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## 3<sup>rd</sup> Special Focus Symposium on Pedagogy:

### CURRICULA OF EARLY EDUCATION AND COMPULSORY EDUCATION

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#### Joint Symposium Chairs:

##### Milan Matijević

Chair of Department of Pedagogy, Faculty of Teacher Education of the University of Zagreb, Savska cesta 77, 10000 Zagreb, Croatia, Tel: +385 1 63 27 327; Fax: +385 1 61 77 860

e-mail: [milan.matijevic@ufzg.hr](mailto:milan.matijevic@ufzg.hr)

##### Zoran Velkovski

Faculty of Philosophy, University Skopje, Macedonia

e- Mail: [zoran@fzf.ukim.edu.mk](mailto:zoran@fzf.ukim.edu.mk)

##### Walter Hövel

Grundschule Harmonie, Eitorf, Bon, Germany

e-Mail: [hoevel.resch@web.de](mailto:hoevel.resch@web.de)

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## **Conference Chair:**



**Ph.D. Vladimir Šimović**

Dean of the Faculty of Teacher Education of the University of Zagreb, Savska cesta 77, 10000 Zagreb, Croatia, Europe & Director of the "ECNSI" - European Center for Advanced and Systematic Research, Savska cesta 77, 10000 Zagreb, Croatia, Europe  
Phn: +385 98 262271 (+385 99 2100400 or +385 1 6131584) Fax: +385 1 6137489  
e-mail: [vladimir.simovic@zg.t-com.hr](mailto:vladimir.simovic@zg.t-com.hr) or [vladimir.simovic@ufzg.hr](mailto:vladimir.simovic@ufzg.hr)

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## **Symposium**

### **CURRICULA OF EARLY EDUCATION AND COMPULSORY EDUCATION**

Preparation for lifelong education begins in kindergarten and at the primary level of the obligatory education. For this reason, the organization of these segments of preschool education and obligatory education is extremely important.

Besides, it is important to remind one of the fact that the process of lifelong education is conditioned by the development of the information and communications technology (ICT). Nowadays, the learning environment has changed significantly. Lifelong education is stimulated and aided by various media and the new educational technologies (from all aspects of television and radio education and information distribution to various learning models stimulated and aided by ICT, and all variants and models of e-learning).

In developed countries all systems of teacher education are based on lifelong learning. The realization of a learning organization plays a significant role in the transition from the traditional organization of the institutions of teacher education towards the modern ones.

Experts find that it is possible and necessary to enable learners to learn independently with the help of the new media as well as to learn independently by discovery. At the age of obligatory education children can be actively introduced to and trained to use the methods and techniques of problem learning and active investigation so that they could use these methods and techniques in the course of their education and in their everyday lives.

An important problem in today's institution of preschool education and schools lies in the criteria and models of process and result evaluation. This is a topic which has always brought about discussion among experts on education.

#### **Main theses**

Aims and competences acquired in the course of preschool education and obligatory education.

Optimal duration and inner structure of obligatory education.

Methods and didactic strategies in kindergartens and schools.

Inclusive pedagogy – every child is treated as a person with their own particular needs.

Models and techniques of achievement observation and assessment.

New media and the educational environment.

New educational technologies.

School and preschool teachers.

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Models of teacher training at university level and professional competences of school/preschool teachers.

External evaluation projects.

**Invited Plenary Lecturers**

Milan Matijević, Croatia

Walter Hövel, Germany

Leena Liusvara, Finland

Zoran Velkovski, Macedonia

Jasna Krstović, Croatia

Dejana Bouillet, Croatia

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## **ADOLESCENT'S MOTIVATION AND RELATIONSHIPS IN THE CONTEXT OF COMPUTER MEDIATED AND FACE TO FACE LEARNING**

**Lence Miloseva , "Goce Delcev" University , Stip, R.Macedonia**

**Jozefina Marelja , Aalborg University, Copenhagen, Denmark**

### **Abstract**

This main aim of this study is to present the findings of the one project initiated in order to investigate the motivation skills, but is uniquely specific to as interpersonal relationships and resources that influence the learner's participation in the teaching/learning process in the context of online-learning and face to face learning (FtF). Uniquely it also explores e-mail romantic relationships with regard to the levels of relationship satisfaction, intimacy, "inclusion" and interpersonal attraction.

