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INTRINSIC MOTIVATION AND FLOW CONDITION ON THE MUSIC TEACHER'S PERFORMANCE

Abstract: The aim of these research is to identify if music teachers and teachers from other areas are intrinsically or extrinsically motivated, to identify the dimensions of the flow state, and to identify if there is a relationship between intrinsic motivation and flow state in these teachers. The sample was made up of 738 active teachers. The presence of flow in teaching, means that the teacher has control in their actions, feel joy and a deep sense of satisfaction. The music teachers show a higher grade of satisfaction without an external reward. The teachers do not identify the loss of self-consciousness or inhibition or they do not maintain this dimension. The optimal experience and intrinsic motivation are highly related with satisfaction without external rewards in teacher and music teacher.

Key words: flow condition, intrinsic motivation, music teacher.

1. Introduction

The concept of *Flow* is study to understand the activity that produce an optimal psychological state and human creativity. Creativity is a central source of meaning in life. Most of the things that are interesting and important result from creativity (Buser, et al., 2011; Csikszentmihalyi, 2006). Language, values, artistic expression, scientific understanding and technology is the result of creativity, which has been recognized and transmitted through learning.

When involved in creative endeavors, many people feel that they experience life more fully. Thus, creativity is valued because it contributes to improved quality of life (Csikszentmihalyi, 2006). Flow is a state of inspiration and creativity. Flow should be used to manage the learning environment (Byrne & Sheridan, 2000). In this context, the concept of flow as optimal experience and intrinsic motivation are rooted in the desire to understand the activity that promote human creativity.

UNESCO keeps creativity and arts education as a fundamental priority within its work. The promotion of creativity should be a need for schools as a central part of their educational mission (Freedman, 2010). Teachers have to make possible the creation of optimal conditions that will increase the likelihood that in the students will occur creative expressions.

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Byrne & Sheridan (2000) suggest that a powerful reflective tool for teachers can be developed using the flow model. Such a tool would be valuable to teachers in initiating, planning, monitoring, regulating and assessing learning. In other words, flow could be used to manage the learning environment.

1.1 Background

Csikszentmihályi (2013) has suggested that the conditions that are necessary to achieve flow include the right blend of the task's level of challenge and the individual's level of skill. When both challenge and skill are high, flow is a much more likely outcome. A bit lower skill level and the individual might experience arousal, but not flow. A bit less challenge may simply lead to a sense of control. But if the challenge is too far out of balance with skills, the results could be either worry and anxiety (high challenge with low skill level) or relaxation and boredom (low challenge with high skills).

1.2 Positive Psychology

Experiencing positive emotions leads to mental states, cognitive processes and behaviors that prepare us to deal successfully with difficulties that may arise. This can improve the quality of life and wellbeing of people (Seligman & Csikszentmihalyi, 2000). Positive psychology analyzes the tendencies of growth people that are beginning on self-motivation (Seligman & Csikszentmihalyi, 2000) and emphasizes the importance of development the human resources for improvement the self-regulation (Ryan & Deci, 2002).

1.3 Autodetermination

The Self-Determination Theory states that motivation is a range to provide higher or lower levels of self-determination. Motivation is defined as a mental factor that leads us to action in each and every one of the situations and areas of human life (Deci & Ryan, 2000). The motivation is composed of three factors (Ryan & Deci, 2002): intrinsic motivation, which is stimulated by the task itself and without external incentives; extrinsic motivation, which is stimulated by external incentives either self-administered or administered by others; and, amotivation, lack of motivation that results in the inability to perform together with a lack of behavioral control action.

Deci and Ryan (2000) defined extrinsic motivation as any situation in which the reason for the action is some separable consequence of it, either self-administered or dispensed by others. External regulation refers to those actions that are performed to satisfy an external requirement. The introjected regulation occurs when subjects perform an act to avoid guilt or anxiety and increase self-esteem. The identified regulation is when the individual voluntarily performs an activity or action because he knows it will be good, although activity itself does not like.

