Working Part-Time during Studies: The Role of Flow in Students' Well-Being and Academic Achievement

Majda Rijavec, Tajana Ljubin Golub, Lana Jurčec and Diana Olčar
Faculty of Teacher Education, University of Zagreb

Abstract

Previous studies have suggested that only flow in the activity that one finds important contributes to well-being. This study was done in order to further investigate the role of flow in different activities and its impact on well-being in two types of students, i.e. nonworking students (NWS) and part-time working students (PWS).

The sample comprised first and second year university students (85% female) at the University of Zagreb, 113 NWS and 110 PWS. Several questionnaires were administered in order to assess flow in different activities, well-being, and burnout. Also, students reported their grade point average (GPA).

The results showed that in both groups flow in academic activities was the only stable positive predictor of well-being and academic achievement, and a negative predictor of burnout, in line with the finding that both groups of students assessed academic activities as the most important and most useful. Additionally, there were no differences between NWS and PWS in well-being, burnout, and GPA, suggesting that this PWS group was not yet experiencing any negative consequences of part-time working. The importance of introducing flow inducing activities in academic assignments is suggested as crucial for students' well-being.

Key words*: burnout; flow; part-time working; university students; well-being.*

Introduction

Flow or optimal experience is a highly enjoyable state of consciousness during which a person is so focused on the task at hand that he/she becomes completely absorbed in it (Csikszentmihalyi, 1975). Flow was first described in 1960s by Csikszentmihalyi, who found that artists were creating something just because of joy of the activity itself

and not because they were particularly interested in the end product (Nakamura & Csikszentmihalyi, 2002). Still, flow is not just an emotional, cognitive or motivational construct, but rather their combination. According to Delle Fave (2009, p. 285), it is "a multifaceted experiential state, in which cognitive, motivational and emotional components coexist in a coherent and complex reciprocal integration." Flow usually happens when a person's skills and challenges of a task are both at a high level. Other preconditions for flow are clear set of goals, clear and immediate feedback and a sense of control (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Fong, Zaleski, & Leach, 2014; Nakamura & Csikszentmihalyi, 2002).

Flow was shown to be associated with higher efficiency. In an educational context, it was shown that flow in learning is positively related to higher GPA (Ljubin Golub, Rijavec, & Olčar, 2016a; Schiefele & Csikszentmihalyi, 1995). Also, flow predicted students' performance (Engeser & Rheinberg, 2008) even when students' initial abilities and GPA were controlled (Engeser, Rheinberg, Vollmeyer, & Bischoff, 2005). Besides that, positive feedback obtained from flow experience contributes to higher self-esteem and well-being. Studies have shown that the individuals who experience flow more frequently are more relaxed and express more interest in activities (Clarke & Haworth, 1994), have higher self-esteem and life satisfaction, lower anxiety and better coping strategies (Asakawa, 2010), are happier and more enthusiastic (Bryce & Haworth, 2002), experience more positive emotions and less burnout (Olčar, 2015), and are more resilient (Schmidt, 2003).

A significant number of students are not only studying, but also working part-time while enrolled in university. Previous research is not consistent regarding the effect of part-time working on students' achievement and well-being. Some research supports Astin's (1984) involvement theory claiming that part-time students have less time for studying, which results in worse academic achievement (e.g., Callender, 2008; Doolan, 2010; Garcia-Vergas, Rizo-Baeza, & Cortes-Castell, 2016; Morrison, 2009; Salamonson, Everett, Koch, Andrew, & Davidson, 2012) and lower physical and mental well-being (Carney, McNeish, & McColl, 2005; Morrison, 2009; Mounsey, Vandehey, & Diekhoff, 2013; Roberts, Golding, Towell, & Weinreb, 1999). However, other studies showed benefits of working during higher education (Martinez, Bilges, Shabazz, Miller, & Morote, 2012; Wang, Kong, Shan, & Vong, 2010), or no effect, neither in academic achievement (Curtis & Nimmer, 1991; Gleason, 1993; Lundberg, 2004; Mounsey et al., 2013), nor in psychological well-being (Light, 2001; Mounsey et al., 2013).

Previous research found that for majority of the students, leisure activities were the most flow inducing activities (Ljubin Golub, Rijavec, & Olčar, 2016b; Massimini & Carli, 1988; Rijavec, Ljubin Golub, & Olčar, 2016). Although academically related activities are not a primary source of flow for students, flow experienced in academic activities contributes the most to students' well-being (Ljubin Golub et al., 2016b; Rijavec et al., 2016). Consequently, Rijavec and colleagues (2016) suggested that the flow experienced in those activities which a person perceives as most important, contributes the most to his/her well-being.

In studies including adults, research showed that work is more flow promoting than both leisure and maintenance activities (Cskiszentmihalyi & LeFevre, 1989; LeFevre, 1988). On the contrary, in student population, Ullen and colleagues (2012) found that work was the least flow-promoting area of students' life, and the authors suggested that the reason for that may be that students usually work at jobs which are not so engaging. However, although students rarely experience flow at work, based on the aforementioned research (Ljubin Golub et al., 2016b), we expect that work-related flow can still contribute significantly to their global well-being, if they perceive their work experience important and useful.

