

THE USE OF IDENTIFICATION OF EDUCATIONAL NEEDS IN CREATING THE IMAGE OF HIGH SCHOOLS – THE PERSPECTIVE OF THE LOCAL ENVIRONMENT

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Abstract: The purpose of this article is to present the results of research on the identification of educational needs of young people from primary and secondary schools in the Czestochowa subregion. The research was carried out as part of the preparation of the development strategy of the Czestochowa University of Technology. The research will serve to more effectively create the image of the university among the local community. Research conducted by means of a diagnostic survey among students of schools in Czestochowa showed that they do not have specific educational plans. Men are more likely than women to be oriented towards science education. Students also have little knowledge about the educational offer of the Czestochowa University of Technology, few of them declare their choice as a future place of study, and they are indifferent to the perception of its image by the local community.

Key words: image management, educational preferences, relations between high schools and local environment, creating of educational offer

Introduction

For several years, Polish universities have been paying more and more attention to building their image in the local environment. They use various methods and strategies for this, including cooperation with local primary and secondary schools, creating an offer of educational services for their students, including various forms of the so-called universities for children and youth (Mioduchowska-Jaroszewicz et al. 2018, p. 91). Another form of promoting university's brand and shaping its image is organizing various types of events, including open door days, campaigns promoting scientific achievements of their employees, science festivals and many others.

Similar actions are undertaken by the Czestochowa University of Technology, as a good form of building university's brand, and at the same time, a way to reach potential students and their parents with an educational offer. In order to know whether campaigns undertaken in order to promote the university and to attract future students to it are noticed by local community, it is necessary to conduct research enabling gathering of knowledge, among others, on what pupils know about the University of Technology: how they perceive this institution and whether they identify it with a place where will continue their studies in the future.

In presented article, the authors will present results of a study on perception of the University of Technology and its educational offer as factors influencing its image among students of Czestochowa primary and secondary schools and indicate the potential possibility of its use in managing of the university image in long term.

Literature Review

The image of an organization is a reflection of what people think about it, a kind of picture for given entity in minds of people who have direct or indirect contact with it (Sławiński 2011, p. 278). In modern society, it is becoming an increasingly important attribute of every organization, including a university (Golata, Sojkin 2020, p. 41).

Image management is inseparably associated with the classic marketing activities of enterprises, while in relation to public and non-profit institutions, it was perceived as redundant for decades (Oleksy 2022, p. 136). Only the need for them to compete to attract and retain students, who are their key clients, by means of the quality of education and a strong own brand, as well as the approach to students as entities without which these institutions have no reason to exist, brought change in this area (Azoury et al. 2014, p. 2; Witczak, Mitreęga 2015, p. 418).

A typical example of a change in approach to image-related activities is the increasing activity of university authorities related to inclusion of image-related issues in management activities. This is the result of the fact that universities managers have noticed that the popularity of a university and its ability to attract students is increasingly determined, among others, by its active building of relationships with stakeholders, which also include local communities, including children, youth and their parents (Nowacka 2016, p. 87; Lafuente-Ruiz-de-Sabando et al. 2018, p. 2; Adamska 2018, pp. 30-31). D'Uggento et al (2022) indicated that pride associated with the brand of the university is a crucial factor for students while making a decision to choose a university, therefore the image of the university is an important decisive factor. “ students with a high reputation of their university develop higher brand experience, which then strengthens the pride to belong to the institution and identify with it” pride seemed to be a most evident factor in the multidimensional aspect of emotional engagement of students. the study revealed a positive association between the high brand experience of the university and the pride of the students.

Equally important are credibility, quality of educational services offered, as well as past and current perceptions by communities interacting with university (Ramdana et al. 2021, p. 359). For these reasons, in order to survive on the market and develop, also modern universities should constantly and professionally shape their image through conscious, deliberate, planned and systematic actions disseminating positive information about them in the long term (Pawlak-Wolanin, Gudowski 2016, p. 287).

