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A Study of Personality Types Towards Students' Mental Health

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Abstract

Mental health illnesses can impair academic performance and social connections, both of which are crucial to a student's success. However, personality type also plays a crucial influence in mental health problems. This study intends to investigate personality types, mental health, the relationship between personality types and mental health, and gender variations in personality types and mental health among undergraduate students at Universiti Kebangsaan Malaysia (UKM). This study is a survey-based quantitative research. According to Krejcie and Morgan's (1970) table, this study's total sample size is 248. Systematic sampling was used as a sampling technique to choose participants. For data collection, Truity Test and Goldberg's General Health Questionnaire (GHQ-28) were adapted. The respondents were given a Likert scale questionnaire with 55 questions. Statistical Package for the Social Sciences (SPSS) version 26.0 was utilized to analyze the data. According to this study's findings, undergraduates have a high level of consciousness personality type (S.D. =.65090) and agreeableness personality type (S.D. =.62137). Undergraduates mental health falls under the category of social dysfunction (S.D. =.59537).

Keywords: Personality Types, Big Five, Mental Health, Undergraduate, Students

Introduction

In the context of Malaysia, the problem is focused on students, as emphasized by Yusof et al (2021) about mental health issues among young people in Malaysia, which are very serious and must be addressed effectively by all parties. Therefore, based on statistics released by the Public Health Institute (2020), it shows that about half a million Malaysians suffer from depression, and 2.3% of those aged 16 and above in the country have mental health problems. Everyone wants to have physical well-being and healthy mental health to live their daily lives well (Panis et al., 2019).

The word "personality type" refers to the psychosocial classification of diverse groups of individuals, based on a variety of theories. One of the personality type models is the 'Big Five' personality type, often known as the 'OCEAN' personality type. The personality types are comprised of openness to experience, consciousness, extraversion, agreeableness, and neuroticism. This specific personality type model contains both positive and negative personality types, which are also present in other personality type models (Lim et al., 2020). Neuroticism, one of the "Big Five" personality qualities, measures the amount to which a

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person experiences negative or unstable emotions (Cherry, 2022). According to Cherry (2022), openness to experience is described as being open to newly discovered experiences. People with the openness personality type frequently have varied interests and a strong desire to learn about the world and its inhabitants. Additionally, the consciousness personality type is classified as a conscientious, dependable, and quick individual. Personality characteristics include neatness and thoroughness. Extraversion is a personality trait characterized by the desire to interact with others. Extraversion seeks to always be the center of attention.

Trust, thoughtfulness, and affection are characteristics of agreeableness personality traits. They are caring and enjoy making people happy. The final personality type is neuroticism, which is characterized by sad, anxiety, and emotional instability. They frequently experience high stress levels, are quick to anger, suffer from anxiety, and find it challenging to recover from stressful situations. Students with high neuroticism experience more negative emotions, anxiety, and anger in this situation (Fuente et al., 2020). Mental health illnesses can negatively impact academic performance and social connections, both of which are crucial for school achievement (Association for Children's Mental Health, 2019). Student rate of mental illness is rising. Consequently, they require assistance, as they are among the most significant individuals who require academic assistance. Individuals with negative personality characteristics are the leading cause of mental health disorders (Psychology Today, 2022).

This study aims to investigate the personality type and mental health of Universiti Kebangsaan Malaysia (UKM) undergraduates. There are four specific objectives:

- 1. To identify the students' personality types based on the Big Five Personality Model.
- 2. To identify the students' level of mental health.
- 3. To identify the difference between personality types and students' mental health among gender.
- 4. To identify the relationship between students' personality types and their mental health.

Literature Review Mental Health

The World Health Organization (WHO) defines mental health as a condition of well-being in which an individual is aware of their potential, can deal with usual pressures of life, and can work effectively and productively. Mental health is influenced by emotional, psychological, and social wellbeing. It influences our thoughts, emotions, and actions. In addition, it influences how we interact with others and make judgments. Mental health is essential from childhood to old age (MentalHealth, 2022).