Study Hypotheses

Keeping in mind the aforementioned points, the central aim of this study was to investigate the contribution of flow in different life domains to well-being of non-working and part-time working students. Based on previous research (Ljubin Golub et al., 2016b; Rijavec et al., 2016), it was expected that the more students find an area of their life important and useful, the more the flow in this area will contribute to their well-being. More specifically, for nonworking students flow in academic activities will be the strongest predictor of well-being (flourishing and life satisfaction), and the strongest negative predictor of burnout, followed by flow in leisure and routine activities (Hypothesis 1). For part-time working students, flow in academic activities will be the strongest positive predictor of well-being (flourishing and life satisfaction), and the strongest negative predictor of burnout, followed by flow at work, and after that leisure and routine activities (Hypothesis 2). Based on previously mentioned findings, we also expected that only flow in academic domain will be a predictor of academic achievement, both in nonworking and part-time working students (Hypothesis 3). Additionally, since previous studies have yielded inconsistent findings regarding whether part-time working during studies is detrimental or not for students' achievement and well-being, and since there is lack of research on this topic on Croatian samples, we also aimed to compare part-time working and nonworking students in well-being, burnout, and academic achievement. Since there is no sufficient theoretical and empirical basis, we investigated this as a research question, and did not pose any specific hypothesis.

Method
Participants and Procedure

The sample comprised 223 university students, mostly female (85%). Participants ranged in age from 18 to 43 with a mean age of 21 years (18 - 43, $M = 20.67$, $SD = 2.60$). There were 110 part-time working (full-time students with part-time jobs) and 113 non-working students (full-time students with no job), 49% and 51% respectively.

Questionnaires were administered in group settings during the regular psychology lectures. Approximately 15 minutes were needed to fill out the questionnaires. The participants were informed about the aim of the research; their participation was voluntary and anonymous, without any credit assigned.

Measures

Several self-reported measures were used as part of a broader survey.

An adapted version of the *Swedish Flow Proneness Questionnaire* (SFPQ; Ullen et al., 2012) was used for assessing flow proneness in daily life. The original SFPQ consists of three subscales with seven items each, and assesses the proneness for flow experiences at work, during leisure activities, and during household maintenance. For the purpose of this study, a fourth subscale referring to academic domain was added, since study-related activities are the core activities in students' lives. Participants rated each item along a five-point Likert scale ranging from 1 (*never*) to 5 (*every day*) in relation to the question "When you do something for your studies, how often does it happen that…. e.g., you feel completely concentrated?".

Mean scores were derived for each subscale. In this study, Cronbach´s alpha coefficients of reliability were as follows: for academic life .71 (.77 for nonworking students, .63 for part-time working students); for maintenance activities .73 (.77 for nonworking students, .68 for part-time working students); for leisure time .85 (.86 for nonworking students, .82 for part-time working students); and for work .77 (answered only by part-time working students).

Importance of different activities scale for students. The importance of each type of flow inducing activity was measured by one-item, seven-point Likert type scale ranging from 1 (*completely unimportant*) to 7 (*extremely important*) in relation to the question "How important are these activities for you…. e.g., studying, leisure activities, household maintenance, work (only for part-time working students)?".

 Usefulness of different activities scale for students. The usefulness of each type of flow inducing activity was measured by a one-item Likert type scale, ranging from 1 (*completely unuseful*) to 7 (*extremely useful*) in relation to the question "How useful are these activities for your future goals…. e.g., studying, leisure activities, household maintenance, work (only for part-time working students)?".

The Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) measures the cognitive component of subjective well-being. Five items measure the individual's evaluation of satisfaction with life in general (e.g., *The conditions of my life are excellent*). Participants respond to each item on seven-point Likert scales from 1 (*strongly disagree*) through 7 (*strongly agree*) where the higher points indicate greater life satisfaction. In this study, Cronbach´s alpha coefficient of reliability was .81 (.82 for nonworking students, .80 for part-time working students).

The Flourishing Scale (FS; Diener et al., 2010) was used for assessing perceived success in important areas such as relationships, self-esteem, purpose, and optimism (e.g., *I actively contribute to the happiness and well-being of others*). The scale consists of eight items and provides a single psychological well-being score. Individuals respond to each item on a seven-point Likert scale, from 1 (*strongly disagree*) through 7 (*strongly agree*). In this study, Cronbach´s alpha coefficient of reliability was .88 (.88 for nonworking students, .88 for part-time working students).

School Burnout Inventory (SBI; Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009) was originally developed on the basis of the Bergen Burnout Indicator 15 (BBI-15) for working life (Näätänen, Aro, Matthiesen, & Salmela-Aro, 2003). School Burnout Inventory consists of nine items (e.g., *I feel overwhelmed by my schoolwork)* measuring three factors of school burnout: (a) exhaustion at school (four items), (b) cynicism toward the meaning of school (three items), and (c) sense of inadequacy at school (two items). All the items were rated on a six-point Likert-type scale ranging from 1 (*completely disagree*) to 6 (*strongly agree*), where the higher points indicate higher school burnout. For the purpose of this study, as in previous studies (e.g., May, Sanchez-Gonzalez, Seibert, & Fincham, 2016; Salmela-Aro, Reed, Minkkinen, Kinnunen, & Rimpelä, 2017), a sum score was calculated from all nine items to indicate the level of students' academic burnout. Cronbach's α was .80 (.75 for nonworking students, .83 for part-time working students).

Academic achievement was measured by self-reported grade point average (GPA) at the end of the previous semester. GPA scale in Croatia ranges from 1 (indicating failure) to 5 (indicating excellent performance).

Results
Overview of Data Analysis

First we present descriptive statistics for part-time working and nonworking students. Student t-tests were used for testing differences between part-time working and nonworking students in all study variables. MANOVAs within and between subject, as well as interaction of work status and different activities were conducted only for leisure activities, household maintenance and academic activities (results in the text). The Box's Ms results were insignificant for importance and flow experiences in different activities and significant for usefulness of activities suggesting that the assumption of homogeneity of covariance across the groups is violated. Since the sample sizes across the groups are the same, Pillai Trace index was used. Considering that only part-time working students rated flow experiences in work activities, repeated-measures ANOVAs were conducted to test the differences within subjects according to activities, separately for part-time working and nonworking students (results are presented in the tables). Partial eta squared values (η_p^2) were calculated as a measure of effect size for mean differences and interpreted according to suggested norms for partial eta-squared: small = .01; medium = .06; large = .14 (Pallant, 2007).