It is particularly important to take actions for benefit of the local community to present intellectual potential of university and its achievements, which serves its prestige and visibility in social environment (Duarte, et al. 2010, p. 29; Załona 2019, p. 88; Kowalska-Musiał 2023, p. 2).

For image building and shaping positive relations with the social environment, it is also important to pay attention to fact that universities should be open to current changes in the environment, and those expected in the future (Golata, Sojkin 2020, p. 36).

All these factors mean that the creation of an image strategy requires managers to comply with typical for rational management activities undertakings, grouped into four basic groups of activities: planning, organizing, managing and controlling. At the same time, proper planning is crucial, as part of which it is necessary to analyze expectations towards university and its perception by stakeholders (Załona 2019, p. 89), which includes, among others, the local community.

Managing the university image also requires that the activities related to it are known to employees and accepted by them. It is also important that employees identify themselves with university and participate in shaping its image, and that their behavior manifests key values for university (Wæraas, Solbakk 2009, p. 453). Chin-Tsu found that at public universities in Iran, students' identification was positively related to the university brand positively. The Students identify themselves with the university brand and promote universities by word of mouth, student identification with the brand affects students engagement (Chin-Tsu 2016, p. 26).

Considering that the smaller the university, the more important it is for its current and future functioning to build relationships and a positive image in the local community, from which a significant part of its future students will probably come, it is necessary to constantly monitor how it is perceived in this community. An effective way of such diagnosis is conducting systematic marketing research among external stakeholders, for which e.g. online surveys can be used. Such actions in 2022 were also undertaken by the Czestochowa University of Technology, and selected results of these studies, regarding the perception of the university by students of Czestochowa primary and secondary schools, are presented later in the article.

Materials and methods

The research presented in this text was quantitative. The chosen research method was a diagnostic poll in the form of 2 online surveys, one of which was intended for primary school students and the other for secondary school students. It was carried out in June 2022 among 1,317 primary school students in grades 7 and 8, and 1,039 secondary school students in grade 3. These were schools located in Czestochowa, while the students came mainly from this city or from towns belonging to the Czestochowa subregion. The research was carried out as part of the preparation of the development perspective of the Czestochowa University of Technology until 2030. Among the primary school students, 230 did not answer any question, and in the secondary school students case, it was 250 people.

The following research hypotheses were adopted:

H1. Both secondary and primary school students mostly do not have specific plans when it comes to choosing a place to study.

H2. Both secondary and primary school students have little knowledge of the educational offer of the Czestochowa University of Technology.

H3. For high school students, the most important when choosing a university are: attractiveness of chosen field of study, the university location and suggestions from friends.

H4. There are statistically significant differences between the educational preferences of male and female school students.

An indicator of planning future studies were declarations of choosing a place to study. The indicator of knowledge about the educational offer were the answers to questions about offered fields of study. In the survey questions, it was possible to indicate both fields of study conducted at the university and those which were not run by the university. The factors taken into account when choosing a university were the answers to a semi-open question. The three factors indicated in the hypothesis appeared most often in case of graduates of the Faculty of Management at the Czestochowa University of Technology (Przewoźna-Krzemińska et al. 2020), which is chosen by largest number of candidates applying for admission at this university. The differences between educational preferences of secondary school students were indicated by declarations of choosing an additional matriculation subject, which is important from the point of view of choosing future fields of study. Hypothesis 4 finds justification in research conducted in other cultural areas, e.g. Martin-Games et al (2022) study reveals that girls are more likely to choose careers related to social science, and humanities which make an impact on society while boys are more inclined towards science. Image promotion of society including the education system which promotes STEM as masculine, due to the preoccupied notion, and beliefs women do not identify themselves with these disciplines, as a result, a gap could be identified that of gender in these disciplines. Teachers' training and the role of schools could play a role in changing such perceptions and promoting a more realistic perspective so that the underrepresentation of women in the field of science and technology could be dealt with.

