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### Off-time higher education as a risk factor in identity formation

**Abstract:** One of the important determinants of development during the transition to adulthood is the undertaking of social roles characteristic of adults, also in the area of finishing formal education, which usually coincides with beginning full-time employment. In the study discussed in this paper, it has been hypothesized that continuing full-time education above the age of 26, a phenomenon rarely observed in Poland, can be considered as an unpunctual event that may be connected with difficulties in the process of identity formation. Relationships between identity dimensions and identity statuses, and age and educational context were analyzed. 693 individuals aged 19-35 took part in the study. The participants attended three types of educational institutions: (1) full-time university studies (BA or MA level), (2) part-time university studies (BA or MA level), and (3) full-time post-secondary school (certificate courses such as: medical rescue, massage therapy, cosmetology, occupational therapy). Among the students of full-time university studies predictable dependencies, also in respect of high levels of indicators of identity crisis and a high frequency of diffused identity occurrence, were observed. Such dependencies were not found in the group of full-time post-secondary school students.

**Key words:** commitment, educational context, exploration, identity, off-time education, unpunctuality

#### Introduction

In recent years a constantly growing number of postulates have been appearing suggesting that psychological studies on identity development ought to diverge from a static understanding of identity in terms of its statuses, as proposed by Marcia (1966, 1980), and adopt a perspective that would treat identity as an effect of mutual relations between a person and contextual factors. It has been postulated that identity should be understood as a dynamic process that refers to the levels of exploration and commitments in different domains, and that investigation of this process ought to concentrate on examining changes in these levels in the course of development (Grotevant, 1987). Also, the classic constructs of exploration and commitments, constituting, in the opinion of Marcia (1966), a basis for identity formation, are being more and more frequently revised, and researchers have emphasized their complexity and diversity (e.g. Crocetti, Rubini, Luyckx, Meeus, 2008;

Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, Goossens, 2008).

One of the latest processual models is the Dual-Cycle Model of Identity Formation (e.g. Luyckx, Goossens, Soenens, Beyers, Vansteenkiste, 2005; Luyckx, Goossens, Soenens, 2006; Luyckx, Goossens, Soenens, Beyers, 2006; also Brzezińska, Piotrowski, 2010) based on the assumption that both exploration and commitment are complex, dynamic, and interrelated processes. Departing from the previous work (Grotevant, 1987; Bosma, Kunnen, 2001; Meeus, Iedema, Maasen, 2002) three types of exploration: (1) exploration in breadth (learning about different alternatives connected with issues important to the individual), (2) exploration in depth (evaluation of the degree to which the undertaken identity commitments comply with the expectations of the individual), and (3) ruminative exploration (a maladaptive component of exploration activity, associated with an inability to make decisions pertaining to the shape of one's life) and two

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characteristics of commitment: (1) commitment making, and (2) identification with commitment were identified and the interactions between them have been described (Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, Goossens, 2008).

The authors of the Dual-Cycle Model of Identity Formation do not distinguish any successive stages of identity development, because they assume that all of the dimensions mentioned above remain in a mutual balance and are present throughout the entire life of an individual. The differences may pertain to the intensity (levels) of particular dimensions, depending on the combination of the psycho-social factors. Identity development under this concept, similarly to Bosma and Kunnen's approach (2001), assumes that with changes in the context of development, in age, and with reference to other personal features, changes in the transactions between the person and the environment take place. The changes also pertain to the dimensions of exploration and commitments and, at the same time, affect the overall sense of identity.

In the present paper, the main factor that has been analyzed with reference to young people's identity is the fact of a delayed, in comparison with the majority of their peers, completion of one of the most important social roles of the transition from adolescence to adulthood, i.e. the ending of the role of a student. Under the Polish system of higher education, young individuals usually finish their education at MA level at the age of approximately 24-25. Part-time studies that are attended by individuals of all ages are also quite popular in Poland, because they enable one to combine full-time work with studying. Nevertheless, even if we take into account part-time students, it turns out that the percentage of people studying in any kind of school / university at the age of 25-29 amounts to 10%, and at the age of 30 and above only to 1%.

Full-time studies are considered to be one of the most important factors that cause a delay in the undertaking of social roles associated with adulthood (Szafraniec, 2011), also in the form of undertaking a full-time job which is key to the adoption of some of the social roles of adulthood (such as leaving the parental household, establishing one's own family, having a child; Nurmi, Poole, Seginer, 1995; Guerreiro, Abrantes, 2004; Czerwińska-Jasiewicz, 2005) and leads to financial dependence on the scholarship system offered by a university, or on the financial support of parents. Taking all this into consideration it seems that in the case of part-time studies, which are the form of studies that most frequently coincides with full engagement in a professional career, it can be assumed that their continuation will not be connected with difficulties in the process of identity formation, whereas continuing full-time studies after the age of 25 or 26, which handicaps young people in becoming fully engaged in the implementation of the social roles of adulthood, can be considered as an unpunctual phenomenon. The lack of punctuality in the fulfilment of this task can be perceived by the individual as something that is inconsistent with his or her developmental timetable (Neugarten, 1976) and can influence other domains of life. Studies on developmental timetables initiated by Neugarten

(1976) have consisted in searching for answers about an optimal age for the fulfilment of various important life events, for instance, getting married, or leaving the parental household. The unanimity in answers of the investigated individuals about the most suitable age for particular behaviors indicates that there exist common in any given culture beliefs about what kind of phenomena should occur and at what age in an "ordinary" man or woman's life.

Studies conducted by Neugarten, and also those more up-to-date, e.g. Settersten (2004), have touched upon the problem of punctuality, and the consequences that may appear in the life of an adult individual when the achievement of particular tasks is delayed. Researchers point to three types of possible consequences: (1) social, in the form of interpersonal pressure to undertake the given task, (2) personal, in the form of fears connected with losing something important due to a delay or an acceleration of the task fulfilment, and worrying about the consequences for psychological well-being and health, (3) developmental, in the form of fears associated with potential problems in the achievement of other developmental tasks, and disturbances for the entire developmental sequence at that particular stage of life.

