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THE IMPACT OF GENDER ON MOTIVATING AND DEMOTIVATING FACTORS IN LEARNING AND WORK AMONG REPRESENTATIVES OF GENERATION Z

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Purpose: The aim of the article is to investigate the influence of gender on motivating and demotivating factors in learning and work among representatives of Generation Z.
Design/methodology/approach: Based on survey data collected from 245 women and 203 men within the Generation Z group (aged 19-26), the most significant motivating and demotivating factors for learning and work were identified. These factors were subsequently analyzed with respect to gender differences.
Findings: The research has shown that gender significantly influences the motivating factors for learning. Substantial and statistically significant differences were observed among 7 out of 13 investigated motivating factors and as many as 16 out of 20 demotivating factors. Women consistently rated the impact strength of all factors on motivation for learning significantly higher.
Research limitations/implications: The limitations of the article lie in its focus solely on students from two educational centers in Poland and individuals aged 19-26 years old.
Practical and social implications: The results indicate that women are more sensitive to the effects of motivating and demotivating factors for learning.
Originality/value: The initial categorization of specific motivators and demotivators into three groups was proposed: the first group concerned benefits, the second comfort, and the third effort. Significant similarities were observed between the motivating and demotivating factors for learning and work among the surveyed Generation Z representatives. The analysis results indicated the need to pay particular attention to demotivating factors for learning, as they hold significantly greater importance than motivating factors.

Keywords: motivation, gender, learning, working, generation, male, female.

Category of the paper: research paper.

1. Introduction

Motivation plays a pivotal role in every individual's life, spanning from early childhood to late adulthood. It applies universally to both men and women. Research conducted over the past

several decades indicates that gender indeed plays a significant role in motivation, such as in learning and work. Several decades ago, women were far less likely to pursue higher education or hold prominent professional positions than they do now (Meece et al., 2009). However, due to social, economic, and particularly cultural changes, the differences in behavior and motivation between both groups have been continuously evolving. Consequently, these differences have been the subject of numerous scientific studies for many years (Bugler et al., 2015; Dai, 2001; Reddington et al., 2015).

The studies (Gardiner et al., 2014; Mahmoud et al., 2020; Sparks, 2012) indicate that behaviors and social attitudes vary depending on age and generation. Generation Z (1995-2012) is the first cohort growing up in a fully digital society. Currently (as of 2023), they range from 11 to 28 years old, and a significant portion of them are both studying and working part-time. This raises questions about the motivating and demotivating factors influencing Generation Z representatives in their studies and work. The objective of the paper is to analyze popular theories of motivation in learning and work and determine the most significant motivating and demotivating factors within the group of Generation Z representatives.

As part of the research on motivation in learning and work, the study sought answers to the following research questions:

1. What are the most significant motivating and demotivating factors for Generation Z representatives (aged 19-26) in their studies and work?
2. Does gender influence the significance of selected factors on motivation in learning and work?

This publication is organized as follows: Chapter 2 describes and compares issues related to selected popular motivation theories. Chapter 3 outlines the methodology used in the conducted research. Chapter 4 presents the obtained results. Finally, the article concludes with a summary.

2. Motivation theories in practice

In scientific literature, one can observe the division of motivation theories into three different groups (Osuch, 2012; Stoner et al., 2001; Zdonek et al., 2021):

- Content theories, which emphasize the significance of internal factors (related to human needs) that drive a person to act in a specific way;
- Process theories, which determine how and as a result of what goals individual employees are motivated;
- Reinforcement theories, illustrating how the effects of past behavior influence future behaviors in an employee's learning process.

One of the most frequently encountered motivation theories in the content theories group is Abraham Maslow's hierarchy of needs theory (Cox, 1987; Maslow, 1954). It presents levels of human needs, starting from physiological needs (e.g., food and sleep, safety), through social needs (e.g., belongingness, acceptance, love, respect, recognition), cognitive needs (to know, understand), and aesthetic needs (beauty, order), culminating in self-actualization needs (personal development and fulfillment) (Daniels, 1982; Maslow, 1999; Wahba, Bridwell, 1976). This theory assumes that people seek to fulfill their needs, starting from the lower levels of the hierarchy and progressing to higher levels.