Correlation and regression analyses were used to examine relationships between variables. Pearson correlation coefficients were further analyzed with the *cocor* package, which conducts statistical comparisons between correlations (Diedenhofen & Musch, 2015). Several multiple regression analyses were conducted to analyze relationships between measures of well-/ill-being, academic achievement as criteria, and proneness for flow experiences during academic activities, in leisure activities, during household maintenance, and at work (only for part-time working students) as predictors. Analyses were conducted separately for part-time working and nonworking

students. For part-time working students hierarchical multiple regression was performed with flow experience at work being entered as independent variables/predictors in the second step. All predictors showed a variance inflation factor < 1.26 indicating that multicollinearity was not an issue (critical value < 10; Hair, Anderson, Tatham, & Black, 1995).

For most variables the values of skewness were < -.85 and those of kurtosis < .47, but for leisure activities skewness was -1.0 and kurtosis was 1.32 (for non-working students), and for household maintenance kurtosis was 1.85. According to George and Mallery (2010), the values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution.

Descriptive Statistics and Comparison of Nonworking and Part-Time Working Students in Flow, Well-Being, Burnout, and Academic Achievement

Descriptive statistics and comparison of nonworking and part-time working students are presented in Table 1.

Table 1

Comparison of nonworking (N = 113) and part-time working (N = 110) students in flow, well-being, burnout and academic achievement

	Nonworking students		Part-time working students			
	M	SD	M	SD	t(df=221)	p
Flow in academic activities	24.42	3.68	25.26	3.14	-1.848	.066
Flow in routine activities	26.89	4.25	27.16	3.73	-0.504	.615
Flow in leisure	29.65	4.49	30.36	3.81	-1.268	.206
Flow in part-time work			27.02	4.34		
Life satisfaction	26.14	5.27	25.69	5.56	0.621	.535
Flourishing	45.78	6.20	46.74	6.27	-1.147	.253
Burnout	24.92	7.16	25.59	8.47	-0.639	.523
Academic achievement	3.52	0.64	3.48	0.58	0.444	.657

Note. M – Mean; SD – Standard deviation; t – t-test value; df- Degrees of freedom; p – Significance value.

The results of t-tests revealed that there were no significant differences between part-time working and nonworking students in experiencing flow in any domain, neither in well-being, burnout, nor academic achievement. Part-time working and nonworking students are almost equally experiencing flow, almost equally satisfied with their lives, they have equal psychological resources and strengths (above theoretical average of the scale), they reported low levels of burnout symptoms, and their academic achievement is equally good (Table 1).

In order to examine whether flow is more frequently experienced in certain domains, in nonworking and part-time working students, MANOVA was performed.

Results showed that there is significant difference in experiencing flow in various daily activities (academic, routine, leisure) among students (Wilks' λ = .45; F(2/220) = 136.20, p =.000, η_p^2 =.57), while there was no effect of work status, nor flow x work status interaction (both ps > .05). Results of ANOVA showed that nonworking students mostly experience flow in leisure activities, then in routine activities and the least in academic activities (Wilks' λ = .50; F(2/111)= 55.98, p=.000, η_p^2 = .50; all differences between groups were at p< .01). Part-time working students also experience flow mostly in leisure activities, then in routine and work activities, and the least in academic activities (Wilks' λ = .38; F(3/107) = 58.93, p < .000, η_p^2 = .62; differences between routine and work activities were insignificant at p> .05; all other differences between groups were significant at p < .01).

Correlations between Flow in Different Activities and Importance, Usefulness of Activities, Well-Being and Academic Achievement of Nonworking and Part-Time Working Students

Generally, Pearson correlations (Table 2) showed that the importance of the activity was positively correlated with experienced flow in this activity (with the exception of leisure activities for part-time working students). For usefulness of the activities the pattern was not so clear. In the part-time working sample, usefulness was positively correlated with flow in all activities, except in leisure. In the non-working sample, only usefulness of routine activities was positively related with flow in these activities.

Flow in all activities was positively related to flourishing in both samples, and life satisfaction in the sample of non-working students. Flow in academic activities was negatively related only to burnout and positively to academic achievement.

Table 2

Correlations between importance and usefulness of activities, well-being, burnout, academic achievement, and flow in different activities

		Flow in…			
	Students' work status	Academic activities	Routine activities	Leisure	Part - time work
Importance of the activity	Nonworking	.24**	.52**	.22*	-
	Part - time working	.27**	.55**	.15	.44**
Usefulness of the activity	Nonworking	.14	.34**	.13	-
	Part - time working	.22*	.35**	.05	.43**
Life satisfaction	Nonworking	.30**	.21*	.34**	-
	Part - time working	.39**	.02	.06	.21*
Flourishing	Nonworking	.48**	.24**	.32**	-
	Part - time working	.39**	.22*	.31**	.19*
Burnout	Nonworking	-.24*	-.13	-.14	-
	Part - time working	-.29**	-.07	.01	.03
Academic achievement	Nonworking	.26**	-.04	.05	-
	Part - time working	.28**	.15	-.01	-.03

Note. *p< .05; **p< .01

Flow in Various Flow-Inducing Activities as Predictors of Well-Being, Burnout and Academic Achievement
Well-Being and Burnout

In order to examine the predictive value of flow in different daily activities for well-being, burnout and academic achievement, several multiple regression analyses were conducted. For each criterion and group of students (nonworking, part-time working) separate analyses were performed. Flow in academic, routine and leisure activities was entered into regression equation of Model 1, for both nonworking and part-time working students. For part-time students only, Model 2 was also assessed, with flow in work activities added as a predictor.