Results

Among the primary school students who took part in the research and answered most of the questions, 428 were women, 405 men, and 128 declared that they did not want to answer this question. The vast majority (883 people) lived in Czestochowa, and only 78 outside this city. However, it can be assumed that there were even fewer people living outside Czestochowa, because additional question about the place where respondent lives gave quite fanciful answers, e.g. Los Angeles or Summoners Rift (a place from the game League of Legends).

Taking into account the respondents from secondary schools, 365 were women, 168 men, and 55 people declared their reluctance to indicate their gender. Contrary to primary schools, half of the respondents lived in Czestochowa (304 responses), and half lived outside Czestochowa (301 responses).

In order to verify H1, primary school students were asked whether they thought about studying, giving them a choice of answers in which they could indicate the place of study (Czestochowa or outside of it). Secondary school students were asked if they wanted to study, and then those who answered yes were asked where they would like to study. Among primary school students, 42% indicated that they were not thinking yet about studying, 9% said they wanted to study in Czestochowa, and 29% that they wanted to study outside of it (Table 1).

Table 1 Indications of the willingness to study and the place of study by primary school students. Number of responses to the question "Are you already thinking about what you will study?" N = 1026

Indications of Czestochowa as a place of study	Indications of another city as a place of study	Indications of no importance as to the place of study	No decision to study in the future
95 (9%)	301 (29%)	196 (19%)	434 (42%)

Source: own work

Interestingly, among 3rd grade students of secondary school, only 35% were able to indicate whether they wanted to study in Czestochowa or outside of it, and for 50% it was indifferent where they would study. Another 16% said they did not want to study. (Table 2). Among secondary school students who chose option of studying in Czestochowa, 17 (2.5% of all respondents answering this question) indicated the Czestochowa University of Technology, and 25 (3.7%) the University of Jan Długosz in Czestochowa. The remaining 5 people did not indicate a specific university.

Table 2 Indications of Czestochowa as a city where secondary school students would like to study. Number of answers to the question "Do you want to study in Czestochowa?" N = 680

Indications of Czestochowa as a place of study	Indications of another city as a place of study	Indications of no importance as to the place of study	No intention of studying after high school
48 (7%)	188 (28%)	343 (50%)	111 (16%)

Source: own work

To verify H2, survey questions about knowledge about the fields of study at the Czestochowa University of Technology were used. Pupils of primary schools were asked to answer the question whether they knew that it was possible to study fields indicated on the list at the university. It turned out that as many as 22% indicated the field of sea navigation, which is not taught at the university. On the other hand, fields offered by the university were indicated by 52% to 76% (Figure 1).

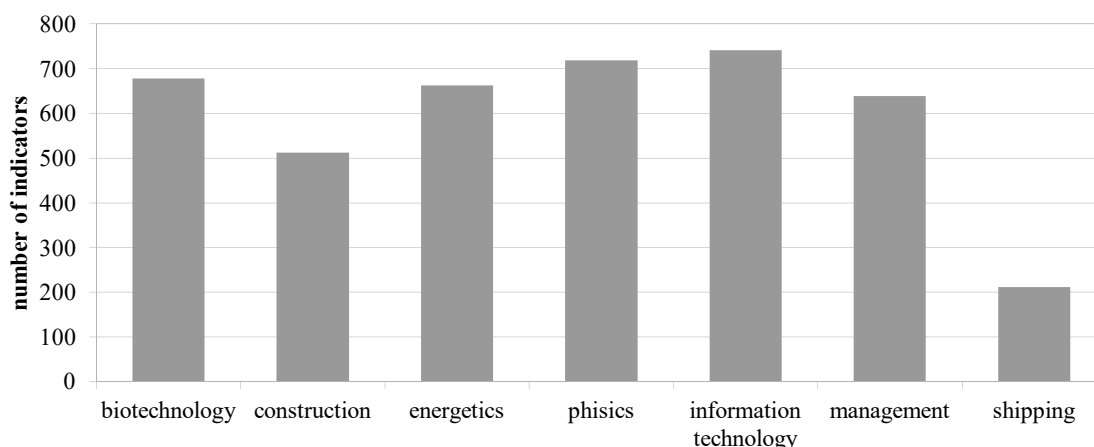


Figure 1. Primary school students indicate fields of study that can be studied at the Czestochowa University of Technology. Answers to the question in the form of a supplementary test: "You can study at the Czestochowa University of Technology ...". N = 980.