Another theory is Douglas McGregor's Theory X and Y (McGregor, 1960; Pardee, 1990). He distinguished two opposing theories regarding the nature of people and their motivation. Theory X assumes that people are inherently lazy, dislike work, and need external control, whereas Theory Y assumes that people are naturally active, enjoy working, and can be self-directed and creative if properly motivated and supported.

McClelland (McClelland et al., 1953) identified three main motivational needs: the need for achievement (the drive for success and setting ambitious goals), the need for power, and the need for affiliation. This theory suggests that different individuals are driven by different needs.

Herzberg (Herzberg, 1968) proposed that satisfaction and dissatisfaction do not exist on the same continuum and therefore are not opposites. He further stated that motivator factors can cause satisfaction or lack thereof, while hygiene factors cause dissatisfaction when absent and absence of dissatisfaction when present, each having its own strength (Pardee, 1990).

Victor Vroom's Expectancy Theory (Huitt, 2001; Vroom, 1964), belonging to the group of process theories, assumes that people take actions based on their expectations regarding outcomes. Motivation arises from the belief that action will lead to a desired outcome, and that outcome is valuable to the individual. This theory takes into account three key factors:

- Expectancy (the perception of the probability of success).
- Value of Obtaining Goal (how important and valuable the goal is to the individual).
- Instrumentality (the belief that a particular action leads to the goal).

These three groups of factors are combined into a formula where motivation is the product of expectancy, instrumentality, and the value of obtaining the goal (Formula 1). Therefore, all three must be present at a relatively high level for motivation to occur.

$$\text{Motivation} = (\text{Expectancy}) * (\text{Instrumentality}) * (\text{Value of Obtaining Goal}) \quad (1)$$

The Self-Determination Theory (SDT) (Deci, Ryan, 2013; Ryan, Deci, 2017) has garnered significant popularity in recent years. It suggests that all individuals have three basic psychological needs: autonomy, competence, and relatedness, which impact motivation, satisfaction, and well-being. Autonomy relates to the sense of having one's own free choice. Its opposite experience is the feeling of compulsion or control in one's behavior. Competence refers to the experience of effectiveness in actions. Relatedness pertains to the need for a sense of connection and belonging with others

Despite the default association of motivation with something an individual wants to do voluntarily, scientific literature (Bénabou, Tirole, 2003; Ryan, Deci, 2000; Vallerand, 1997) distinguishes its division into external and internal motivation. External motivation involves individuals' behavior to perform tasks and learn new skills due to external rewards or avoiding punishment. The individual engages in the behavior not because it is enjoyable or appealing but to receive a reward or avoid punishment in return. External and internal motivation are often treated separately, focusing on utility (external motivation) or pleasure (internal motivation) (Teo et al., 1999).

3. Materials and Methods

3.1. Research sample and questionnaire

Within the multifaceted study conducted in 2022 and 2023, surveys were carried out among both full-time and part-time students from two universities in Poland (Silesian University of Technology in Gliwice and University of Agriculture in Krakow). In 2022, preliminary research involving 80 respondents (Generation Z) was conducted concerning motivating and demotivating factors for studying. The questionnaire consisted of open-ended questions about motivating and demotivating factors. Based on the provided responses and a literature review, another questionnaire was developed for the actual research, featuring a list of motivating and demotivating factors measured on a Likert scale. Approximately 750 students from 8 fields of study: management, business analytics, logistics, management and production engineering, environmental engineering, spatial economy, geodesy, landscape architecture were invited to participate. Concerns existed about obtaining only around 10-20% correctly completed questionnaires from individuals with certain personality traits (openness, willingness to share knowledge, etc.). Hence, a form of incentive was introduced, offering the chance to earn extra points for participation in the study and discussion during classes related to the addressed issues in the research (such as motivation, generational differences, and ICT technology development). The study received substantial interest. The survey concluded with a unique identifier for each participant, which had to be submitted in a special form as confirmation of participation. Participation was optional and anonymous. After excluding incomplete, qualitatively doubtful responses and those from individuals above 26 years old, as well as responses from individuals declaring a gender other than male or female (due to their small number < 2%), statistical analysis of the results was conducted with 448 responses from individuals aged 19 to 26 taken into account. Table 1 presents the profile of the respondents.