The results showed that flow in different daily activities accounted for 18% and 16% of the variance of students' life satisfaction in nonworking and part-time working students, respectively (Table 3). The amount of explained variance was not significantly different (Fisher's $z = 0.18$, $p = .860$) for nonworking and part-time working students. Flow in academic activities was a significant predictor of both nonworking and part-time working students' life satisfaction, while flow in leisure was a significant predictor only in nonworking students' life satisfaction (Model 1). The inclusion of flow in work activities into analysis increased prediction by additional 4% ($\Delta R^2 = .042$; $F (1/105) = 5.47$; $p = .021$) of the variance on part-time working students' life satisfaction (Model 2). In the final model, besides academic activities, part-time work was found to significantly predict part-time working students' life satisfaction.

Table 3

Multiple regression analysis for flow in different activities explaining life satisfaction

| Flow in… | Nonworking students | | | Part-time working students | | | | | |
| | Model 1 | | | Model 1 | | | Model 2 | | |
	β	t	p	β1	t	p	β2	T	p
Academic activities	.24	2.71	.008	.42	4.46	.000	.42	4.55	.000
Routine activities	.09	0.96	.340	-.03	-0.27	.787	-.09	-.95	.346
Leisure	.26	2.80	.006	-.07	-0.75	.456	-.11	-1.12	.266
Part - time work							.22	2.34	.021
	R=.42; R²=.18; Adjusted R²=.16; F(3/109)=7.88;			R=.40; R²=.16; Adjusted R²=.14; F(3/106)=6.77;			R=.45; R²=.20; Adjusted R²=.17; F(4/105)=6.67;		
	p<.001			*p<.001*			*p<.001*		

Note. Standardized betas are shown

In Table 4 the results showed that flow in different daily activities accounted for 30% of the variance of nonworking students' flourishing and 20% of the variance of part-time working students' flourishing. The amount of explained variances was not significantly different (Fisher's $z = 0.99$, $p = .325$) for nonworking and part-time working students. Flow in academic activities and leisure were significant predictors of nonworking students' flourishing, but only flow in academic activities was a significant

predictor of part-time working students' flourishing (Model 1). The inclusion of flow in work activities into analysis did not significantly increase prediction (ΔR^2=.007; F(1/105) =0.92; p=.341) of the variance on part-time working students' flourishing (Model 2).

Table 4

Multiple regression analysis for flow in different activities explaining flourishing

| Flow in… | Nonworking students Model 1 | | | Part-time working students | | | | | |
| | | | | Model 1 | | | Model 2 | | |
	B	t	P	β1	T	p	β2	t	p
Academic activities	.43	5.23	.000	.32	3.42	.001	.32	3.42	.001
Routine activities	.12	1.44	.154	.12	1.30	.196	.09	0.96	.337
Leisure	.20	2.36	.020	.17	1.80	.075	.16	1.63	.107
Part-time work							.09	0.96	.341
	R=.55; R²=.30; Adjusted R²=.28; F(3/109)=15.60;			R=.45; R²=.20; Adjusted R²=.18; F(3/106)=9.05;			R=.46; R²=.21; Adjusted R²=.18; F(4/105)=7.01;		
	p<.001			*p*<.001			*p*<.001		

Note. Standardized betas are shown

The results presented in Table 5 show that flow in different daily activities accounted for 7% of the variance of nonworking students' burnout, and 10% of the variance of part-time working students' burnout, with no differences in the amount of variances explained (Fisher's *z* = - 0.40, *p* = .687). Flow in academic activities was the only significant (negative) predictor of both nonworking and part-time working students' burnout (Model 1). The inclusion of flow in work activities into analysis did not significantly increase prediction (ΔR^2=.002; F(1/105)=0.27; *p*=.607) of the variance on part-time working students' burnout (Model 2).

Table 5

Multiple regression analysis for flow in different activities explaining burnout

| Flow in… | Nonworking students Model 1 | | | Part-time working students | | | | | |
| | | | | Model 1 | | | Model 2 | | |
	β	t	P	β1	t	p	β2	t	p
Academic activities	-.21	-2.27	.025	-.33	-3.35	.001	-.33	-3.34	.001
Routine activities	-.08	-.81	.419	-.05	-0.55	.584	-.07	-0.67	.502
Leisure	-.08	-.77	.445	.13	1.31	.192	.13	1.21	.228
Part-time work							.05	0.52	.607
	R=.27; R²=.07; Adjusted R²=.05; F(3/109)=2.83;			R=.32; R²=.10; Adjusted R²=.08; F(3/106)=3.94;			R=.32; R²=.10; Adjusted R²=.07; F(4/105)=3.00;		
	p=.042			*p*=.010			*p*=.022		

Note. Standardized betas are shown

The results indicate that *the first hypothesis,* stating that for nonworking students flow in academic activities will be the strongest predictor of well-being (flourishing and life satisfaction), and the strongest negative predictor of burnout, followed by flow in leisure and routine activities, was partially confirmed. Flow in academic activities was the strongest positive predictor of flourishing and the strongest and the only negative predictor of burnout. However, for life satisfaction the strongest predictor was flow in leisure, followed by flow in academic activities.

The second hypothesis, which proposed that for part-time working students, flow in academic activities will be the strongest positive predictor of well-being (flourishing and life satisfaction), and the strongest negative predictor of burnout, followed by the flow at work, and after that followed by leisure and routine activities, was also partially confirmed. Flow in academic activities was the strongest positive predictor of life satisfaction and flourishing, and the strongest and the only negative predictor of burnout. Flow in other activities was not a significant predictor, except flow at work, which was a significant predictor of life satisfaction.