Source: own work

This means that a significant percentage of students do not know which fields of study can be studied at the university, taking into account that some students could choose answers at random. In case of high school students, 3 fictitious majors were given in the question. Two of them were indicated by few people: mining 8%, and criminology 21%. The third, architecture, was indicated by as many as 39%. Other directions were indicated by 24% to 48% (Figure 2).

The percentages refer to number of people who answered metric questions, so they did not resign from participating in survey in case of this question. It is surprising that more indications occurred in the case of primary school students. However, questions were not identical in both surveys, as they were adapted to the profile of the respondent. Since the number of majors to choose from in survey for high school students was quite long, it could be too tiring and some people could refrain from answering or indicate only some of them. On the other hand, primary school students may have been more interested in giving the correct answers. Taking into account small number of indications of the Czestochowa University of Technology as a university where they would like to study in future, high school students can say that they did not need to search for courses it offers. Considering the above, it can be said that H2 has not been unequivocally verified.

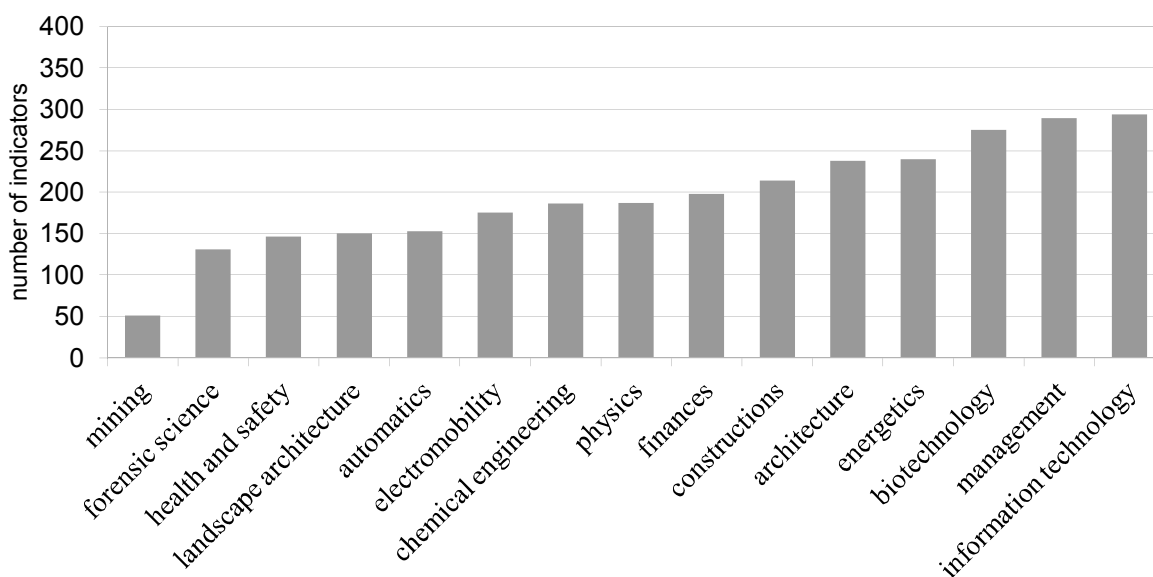


Figure 2. High school students indicate fields of study that can be studied at the Czestochowa University of Technology. Answers to question "Does the Czestochowa University of Technology offer studies in field of study? Tick all the correct answers". N = 980.