Vallerand (1997) defines intrinsic motivation as the need to explore the environment for curiosity and pleasure with feelings of competence and self-realization, even after having reached the target without need for an external gratification.

In teaching, intrinsic motivation is what drives and influences the degree of acceptance, enthusiasm and satisfaction of the profession; while extrinsic motivation often causes situations of lack of motivation among teachers (Sánchez, 2009). The role of the teacher has a

positive effect on student performance associated with intrinsic motivation (Boza & Toscano, 2012).

Some research has analyzed the relationship between motivation and flow state, and some studies have found relations between intrinsic motivation and the tendency to experience flow or different dimensions of flow state (Charalambous & Ntoumanis, 2000; Kimiecik & Jackson, 2002; Papaioannou & Kouli, 1999; Tipler, et al., 2004).

1.4 Flow or optimal experience

The theory of optimal experience is defined as self-control over our actions and being masters of our fate by generating confidence in their own abilities together of happiness and enjoyment. Optimal experience requires a balance between the challenges perceived in a given situation and the skills a person brings to it (Csikszentmihalyi, 2006). Csikszentmihalyi (1975) considered a flow state to be the optimal psychological state to perform an activity. The flow state as an intrinsically enjoyable experience, it is similar to both peak experience and peak performance. Flow per se does not imply optimal joy or performance but may include either or both. Csikszentmihalyi and LeFevre (1989) established when flow occurs; individuals feel they can improve their capacity to face the challenge. This involved improving their skills and the possibility of learning new actions that will contribute to increasing their capacity and optimizing their self-esteem (García, et al., 2008).

Mundell (2000) define the concept of flow as a state of deep concentration, perceived control, loss of self awareness, and distortion of sense of time. The flow state can be considered to be associated with an optimal psychological state that allows one to carry out activities in ideal conditions, optimizing satisfaction and performance. Flow is a term that describes a subjective mental state in which an individual becomes fully immersed in an activity and experiences feelings of energized focus, deep involvement, and success of the activity.

The field of education has shown that the concept of flow is defined for nine exceptionally robust properties. It provides a clear path for the presence of the dimensions. These factors are directly related to the experience of the optimal psychological state and that we shall explain below.

1. **Balance between ability level and challenge.** To consider that the task to be performed involves an achievable challenge will improve the individual's motivation to perform it.
2. **Merging one to action and awareness.** This characteristic focuses on performing tasks automatically. This act leads one to perform the activity more fluidly, avoiding the disturbing thoughts.
3. **Clear goals.** The importance of having clear goals in order to optimize the performance of an activity at the psychological level. The activity is clearly defined.
4. **Direct and clear feedback.** Clear and immediate feedback in relation to the goal(s) set. It is necessary to know if one is doing it correctly.
5. **Concentration on the task being performed.** Narrowing of focus and the centering of attention on a limited stimulus field. To be concentrated on the task is an essential characteristic to explain an optimal state in deep learning process (Hernandez & Maquilon, 2010).
6. **A sense of control.** A sense of exercising control without actually trying to be in control. Teachers feeling that they have control and master the task they are facing.

7. **Loss of self-consciousness or inhibition.** This is the capacity to avoid concerns and worries about one's own skill. Concern for the self disappears and the person becomes one with the activity. This helps teachers feel more daring when facing the task.
8. **Distortion of the sense of time.** A loss of time awareness or time disorientation. The sense of time can be altered depending on the interests: in some cases, there is a reduced sense of time and, in others, an increased sense of time. This produces a more positive psychological attitude and, in turn, leads to better task performance.
9. **Autotelic experience.** An intrinsically rewarding experience involving a deep sense of enjoyment. This characteristic refers to the intrinsic satisfaction produced by the task. This is related to the self-determination theory (Ryan & Deci, 2002). The task is easier to perform when one feels satisfaction simply from doing it, without the need of any external reward.