Academic Achievement

As shown in Table 6, flow in different daily activities accounted for 7% of the variance on nonworking students' academic achievement, and 11% of the variance of part-time working students' academic achievement, with the amount of explained variances showing no statistical difference (Fisher's $z = -0.74$, $p = .461$). As predicted in *the third hypothesis*, flow in academic activities was the only significant predictor of both nonworking and part-time working students' academic achievement (Model 1). The inclusion of flow in work activities into analysis did not significantly increase prediction ($\Delta R^2 = .006$; $F (1/105) = 0.69$; $p = .408$) of the variance on part-time working students' academic achievement (Model 2). These results confirmed our third hypothesis.

Table 6

Multiple regression analysis for flow in different activities explaining academic achievement

Flow in…	Nonworking students			Part-time working students					
	Model 1			Model 1			Model 2		
	B	t	p	β1	t	p	β2	t	p
Academic activities	.27	2.82	.006	.31	3.18	.002	.31	3.17	.002
Routine activities	-.09	-0.87	.388	.15	1.59	.114	.18	1.77	.080
Leisure	.03	0.29	.776	-.17	-1.63	.106	-.15	-1.48	.141
Part-time work							-.08	-0.83	.408
	R=.27; R²=.07; Adjusted R²=.05; F(3/109)=2.90; p=.039			R=.36; R²=.11; Adjusted R²=.09; F(3/106)=4.46; p=.005			R=.34; R²=.12; Adjusted R²=.08; F(4/105)=3.50; p=.010		

Note. Standardized betas are shown

Importance and Usefulness of Various Flow Inducing Activities

In order to further clarify the role of predictors (flow in various daily activities) in explaining well-being, burnout and academic achievement, we tested differences in importance and usefulness of various daily activities in nonworking and part-time working student samples (Table 7).

Table 7

Importance of various activities for nonworking (N = 113) and part-time working (N = 110) students

Importance of …	Nonworking students		Part-time working students			
	M	SD	M	SD	t (df=221)	p
Academic activities	6.37 $_{2,3}$	0.80	6.45 $_{2,3,4}$	0.76	-0.790	.431
Routine activities	4.78 $_{1,3}$	1.45	4.69 $_{1,3,4}$	1.48	0.448	.654
Leisure activities	5.76 $_{1,2}$	1.23	5.95 $_{1,2,4}$	0.98	-1.235	.218
Part-time work			5.34 $_{1,2,3}$	1.43		
	Wilks' λ = .43; F(2/111)=73.96, p<.001, η_p^2 =.57		Wilks' λ = .39; F(3/107)=55.68, p<.001, η_p^2 =.61			

Note. The indices next to the values of the arithmetic means signify between which activities a significant difference was determined by Bonferroni's *post hoc* test (1- academic, 2- routine, 3-leisure, 4- work)

Results of MANOVA showed that there was a significant effect of importance of different activities (academic, routine, leisure) within subjects (Wilks' λ = .41; F(2/220)=156.01, p=.000, η_p^2 =.57), insignificant effect of work status (*p* = .578) and insignificant effect of importance x work status interaction (*p* = .456).

Results of separate ANOVAs for part-time working and nonworking students presented in Table 7 show that different daily activities were not of the same importance for part-time working as well as for nonworking students. For nonworking students, the most important were academic activities, then leisure activities, and then routine activities (household maintenance) as the least important in their daily life. For part-time working students, academic activities were in the first place of importance, leisure in the second, work in the third and routine activities were in the fourth, last place.

As expected, academic activities were the most important for both groups of students, followed by leisure activities. However, contrary to our expectations, for part-time working students, work was not the second important predictor as we assumed. Routine activities were the least important for both groups.

The same results were obtained for ratings of the usefulness of activities. According to the results obtained by MANOVA, students do not perceive various daily activities (academic, routine, leisure) equally useful for their future goals (Pillai's Trace = .47; F(2/220) = 97.11, p =.000, η_p^2 =.47). The main effect of work status was insignificant (p = .387) and so was interaction between usefulness and work status, too (p = .057). Results of separate ANOVAs for part-time working and nonworking students

presented in Table 8 show that different daily activities are of different usefulness for students' future goals. For nonworking students the most useful for their future goals are academic activities, then leisure activities and routine activities (household maintenance). For part-time working students, academic activities are in the first place of usefulness, leisure and part time work in the second, and routine activities in the third, as the least useful for their future goals.

Table 8

Usefulness of various activities for nonworking (N = 113) and part-time working (N = 110) students

Usefulness of …	Nonworking Students		Part-time working students		t (df=221)	p
	M	SD	M	SD		
Academic activities	$6.51_{2,3}$	0.72	$6.47_{2,3,4}$	1.04	0.340	.735
Routine activities	5.22_1	1.47	$4.82_{1,3,4}$	1.70	1.897	.059
Leisure	5.58_1	1.30	$5.71_{1,2}$	1.19	-0.801	.424
Part-time work			$5.47_{1,2}$	1.60		
	Wilks' λ= .53; F(2/111)= 49.39, p=.000, η^2_p =.47		Wilks' λ = .52; F(3/105)=32.54, p=.000, η^2_p =.48			

Note. The indices next to the values of the arithmetic means signify between which activities a significant difference was determined by Bonferroni's *post hoc* test (1- academic, 2- routine, 3-leisure, 4- work)

Discussion

We first compared non-working and part-time working students on flow, well-being, burnout and academic achievement. The results revealed that there are no significant differences between part-time working and nonworking students in their tendency to experience flow, nor in any of the measures of well-being (flourishing and life satisfaction), burnout, or academic achievement. This suggests that, at least for our sample, there are no negative consequences of part-time working during studying at the university. Students with and without a part-time job are equally satisfied with their lives, equally experience moderately high flourishing and flow in different activities, and moderately low burnout. They also have the same academic achievement.