A personal sense of punctuality of developmental tasks is built on the basis of simultaneous comparison and reference of the individual situation to: (1) real and/or imagined situation of peers, and (2) internalized beliefs about the time and sequence of life events (life scripts, cultural concept of biography, developmental timetable). An evaluation of the punctuality of a developmental task completion is, thus, conducted from two perspectives: (1) social / normative, and (2) individual, in which the occurrence of the given event and associated with it tasks, and engagement in the completion of the given goals is referred to the personal life history and the phase of the development process in which the person currently is.

An interesting approach to the issue of punctuality of important events in the lives of adults has been proposed by Worsch and Heckhausen (2005). The authors have touched upon the problem of the so-called developmental deadlines, which set the time limits for the completion of particular tasks or, using their terminology, the achievement of a particular developmental goal. Starting the process of goal achievement at an appropriate time i.e. before the deadline, offers more possibilities of achieving it and is less troublesome. The carrying out of tasks after the deadline, in turn, requires using different strategies and is connected with the necessity to struggle with difficulties and obstacles. Also Rook, Catalano and Dooley (1989) have shown that investigated individuals classified as "unpunctual" were characterized by having poorer physical health, experienced more negative psychological symptoms, and more often would come into conflict with people from their direct environment.

In the opinion of Shanahan (2000, p. 669), the course of life in modern societies is determined by two opposing processes: standardization (institutionalization) and individuation. The former one has shaped societies through their institutions that have specified the tasks and

the right time for their achievement. The latter process is responsible for an increasing diversity of lifestyles and possible forms of satisfying individual needs. Thanks to the processes of individuation, the lives of people currently have become individual projects that are negotiated between the needs and expectations of the person and their environment.

The two processes described above pertain to all stages of development during childhood, adolescence and adulthood, nevertheless researchers have devoted particular attention to their influence on the transition from adolescence to adulthood (Shanahan, 2000; Shanahan, Porfeli, Mortimer, Ericsson, 2005). These authors point to the fact that crucial for this transition are such events as finishing school, starting to work full-time, leaving the parental household, getting married, having a first child. With reference to each of these tasks changes in the time of their achievement have been observed, for instance, a delay in establishing formal relationships and having a first child. Also, changes in the sequence of their attainment, such as undertaking systematic work during studies, have become more and more visible. Researchers see the causes of such changes in, on the one hand, the desire of young people to fulfill their own needs, for instance, educational or professional needs before establishing a family and having a child and, on the other hand, in the necessity to adopt this kind of strategy due to uncertainty in the labor market, the necessity to be mobile and the need to continuously update one's skills, all of which does not guarantee the financial stability necessary for establishing a family and supporting a child (Shanahan et al., 2005).

Studies on the punctuality of events connected with education have been conducted by Kokko, Pulkkinen, Masiäinen & Lyyra (2008). Their studies have shown that individuals who continued education for a relatively long period of time (continuing education group), often even above the age of 30, or who started postcomprehensive or higher education a few years after finishing education at the secondary level (off-time group), were generally characterized by a lower level of professional career stability in the period between 27 and 42 years of age, in comparison with individuals who either did not continue education after finishing secondary school or who had completed it on-time, at the age of twenty-something. This effect proved to be the strongest in the off-time group.

Among the subjects at the age of 27 from the off-time group (surveys were conducted also at the age of 36 and 42) the lowest level of optimism and the lowest results in respect of achieved identity were observed. The individuals who had finished their education relatively early (no or early education group) and the subjects from the off-time group mainly originated from families with a lower socio-economical status than the rest of the examined people, had lower levels of school success, and were characterized by lower scores on school motivation. In terms of a number

of psychological characteristics, the best functioning was observed in the on-time group (those individuals would most often finish their education before the age of 30) and in the continuing education group, composed of individuals who would educate themselves the longest, very often even after the age of 30, obtaining, however, the highest level of education.

Clearly, what was not controlled for in the studies of Kokko, et al. (2008), was the type of education undertaken by the subjects. It is, though, one thing to complement one's education by undertaking various courses or part-time studies around the age of 30, and something completely different when individuals of this age are still in full-time study. In the studies that are the subject of this paper we wanted to find out whether tertiary education, very popular in Poland (the net schooling rate for higher education in Poland is one of the highest in Europe and in 2010 it was 41% in the age group 19-24: Szafraniec, 2011; Central Statistical Office: [www.stat.gov.pl](http://www.stat.gov.pl)), is connected with differences in respect of identity formation in individuals who accomplish this task either on-time or off-time.

### Hypothesis

We suppose that continuation of full-time studies above the age of 26 may be perceived by young people as an off-time phenomenon (i.e. taking place too late / lasting too long). Such a situation, in turn, may find its reflection in problems with identity formation. Above all, we expect that full-time students, in comparison with part-time students for whom studies are rather an additional form of activity, carried out mostly on weekends, and who can successfully combine education and work, will be characterized by a higher level of ruminative exploration, weaker commitments and weaker identification with those commitments.

### Subjects

693 individuals aged 19-35 took part in the studies. The participants represented three types of educational institutions: (1) full-time university studies at BA or MA level ( $n = 203$ ; age  $M = 23.25$ ;  $sd = 3.94$ ), (2) part-time university studies at BA or MA level ( $n = 107$ ; age  $M = 23.30$ ;  $sd = 3.59$ ), and (3) full-time post-secondary medical school certificate courses: medical rescue, massage therapy, cosmetology, occupational therapy, which take 2 years of education ( $n = 383$ ; age  $M = 22.01$ ;  $sd = 3.43$ ). In the majority of the analyzes presented here the subjects were also divided into age groups (Table 1). In every age group women dominated – they constituted 89.5% of the youngest group (19 – 21 years of age), 79.2% of the group composed of people aged 22-25, and 68.8% of the oldest group (26 – 35 years of age).