Source: own work

H3 has been partially verified positively. Most people indicated attractiveness of the field of study (67%), followed by costs associated with studying (39%), professionalism of teaching staff (37%), favorable location (36%) and attractiveness of city where university is located (36%). Suggestions from friends were indicated by only 5%, as were suggestions from family. On the other hand, 20% indicated reputation of university. Although D'Uggento et al. (2022) indicated that pride may be important when making decisions about choosing a university, their research concerned people already studying at one of the Italian universities. One can claim that feeling of pride is something that students feel, but potential candidates for studies do not experience it. This, in turn, may affect the perception of one's own choices made in the past. Otherwise it can be said that high school students before starting their

final year are more individualistic when it comes to university preferences. Nevertheless, it is worth noting that the main factor is attractive educational offer. Perhaps precisely because the university does not offer courses that would be attractive to students, they do not check what other courses they could study there.

In the case of the H4 verification, significant correlations were noticed between gender and choice of some additional subjects at matriculation examination. Women more often chose Polish, a foreign language, biology and physics, while men chose mathematics and computer science (Table 3).

Table 3. Correlations between gender and choice of additional subjects at matriculation examination by students of high schools in Czestochowa

Item	Standard		
	ϕ	χ^2	p
Polish language	0.261	37,678	0.000
Foreign language	0.138	10,488	0.001
Mathematics	-0.099	5.395	0.020
Geography	-0.041	0.941	0.332
History	0.055	1,700	0.192
Biology	0.086	4.124	0.042
Physics	0.208	24.047	0.000
Chemistry	-0.021	0.243	0.622
Information technology	-0.268	39.819	0.000
Civics	0.022	0.269	0.604

Results with significant statistical relationships are bolded

Source: own work

It can therefore be said that women are more oriented towards humanities and natural sciences, and men towards technical studies.

Discussion

The study presented in the article shows that despite the numerous events organized for primary and secondary school students by the Czestochowa University of Technology, knowledge about this institution on the part of the respondents is proportionally small. There is also no particular interest in it as a future university. It is also impossible to tell how they perceive university image.

This may be due to a number of factors resulting from both adopted methodological assumptions of entire study, as well as the fragment whose results are presented in the article. Taking into account number of events organized by the university, which are addressed to students, or even preschoolers, and observing interest that occur during them, it can be assumed that knowledge and interest in Czestochowa University of Technology among students should be much greater. On the other hand, when conducting a literature search, it was noticed that many studies, both domestic and foreign, include groups such as students, business representatives, parents (Ramdana et al., 2021; Azoury et al. 2014; Golata, Sojkin 2020; et. al.). This approach of researchers may indicate that students are not the optimal target group for this type of research. This is also evidenced by the results of the presented study, in which the "playful" approach to it was already visible in answers to the metric questions, which was mentioned in description of the sample.

However, taking into account number of students living in Czestochowa and its vicinity, taking up studies at all faculties of the university, it seems that the assessment of its educational offer and its quality are perceived positively by the local community, and thus its image is also positive. Such

a conclusion can be drawn by analyzing reports from research presented by other authors, in which they indicated the quality of education and the attractiveness of educational offer as one of most important factors positively influencing the image of a university (Zacłona 2021, Adamska 2018; Kowalska-Musiał 2023, et al.).

It also seems advisable that when undertaking similar research in future, it should be conducted in conditions controlled by the University of Technology (e.g. during the stay of students at events organized by it), and not in conditions of complete lack of supervision over these research, as it was the case in this study.

Summary

To sum up, the issue of managing a university image has been an issue of interest to Polish and foreign researchers for many years. In research on this issue, special attention is paid to the examining of local communities, business representatives, external stakeholders, graduates and many other social groups entering into direct and indirect relations with universities.

However, there are no extensive studies involving potential future students, i.e. primary and secondary school students. The results of the study conducted on this group of people presented in the article indicate that knowledge about the interests of students and their plans for education after finishing school education can be built on their basis. This means that it is possible for university to obtain information on the basis of which future directions of education can be designed and the level of interest in studying at the university can be estimated.

On the other hand, using surveys among students as a source of information on the image of the university seems to be of little use, as it is probably an issue of no importance to them.