**Key words:** computer mediated; learning; Face to Face; interpersonal; relationship.

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## **1. Introduction**

This study is one of several projects initiated in order to investigate the motivations, skills, interpersonal relationships and resources that influence a learner's participation in the teaching learning process in the context of both online-learning and face to face learning. While it is generally acknowledged that current developments associated with the information and communication technologies have restructured the world predicated the advent of the information society, little has been studied or reported empirically as to the rather 'earthy' and quite natural humanistic side as to the influence of such mediums on personal relationships of participants as how this might influence the virtues in virtuosity.

The work of Bandura (1986) crystallized a theoretical foundation for the study of learners in what he termed a social-cognitive theory. The educational application of Bandura's social – cognitive theory manifested itself in a concept known as self-regulated learning. Understanding the concept of self-regulation is important in the development of the achievement capabilities for both teachers and students. Self-regulated learning is a self-initiated action that involves goal setting and regulating one's efforts to reach the goal, self-monitoring (meta-cognition), time management, and physical and social environment regulation (Zimmerman & Risemberg, 1997).

It's widely recognized and accepted that computer mediated communication (CMC) is increasingly influencing our organizational and personal communication however there is less awareness, and perhaps have less interest in, the private interpersonal relationships that are influenced as a consequence of communication mediated communication. Internet based distant learning programs and computer networks have affected the social and private lives of millions of users worldwide (Quarterman, 1990).

In discussing what can replace the proximity based and traditional learning community Cutler (1994) argues that the "traditional community based upon location, a history of interlocked relationships, has fallen away. What can replace it?"(p. 11).

## **2. Methodology**

First of all we must make a distinction between "Computer Mediated Communication" (CMC) and "Face to Face Communication" (FtF). The term CMC refers to a type of interpersonal communication which is facilitated through the use of computer network or conferencing system. In contrast, FtF describes an interpersonal communication setting in which all participants share a

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common space and time context, and can engage in communication where all five senses are used by the participants.

We based this research on the social - emotion - oriented research model in CMC environments. It relies primarily on Walther's (1992) Social Information Processing Model, which follows on principles in social cognition and interpersonal relationship development from social psychology. According to Walther, the Social Information Processing Model refers to the way in which communicators process relational and social identity cues using various media.

This is a quantitative study of 140 students, in period of late adolescence , in their second year of study, which in answering the question we derived from Cutler (1994), has two primarily goals through five hypothesis.

### **Goals:**

The first and primary goal was to identify any changes in learning strategies on a sample of student in their second year of pedagogical education with specific attention to the variables of motivation and learning strategy in the distinct context for comparison for online and face to face learning.

The second main aim of this study was to compare more earthy and humanistic side of the romantic CMC versus FtF. Specifically, it explores e-mail relationships with regards to the levels of relationship satisfaction, intimacy, "inclusion" and interpersonal attraction of participants.

### **Hypothesis:**

*H<sub>1</sub>: There is a difference in the usage of the motivated and learning strategy that occurred during the second year of pedagogical education between students, adolescents, who prefer online and those who prefer face to face learning.*

*H<sub>2</sub>: In romantic, long-term, cross-gender relationships the level of relational satisfaction is lower in CMC relationships than in FtF relationships.*

*H<sub>3</sub>: In romantic, long-term, cross-gender relationships the level of intimacy is lower in CMC relationships than in FtF relationships.*

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*H<sub>4</sub>: In romantic, long-term, cross-gender relationships the level of inclusion of the other's personality in the self is lower in CMC relationships than in FtF relationships.*

*H<sub>5</sub>: In romantic, long-term, cross-gender relationships the level of interpersonal attraction is lower in CMC relationships than in FtF relationships.*

The participants (140 students, adolescents, at the Faculty of Education, Stip) were divided into two subgroups in relation to the criterion experience with online – learning by means of a separate questionnaire and a scale of attitudes related to the online-learning. The first subgroup is made up of 85 students with a positive preference attitude and one year of online-learning experience. The second subgroup is made up of 55 students, adolescents, with little or no online-learning experience who prefer face to face learning.

Self-regulation is a fairly new construct of motivation and it refers to “learning that occurs from students’ behaviours that are systematically oriented toward attainment of learning goals” (Schunk 1990, 3). In accordance with the main aim of the first part of the project and the theoretical-empiric framework we have established the first hypothesis.

*H<sub>1</sub>: There is a difference in the usage of the motivated and learning strategy that occurred during the second year of pedagogical education between students who prefer online and those who prefer face to face learning.*

Students from two subgroups first filled in a questionnaire which measure the scale of attitudes related to the online and face to face learning. The MSLQ (Pintrich et al. 1991) was selected as the instrument to measure the component of self- regulated learning explored in this study. Students from both subgroups filled in the MSLQ at the beginning and the end of the first and second academic year .