These results are in line with the studies already mentioned in the introduction that did not find any differences in GPA (Curtis & Nimmer, 1991; Gleason, 1993; Mounsey et al., 2013), learning (Lundberg, 2004), credits earned (Curtis & Nimmer, 1991) and depression (Mounsey et al., 2013). It seems that students in this sample are not engaged in work to the measure that would interfere with their students' obligations. Also, their part-time working is not related to lower levels of well-being, either. Although some studies showed that working during studies is connected to lower physical and mental well-being (Carney et al., 2005; Roberts et al., 1999) and more anxiety and stress (Mounsey et al., 2013), that does not hold for our sample.

Both part-time working and nonworking students experience flow mostly in leisure activities and the least in academic activities. These results are in line with previous

research which also found that flow in academic activities is less often experienced than in leisure activities (Ljubin Golub et al., 2016b; Massimini & Carli, 1988; Rijavec et al., 2016). It is probably easier for students to experience flow in leisure because during their free time they can choose activities that suit them best and that they enjoy the most. Additionally, leisure activities involve sports, music, dancing, arts, which are all flow inductive activities (Csikzentmihaly, 1975). Routine tasks are probably not so flow promoting, while to experience flow in academic activities students have to have advanced skills and knowledge and challenging tasks, which is not often the case. When separately tested only on part-time working students, flow in part-time work activities was at the same level as in routine activities, which confirms Ullen and colleagues' (2012) findings that work is the least flow-promoting area of students' life. Although work can be most flow promoting area of life for adults (Cskiszentmihalyi & LeFevre 1989; LeFevre, 1988), students probably mostly work on some mundane jobs (e.g., they wait tables or work in call centres) which they do not find as much flow promoting as maybe some job which is more in line with their interests and skills.

Flow in Different Domains as Predictors of Students' Well-Being, Burnout and Achievement

The central aim of this study was to investigate the contribution of flow in different life domains to well-being of nonworking and part-time working students. We expected that for nonworking students flow in academic activities will be the strongest predictor of well-being, followed by flow in leisure and routine activities. For part-time working students, flow in academic activities was expected to be the strongest predictor of well-being, followed by flow at work, and after that flow in leisure and routine activities.

Additionally, contribution of flow in different life domains to well-being of non-working and part-time working students was explored. Based on the premise that only flow experienced in areas of life that students perceive important and useful will contribute to well-being, two hypotheses were set. The first hypothesis was that for nonworking students flow in academic activities will be the strongest predictor of well-being, followed by flow in leisure and routine activities. The second hypothesis was that for part-time working students, flow in academic activities will be the strongest predictor of well-being, followed by flow at work, leisure and routine activities. Both hypotheses were partially confirmed. Flow in academic activities was the only stable significant positive predictor of well-being and negative predictor of burnout among students. Since academic activities were rated as the most important and useful in both samples, these results suggest that only flow in activities that one perceives important and useful, contributes to well-being. The results are also in line with our previous research showing that only flow in academic activities was associated with well-being (Ljubin Golub et al., 2016b). Experiencing flow repeatedly in any activity leads to increase in skills and competencies in that activity (Delle Fave, Massimini,

& Bassi, 2011). Therefore, it is understandable that getting better at an activity that a person finds important and useful will in the long run contribute to higher well-being. Flow in activities that one does not find as important and useful, does not contribute as much to well-being. Here we tried to tackle that question with two separate groups of students, the ones who work part-time and the ones who do not work at all, and the results are similar for both groups. Still, although students do not find leisure and part-time work as important and useful as academic activities, flow in these areas also contributes to well-being, although not as much. Besides flow in academic activities, higher level of nonworking students' life satisfaction and flourishing can be predicted by a higher level of experiencing flow in leisure activities. For part-time students flow in part-time work was a significant predictor of life satisfaction.

Results revealed that total flow (experienced in academic activities, leisure and routine activities) can explain 18% and 16% of the variance of life satisfaction in nonworking and part-time students, respectively. With flourishing as criteria, total flow explained 30% and 20% of the variance in nonworking and part-time working students, respectively. With regard to burnout as criteria, total flow explained 7% and 10% of the variance of nonworking and part-time working students, respectively. The amount of explained variances of well-being were not significantly different for nonworking and part-time working students, suggesting that the flow predictors are equally important in both groups of students. Amounts of variances of well-being variables explained by flow in different activities are moderate, indicating that some other variables besides flow, may also be significant predictors of these well-being indices. However, consistency across findings with different measures of well-being employed, as well as with ill-being (burnout) gives us confidence to believe that flow is one of the important positive predictors of well-being.

As expected, the present study also showed that the only significant predictor of academic achievement for both groups was flow in academic activities. This result is in line with previous studies showing the association between flow in learning and academic achievement (Engeser et al., 2005; Ljubin Golub et al., 2016a). Flow in academic activities, leisure and routine activities can explain 7% of the variance of nonworking students' academic achievement and 11% of the variance of part-time working students' academic achievement. The amount of explained variances of academic achievement was not significantly different for nonworking and part-time working students, suggesting that the role of academic flow in academic achievement is about equal in both groups.

Future Research Recommendation

Although this study shows that having a part-time job is not related to negative outcomes, future studies should address the older students as well as the number of hours spent working part-time. Besides nonworking and part-time working students, full time working and part-time studying students should also be included in the research. Type of part-time work also matters. Geel & Backes-Gellner (2012) warn

that "earning while learning" is beneficial only when student employment is connected to student's study field, and Ullen and colleagues (2012) stressed engagement as an important factor of flow in work activities.

Since students' well-being and academic achievement were associated with experiencing flow during academic activities, introducing more activities/assignments for students, which are more enjoyable and more challenging is recommended.

Acknowledgement

References

Asakawa, K. (2010). Flow experience, culture, and well-being: how do autotelic Japanese college students feel, behave, and think in their daily lives? *Journal of Happiness Studies*, *11*, 205-223. https://doi.org/10.1007/s10902-008-9132-3

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, *25*, 297-308.