**Table 1. Characteristics of study population (N = 693)**

educational groups	age groups			Total
	19 – 21 age: M = 20.32 sd = 0.67	22 – 25 age: M = 22.90 sd = 0.93	26 – 35 age: M = 30.39 sd = 3.37	
$\chi^2 (df = 4; N = 693) = 49.73;$ $p < 0.001$				
full-time university studies	n = 77 37.9% 20.6%	n = 91 44.8% 41%	n = 35 17.2% 36.1%	n = 203 100% 29.3%
part-time university studies	n = 45 42.1% 12.0%	n = 41 38.3% 18.5%	n = 21 19.6% 21.6%	n = 107 100% 15.4%
full-time post-secondary school	n = 252 65.8% 67.4%	n = 90 23.5% 40.5%	n = 41 10.7% 42.3%	n = 383 100% 55.3%
<b>Total</b>	n = 374 54% 100%	n = 222 32% 100%	n = 97 14% 100%	N = 693 100% 100%

The investigated individuals were, for the most part, residents of cities of over 50,000 inhabitants (57.1%). They were a heterogeneous group in respect of parents' education: 47.4% of fathers and 59.1% of mothers had secondary or higher education, the rest of parents (52.6% and 40.9% respectively) had primary or basic vocational education. The vast majority of subjects were not married (92.3%) and did not have children (90.6%). More than half of respondents (54.5%) worked occasionally during the academic year or vacations, 10.6% worked part-time, and 16.7% full-time, whereas 18.2% did not engage in any form of work activity.

Great similarity, in respect of socio-economic characteristics, between individuals from particular educational groups were observed. The only one significant difference was related to mother's education. Mothers of post-secondary school students, in each age group, more often than mothers of full-time and part-time university students, had basic or vocational education.

### Method

**The Dimensions of Identity Development Scale (DIDS).** The questionnaire enables measurement of the position of an individual on the five dimensions of identity (Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, Goossens, 2008): exploration in breadth (EB; the extent

to which a person seeks for various alternatives with reference to his or her goals, values and beliefs, 5 items. e.g. *I actively think about the direction I want to take in my life*), exploration in depth (ED; in-depth evaluation of the decisions and choices already made, i.e. undertaken commitments, in order to verify the degree to which they comply with the personal standards, 5 items. e.g. *I actively consider whether the future plans I strive for correspond to what I really want*), ruminative exploration (RE; the intensity of an individual's concerns and problems faced by them while engaging in areas important for their identity development, for example, 5 items. e.g. *I am doubtful about what I really want to achieve in life*), commitment making (CM; the degree to which an individual has made choices about important identity issues, e.g. *I have decided on the direction I want to follow in my life*), and identification with commitment (IC; the degree to which an individual identifies with the choices and commitments he or she has already made, 5 items. e.g. *My plans for the future match with my true interests and values*). Each position were rated on a 6-point scale ranging from "1" - "strongly disagree" to "6" - "strongly agree". The Polish adaptation of the measure was developed by Brzezińska and Piotrowski (2010). Cronbach's alpha coefficient for the particular scales of DIDS in the entire sample were, respectively: 0.72, 0.65, 0.82, 0.89, 0.86.

**Table 2. Correlations between the identity dimensions and age (N = 693)**

Identity dimensions	exploration in depth	ruminative exploration	commitment making	identification with commit.	Age
exploration in breadth	0.72*	0.16*	0.22*	0.32*	- 0.17*
exploration in depth	---	0.15*	0.18*	0.27*	- 0.16*
ruminative exploration		---	- 0.72*	- 0.62*	- 0.10*
commitment making			---	0.85*	0.00
identification with commitment				---	- 0.04

\*  $p < 0.001$

## Results

### (1) Identity dimensions and age: correlation analysis

The analysis of Pearson's correlation showed a strong positive relationship between exploration in breadth and in depth ( $r = 0.72$ ), and between commitment making and identification with commitment ( $r = 0.85$ ). At the same time, a quite strong negative correlation was found between the two dimensions of commitments and ruminative exploration. Between the dimensions of commitments and adaptive exploration (in breadth and in depth) a positive, however weak, relationship was observed. Also, a weak positive correlation was found between ruminative exploration and exploration in breadth and in depth. All three scales of exploration also correlated negatively with age (Table 2). Dependencies between particular dimensions of identity

were in line with previous studies conducted with the use of the same measure (e.g. Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, Goossens, 2008; Luyckx, Duriez, Klimstra, De Witte, 2010; Piotrowski, Brzezińska, 2011; Piotrowski, 2013 – this volume).

### (2) Differences in identity dimensions among age and educational groups

To investigate the differences between individuals of different age and belonging to different educational groups, two-way multivariate analysis of variance (MANOVA) was conducted, with age and educational groups as factors, and dimensions of identity as dependent variables.

**Table 3. Analysis of variance and post hoc comparisons (Tukey HSD)**

identity dimensions	age groups			F ( $\eta^2$ )
	19-21 (n = 374)	22-25 (n = 222)	26-35 (n = 97)	
exploration in breadth	M = 3.18 <sup>b</sup>	M = 3.15 <sup>b</sup>	M = 2.75 <sup>a</sup>	9.63*** (0.03)
exploration in depth	M = 3.09 <sup>b</sup>	M = 3.02 <sup>b</sup>	M = 2.74 <sup>a</sup>	5.57** (0.02)
ruminative exploration	M = 2.30 <sup>b</sup>	M = 2.30 <sup>b</sup>	M = 2.05 <sup>a</sup>	4.06* (0.01)
commitment making	M = 3.27	M = 3.28	M = 3.20	Ns
identification with commitment	M = 3.35	M = 3.32	M = 3.60	Ns
identity dimensions	educational groups			F ( $\eta^2$ )
	full-time university students (n = 203)	part-time university students (n = 107)	full-time post-secondary school students (n = 383)	
exploration in breadth	M = 2.99 <sup>a</sup>	M = 3.07 <sup>a,b</sup>	M = 3.18 <sup>b</sup>	6.21** (0.02)
exploration in depth	M = 2.90 <sup>a</sup>	M = 2.95 <sup>a,b</sup>	M = 3.09 <sup>b</sup>	4.17* (0.01)
ruminative exploration	M = 2.47 <sup>b</sup>	M = 2.18 <sup>a</sup>	M = 2.19 <sup>a</sup>	9.57*** (0.03)
commitment making	M = 2.94 <sup>a</sup>	M = 3.30 <sup>b</sup>	M = 3.42 <sup>b</sup>	27.99*** (0.08)
identification with commitment	M = 3.03 <sup>a</sup>	M = 3.41 <sup>b</sup>	M = 3.45 <sup>b</sup>	29.85*** (0.08)