This pre test-post test design was implemented to identify any changes in learning strategies that occurred during the second year of pedagogical education. Data from the students’ permanent records were obtained to identify the students’ performance in first and second year subjects.

The second part of the study try to explore romantic CMC versus FtF relationships. The same students took part in the second part of the project. In more modern times romantic love has been the theme of art entertainment in all its forms. Some of the greatest poetry (e.g. Shakespeare’s sonnets), opera ( e.g. La Boheme), and literature ( e.g. Pride and Prejudice) have romantic love as

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the main theme. Similarly much of more popular culture from theatre to film to popular music has romantic love at its heart.

Can "love" be found and fostered via CMC? If one believes that love is essentially in the mind of the person "in love," then it seems that it can be found. Psychologists generally agree that "romantic love is inexorably tied up with fantasy" . As Waller and Hill (1951) put it: "Idealization is an essential element in romantic love" (120). How better to idealize than through CMC, where one is left to paint his or her own mental picture of someone?

We tried to compare romantic CMC versus FtF relationships. We explored e-mail relationships with regards to the levels of relationship satisfaction, intimacy, "inclusion" and interpersonal attraction. Only 85 students who reported both FtF and CMC friendship (with a minimum length of one month for CMC) qualified for participation. About half of the students had never seen their dyadic CMC partner. Those who had seen him / her had not seen the other person for at least three months in order to qualify for participation.

It focuses on the question whether, due to the nature of computer mediated communication, lower levels of relational satisfaction, or even intimacy, "as the inclusion of other in the self" and interpersonal attraction are obtained in this medium rather than in face to face communication settings. This is an attempt to systematically compare variables measuring the quality of romantic relationships in FtF versus CMC.

For the purpose of this study, relational satisfaction is defined as a favourable affective response to the reinforcement of positive expectations in a relationship. The absence of nonverbal cues is expected to cause a decrease in relational satisfaction.

*H<sub>2</sub>: In romantic, long-term, cross-gender relationships the level of relational satisfaction is lower in CMC relationships than in FtF relationships.*

Relational intimacy describes feelings and perceptions of union, closeness, interdependence, warmth and affection (Andersen, 1989).

Almost all theorists agree that interpersonal attraction is a "positive or negative attitude toward another person".( Berscheid & Hatfield, 1978,p. 2)."Attitude" means a person's readiness to respond toward an object, or a class of objects, in a favourable or unfavourable manner. Interpersonal attraction (or interpersonal hostility) is defined as "an individual's tendency or predisposition to evaluate another person or symbol of that person in a positive (or negative) way" (Berscheid & Hatfield, 1978, p.2).

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Nonverbal communication has been proven to be a crucial part of intimate relationships. Therefore, it is hypothesized that the lack of nonverbal communication in romantic CMC leads to a lower level of relational intimacy.

*H<sub>3</sub>: In romantic, long-term, cross-gender relationships the level of intimacy is lower in CMC relationships than in FtF relationships.*

Findings which describe intimacy as a process of escalating reciprocity of self-disclosure in which each individual feels his or her innermost self validated, understood and cared for by the other, lead to the concept of a connection of self's in a close relationship, or "inclusion of other in the self". Nonverbal communication is believed to play an important role in this process, too (Patterson ,1988).Therefore, it is hypothesized that the lack of nonverbal communication in romantic CMC leads to a lower level of relational inclusion of the other's personality in the self.

*H<sub>4</sub>: In romantic, long-term, cross-gender relationships the level of inclusion of the other's personality in the self is lower in CMC relationships than in FtF relationships.*

Interpersonal attraction has been found to be a facilitator of interpersonal communication, and much interpersonal communication has been found to exist for the primary purpose of enhancing interpersonal attraction (McCroskey & McCain, 1974). Physical appearance has been found to have great communication potential, and in experiments, subjects have attributed more positive qualities to physically attractive people (Burgon, Buller & Woodall, 1989).Therefore, it can be hypothesized that the level of attraction is lower when no nonverbal cues are available, as is the case in romantic CMC.

*H<sub>5</sub>: In romantic, long-term, cross-gender relationships the level of interpersonal attraction is lower in CMC relationships than in FtF relationships.*

In order to measure relational satisfaction, interpersonal intimacy, inclusion and attraction, several different scales were employed. The first section of the questionnaire measured intimacy, using a slightly simplified version of Andersen and Jensen's Generalized Immediacy Scale (1979).The second section of the questionnaire measured relational satisfaction, using a shortened version of Hendrick's Relational Assessment Scale (1988). The third part of the questionnaire measured attraction, using modified versions of McCroskey and McCain's Interpersonal Attraction

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Scale (1974). The fourth part of the questionnaire measured the level of inclusion of the other in the self, using Aron and Aron's Inclusion of Other in the Self Scale (1992). The last section of the questionnaire asked students for demographic information (age, gender, e-mail experience, duration of described relationships)-Demographic questionnaire.