Holmes (2022) describes mental health as the emotional and mental wellbeing of an individual. Mental illness can lead a person to encounter difficulties in daily life. Mental health has a strong correlation with a high quality of life, which is the capacity to perform daily tasks without difficulty. The statement relates to the findings of the study by Marzabadi et al (2018), which indicated that courteous and appreciative individuals have a greater likelihood of enjoying better mental and physical health. Researchers discovered that those who are attentive and appreciative of all things had better health. Positive personality, according to the research of Rachmawati et al (2019), is centered on being vigilant and appreciating everything, quality of life, and excellent health.

Depression is a serious illness that should be avoided at all costs (Sahni et al., 2020). Using the Big Five personality model to create emotional barriers against Covid-19 is the title of the researcher's study, which identifies how the Big Five personality model can help

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develop emotional resilience in a pandemic scenario and whether these five personality traits differ between students, working adults, and housewives. Consequently, the study of the findings reveals three personality types: the resilient, the overly-controlling, and the emotionally uncontrolled. Emotional resilience is connected with consciousness, openness to experience, and neuroticism. As a result, they are more resilient in adverse learning environments and tend to be organized, creative, and unique thinkers.

There are multiple definitions of "theory" and "model," as well as numerous justifications for each. It is possible to concur with Fried's (2020) assertion regarding theories and models, wherein a theory is a comprehensive knowledge framework that describes facts and evidence. A model is a more precise and concrete theoretical need, applied to specific components of the theory to provide a more concentrated explanation or comprehension of reality. The model bridges theory and reality. Miller (2019) explains that some mental health theories are analytical/developmental (Freud, Jung, Erickson, Kohlberg), behavioral (Watson, Skinner, Pavlov), cognitive (Tolman, Piaget, Chomsky), social (Bandura, Lewin, Festinger), humanistic (Rogers and Maslow), and personality (Erickson's theory of psychosocial development).

Big Five Personality Types Model

According to Bedaso and Han (2021), an individual's personality remains largely unchanged as they age. For instance, neuroticism tends to increase with age, but extraversion and conscientiousness tend to decrease. Subjective well-being refers to how individuals judge their own pleasure and life experiences, which can range from sadness to happiness. Important to subjective well-being is personality. Therefore, the students who were chosen as participants in this study might learn that it is crucial to maintain mental health prior to reaching old age. According to Proto & Zhang (2021), those with extroverted and open personality qualities have a higher chance of mental health deterioration, but those with pleasant personalities have a reduced risk.

The Myers-Briggs Type Indicator, or MBTI, categorizes individuals based on how they process environmental information. Due to their Myers-Briggs (MBTI) personality type, some persons refer to themselves as INFJ or ENFP. The Myers-Briggs Type Indicator determines an individual's personality (MBTI). Extrovert against introvert, senses versus intuition, logic versus emotions, and judgment versus perception. These characteristics of personality indicate how each individual interacts with the outside world. To examine a person's character, the OCEAN model presents five personality traits. These include openness to experience, consciousness, extraversion, agreeableness, and neuroticism.

Research Methodology Research design

This research is quantitative and uses a study design. To collect data for this study, Google Forms were used to develop a set of questions. According to Holgado et al (2020), the purpose of the questionnaire survey is to collect data and opinions from a chosen sample of respondents. The Google Forms survey method is therefore suitable for this study, as it simply requires the link to the questionnaire to be distributed by email and no in-person meetings. In addition to avoiding contact with others to avoid Covid-19, the majority of undergraduates are preoccupied with their education and have limited time. The survey design was also selected to ensure that it could achieve the study's aims.

Population and Sample Study

This research examines undergraduates enrolled in the Faculty of Education at the Universiti Kebangsaan Malaysia (UKM). Students in their second and third years who took courses on thinking skills in education and industry/community made up the study's respondents. 298 students make up the total enrollment. Using Krejcie and Morgan's (1970) table, the sample size is calculated. Students in years one through three are therefore in an academic semester. Those who participate in practical training are students in their fourth year. This study employed a systematic sampling method.