Table 1.
Profile of respondents

Demographic items	Frequency	Percentage (%)
Gender		
Female	245	54.7
Male	203	45.3

Source: Own elaboration

One of the aspects of this research involved analyzing the motivating and demotivating factors for studying from the perspectives of both women and men, considering selected personality traits. Based on preliminary open-ended survey inquiries, a list of motivating and demotivating factors for students' learning was compiled. This list was then analyzed, and based on this analysis and scientific literature, 13 motivating factors and 20 demotivating factors for studying were identified. Each of these factors was assessed in the conducted study on a Likert scale from 1 to 5, where: 1 - no influence or very little influence; 2 - low influence; 3 - moderate influence; 4 - high influence; 5 - very high influence.

The question about motivating factors for studying was: Q5. What motivates you to study or helps in learning (and how does it influence your motivation)? The question about demotivating factors for studying was: Q6. What demotivates you from studying or hinders learning (and how does it influence your motivation)? These questions were primarily directed at individuals simultaneously studying and working. The questions were randomly distributed to only a small portion of the respondents. A total of 94 responses regarding motivating and demotivating factors for studying were obtained.

The lists of motivating and demotivating factors for studying that were subjected to analysis are presented in Tables 2 and 3.

Table 2.
Motivating factors for studying

ID	Motivating factor
MF1	Small but immediate reward (e.g., perks)
MF2	Topics related to personal interests
MF3	Desire to be among the best in the group
MF4	Avoidance of being among the worst in the group
MF5	Interesting practical knowledge
MF6	Interesting theoretical knowledge
MF7	Small immediate penalty for lack of preparation (for studying)
MF8	Obtaining a certificate of acquired skills
MF9	Engaging tasks
MF10	Group work
MF11	Positive atmosphere during classes
MF12	Possibility of obtaining a scholarship
MF13	Listening to music in the background

Note: Own elaboration.

Table 3.
Demotivating factors for studying

ID	Demotivating factor
DF1	Stress during classes
DF2	Noise
DF3	Excessive amount of material to study
DF4	Public questioning "at the board"
DF5	Peer reluctance to study
DF6	Material that is too difficult
DF7	Unfair grading by the teacher
DF8	Impractical knowledge
DF9	Long, monotonous classes
DF10	Theory-heavy with little practical application
DF11	Unpleasant teacher
DF12	Other peers cheating (e.g., copying assignments)
DF13	Outdated and boring material
DF14	Criticism from the teacher
DF15	Nice weather
DF16	Unpleasant atmosphere within the group
DF17	Competition for grades within the group
DF18	(in times of COVID-19) Various distractions (FB, messages, YouTube)
DF19	(in times of COVID-19) Lack of physical contact with peers
DF20	(in times of COVID-19) Lack of physical contact with the teacher

Note: Own elaboration.

The Cronbach's alpha coefficient for questions regarding motivating factors (MF1-MF13, 13 items) was 0.757, and for questions related to demotivating factors (DF1-DF20, 20 items) it was 0.847. The obtained results confirmed high and acceptable reliability of the research tool.

3.2. Statistical Analysis

In the statistical analysis, 448 questionnaires were utilized (n = 448). A comparison between two groups divided by gender was conducted using the Mann–Whitney U test. Statistical hypotheses were verified at a significance level α of 0.05. Factor analysis was also applied to group the studied factors. The statistical analysis was carried out using Microsoft Excel and Statistica Tibco.

4. Results

In the analyzed population, there were 448 respondents, comprising 245 women (54.7%) and 203 men (45.3%). The gender structure of the surveyed population reflects the composition of students in Polish universities. According to data from the Central Statistical Office (GUS) and the POL-on system in 2022, approximately 1.2 million individuals were enrolled in education in Poland. There were more female students than male students (58% vs. 42%) (Website GUS, 2023). Based on the obtained results, motivators and demotivators for learning

were ranked from the most to the least significant. Table 4 presents motivators and demotivators sorted from the most to the least significant based on respondents' responses.