We want to point it out that before we start to implement this scales and questionnaire we prepared pilot survey in order to modify and adapt them .

One – tailed t test for paired samples were performed to detect differences in the means for relational satisfaction, intimacy, inclusion, and attraction between CMC and FtF relationships. One – tailed t test were used because the hypotheses predicted that the means for the variables would be lower for CMC than for FtF.

### **3.Results and Discussion**

#### ***3.1. Results of the first part of the study***

Evaluations of the changes between the first and second administrations of the MSLQ descriptive statistics and paired t-test were run on each of the fifteen scales.

An exploratory evaluation of the impact of the fifteen scales of the MSLQ on the total first and second year grades was done using three multiple regression analyses with groups of independent variables (pre test MSLQ scores, post test MSLQ scores and change scores calculated by subtracting pre test scores from post test scores) predicting the second year grade. Using the  $R^2$  as the statistic of interest, an important shift in the relationships of the variables with the first and second year grade was identified. For the 85 students of first subgroup with pre-and post test scores, pre test MSLQ scores explained 36% of the variability in the second year grade. At post test, the MSLQ scores explained 24% of the second year grade. But most dramatically, the change scores on the fifteen scales explained 40% of the variability in the second year grade.

We confirm the first hypothesis  $H_1$ . There is a difference in the usage of motivated and learning strategy that occurred during the second year of pedagogical education between students who prefer online and those who prefer face to face learning.

For the first subgroup all of the significant changes were in a positive direction, indicating an increase in scores at the end of the second year from the students' initial scores. The change in intrinsic goal orientation is one of two variables significantly related to the second year grade ( $r = .$

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27 ,  $p = .043$ ). The direction of the relationship for this variable indicates that as a whole, intrinsic goal orientation increased, however , they also realized a higher second year grade.

Most substantial, the correlation between change in self- efficacy and the second year grade was statistically significant (  $r = .43$ ,  $p = .000$ ), suggesting that students who felt confident that they would do well had higher grades than students who felt less confident in their ability to do well.

Of the second sub area of date from the MSLQ, that of the learning strategies, no statistically significant relationships were detected with the second year grade.

In the third sub-area, learning resources management, none of the MSLQ resource variables was significantly related to the second year grade.

If for a moment we compare the decreasing and the increasing trends of the statistically significant chosen motivated and learning strategies we can conclude, as it was expected, that in online learning cohort, with the increasing trend are the strategies that are among the most important for self – regulated learning. Their absence and even the decreasing trend are noticed in the orientation during the choice of the motivated and learning strategies with the students who prefer face to face learning.

The results for the second subgroup show the existence of statistically significant differences. Using the  $R^2$  as the statistic of interest, an important shift in the relationships of the variables with the second year grade was identified. For the 55 students of second subgroup with pre-and post test scores, pre test MSLQ scores explained 23 % of the variability in the second year grade.

At post test, the MSLQ scores explained 28 % of the second year grade. But most dramatically, the change scores on the fifteen scales explained 39 % of the variability in the second year grade.

Statistically significant differences were found on : intrinsic goal orientation (  $r = .36$ ,  $p = .016$  ); control of learning beliefs (  $r = .23$ ,  $p = .042$  ); metacognitive self – regulation (  $r = .26$ ,  $p = .049$ ); time and study environment (  $r = .39$ ,  $p = .021$ ); self- efficacy (  $r = .19$  ,  $p = .038$  ).

All of the significant changes were in a negative direction, indicating a decrease in scores at the end of the second year from the students' initial scores.

Differences were not statistically significant (  $p > .05$  ) for the changes in : extrinsic goal orientation; task value; test anxiety; rehearsal; elaboration; organization; critical thinking; effort regulation; peer learning or help seeking.

The changes in learning strategies suggest that students who prefer face to face learning as a group were less likely to use some of the strategies that would help them to realize a higher second year grade.

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### ***3.2. Results for the second part of the study***

The results for all four t-test in the second part of the study were significant ( $p < .05$ ) indicating that there was a significant difference in means for all four variables and that the effects were in the direction stated in the hypotheses. Therefore, all four hypotheses were confirmed. Hypothesis H<sub>2</sub> concerning relational satisfaction was confirmed ( $t = -3.22$ ;  $p = .001$ ). The computed mean for relational satisfaction in FtF was 3.82, while the mean for relational satisfaction in CMC was 3.43.