Data Collection Procedures

The research questionnaire was created in Google Forms and sent to each responder through email. This questionnaire is divided into three sections: (A) demographic information, (B) personality type, and (C) mental health state. Part A comprises of demographic inquiries, including gender and academic year. Twenty-five questions taken from the Truity Test comprise Section B. This survey employs a 5-point Likert scale, ranging from 1 (very inaccurate) to 5 (extremely accurate). Part C includes 28 questions from Goldberg's General Health Questionnaire (GHQ-28) to evaluate the mental health of students. This section employs a Likert scale continuum ranging from "More than usual" to "Not at all." There are a total of 53 questions, excluding the two questions that require respondents' demographic information. Furthermore, the questions are offered in English and Malay. This is done because Malay is the university's primary language.

Data Analysis

The data was analyzed using Statistical Package for the Social Sciences (SPSS) version 26.0 software. The data were examined using descriptive (mean, percentage, standard deviation) and inferential (t-test for independent samples and Pearson correlation) methods. The table below displays the mean score interpretation used to identify the mean score interpretation for the respondent's personality type and mental health condition.

Table 1
Interpretation of Mean Scores (Nunnally & Berstein, 1994)

Mean Scale	Level
4.01 - 5.00	High
3.01 - 4.00	Medium High
2.01 - 3.00	Medium Low
1.00 - 2.00	Low

Table 2 shows the interpretation of the Pearson correlation coefficient (r). Karl Pearson was the one who came up with the idea, and Francis Galton was the one who first presented it (1844). The table was used to identify the relationship between students' personality types and their mental health in this study.

Table 2
Interpretation of Pearson's correlation coefficient ®

Correlation Coefficient Value (r)	Direction and Strength of Correlation
-1	Perfectly negative
-0.8	Strongly negative
-0.5	Moderately negative
-0.2	Weakly negative
0	No association
0.2	Weakly positive
0.5	Moderately positive
0.8	Strongly positive
1	Perfectly positive

Validity and Reliability

A pilot study was conducted to ensure the questionnaire's reliability and make any necessary adjustments. Cronbach's alpha, which is also known as coefficient alpha, is a measure of reliability, namely the reliability of internal consistency or interrelatedness of items, scales, or tests (Cronbach, 1951). The statistics regarding the instrument's reliability are shown in Table 3.

Table 3
Instrument Reliability Statistics

Cronbach's Alpha	N of Items
.919	53

Following the pilot study, data were obtained from 165 respondents. Based on the questionnaire responses, Cronbach's alpha was calculated, and the study's reliability data revealed a Cronbach's alpha of 0.768 with 25 items for scale 1. The second scale revealed a value of 0.93 for 28 items.

Table 4
Instrument Reliability Statistics

Construct	Number of items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
Personality type	25	.768	.834
Mental health	28	.930	.912

Results

Respondent Demographics

This section is part of Questionnaire Part 1. Details of the analyzed data pertain to the demographics of the respondents, such as their gender and current year of study in the university category. This study has included 165 participants. Table 5 presents the respondent's demographic information, including their gender category and enrollment year. There were 89 (53.9%) females. While the majority of the participants in the study were third-year students, 101 (61.2%).

Table 5

Demographic

Demography		Frequency	Percent (%)	
Gender	Female	89	53.9	_
	Male	76	46.1	
Current year of	Year 2	64	38.8	
study	Year 3	101	61.2	

Personality types based on the Big Five personality model

Part B of the questionnaire contained personality types according to the "Big Five" personality model for undergraduate students. This section summarizes the results for items 1 to 25. It is supported by the frequency and percentage of participants' levels of agreement and disagreement as measured by a Likert scale in the survey. According to Table 6, consciousness (mean= 4.3733, s.d.= .65090) and agreeableness (mean= 4.4012, s.d.= .62137) are more frequent than other personality types.

Table 6
Personality Types

Construct	Mean	S.D.	Level
Openness	3.9297	.87536	Medium High
Consciousness	4.3733	.65090	High
Agreeableness	4.4012	.62137	High
Extraversion	3.2448	1.29131	Medium High
Neuroticism	3.5067	1.08617	Medium High

Status of students' mental health

Part C, the final section of the questionnaire, addresses the mental health state of undergraduate students. This section presents the conclusions for items 26 through 53. The demonstrated analysis is supported by the frequency and percentage of respondents' levels of agreement and disagreement as indicated by their Likert scale responses to the questionnaire. Students' mental health is social dysfunctional, which is at a medium-high level (mean= 3.7065, s.d.= .59537), according to Table 7.