Table 4.
Ranking of Motivating Factors (MF) and Demotivating Factors (DF) for learning

ID	Median	Mean ±SD		ID	Median	Mean ±SD
MF2	4.00	4.11 ±1.05		DF9	5.00	4.29 ±0.96
MF5	4.00	3.95 ±1.06		DF8	4.00	4.14 ±1.02
MF8	4.00	3.93 ±1.13		DF7	4.00	4.07 ±1.11
MF11	4.00	3.84 ±1.12		DF3	4.00	4.05 ±1.06
MF9	4.00	3.56 ±1.16		DF13	4.00	4.02 ±1.05
MF6	3.00	3.33 ±1.12		DF10	4.00	3.98 ±1.05
MF10	3.00	3.07 ±1.22		DF11	4.00	3.97 ±1.12
MF4	3.00	3.06 ±1.4		DF4	4.00	3.7 ±1.3
MF12	3.00	3.02 ±1.5		DF1	4.00	3.68 ±1.3
MF13	3.00	2.83 ±1.45		DF2	4.00	3.62 ±1.24
MF1	3.00	2.75 ±1.27		DF6	4.00	3.62 ±1.15
MF3	3.00	2.68 ±1.31		DF16	4.00	3.58 ±1.22
MF7	2.00	2.35 ±1.31		DF14	4.00	3.55 ±1.24
				DF18	3.00	3.35 ±1.34
				DF15	3.00	3.21 ±1.38
				DF19	3.00	3.17 ±1.4
				DF12	3.00	2.9 ±1.38
				DF17	3.00	2.78 ±1.37
				DF20	3.00	2.73 ±1.36
				DF5	2.00	2.52 ±1.2

Note: Own elaboration.

Respondents indicated that the most motivating factors for learning were: topics related to their interests (MF2, 4.11 ±1.05), interesting practical knowledge (MF5, 3.95 ±1.06), acquiring a certificate for acquired skills (MF8, 3.93 ±1.13), as well as a positive atmosphere during classes (MF11, 3.84 ±1.12).

The most demotivating factors for learning were: long, monotonous classes (DF9, 4.29 ±0.96), impractical knowledge (DF8, 4.14 ±1.02), unfair grading by teachers (DF7, 4.07 ±1.11), excessive study material (DF3, 4.05 ±1.06), outdated and boring materials (DF13, 4.02 ±1.05), excessive theory with little practice (DF10, 3.98 ±1.05), and an unsympathetic teacher (DF11, 3.97 ±1.12).

The results of the analysis showed significant differences in the impact of individual motivators and demotivators for learning based on gender. The analysis indicates that the motivating and demotivating factors for learning are significantly more influential for women than for men. The results are presented in Tables 5 and 6.

Table 5.
Variations in the impact of specific motivating factors on motivation. Mann-Whitney U test results for the variable on gender: Female (n = 245), Male (n = 203)

Variable	Test probability (p)	Significance	Female	Male
MF1	0.0070	**	2.89 ±1.23	2.58 ±1.29
MF2	0.1107		4.18 ±1.01	4.01 ±1.1
MF3	0.1271		2.76 ±1.32	2.57 ±1.3
MF4	0.0911		3.16 ±1.44	2.95 ±1.35
MF5	0.7745		3.97 ±1.02	3.92 ±1.1
MF6	0.0061	**	3.46 ±1.07	3.18 ±1.16
MF7	0.9520		2.36 ±1.35	2.33 ±1.27
MF8	0.0103	*	4.05 ±1.08	3.78 ±1.17
MF9	0.0050	**	3.69 ±1.12	3.39 ±1.19
MF10	0.4899		3.1 ±1.23	3.02 ±1.21
MF11	0.0311	*	3.93 ±1.1	3.72 ±1.13
MF12	0.0000	***	3.4 ±1.45	2.57 ±1.43
MF13	0.0046	**	3.02 ±1.5	2.62 ±1.35

Note: Own elaboration.

