the evaluation of how Portuguese and Lithuanian cultures use creativity in different ways in higher education, which was corroborated by the results obtained. It is also possible to add that the results of the study indicate that students from both institutions recognize the need and preponderance of the creativity concept in universities.

Regarding the different opinions among students, it is the result of the experiences of creativity during the course of higher education, being justified by the fact that each culture presents common characteristics and, the common traits of each culture vary differently in each different part of the world, being creativity a variable that presents itself differently in each educational institution.

This study also highlights that the development of creativity in higher education is dependent on an institutional culture, and it is necessary to implement a strategy in this direction. Alencar, Fleith and Pereira (2017) emphasize a set of methodologies that can allow a greater development of creativity in higher education, namely: allowing students to develop their work with new and interesting methodologies; challenging students with real, demanding, and exciting work and designing evaluation methods that allow results that are not strictly predetermined.

The research that is presented in this paper is the first research related to creativity in education comparing Portugal and Lithuania. Nevertheless, to better understand the current situation of how creativity influences education, further research should be carried out with a greater sample to get even more precise and accurate data.

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## APPENDIX

Component	Items
Practicing specified activities during classes	Teachers appreciate imaginative and unusual ideas.
	Teachers appreciate the unusual questions.
	Teachers allow students to express their creativity.
	Teachers use case studies from real world as learning tools.
	Teachers show their creativity.
	Teachers provide learning situations in which there are no correct answers.
	Teachers are questioning all known in theory to encourage student thinking.
	Teachers encourage students to develop self-confidence to work in unpredictable situations
	Teachers are friendly to different new solutions and accept different opinions.
	Teachers encourage communication between and with students.
Students' involvement	Participate in a constructive discussion.
	Express their own ideas.



ent during the classes	Give new solutions of problems.
	Give constructive suggestions.
Degree of creativity in classroom	Students should be encouraged to be creative.
	Lessons need to be oriented towards new methods of learning.
	Teachers are the main instigators of students' creativity.
	Creativity of students depends on the characteristics of teachers.
	All student perceptions/experiences of a problem should be considered.
	It is more important to communicate with students than to lecture planned material.
	Each problem has a unique solution.
	To successfully pass the exam the student needs to answer the question exactly as it is stated in literature.
Creativity Understanding	Students can have their opinion about a problem that is completely different from teachers' opinion.
	Thinking outside the box.
	Search beyond the obvious.
	Seeing the world in different ways.
	Adaption of the things that someone else invented.
	Do things that others have done before, but in a different way.
	See unusual connections between existing things/concepts.
	Be curious.
	Explore and discover new and unknown.
	Critically reflect on the current world.
	Adapt to existing frameworks.
	Take the risk.
Analyze.	
Experiment.	