Table 7

Mental Health Status

Construct	Mean	S.D.	Level
Somatic symptoms	2.7515	.90404	Medium low
Anxiety/ insomnia	2.0087	1.16269	Medium low
Social dysfunctional	3.7065	.59537	Medium high
Severe depression	1.7342	1.12959	Low

The differences between personality types and genders

H1: There is no significant difference between the personality types of students in the gender group.

An independent sample t-test was conducted to compare the personality type of openness for male and female respondents. There were no significant differences (t (df) = 163, p = .314) in openness scores for female (M = 3.99, SD = .70) and male (M = 3.85, SD = 1.03). There were no significant differences (t (df) = 163, p = .053) in extraversion scores for female (M = 3.065, SD = 1.21) and male (M = 3.455, SD = 1.356). Therefore, the hypotheses for personality types of openness and extraversion are accepted.

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Table 8
Personality Type

Construct	Gender	N	Т	DF	Sig. (2- tailed) (p)	Mean differe nce	Std. Error Differe nce
Openness	Female	89	1.009	163	.314	.13800	.13671
	Male	76					
Agreeablene ss	Female	89	-2.638	163	.009	25145	.09533
	Male	76	_				
Extraversion	Female	89	-1.951	163	.053	39009	.19998
	Male	76	_				
Neuroticism	Female	89	4.415	163	.000	.71002	.16082
	Male	76	_				
Consciousnes	Female	89	-2.341	163	.020	23483	.10030
S	Male	76	_				

The differences between mental health and gender

H2: There is no significant difference between mental health and gender among students.

To compare mental health and gender, a t-test was conducted on separate samples. Table 9 displays the results about the mental health of male and female. Based on the table, the t-test showed that there are no significant differences of social dysfunctional among both females and male (t (df) = 163, p = .013) in scores for female (M = 3.60, SD = .53) and male (M = 3.83, SD = .63). Hence, there are no difference of the mean score between male and female and the hypothesis is accepted.

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Table 9 Mental Health

Construct	Gender	N	Т	DF	Sig. (2- tailed) (p)	Mean differe nce	Std. Error Differe nce
Somatic symptoms	Female	89	4.219	163	.000	.56735	.13448
	Male	76					
Anxiety/ insomnia	Female	89	4.404	163	.000	.75832	.17219
	Male	76	_				
Social	Female	89	-2.519	163	.013	23051	.09151
dysfunction	Male	76	_				
Severe	Female	89	3.814	163	.000	.64676	.16956
depression	Male	76	_				
			_				

The relationship between personality type and mental health of students

H3: There is no significant relationship between personality type and mental health of undergraduate students.

The relationship between personality types (openness, consciousness, agreeableness, extraversion, and neuroticism) and the mental health of students (somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression) is illustrated in Table 10. Pearson product correlation between openness and somatic symptoms (p = .336), anxiety/insomnia (p = .267), social dysfunctional (p = .241) and severe depression (p = .550) was not significant. The Pearson correlation of extraversion and social dysfunction was found to be no association and not significant (p > .444). Pearson correlation of neuroticism and social dysfunction was found to be of no association and not significant (p > .875). Nevertheless, there is a relationship between neuroticism and somatic symptoms, anxiety/ insomnia, and severe depression, which explains why an increase in neuroticism would result in an increase in somatic symptoms, anxiety/ insomnia, and severe depression.

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Table 10 Correlations between students' personality types and mental health