Note. Different indexes next to the mean values indicate significant differences between the clusters (*post-hoc* Tukey HSD);

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The analysis showed a significant overall multivariate effect of both age group [Wilks'  $\lambda = 0.96$ ;  $F(10, 1360) = 2.78$ ;  $p < 0.01$ ;  $\eta^2 = 0.02$ ] and educational group [Wilks'  $\lambda = 0.91$ ;  $F(10, 1360) = 6.76$ ;  $p < 0.001$ ;  $\eta^2 = 0.05$ ], and also a significant interaction of the two factors [Wilks'  $\lambda = 0.92$ ;  $F(20, 2256) = 2.85$ ;  $p < 0.001$ ;  $\eta^2 = 0.02$ ]. The results of univariate analyses of variance, offering an insight into the obtained dependencies of the overall effects, have been presented in Table 3.

The oldest age group (26-35) was characterized by significantly lower levels of all dimensions of exploration (in breadth, in depth, and ruminative) in comparison with younger people. No statistically significant differences were found between subjects of different age in respect of the commitments dimensions.

Full-time university students were characterized by the lowest, and full-time post-secondary school students by the highest, levels of exploration in breadth and in depth. When compared with other educational groups, full-time university students also demonstrated a higher level of ruminative exploration, and lower levels of commitment making and identification with commitment.

A significant interaction of factors could be observed in the case of: exploration in breadth [ $F(4, 684) = 3.90$ ;  $p < 0.01$ ;  $\eta^2 = 0.02$ ; Figure 1.], commitment making [ $F(4, 684) = 8.55$ ;  $p < 0.001$ ;  $\eta^2 = 0.05$ ; Figure 3.], and identification with commitments [ $F(4, 684) = 10.13$ ;  $p < 0.001$ ;  $\eta^2 = 0.06$ ; Figure 4.]. Also, a weak effect (at a statistical trend level) was found in the case of ruminative exploration [ $F(4, 684) = 2.23$ ;  $p < 0.1$ ;  $\eta^2 = 0.01$ ; Figure 2.].

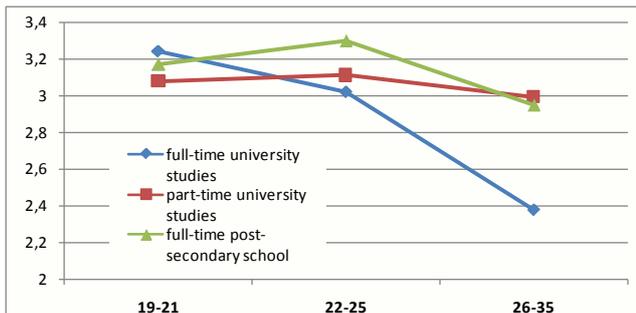


Figure 1. Exploration in breadth

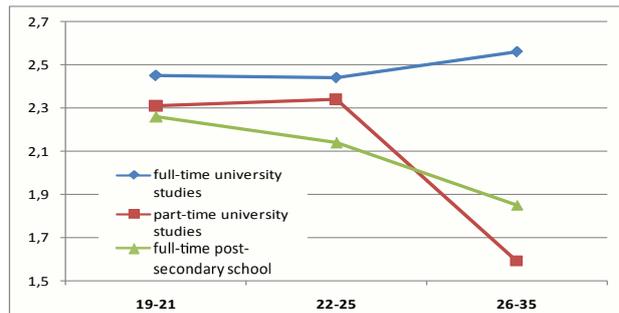


Figure 2. Ruminative exploration

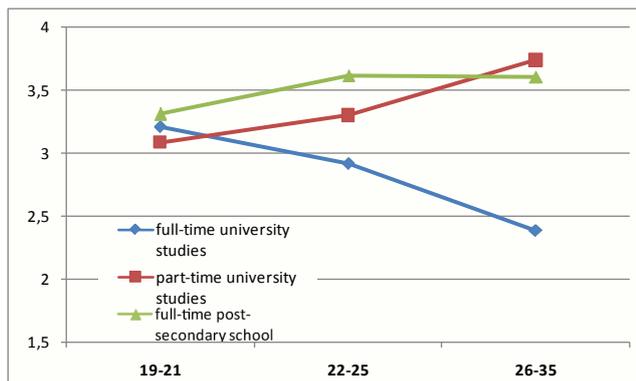


Figure 4. Identification with commitment

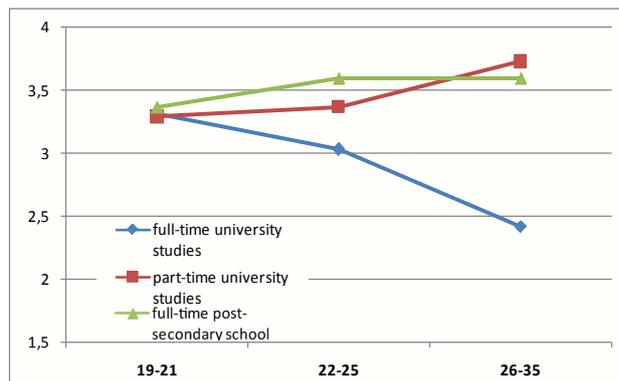


Figure 3. Commitment making

When it comes to exploration in breadth, it turned out that constantly decreasing results in successive age groups could be observed primarily among full-time university students [ $F(2, 684) = 15.97; p < 0.001; \eta^2 = 0.05$ ] and, however to a much lesser extent, among full-time post-secondary school students [ $F(2, 684) = 3.17; p < 0.05; \eta^2 = 0.01$ ]. Exploration in breadth in the group of part-time university students remained on a similar level regardless of age. At the same time, in the age group 26–35, exploration in breadth of full-time university students was significantly lower than in the other educational groups [ $F(2, 684) = 6.85; p = 0.01; \eta^2 = 0.02$ ].