Table 6.
Variations in the impact of specific demotivating factors on motivation. Mann–Whitney U test results for the variable on gender: Female (n = 245), Male (n = 203)

Variable	Test probability (p)	Significance	Female	Male
DF1	0.0000	***	4.04 ±1.13	3.24 ±1.35
DF2	0.0000	***	3.85 ±1.12	3.34 ±1.31
DF3	0.0007	***	4.21 ±0.98	3.86 ±1.13
DF4	0.0000	***	4.09 ±1.15	3.22 ±1.32
DF5	0.3377		2.56 ±1.16	2.47 ±1.25
DF6	0.0048	**	3.76 ±1.1	3.45 ±1.19
DF7	0.0000	***	4.31 ±0.95	3.78 ±1.21
DF8	0.4975		4.18 ±0.99	4.1 ±1.05
DF9	0.0015	**	4.41 ±0.9	4.14 ±1.01
DF10	0.0369	*	4.07 ±1.03	3.87 ±1.07
DF11	0.0024	**	4.11 ±1.08	3.8 ±1.16
DF12	0.0006	***	3.11 ±1.33	2.66 ±1.4
DF13	0.8667		4.01 ±1.07	4.03 ±1.03
DF14	0.0000	***	3.86 ±1.11	3.17 ±1.29
DF15	0.0232	*	3.35 ±1.35	3.05 ±1.41
DF16	0.0005	***	3.77 ±1.13	3.35 ±1.28
DF17	0.0001	***	3 ±1.34	2.51 ±1.34
DF18	0.0004	***	3.55 ±1.31	3.1 ±1.35
DF19	0.0079	**	3.33 ±1.37	2.98 ±1.41
DF20	0.0573		2.84 ±1.37	2.6 ±1.34

Note: Own elaboration.

In the further stage, to cluster motivators and demotivators, a factor analysis was employed. An effort was made to incorporate the most significant ones. Consequently, 12 variables were selected, which, after the factor analysis, were divided into 3 groups. The cumulative explained variance amounted to 54.68%. The identified factors were named: benefits, comfort, and effort. The results were presented in Table 7.

Table 7.
Factor analysis. Division into 3 groups of factors

ID	Benefits	Comfort	Effort
MF2	0.721827	0.019224	0.288022
MF5	0.801860	-0.024872	0.111638
MF8	0.589117	0.107344	0.043001
MF9	0.751488	0.119376	-0.026552
DF8	0.133469	-0.005508	0.825360
DF9	0.140095	0.213197	0.773106
DF3	-0.016447	0.401650	0.636162
DF4	0.004871	0.747020	0.067973
DF1	-0.000776	0.795728	0.140058
DF2	0.049096	0.434895	0.113934
DF16	0.177915	0.607167	0.074145
DF14	0.084087	0.751141	0.191480
Explained variance	2.154678	2.546787	1.860968
Contribution	0.179556	0.212232	0.155081

Note: Own elaboration.

To the Benefits group, the following factors were assigned:

- MF2 - thematic interest related topics,
- MF5 - interesting practical knowledge,
- MF8 - obtaining a certificate of acquired skills,
- MF9 - engaging tasks.

To the Comfort group, the following factors were assigned:

- DF1 - stress during classes,
- DF2 - noise,
- DF4 - public questioning "at the board",
- DF14 - criticism from the teacher,
- DF16 - unpleasant atmosphere within the group.

To the Effort group, the following factors were assigned:

- DF3 - too much study material,
- DF8 - Impractical knowledge,
- DF9 - long, monotonous classes.

Ultimately, the analysis involved examining data regarding motivators and demotivators for work, gathered based on open-ended questions among students who were both working and studying (n=94). The most frequently occurring responses were grouped and presented in Tables 8 and 9, aiming to align them with the previously identified three groups of factors.

Table 8.
Motivating factors for work

Benefits
• work related to interests • money/earnings • satisfactory level of pay commensurate with the job performed • bonuses/non-monetary benefits (e.g., holiday packages, company team-building events, health care, multisport cards) • opportunity to learn/acquire new skills • opportunity to receive task-related bonuses • interesting tasks to perform • opportunity for advancement • chance to meet new people • opportunity for recognition based bonuses
Comfort
• positive atmosphere, friendly environment, cohesive team • fair, understanding boss • praises/recognition • shared goal between employees and employer, shared direction of action, sense of contribution to the company/organization's growth • pleasant/visually appealing environment/office
Effort
- flexible/adjustable working hours - remote/hybrid work

Note: Own elaboration.