The state of flow in teachers can help optimize learning environments (Lochner, Wieser, & Mischo-Kelling, 2012; Lei, 2010), because when the teacher is in this state affects the active participation of students (Demir, 2011). So if the teacher presents the state of flow, that feeling of satisfaction as a result improve their performance, and it will give you the opportunity to generate new goals, and therefore design more efficient spaces for the learning (Chamundeswari, 2013).

1.5 Flow and Music

Musical performance is recognized to provide a clear platform to explain the state of flow (Wrigley & Emmerson, 2011). Some studies find a relationship between flow and the concept of creativity in students composers (Byrne, MacDonald, & Carlton, 2003). Also studies where the flow state appears immediately with the musical performance (Wrigley & Emmerson, 2011). Michel and Wanner (1975) provide evidence of improvement in work output under conditions in which the music is synchronized with physical tasks (synchronous music). As part of this research we want to recognize the dimensions of the flow state for teachers and music teachers.

2. The study

There is a shortage in relation to recognize the dimensions of flow in music teaching (Hart & Di Blasi, 2013). If the teacher presents the state of flow it would improve their student's performance (Chamundeswari, 2013). In this research, we focus to know if flow state appears in teachers from other areas and music teacher.

2.1 Aims of the study

1. *Identify whether music teachers and teachers in other areas are intrinsically or extrinsically motivated.*
2. *Identify the dimensions of the flow state that teachers have on their best and worst performance.*
3. *Determine if there is a relationship between intrinsic motivation and flow state in music teachers and the teacher from other areas.*

2.2 Hypothesis

1. Music teachers have a higher mean of the intrinsic motivation that teacher in other areas.
2. Music teachers have a higher mean in some of the dimensions of the flow state that teachers in other areas.
3. If there is correlation between motivation and flow state, then this will be higher in music teacher than the teachers in other areas will.

3. Methodology

3.1 Data collection

The sample for this study was made up of 738 active teachers of ages between 18 and 68 years ($M=35$, $SD=10.69$), 411 were female and 327 were male from the Mexico's Northeast in tertiary and degree education. The distribution of the sample in subjects was follows: 25% music's teachers, 24.3% social studies teacher (history, vocabulary, grammar), 14% sciences teachers, and 13% experimental sciences teacher, 11% teachers of specialized fields, 6% languages teachers, 6% others subjects and .7% religion teachers. About professions teachers sample follows is 22% were musicians, 47% educators, 4% psychologists, 5% engineers, 3% business, 2% lawyer, 2% mathematicians, 1% accountant, 1% veterinary doctor, the rest of the sample has other fields less than 1%.

3.2 Measures

Motivation. For motivation we used the Vallerand and others (1992) Test called Academic Motivation Scale High School version (AMS-HS 28). The AMS-HS 28 was translated, using the backward translation strategy. First, three teachers who were experts in the subject and who were proficient in English and Spanish translated the scale. Any differences in the resulting translations were discussed by the team until they reached a final wording of the instrument. After, a different person, which was not involved in the investigation, was asked to translate the instrument back into English, to confirm whether there were any important discrepancies between the original and the translate version, and this procedure serve to revise the tool once more.

Flow. To asses flow, we used the Spanish adaptation of the Flow State Scale (FSS) de Jackson and Marsh (1996) by García, Jiménez, Santos-Rosa, Reina and Cervelló (2008). The FSS was adapted to the teaching field by a group of experts. Any differences in the resulting adaptation were discussed by the team until they reached a final wording of the instrument. This procedure is part of a running research parallel to this work. This instrument has 36 items that assess the 9 factors that comprise the flow state for teaching. Each factor has 4 items that are rated in this case on a 7-point Likert-type scale. This instrument gives a global measure of the flow experience and a score for each of the nine subcomponents of the flow experience. García and others (2008), shown as a factor validity the fit indexes of 4 models tested in the confirmatory analysis. In order to analyze the concurrent validity García and others (2008) decided to analyze the dimensions of flow in samples of American and European people.

Both instruments have satisfactory validity and internal consistency.