In the case of ruminative exploration, the dependencies had the opposite direction. In the groups of part-time university students [ $F(2, 684) = 4.69; p < 0.01; \eta^2 = 0.01$ ] and full-time post-secondary school students [ $F(2, 684) = 3.14; p < 0.05; \eta^2 = 0.01$ ] decreasing results in successive age groups were observed, whereas in the group of full-time university students ruminative exploration remained on a comparable level in every age group. At the age of 26–35 ruminative exploration of full-time university students was significantly higher than in the other educational groups [ $F(2, 684) = 7.97; p < 0.001; \eta^2 = 0.02$ ].

Among part-time university students and full-time post-secondary school students, increasing results in successive age groups on the dimension of commitment making were also observed (respectively:  $F(2, 684) = 3.62; p < 0.05; \eta^2 = 0.01$  and  $F(2, 684) = 4.86; p < 0.01; \eta^2 = 0.01$ ), whereas in the group of full-time university students commitment making was found to be less and less intensive in successive age groups [ $F(2, 684) = 9.81; p < 0.001; \eta^2 = 0.03$ ]. At the same time, commitment making in the group

of full-time university students was at the age of 22–25 [ $F(2, 684) = 13.61; p < 0.001; \eta^2 = 0.04$ ] and at the age of 26–35 [ $F(2, 684) = 21.67; p < 0.001; \eta^2 = 0.06$ ] significantly lower than in the other educational groups.

As regards identification with commitment, the results were similar to those pertaining to the dimension of commitment making. In the successive age groups, the results were increasing among part-time university students [ $F(2, 684) = 2.32; p < 0.1; \eta^2 = 0.01$ ] and among full-time post-secondary school students [ $F(2, 684) = 3.71; p < 0.05; \eta^2 = 0.01$ ], and decreasing in the group of full-time university students [ $F(2, 684) = 15.30; p < 0.001; \eta^2 = 0.04$ ]. At the age of 22–25 [ $F(2, 684) = 11.76; p < 0.001; \eta^2 = 0.03$ ] and 26–35 [ $F(2, 684) = 26.46; p < 0.001; \eta^2 = 0.07$ ] identification with commitment among full-time university students was significantly lower than in the other groups.

### (3) Identity statuses: cluster analysis

In order to capture multivariate interactions of the identity dimensions and discover identity statuses occurring in the examined sample, a two-step procedure of cluster analysis was conducted (Gore, 2000; Luyckx, Duriez, Klimstra, De Witte, 2010). Prior to the essential part of the procedure, outliers were removed: 7 univariate cases (results above or below third standard deviation from the mean on any of the five dimensions of identity), and 21 multivariate cases (high Mahalanobis distance value;  $p < 0.001$ ), and the results of subjects on particular identity dimensions were standardized.

After having excluded the outliers, a hierarchical cluster analysis using Ward's method based on squared Euclidian distances was conducted. On the basis of this

procedure, three, four, five, six, and seven clusters were distinguished. In the next step, the clusters were analyzed with respect to their theoretical accuracy (Luyckx, Schwartz et al., 2008), by “economic” criterion (every cluster had to be characterized by a different configuration of dimensions, and not only different intensity of particular dimensions), and by the explanatory power of particular dimensions: at least 40% of the variance of particular identity dimensions explained by the clusters. On the basis of such criteria, we decided that an optimal number of clusters would be

four. Next, initial cluster centers were used as non-random starting points in an iterative k-means clustering procedure. The obtained solution (Figure 5) made it possible to explain 46% of exploration in breadth variance, 48% of exploration in depth variance, 60% of ruminative exploration variance, 68% of commitment making variance, and 63% of identification with commitment variance.