Literature

1. Adamska M. (2018), *Research report on the role and importance of teaching staff in the opinion of students of the Opole University of Technology*, Wyd. Opole University of Technology, Opole.
2. Azoury N., Daou L., El Khoury Ch. (2014), *University image and its relationship to student satisfaction-case of the Middle Eastern private business schools*, "International Strategic Management Review" 2, pp. 1-8.
3. Chin-Tsu C. (2016), *The Investigation on Brand Image of University Education and Students' Word-of-Mouth Behavior*, "Higher Education Studies"; Vol. 6, No. 4.
4. Duarte, PO, Alves, HB, Raposo, MB (2010), *Understanding university image: a structural equation model approach*, "International Review on Public and Nonprofit Marketing", 7(1), pp. 21-36.
5. García-Durán D., Fernández-Oliveras A., Torres-Blanco V. (2022) *Factors to consider from education to promote an image of science and technology with a gender perspective*, "Heliyon", 8 e11169, doi: 10.1016/j.heliyon.2022.e11169.
6. Golata K. Sojkin B. (2020), *Determinants of building image and reputation of the university towards its stakeholders*, "Marketing of Scientific and Research Organizations", 35(1), pp. 29-58.
7. Oleksy K. (2022), *Creating the image of a scientist in the media on the example of academic research universities in Poland*, "Media Management", 10(2), pp. 135-170.
8. Kowalska-Musiał M. (2023), *Shaping the image of an institution on the example of a university*, <https://nowymarketing.pl/a/41423,kszaltowanie-wizerunku-instytucji-na-przykladzie-uczelni-wyzszej>, p. 2. (access date: April 27, 2023).
9. Lafuente-Ruiz-de-Sabando A., Forcada J., Zorrilla P. (2018), *The university image: a model of overall image and stakeholder perspectives*, "Cuadernos de Gestión", 19(1), pp. 1-24.
10. Mioduchowska-Jaroszewicz E., Hawran K., Kowalik J. (2018), *Strategic marketing as a tool for building the image of universities in Szczecin*, "Studies and Works of WNEIZ US", 53(3), pp. 89-99.
11. Nowacka M. (2016), *Creating the image of a university among selected target groups*, "Scientific works of the Academy of Jan Długosz in Częstochowa. Pedagogy", XXV, 2, pp. 85-100.
12. Witzczak O., Mitreęga M. (2015), *Management of scientific productivity in the context of building a university brand*, "Scientific Journals of the University of Szczecin 875, Problems of Management, Finance and Marketing", 41(1), pp. 415-424.



13. Pawlak-Wolanin A., Gudowski J. (2016), *Influence of the internal client on creating the image of a private university*, "Scientific Notebooks of the Jan Wyzkowski University. Studies in Social Sciences", 9, pp. 287-302.
14. Przewoźna-Krzemińska A., Kukowska K., Randak-Jezińska M., Skolik S., Chraperek E. (2020), *Report on the career paths of graduates of the Faculty of Management at the Czestochowa University of Technology*, academic year 2019/2020, Czestochowa.
15. Ramdana A.M., Rahayua A., Wibowoa L.A., Dirgantari PD (2021), *The effect of uniqueness and student's experience in improving university image: Empirical study at private universities in Indonesia*, "Management Science Letters", 11, pp. 357-364.
16. Sławiński K. (2011), *The effectiveness and measurement of image-building activities of universities in Poland*, "Scientific Notebooks of the WSB University in Wrocław", 26, pp. 277-288.
17. *Development strategy of the Czestochowa University of Technology for the years 2023-2027*, <https://pcz.pl/uczelnia/strategia-Rozwoju-uczelni> (access date: 28.04.2023).
18. D'Uggento A.M., Petruzzellis L., Piper, L., Gurrieri A.R. (2022). In the name of the University: the choice to promote as a tool to influence decision-making. "Quality & Quantity", August 2022 (4), <https://doi.org/10.1007/s11135-022-01475-w>.
19. Wæraas, A. Solbakk M.N. (2009), *Defining the essence of a university: lessons from higher education branding*, "Higher Education", 57(4), pp. 449-462.
20. Załona T. (2019), *Managing the instrument for shaping the image of a university*, "Economic Studies. Economy, Society, Environment", 1(3) pp. 86-98.



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