		1	2	3	4	5	6	7	8	9
Openne ss	Pearson Correlation	1	.242**	.230**	282**	.421**	.075	087	.092	.04 7
	Sig. (2-tailed)		.002	.003	.000	.000	.336	.267	.241	.55 0
Conscio usness	Pearson Correlation	.242**	1	.723**	.235**	128	25 2**	439* *	.463 **	3(8**
4511655	Sig. (2-tailed)	.002		.000	.002	.100	.001	.000	.000	.00
Agreeab leness	Pearson Correlation	.230**	.723**	1	.215**	064	36 4**	431* *	.454 **	2i 7**
iciicss	Sig. (2-tailed)	.003	.000		.005	.413	.000	.000	.000	.00 0
Extraver sion	Pearson Correlation	282* *	.235**	.215**	1	504* *	.236	.175*	.060	.20 0**
31011	Sig. (2-tailed)	.000	.002	.005		.000	.002	.025	.444	.01 0
Neurotic ism	Pearson Correlation	.421**	128	064	504**	1	.303	.331**	.012	.30 8**
	Sig. (2-tailed)	.000	.100	.413	.000		.000	.000	.875	.00 0
Somatic sympto	Pearson Correlation	.075	252* *	364**	.236**	.303**	1	.817**	14 9	.70 9**
ms	Sig. (2-tailed)	.336	.001	.000	.002	.000		.000	.056	.00
Anxiety/ insomni	Pearson Correlation	087	439* *	431**	.175*	.331**	.817 **	1	21 8**	.81 4**
а	Sig. (2-tailed)	.267	.000	.000	.025	.000	.000		.005	.00
Social Dysfunc	Pearson Correlation	.092	.463**	.454**	.060	.012	14 9	218* *	1	1(5
tion	Sig. (2-tailed)	.241	.000	.000	.444	.875	.056	.005		.18 1
Severe Depressi on	Pearson Correlation	.047	308* *	287**	.200**	.308**	.709 **	.814**	10 5	1
	Sig. (2-tailed)	.550	.000	.000	.010	.000	.000	.000	.181	

Discussion

The difference between students' personality types among genders

The majority of respondents to the questionnaire are female, which is a little difference from the overall number of male. The majority of respondents are from year 3, not year 2. According to this study's findings, the highest personality type among respondents is consciousness and agreeableness, answering the first research question. The majority of undergraduates are responsible, structured, hard-working, goal-oriented, and attentive to norms and rules, all of which are indicative of consciousness-type personalities. Aside from consciousness, the majority of questionnaire responses reflect personalities of agreeableness. This indicates that the majority of responders have a personality that is kind, kind, compassionate, cooperative, and helpful. They are the type of people who have a good outlook on humanity and get along well with others. There are significant gender differences in neuroticism, agreeableness, and consciousness associated with personality type, but there are no significant gender differences in openness and extraversion. Male responders are more conscious and agreeable than their female counterparts. This result is consistent with

the findings of Weisberg et al (2018), who discovered that females reported greater Big Five neuroticism scores than male.

The difference between students' mental health among genders

The second research question addressed the respondent's mental health that falls under the category of social dysfunction. The majority of respondents chose to agree with the statement that they manage to be busy and busy, take longer in what they do, feel overall that they do something well, are satisfied with the manner in which they carry out their work, feel they play a useful role in something, feel able to make decisions about things, and can enjoy their normal daily activities. According to Nickerson (2022), social dysfunction develops when the structure of a social system does not match the function for which it was built. This indicates that the majority of mental health issues among responders are social dysfunction.

To answer the third research question, it was determined that severe depression, anxiety/insomnia, and somatic symptoms, but not social dysfunction, showed significant gender differences. In each of the three mental health categories, namely somatic symptoms, anxiety/insomnia, and severe depression, a greater proportion of female respondents than male responses were collected. The findings of Fatemeh & Naser (2018) study demonstrated that young women are more prone to anxiety than young men, which is consistent with the findings of this study. The researcher emphasizes that due of their thought control mechanisms and metacognitive beliefs, which lead to their having emotional and neurotic disorders.

On the other hand, it has been suggested that women are almost twice as likely to be affected by depression as males are, and that depression in women seems to have different contributory reasons than it does in men (Psycom, 2022). Reproductive hormones, a distinct female response to stress, and social influences that are specific to a woman's life experiences are all elements that can play a role in the development of this condition. The findings of this study are similar with those of Zaenb et al (2020) study, which came to the conclusion that it is concerning to find such a high frequency of anxiety and depression among female students.