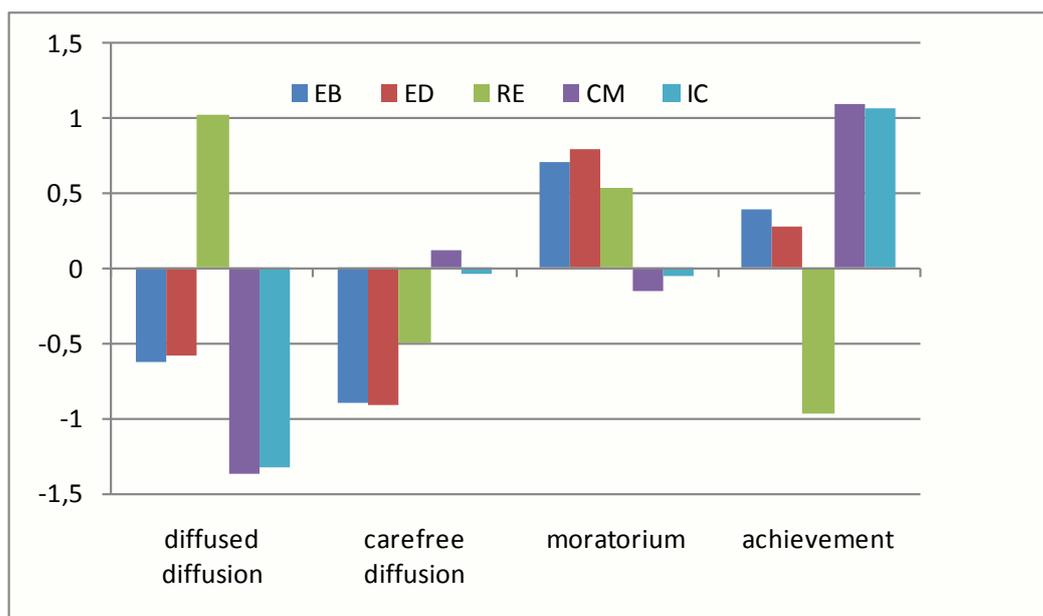


Figure 5. Identity statuses

As a result of the cluster analysis, the following identity statuses were distinguished: diffused diffusion, carefree diffusion, moratorium, and achievement (Figure 5). The individuals whose identity status was defined as diffused diffusion ( $n = 127$ ; 19.1% of the sample), were characterized by a high level of ruminative exploration and low levels of the other four dimensions of identity. This was the group that clearly experienced difficulties in identity formation. The status of carefree diffusion ( $n = 156$ ; 23.5% of the sample) was characterized by low or moderate levels of all identity dimensions. What primarily distinguished this group from diffused diffusion, was a low level of ruminative exploration along with a low level of adaptive exploration and a relatively low level of commitments. The subjects in the moratorium cluster ( $n = 211$ ; 31.7%) were characterized by high levels of the three exploration dimensions and moderate levels of the two commitment scales. The status of achievement ( $n = 171$ ; 25.7%) was characterized by relatively high levels of exploration in breadth and in depth, high levels of commitment making and identification with commitment, and a low level of ruminative exploration.

The results of analysis of variance revealed the existence of age differences between individuals with different identity statuses [ $F(3, 661) = 5.71$ ;  $p < 0.001$ ;  $\eta^2$

$= 0.03$ ]. The subjects with identity achievement ( $M = 22.82$ ;  $sd = 3.90$ ) and carefree diffusion ( $M = 23.15$ ;  $sd = 4.25$ ) were older than the individuals with identity moratorium ( $M = 21.70$ ;  $sd = 2.65$ ). Subjects with diffused diffusion status did not differ from any of the other groups in age.

Statuses in the three age groups was also found [ $\chi^2(df = 6, N = 665) = 18.30, p < 0.01$ ]. In the groups of 19-21 and 22-25-year-olds the frequency of occurrence of particular identity statuses was quite diverse, while in both of these age groups the status of identity moratorium could be observed the most frequently. In the group of subjects aged 26-35, an interesting phenomenon was observed: the percentage of individuals with identity moratorium turned out to be considerably lower than in the group of younger subjects, whereas the percentage of people with identity achievement and carefree diffusion was higher. The frequency of occurrence of particular identity statuses in different educational groups was also diverse, however to a lesser extent [ $\chi^2(df = 6, N = 665) = 22.16, p < 0.01$ ]. The most visible difference pertained to the fact that among full-time university students the frequency of occurrence of identity diffusion was significantly higher than in the other educational groups, especially in comparison with full-time post-secondary school students.