3.3 Procedure

We select the sample intentionally. The participants completed the flow state test just after a class, as this considered the most appropriate time (Jackson, 1996).

3.4 Data analyze

To analyze the data was used the statistical program SPSS 17.0. Firstly, we computed internal consistencies (Cronbach's α) and descriptive analyses, then realize descriptive analyses, comparison of means between groups and correlation analysis for the relationship between variables and prediction (McMillan, 2000, p. 184).

4. Results

To identify the first aim if music teachers and other areas are intrinsically or extrinsically motivated we obtained the means, standard deviations, internal consistency (Cronbach's α), stability and inter-correlations for the scales in the study among teachers and music teachers about intrinsic motivation. All the values met the criterion of .70 in all cases or above .64 (Nunnally, 1978). The lowest score of .64 was that of the factor intrinsic motivation to learn and intrinsic motivation to experience stimulation. We can see at Table 1, 2 and 3.

Table 1. Intrinsic Motivation.

	Music Teacher N= 176			Teacher from another fields N=542		
	M	SD	α	M	SD	α
intrinsic motivation to learn	5.60	.84	.64	5.47	.99	.68
intrinsic motivation to experience stimulation	5.61	.86	.64	5.50	.99	.68
Intrinsic achievement motivation	5.61	.89	.68	5.53	1.08	.78

Note: M = mean; SD = standard deviation; α = Cronbach's alpha coefficient.

Table 2 displays the means, standard deviations, internal consistency (Cronbach's α), stabilities and intercorrelations for the scales in the study among music teachers and other fields teachers about extrinsic motivation and amotivation. The lowest score of .64 was that of the factor extrinsic motivation identification.

Table 2. Extrinsic Motivation and amotivation.

	Music Teacher N=176			Teacher from another field N=542		
	M	SD	α	M	SD	α
Extrinsic Motivation Identification	4.64	1.06	.64	4.26	1.17	.66
Extrinsic Motivation Introjection	3.95	1.18	.66	3.61	1.35	.70
Extrinsic motivation external regulation	3.78	1.41	.806	3.62	1.33	.75
Amotivation	2.78	1.47	.791	2.47	1.36	.80

Note: M = mean; SD = standard deviation; α = Cronbach's alpha coefficient.

In Table 3 are displayed the t-Test between intrinsic and extrinsic motivation. To identify the dimensions of the flow state that teachers have on their best and worst performance. In Table 4 are displayed the descriptive statistic of the Flow State Scale factors.

Table 3. t-Test intrinsic and extrinsic motivation.

	Intrinsic Motivation	Extrinsic Motivation
Mean	5.52	3.90
T-statistic		30.26
p-value		0.000

On the other hand, all the values met the criterion of .70 in all cases, except with other teacher-merging one to action and awareness in best experience (.67), concentration on the tasks in best experience (.64) and distortion of the sense of time in worst experience (.65). We find the dimension of flow state in music teacher and teacher. In the worst experience we didn't find presence of dimensions of the flow less than 4 point.

We can see the dimension with higher presence is autotelic experience, the intrinsic satisfaction produced by the task and Concentration on the task, to obtain a deep process.

Tabla 4. Flow state best and worst teaching experience.

		Music Teacher N=176			Teacher from another field N=542		
		M	SD	α	M	SD	α
Balance between ability level and challenge	Best experience	5.72	0.86	.68	5.42	.93	.70
	Worst	4.48	1.19	.79	4.40	1.25	.80
Merging one to action and awareness	Best experience	5.28	1.01	.769	4.99	1.05	.67
	Worst	3.94	1.16	.807	4.07	1.19	.74
Clear goals	Best experience	5.83	.88	.785	5.55	.95	.75
	Worst	4.49	1.23	.844	4.63	1.33	.86
Direct and clear feedback	Best experience	5.53	.95	.830	5.28	.91	.73
	Worst	4.05	1.19	.840	4.26	1.36	.87
Concentration on the task being performed	Best experience	5.84	.82	.734	5.59	1.13	.64
	Worst	4.49	1.16	.724	4.52	1.27	.82
A sense of control	Best experience	5.64	.96	.843	5.39	.99	.77
	Worst	4.12	1.31	.854	4.29	1.32	.84
Loss of self-consciousness or inhibition	Best experience	4.55	1.38	.788	4.29	1.23	.71
	Worst	3.67	1.29	.801	3.73	1.32	.82
Distortion of the sense of time	Best experience	4.97	1.22	.823	4.76	1.22	.74