The relationship between students' personality types and their mental health

The last research question was the relationship between students' personality types and their mental health. Based on the findings of this study, an increase in consciousness lead to lower somatic symptoms, anxiety/ insomnia and severe depression. It can be said that a person who is consciousness which is the type of person that is careful with anything they are doing, prefer to be organized and they have the ability to make themselves do things that they know they should do and know what they should not do, are the ones that have low chance of getting somatic symptoms, anxiety/ insomnia and severe depression such as mental health illness of pain, shortness of breath, fatigue or weakness. As for mental health condition, it includes the symptoms of feeling nervous, panic, fear or a rapid heartbeat, and mental health condition such as a persistent feeling of sadness and having zero interest of anything (Bell et al., 2019). However, this study proved that a higher level of consciousness cause social dysfunction. This means that an individual with higher level of consciousness would have the mental health problems such as feeling shy, anxious when they are around other people, or rarely socialize with people.

This study also showed that an increase in agreeableness lead to a lower somatic symptoms, anxiety/ insomnia and severe depression in mental health. It can be proven that an individual that are friendly and helpful and find it important to get along with others, always show to people that they are willing to put aside their interests and efforts for other people and they are also very generous towards other people, are the ones that would not have the risk of getting mental health conditions of somatic symptoms, anxiety/ insomnia and severe depression. However, a higher social dysfunction are caused by higher level of agreeableness. It indicates that even though individuals are the agreeableness type of personality, but it is possible that some people with agreeableness gets shy easily, feel anxious and they do not prefer to socialize with people.

There is no relationship between openness and all of the mental health such as somatic symptoms, severe depression, anxiety/ insomnia and social dysfunction. For the personality type of extraversion has no relationship to only social dysfunction. But, this study proved that the increase in extraversion leads to higher level in somatic symptoms, anxiety/ insomnia and severe depression. Individuals with extraversion type of personality are the ones that is outgoing and very socialize person which like to participate in any event that consist of gathering with people. Hence, it proved that some of extraversions will possibly to highly get mental health conditions of somatic symptoms, anxiety/ insomnia and severe depression.

Based on the findings, this study demonstrates that neuroticism and social dysfunction have no relationship. Nevertheless, there is a relationship between neuroticism and somatic symptoms, anxiety/ insomnia, and severe depression, which explains why an increase in neuroticism would result in an increase in somatic symptoms, anxiety/ insomnia, and severe depression. Individuals with neuroticism are the ones that usually will worry about things, easily get disturbed, get mood swings all day and often feel sad. Therefore, neuroticism is the only personality type in Big Five model that is a negative personality type. So, neuroticism individuals can get anxiety/ insomnia, severe depression and somatic symptoms easily.

Conclusion

This study is capable of reaching to its conclusion, which provides answers for the objectives. The majority of the participants in this study were third-year female students. Therefore, the majority of students in the Faculty of Education at Universiti Kebangsaan Malaysia (UKM) showed the Big Five personality traits of consciousness and agreeableness. This study revealed that certain personality types have an impact on the mental health of undergraduate students, which falls under the category of social dysfunction. There are differences in personality types and mental health between male and female students. These differences include neuroticism, agreeableness, and consciousness, as well as severe depression, anxiety, insomnia, and somatic symptoms. This study showed a relationship between the personality types of students and their mental health, which is social dysfunction. A higher level of agreeableness causes a greater level of social dysfunction. This study demonstrates that mental health can be influenced by a person's personality type, since it can be demonstrated that the mental health of undergraduate students is just social dysfunction resulting from their consciousness and agreeableness personality type.

According to the findings of this study, influential individuals such as educators, students, and researchers can dedicate their whole attention and fulfill their responsibility to aiding students with mental health issues. Specifically for students who must equally manage their studies and mental wellbeing. Many university students are ignorant of the importance of caring for their mental health, which can lead to mental issues. People may not be able to sustain good mental health throughout their life as a result. This study issue should be reexamined by researchers from various areas. In addition, the purpose is to learn more about the topic and identify the research question, which may result in different findings from this study. There is a need for greater methodological research into how to reliably determine the personality types and mental health of university students. This study had a small sample size consisting solely of undergraduates from two different courses. Aside from that, this study collects data through a questionnaire in which respondents can only select the options provided and cannot express their own viewpoint. A suggestion for future studies is to expand the number of study population-based samples.

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