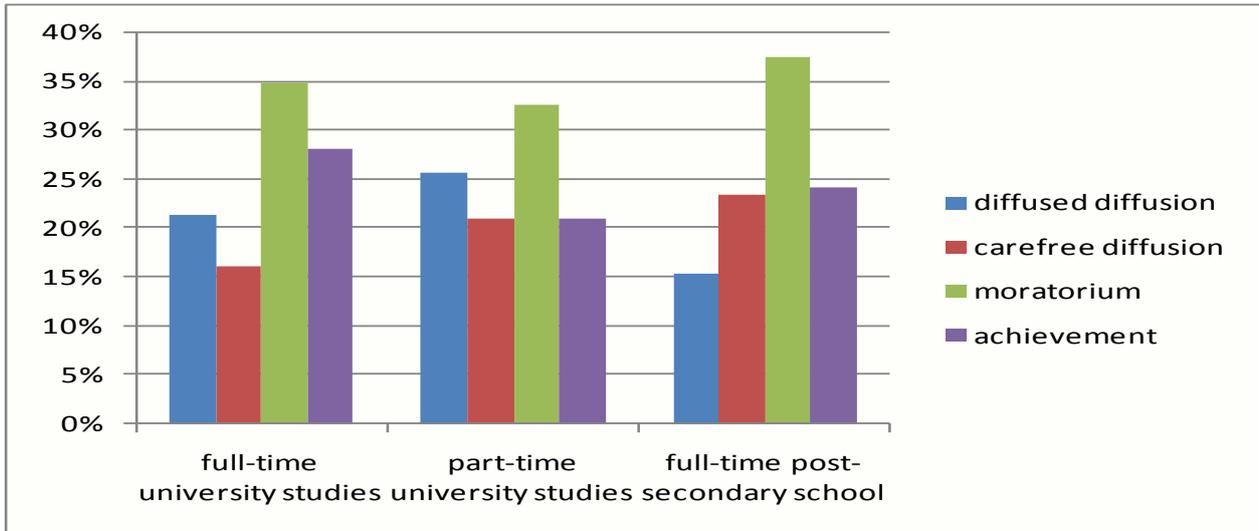


Figure 6. Identity statuses in the educational groups of subjects ages 19 to 21

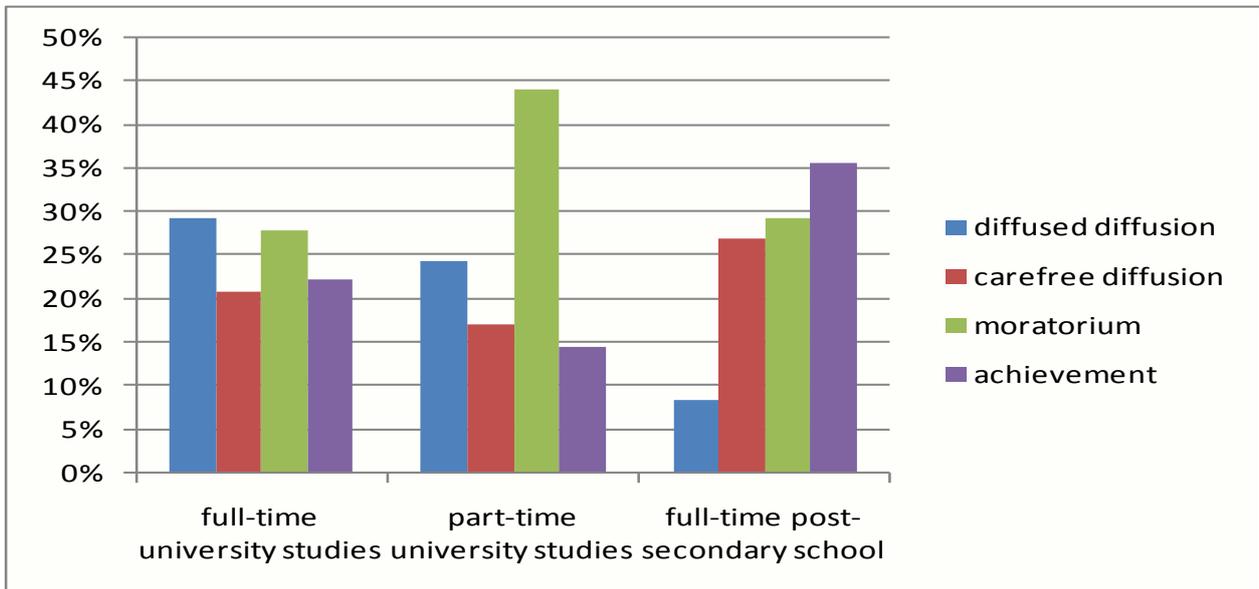


Figure 7. Identity statuses in the educational groups of subjects ages 22 to 25

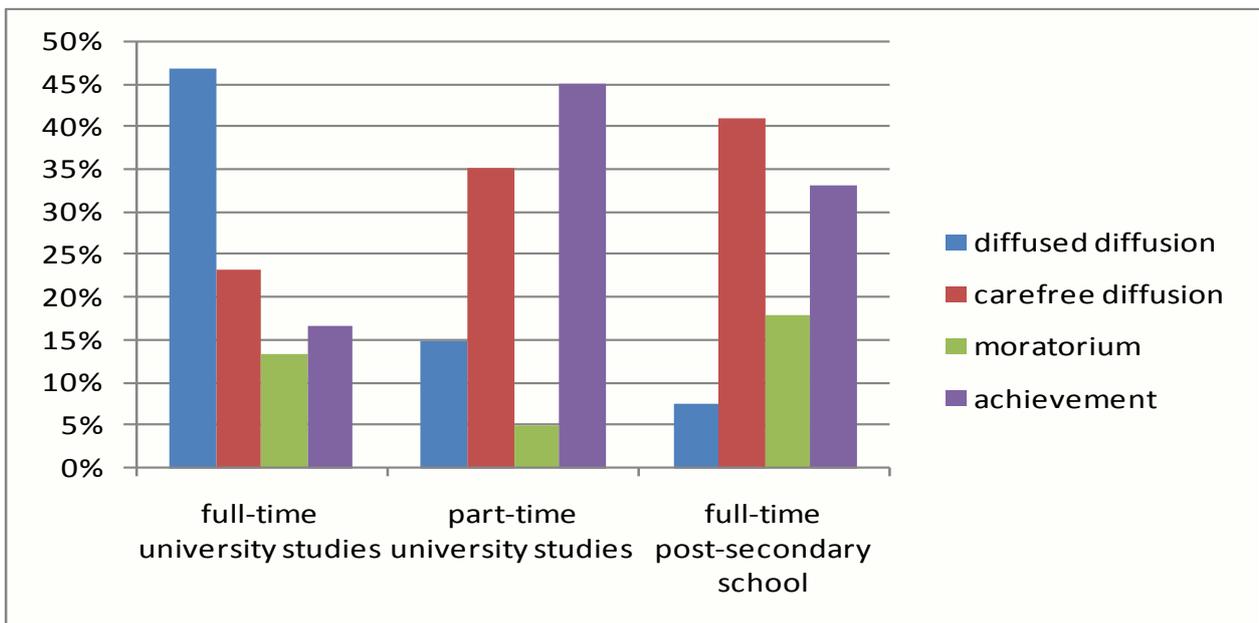


Figure 8. Identity statuses in the educational groups of subjects ages 26 to 35

Nevertheless, the most interesting differences, enabling an explanation of the overall effects described above, were found during the analysis of frequency of occurrence of particular identity statuses among individuals studying in different modes in particular age groups.

In the youngest group (19-21 years of age), the frequency of occurrence of particular identity statuses was similar in all educational groups [ $\chi^2$  (df = 6;  $N = 367$ ) = 5.25;  $p > 0.05$ ], while in every educational group the status of identity moratorium could be observed the most frequently (Figure 6).

Among the subjects at the age of 22-25, the frequency of occurrence of identity statuses was different in particular groups [ $\chi^2$  (df = 6;  $N = 209$ ) = 18.41;  $p < 0.01$ ]. The most distinct difference, in comparison with the younger participants, was found in the group of full-time post-secondary school students, where the percentage of individuals with diffused diffusion, carefree diffusion and moratorium was the lowest, and the percentage of people with identity achievement was the highest (Figure 7). In the group of full-time university students, in comparison with younger individuals, the percentage of subjects with identity achievement and moratorium was lower, whereas the percentage of people with identity diffusion (carefree diffusion and diffused diffusion) was higher. Among part-time university students the differences between the subjects at the age of 19-21 and 22-25 were rather small.

A totally different frequency of occurrence of particular identity statuses was found in the group of subjects at the age of 26-35 (Figure 8). In all educational groups, the percentage of individuals with identity moratorium was significantly lower, and the percentage of people with identity diffusion statuses was higher, while among full-time university students the status of diffused diffusion was considerably more frequent than among individuals in younger groups and the percentage of subjects with carefree diffusion was higher in the group of part-time university students and full-time post-secondary school students. One of the main differences between educational groups composed of 26-35-year-olds pertained to the percentage of individuals with identity achievement: this status was much less frequent among full-time university students than among the representatives of the other two educational groups.