	Worst	3.97	1.22	.763	3.99	1.17	.65
Autotelic experience	Best experience	6.19	.78	.843	5.76	1.04	.83
	Worst	3.71	1.59	.886	3.94	1.77	.87

Note: M = mean; SD = standard deviation; α = Cronbach's alpha coefficient.

We observe, by the factor, that intrinsic motivation is greater in teachers, and more in music teacher than extrinsic motivation and amotivation, see Table 5.

Table 5. Descriptive Statistic for Factors.

	Music Teacher N= 176		Teacher from another field N=539	
	M	SD	M	SD
Intrinsic motivation	5.60	.77	5.49	.89
Extrinsic Motivation	4.12	1.08	3.82	1.36
Amotivation	2.78	1.47	2.47	1.36
Flow best experience	5.51	.71	5.23	.79
Flow worst experience	4.10	1.01	4.20	1.07

Note: M = mean; SD = standard deviation.

The music teachers show a higher grade of satisfaction without an external reward, see Table 6.

Table 6. t-Test for Flow State for best experience.

	Flow best			
	Teachers/ Music Teachers	Mean	t	P(T<t) una cola
Balance between ability level and challenge	0	5.43		
	1	5.72	-3.65	0.000
Merging one to action and awareness	0	5.00		
	1	5.28	-3.12	0.000
Clear goals	0	5.54		
	1	5.84	-3.58	0.000
Direct and clear feedback	0	5.28		
	1	5.53	-3.03	0.001
Concentration on the task being performed	0	5.59		
	1	5.84	-2.68	0.003
A sense of control	0	5.39		
	1	5.64	-2.80	0.002
Loss of self-consciousness or inhibition	0	4.29		
	1	4.55	-2.37	0.008
Distortion of the sense of time	0	4.76		
	1	4.97	-1.94	0.02
Autotelic experience	0	5.73		
	1	6.19	-5.07	0.000
Flow best experience	0	5.23		
	1	5.51	-4.19	0.000

To determine if there is a relationship between intrinsic motivation and flow state in music teachers and other areas, we identify the correlations between the factors. In the Table 7 are displayed the results obtained after calculating bivariate correlations with the diverse factors of flow, and teachers intrinsic motivation.

Table 7. Correlations between intrinsic motivation and Flow State for teachers.

	Intrinsic motivation to learn	Intrinsic motivation to experience stimulation	Intrinsic achievement motivation	Intrinsic motivation
Balance between ability level and challenge	.303**	.365**	.384**	.399**
Merging one to action and awareness	--	.327**	--	--
Clear goals	.311**	.379**	.365**	.400**
Direct and clear feedback	.318**	.344**	.362**	.389**
Concentration on the task being performed	.297**	.319**	.317**	.353**
A sense of control	.325**	.365**	.350**	.394**
Autotelic experience	.364**	.411**	.410**	.449**
Flow best experience	.345**	.416**	.399**	.440**

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

NC=there is no correlation.

In the Table 8 are displayed the results obtained after calculating bivariate correlations with the diverse factors of flow and intrinsic motivation of the music teachers.