The means of 1.65 for FtF and 1.81 for CMC proved to be significantly different in the hypothesized direction, confirming hypothesis H<sub>3</sub>, although the significance between the level of intimacy was comparatively low ( $t = -1.92$ ;  $p = .04$ ).

Hypothesis H<sub>4</sub> regarding inclusion was confirmed with means of 3.05 for FtF and 2.43 for CMC ( $t = -3.68$ ;  $p = .0005$ ). This hypothesis was confirmed at a very high significance level. Hypothesis H<sub>5</sub> concerning the level of attraction was lower in CMC than in FtF. The mean for attraction in FtF was 3.98, compared to 3.51 for CMC ( $t = -3.42$ ;  $p = .0005$ ). Therefore, hypothesis H<sub>5</sub>, too, was confirmed.

Results and findings from the study provided empirical support for the preference for romantic face to face settings as opposed to CMC for the fulfilment of positive human relationships. Nonverbal communication is an essential part of human communication.

Systematic research of this kind might lead to a better understanding of the possibilities and limitations of a medium that could have large effects on the relationships we have in our lives.

## **4. Conclusions**

Although the initial goal of the first part of this study was comparing online with face to face learning through compare of learning strategies, the issue of intrinsic motivation and beliefs about one's own abilities to succeed were the significant relationships identified in this study.

Increasing or decreasing scores in intrinsic motivation may indicate that pre-service teachers in the end of the second year may be still struggling to find the relevancy of what they are doing in the second year to their plans to be a practicing teachers.

This study indicates that academic administrators and higher education decision makers may want to further look at ways to improve students' intrinsic motivation and self-efficacy. However, as this

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study suggests, students who do find affinity for the teacher school experience and enjoy the learning opportunity for its own sake, rather than for some extrinsic reward, actually reap the reward of better grades.

What this study suggests is that through data collection activities and use of information from student records, it may be possible to identify students who might be at-risk of negative outcomes at pedagogical faculties.

Furthermore, during studying, the implementing of success factors in building the self-efficacy is stated to be a very important moment, both by teachers and students.

Finally, this study reinforces the notion that research on student learning, especially using of motivated and learning strategy and their comparing through online and face to face learning, has the potential to provide classroom instructors, curriculum designers, and institutional planners with important information for decision making.

Results of the second part of this study provided support for all hypotheses. Findings from the study provided empirical support for the preference for face to face settings as opposed to CMC for the fulfilment of positive human relationships.

Relationships maintained in face to face settings are regarded to be more satisfying than relationships maintained through e-mail. This can be explained by the lower level of communication effectiveness in CMC due to a lack of redundancy of information elements usually provided by nonverbal cues.

Even though the significance level for the intimacy variable was slightly lower than those of the other variables in this study, e-mail relationships were found to be less intimate than relationships in face to face settings are. This can easily be explained by the fact that nonverbal cues such as touch have been equated with intimacy itself, demonstrating the importance of nonverbal communication for intimate relationships.

The same is true for perceptions of “inclusion of the other in the self”. Less inclusion is felt in CMC relationships, at a very high significance level, indicating that the single – channelled nature of CMC is inadequately suited to capture the multifacetedness of cues required for the establishment of empathic understanding and feelings of closeness. The participants in this study agree that people also feel more attracted to relational partners with whom they interact in real – world settings rather than in virtual environments. The lack of nonverbal cues seems indeed to be the reason for the lower quality of relationships maintained through e-mail.

Emotion is present in computer-mediated communication (CMC). People meet via CMC every day, exchange information, debate, argue, woo, commiserate, and support. They may meet via a mailing

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list or newsgroup, and continue the interaction via e-mail. Their relationships can range from the cold, professional encounter, to the hot, intimate rendezvous.

In summary, it can be said that at its current developmental stage, CMC lacks both the breadth and depth required for the maintenance of satisfactory, intimate, close interpersonal relationships.

Our study found close human interpersonal relationships to be too vivid, ambiguous, and multi-channelled to be adequately captured by a single- channelled medium.

Cutler(1994) notes that in the new social situation there are new relationships and the new roles emerging what place pressure on personal identities. While accepting the premise of changing role seems almost obvious the question of the pressures being placed on personal identities of such role is less certain and leads to the question and dilemma : is he right or not? What to choose ?

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