## Discussion

In line with the assumed research hypothesis, both age and school type – mode of studying, proved to be significantly connected with the dimensions of identity. A significant difference between age groups in respect of the three dimensions of exploration has been observed. The oldest group was characterized by the lowest levels of all three dimensions of exploration. This seems to confirm the trends observed in other studies conducted in our country, according to which engagement in exploration decreases with age (Brzezińska, Piotrowski, 2009). In turn, commitment making and the strength of identification with commitment were found to be rather connected with contextual factors

that in the discussed studies were represented by the type of school / mode of studying.

Our hypotheses, according to which individuals who study in the full-time mode, i.e. full-time university students and full-time post-secondary school students, were expected to manifest more visible symptoms of identity crisis above the age of 26, have been only partially confirmed. Such a dependency was observed exclusively in the group of full-time university students, whereas the results obtained for full-time post-secondary school students were comparable to those of part-time university students.

The difference between full-time university students and the other educational groups became more significant with age – exploration in breadth, commitment making and identification with commitments decreased in successive age groups, and among the oldest subjects, those above the age of 26, the level of these dimensions was significantly lower than in the other educational groups, whereas ruminative exploration, on the contrary, was significantly higher in this group.

Among part-time university students and full-time post-secondary school students it was observed that the results of the commitment making and identification with commitment scales increased in successive age groups. Thus, it has turned out that the mere fact of studying full-time above the age of 26 is not by itself connected with difficulties in tackling an identity crisis, and that the type of educational institution needs to be taken into consideration.

Education in a post-secondary medical school in the majority of fields of study (such as those attended by the investigated individuals: medical rescue, massage therapy, cosmetology, occupational therapy) lasts 2 years (4 semesters). Additionally, this type of school can be selected, especially above the age of 26, by individuals who may have been professionally involved in the medical field and are continuing in such a school their professional career. In turn, full-time university students above the age of 26 could be either people who are interested in a radical change of their life and professional career's direction, or people who experience difficulties in finishing their studies, and their presence at full-time studies stems from a significant extension of the education period. This could explain why identity formation in these two groups – post-secondary and university students - takes such different directions. Our assumption that continuing full-time studies above the age of 26 can be treated, in some respects, as an unpunctual phenomenon, has been confirmed, however only with reference to full-time university studies, and not to full time education in general.

Notwithstanding, it needs to be emphasized that we are talking here about a lack of punctuality in the sense of diverging from a certain statistical norm. The subjects who belong to the group of full-time university students and are above the age of 26 (the group composed of individuals aged 26-35) continue education in a mode that definitely places them in the minority. Of course this does not need to be connected with experiencing by such individuals a subjective sense of unpunctuality, however, taking into account the results that have revealed a high percentage

of individuals with identity diffusion, such a possibility should not be disqualified. Beliefs about the punctuality of developmental tasks develop as a result of comparing one's own situation with the situation of peers and, at the same time, culturally-determined life scripts (see Bernsten, Rubin 2004), and the full-time university students over 26 can be recognized as "unpunctual" in both of these cases.

The results of our studies seem to confirm the fact that changes in the structure of identity that appear with age reflect the cultural and social changes that take place in the environment of the investigated individuals. Particular age groups did not constitute homogeneous entities – significant differences could be observed between individuals of the same age, but attending different types of educational institutions. Looking for the causes of this phenomenon, we can refer to changes of social norms that, at the beginning of the 21st century, have led Arnett (2000) to describe a new phase in human development – emerging adulthood. The phase suggested by Arnett is the time when young people find it extremely difficult to assess whether they already are adults or not, and is a time of constant changes, unpredictability, and searching for one's own identity (Arnett, 1997; 2007). The popularization of further education (the percentage of secondary school graduates who continue their education at university level has been constantly increasing in Poland – Szafranec, 2011) creates conditions conducive to moratorium prolongation, especially when it comes to full-time university students, for whom studying becomes a basic activity during the period of emerging adulthood.

Following Settersen's line of reasoning (2004), it can be stated that unpunctuality in the achievement of such a task as finishing education yields three types of consequences: social (in the form of exposure to interpersonal pressure to accomplish the developmental task connected with education and undertake new, "adult" developmental tasks, instead of being a "professional student"); personal (fears connected with the carrying out of developmental tasks – a high level of ruminative exploration); developmental (pursuing different developmental tasks than peers) (see also Wrosch, Heckhausen 2005). At the same time, based on the results obtained by Kokko et al. (2008), it can be speculated that this negative effect may disappear in the years that follow finishing formal education.

Particularly risky seems to be the fact that in the case of full-time university students both the adaptive exploration (in breadth and in depth) and commitments become less and less intensive. One of the greatest advantages of a prolonged education is the opportunity to deeply explore various alternatives, however, in the case of full-time university students who study off-time their education does not serve as a means of doing this. Unfortunately, we do not know whether the investigated individuals had experienced difficulties in identity formation in the past, for instance, at the beginning of studies or during early adolescence, or whether the difficulties experienced by them were caused by difficulties in finishing education on time. This issue needs to be analyzed in the future, ideally through longitudinal studies.

An unquestionable shortcoming of the present study is the disproportion between the number of investigated individuals in different age and educational groups, for example, crucial from the point of view of the explored problem, the small number of full-time university students at the age of 26-35, and a disproportion between men and women. A certain limitation to the interpretative potential is also the fact that only students from a medical post-secondary school were examined – it would be interesting to compare their results with results of students from different fields. The present study merely illustrates the phase of identity development in which the subject remained at the time, and they need to be replicated, preferably in the form of longitudinal studies. The conclusions formulated here need to be treated as preliminary. At the same time, we hope that other researcher will take up this interesting and hitherto unexplored issue of unpunctuality of events connected with education

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