Bryce, J., & Haworth, J. (2002). Wellbeing and flow in a sample of male and female office workers. *Leisure Studies, 21*(3-4), 249-263. https://doi.org/10.1080/0261436021000030687

Callender, C. (2008). The impact of term-time employment on higher education students' academic attainment and achievement. *Journal of Education Policy*, *23*(4), 359–377. https://doi.org/10.1080/02680930801924490

Carney, C., McNeish, S., & McColl, J. (2005). The impact of part-time employment on students' health and academic performance: A Scottish perspective. *Journal of Further and Higher Education*, *29*(4), 307–319. https://doi.org/10.1080/03098770500353300

Clarke, S. G., & Haworth, J. T. (1994). 'Flow' experience in the daily lives of sixth-form college students. *British Journal of Psychology*, *85*, 511–523. https://doi.org/10.1111/j.2044-8295.1994.tb02538.x

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety.* San Francisco, CA: Jossey-Bass.

Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J. (2005). Flow. In A. Elliot (Ed.), *Handbook of Competence and Motivation* (pp. 598–698). New York: The Guilford Press.

Cskiszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology, 56,* 815–822. https://doi.org/10.1037/0022-3514.56.5.815

Curtis, G., & Nimmer, C. E. (1991). To Work or Not to Work: That Is the Question. *Journal of Student Financial Aid*, *21*(3), 16-26. Retrieved from http://publications.nasfaa.org/jsfa/vol21/iss3/2

Delle Fave, A. (2009). Optimal experience and meaning: Which relationship? *Psihologijske teme, 18,* 285-302.

Delle Fave, A., Massimini, F., & Bassi, M. (2011). *Psychological selection and optimal experience across cultures.* Dordrecht: Springer Science. https://doi.org/10.1007/978-90-481-9876-4

Diedenhofen, B., & Musch, J. (2015). Cocor: A Comprehensive Solution for the Statistical Comparison of Correlations. *PLoS ONE, 10*(4), e0121945. https://doi.org/10.1371/journal.pone.0121945

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicator Research, 97,* 143-156. https://doi.org/10.1007/s11205-009-9493-y

Doolan, K. (2010). "My dad studied here too": Social inequalities and educational (dis)advantage in a Croatian higher education setting. (Doctoral Thesis). Cambridge: University of Cambridge.

Engeser, S., & Rheinberg, F. (2008). Flow, performance and moderators of challenge-skill balance. *Motivation and Emotion, 32*, 158-172. https://doi.org/10.1007/s11031-008-9102-4

Engeser, S., Rheinberg, F., Vollmeyer, R., & Bischoff, J. (2005). Motivation, Flow Erleben und Lernleistung in universitären Lernsettings [Motivation, flow experience, and performance in learning settings at universities]. *Zeitschrift für Pädagogische Psychologie*, *19,* 159-172. Retrieved from http://www.unitrier.de/fileadmin/fb1/prof/PSY/PGA/bilder/Engeser_Rheinberg_Vollmeyer_Bischoff_2005.pdf, https://doi.org/10.1024/1010-0652.19.3.159

Fong, C. J., Zaleski, D. J., & Leach, J. K. (2014). The challenge-skill balance and antecedents of flow: A meta-analytic investigation. *The Journal of Positive Psychology, 10*(5), 425-446. https://doi.org/10.1080/17439760.2014.967799

Garcia–Vargas, M. C., Rizo–Baeza, M., & Cortes–Castell, E. (2016). Impact of paid work on the academic performance of nursing students. *PeerJ, 31*, 1–13. https://doi.org/10.7717/peerj.1838

Geel, R., & Backes-Gellner, U. (2012). Earning while Learning: When and How Student Employment is Beneficial. *Labour, 26*(3), 313–340. https://doi.org/10.1111/j.1467-9914.2012.00548.x

George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference* (17.0 update). Boston: Pearson.

Gleason, P. M. (1993). College Student Employment, Academic Progress, and Postcollege Labor Market Success. *Journal of Student Financial Aid, 23*(2), 5-14. Retrieved from http://publications.nasfaa.org/jsfa/vol23/iss2/1

Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate Data Analysis* (3rd ed.). New York: Macmillan.

LeFevre, J. (1988). Flow and the quality of experience during work and leisure. In M. Csikszentmihalyi, & I. Csikszentmihalyi (Eds.), *Optimal experience: Psychological studies of flow in consciousness* (pp. 307–318). New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511621956.018

Light, R. J. (2001). *Making the most of college: students speak their minds.* Cambridge, MA: Harvard University Press.

Ljubin Golub, T., Rijavec, M., & Olčar, D. (2016a). The relationship between executive functions and flow experiences in learning. *Studia Psychologica, 58*(1), 47-58. https://doi.org/10.21909/sp.2016.01.706

Ljubin Golub, T., Rijavec, M., & Olčar, D. (2016b). *Zanesenost u učenju: rjeđa ali važnija za dobrobit studenata*. Paper presented at the 3rd Days of Educational Sciences. Educational Change: Challenges and Expectations, Zagreb, Hrvatska. Abstract retrieved from http://www.idi.hr/doz2016/DOZ_2016_knjiga_sazetaka.pdf

Lundberg, C. A. (2004). Working and learning: The role of involvement for employed students. *NASPA Journal, 41*, 201-215. https://doi.org/10.2202/0027-6014.1330

Martinez, E. F., Bilges, D. C., Shabazz, S. T., Miller, R., & Morote, E-S. (2012). To Work or Not to Work: Student Employment, Resiliency, and Institutional Engagement of Low-Income, First-Generation College Students. *Journal of Student Financial Aid, 42*(1), 28-39. Retrieved from http://publications.nasfaa.org/jsfa/vol42/iss1/3