Table 9.
Demotivating factors for work

Benefits
• low salary/inadequate pay for the work done • poor or lack of bonuses • lack of development opportunities
Comfort
• bad/negative atmosphere/unpleasant company • unpleasant boss (unfriendliness, dishonesty, explosiveness, lack of respect, incompetence) • unnecessary stress/pressure • lack of cooperation among employees • complaining/criticism from superiors • lack of praise/recognition • noise • passing off responsibilities onto others • ignoring workplace issues by superiors • lack of influence on achieved outcomes/goals • lack of efforts to improve work quality • competition among employees • unfair compensation • knowing the pointlessness of a task/work • lack of dedication to work by other employees
Effort
• the monotony of work • excessive working hours • excessive workload/too many responsibilities • inflexible/rigid work hours • unclear task allocation/workscope/employer expectations • high effort resulting in fatigue • unpleasant conditions (e.g., high temperature) • good weather outside • useless regulations/policies

Note: Own elaboration.

5. Discussion

The obtained research results indicate a significant resemblance between motivating factors for learning and work. In the case of work, the benefits are associated with money (salary, benefits, etc.), while for learning motivators, they are confirmed skills (diploma and certificates). Benefits are crucial in both cases. In the workplace, maintaining good relationships with superiors is important, while in school, it's a positive atmosphere during classes. Comfort in learning or work is equally essential. Effort is also similar; in the workplace, it's the burden of excessive workload, while in school, it's dealing with an overwhelming amount of difficult study material. There are numerous such similarities in each of the mentioned categories. Analyzing the presented motivation theories reveals that each has some reflection in these factors, offering different perspectives on motivation. Hence, they complement each other, and understanding their existence and significance in educational processes and employee motivation is valuable. Motivation also influences the income earned (Gwiazdowska, Klinkosz, 2012) or benefits. For students, income or benefits can be acquired knowledge, skills, certificates, while for work, it's the salary.

However, it's important to note that some experiments suggest that additional motivators related to benefits, such as monetary rewards, don't always positively impact increased efficiency and engagement. In the longer term, they weaken intrinsic motivation, namely satisfaction and joy from one's work (Zhang, 2018). Hence, it's essential to pay attention to intrinsic motivation, which isn't solely tied to rewards and punishments.

With the advancement of internet technology and among individuals aged 19-26 (Generation Z), one can formulate a thesis about their increasing awareness of the significance of practical knowledge and skills in the future. Access to an immense array of educational materials and tutorials online makes individuals in this age group increasingly aware of content they don’t necessarily expect in the educational process. Hence, the direction of higher education's development in the form of an increasing number of elective courses seems very appropriate in the context of these studies.

Moreover, long and monotonous classes should be replaced with short interactive sessions focusing on specific topics and tasks. The development of IT technology has made younger people increasingly impatient and less capable of focusing on one task for extended periods compared to previous generations (e.g., listening to lectures). The effort associated with long and dull classes is highly demotivating for learning. This indicates that the direction of class development toward working on specific projects is also highly desired in the context of this research. Implementing such changes in the educational process is time-consuming and not an easy task. However, these studies signal that this direction is expected by Generation Z.

6. Summary

In this article, research conducted among a group of 245 women and 203 men was presented. The study highlighted factors that employers should pay particular attention to in the near future. These individuals are among the first of Generation Z, who are growing up entirely in a digital world and entering the job market. They have specific expectations regarding motivating factors and are highly sensitive to demotivating factors. Employers aiming to attract these individuals to work should be aware of what motivates and demotivates them. The research indicates a significant importance of demotivators (according to Herzberg's hygiene factors). Additionally, attention should be paid to the differences in the perception of various motivating and demotivating factors between women and men. The study suggests that women are more sensitive to both motivating and demotivating factors than men. The most significant differences were found in: the possibility of obtaining a scholarship, stress during classes, noise, excessive study material, public questioning at the board, unfair grading by teachers, peers cheating (e.g., copying tasks), teacher criticism, unsympathetic group atmosphere, competition for grades within the group, and (during COVID-19) various distractions (Facebook, messages, YouTube). The most critical motivators for both genders are: topics related to interests, obtaining certificates for acquired skills, and interesting practical knowledge. The most significant demotivators for women are: long, monotonous classes, unfair grading by teachers, and excessive study material. The most significant demotivators for men are: long, monotonous classes, impractical knowledge, and outdated and dull material. The results of this research can be useful not only for educators but also for managers of training companies. Further work could delve into a more detailed analysis of motivating and demotivating factors for work and self development.

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