Table 8. Correlations between motivation and Flow State for music teachers

	Intrinsic motivation to learn	Intrinsic motivation to experience stimulation	Intrinsic achievement motivation	Extrinsic Motivation Identification	Extrinsic Motivation Introjection	Extrinsic motivation external regulation	Intrinsic motivation	Extrinsic Motivation
Balance between ability level and challenge	--	--	.243**	.267**	--	--	--	--
Merging one to action and awareness	--	--	--	--	--	.266**	--	--
Clear goals	--	.289**	--	--	--	--	.276**	--
Direct and clear feedback	--	.303**	.266**	--	--	--	.298**	--
Concentration on the	--	.243**	--	--	--	--	--	--

task being performed								
A sense of control	--	.271**	--	--	--	--	--	--
Distortion of the sense of time	--	.320**	.300**	.285**	.277**	.298**	--	--
Autotelic experience	.315**	.354**	.318**	--	--	--	.370**	.301**
Merging one to action and awareness worst experience	--	--	--	.299**	.303**	.325**	--	--
Direct and clear feedback worst experience	--	--	--	--	--	.286**	--	--
Flow best experience	--	--	--	--	--	--	.344**	.275**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

--there is no correlation.

5. Discussion

In both groups of teachers, we found that intrinsic motivation is higher than extrinsic motivation and amotivation. We found statistically significant differences in favor of intrinsic motivation with respect to extrinsic ($t = 30.26$, $p < .001$). In education, intrinsic motivation is a support tool to facilitate knowledge transfer between individuals, encourage the development of informal groups outside the formal structures, allow rapid troubleshooting, transfer best practices and develop professionals to share experiences. It is necessary to interpret the results with caution because of its non-experimental nature. Hypothesis 1 would be reject, not found, statistically significant differences between groups of teachers for intrinsic motivation.

Well then, the autotelic activity means the enjoyment of the activity by itself; it is high for both groups of teachers. The presence of flow in teaching, where the teacher controls their actions (sense of control with clear goals), feels joy and a deep sense of satisfaction beyond just for fun (presence of autotelic experience). In the flow state all the differences in the means of the state dimensions are statistically significant and in favors of music teachers. Hypothesis 2 is accepted.

The presence of flow in the teaching, the teacher controls their actions, feel joy and a deep sense of satisfaction beyond just fun (Rubio & Garcia, 2010).

There is a statistically significant positive moderate bivariate correlation for intrinsic motivation and flow state in teachers and music teachers. The highest correlation was found was intrinsic motivation and autotelic activity, we believe this is because as he says (Csikszentmihalyi, 2013), optimal experience is related to intrinsic motivation and what gives us pleasure, comparing this optimal experience directly to the state of flow.

We reject hypothesis 3, this relationship is the same between music teachers and teachers.

The highest correlation was found by intrinsic motivation and autotelic activity, we believe this is because as he says (Csikszentmihalyi, 2013), optimal experience is related to intrinsic motivation and what gives us pleasure, comparing this optimal experience directly to the state of flow.

6. Conclusion

The Flow model includes processes defined by creative researchers such as Csikszentmihalyi (2006) as the way creative people work.

We can comment that the teachers of this research can be defined from the Flow Model, as creative teachers because they find satisfaction in the work performed independently of external motivation.

We can envisage a teaching and learning tool that makes use of the flow model in which the learner is kept on-task, regular and immediate feedback is given, clear targets are well defined and achievable, and in which there is a balance between challenges and skills. Of course, activities in which participants can attain feelings of flow are likely to be highly intrinsically motivated.

The presence of flow in teaching, means that the teacher has control in their actions, feel joy and a deep sense of satisfaction (Rubio & Garcia, 2010).

We found that intrinsic motivation is higher than extrinsic motivation and amotivation, we found statistically significant differences in favor of intrinsic motivation with respect to extrinsic ($t = 30.26, p < .001$).

The music teachers show a higher grade of satisfaction without an external reward. There is a statistically significant positive moderate bivariate correlation for intrinsic motivation and flow state in teachers and music teachers.

We believe it is important to continue investigating teachers who know that use creative thinking strategies and teachers who do not, in relation to their intrinsic motivation and process flow (Byrne, et al., 2003). In addition, start researching in other areas or science teacher with experimental research.

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