Massimini, F., & Carli, M. (1988). The systematic assessment of flow in daily experience. In M. Csikszentmihalyi, & I. Csikszentmihalyi (Eds.), *Optimal experience: Psychological studies of flow in consciousness* (pp. 266-287). New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511621956.016

May, R. W., Sanchez-Gonzalez, M. A., Seibert, G. S., & Fincham, F. D. (2016). Physiology of school burnout in medical students: Hemodynamic and autonomic functioning. *Burnout Research, 3*, 63-68. https://doi.org/10.1016/j.burn.2016.05.001

Morrison, K. (2009). Higher education students in part-time work in a Chinese city. *Evaluation & Research in Education*, *22*(2-4), 121-144. https://doi.org/10.1080/09500790903499764

Mounsey, R., Vandehey, M., & Diekhoff, G. (2013). Working and Non-Working University Students: Anxiety, Depression, and Grade Point Average. *College Student Journal, 47,* 379-389.

Näätänen P., Aro A., Matthiesen S., & Salmela-Aro, K. (2003). *Bergen Burnout Indicator 15*. Helsinki: Edita.

Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder, & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 89-105). New York: Oxford University Press.

Olčar, D. (2015). *Životni ciljevi i dobrobit učitelja: Posredujuća uloga temeljnih psiholoških potreba i zanesenosti* (Doctoral dissertation). Zagreb: Sveučilište u Zagrebu, Učiteljski fakultet.

Pallant, J. (2007). *SPSS Survival Manual: Step-by-Step Guide to Data Analysis (3rd ed.)*. Sydney: Allen & Unwin.

Rijavec, M., Ljubin Golub, T., & Olčar, D. (2016). Can learning for exams make students happy? Faculty related and faculty unrelated flow experiences and well-being. *Croatian Journal of Education, 18*(Sp. Ed. 1), 153-164.

Roberts, R., Golding, J., Towell, T., & Weinreb, I. (1999). The effects of economic circumstances on British students' mental and physical health. *Journal of American College Health, 48*(3), 103-109. https://doi.org/10.1080/07448489909595681

Salamonson, Y., Everett, B., Koch, J., Andrew, S., & Davidson, P. M. (2012). The impact of term-time paid work on academic performance in nursing students: A longitudinal study. *International Journal of Nursing Studies, 49,* 579-585. https://doi.org/10.1016/j.ijnurstu.2011.10.012

Salmela-Aro, J. K., Reed, S., Minkkinen, J., Kinnunen, J., & Rimpelä, A. (2017). Immigrant status, gender, and school burnout in Finnish lower secondary school students: A longitudinal study. *International Journal of Behavioral Development,* 1–12.

Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J. E. (2009). School-Burnout Inventory (SBI) – Reliability and validity. *European Journal of Psychological Assessment, 25*(1), 48–57. https://doi.org/10.1027/1015-5759.25.1.48

Schiefele, U., & Csikszentmihalyi, M. (1995). Motivation and ability as factors in mathematics experience and achievement. *Journal for Research in Mathematics Education, 26*(2), 163-181. https://doi.org/10.2307/749208

Schmidt, J. (2003). Correlates of reduced misconduct among adolescents facing adversity. *Journal of Youth and Adolescence*, *32,* 439–452. https://doi.org/10.1023/A:1025938402377

Ullen, F., de Manzano, O., Almeida, R., Magnusson, P. K. E., Pedersen, N. L., Nakamura, J., ... Madison, G. (2012). Proneness for psychological flow in everyday life: associations with personality and intelligence. *Personality and Individual Differences, 52*, 167-172. https://doi.org/10.1016/j.paid.2011.10.003

Wang, H., Kong, M., Shan, W., & Vong, S. K. (2010). The effects of doing part-time jobs on college student academic performance and social life in a Chinese society. *Journal of Education and Work, 23*(1), 79-94. https://doi.org/10.1080/13639080903418402

Majda Rijavec
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
majda.rijavec@ufzg.hr

Tajana Ljubin Golub
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
tajana.ljubingolub@ufzg.hr

Lana Jurčec
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
lana.jurcec@ufzg.hr

Diana Olčar
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
diana.olcar@ufzg.hr

Povremeni rad tijekom studija: Uloga zanesenosti u dobrobiti i akademskom uspjehu studenata

Sažetak

Prethodna istraživanja sugeriraju da samo zanesenost u aktivnostima koje osoba smatra važnima doprinosi dobrobiti. Ovo je istraživanje provedeno kako bi se dodatno istražila uloga zanesenosti u različitim aktivnostima u dobrobiti studenata koji povremeno rade i studenata koji ne rade.

Uzorak su činili studenti prve i druge godine sveučilišnih studija (85 % ženskih) na Sveučilištu u Zagrebu (110 povremeno zaposlenih i 113 koji ne rade). Nekoliko je upitnika primijenjeno kako bi se procijenila zanesenost u različitim aktivnostima, dobrobit i sagorijevanje. Također, studenti su naveli prosjek ocjena.

Rezultati su pokazali da je zanesenost u akademskim aktivnostima u obje skupine bila jedini stabilan pozitivan prediktor dobrobiti i akademskog uspjeha te negativan prediktor sagorijevanja, u skladu s činjenicom da su obje skupine studenata procijenile akademske aktivnosti najvažnijima i najkorisnijima. Osim toga, nije bilo razlike između grupa studenata u dobrobiti, sagorijevanju i prosjeku ocjena, što sugerira da trenutno nema negativnih posljedica povremene zaposlenosti kod studenata.

Preporučuje se uvođenje što više akademskih aktivnosti koje potiču zanesenost jer su se pokazale kao bitne za studentsku dobrobit.

Ključne riječi: *dobrobit; povremeni rad; sagorijevanje; studenti; zanesenost.*