
Customer-centricity in Designing: Application of Design Thinking Methodology in Creating Educational Solutions at the University of Warmia and Mazury in Olsztyn

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Piotr Wasyluk¹, Andrzej Kucner²

Abstract:

Purpose: The study presents customer-centricity in designing a concept of a graduate program, managing university, and continuous assessment. It shows and evaluates an application of methods and tools of design thinking in creating a modern educational solution that is in line with the main expectations of stakeholders. The analysis concerns customer-centricity as a way to create educational solutions which require adjusting education methods to the future needs of stakeholders.

Design/Methodology/Approach: The design process is based on methods and tools of design thinking: qualitative analysis of the users, desktop research, needs analysis of students and employers, trend and change signals analysis. Designing solutions, we used creative teamwork methods, prototyping, testing, and optimizing solutions.

Findings: Customer-centricity is treated as a trend reorienting the functioning of a higher education institution and managing education to adapt its offer to students' needs and generational changes.

Practical Implications: Customer-centricity is based on a set of values, principles, and behaviors that create solutions adapted to the needs and expectations of their users. This approach requires analyzing the conditions, behaviors, and needs of its recipients. When it comes to the design process we conducted, customers comprised of students, employers, and academic teachers. The design process itself and the assumptions we embraced were an alternative to commonly employed solutions in which stakeholders do not participate.

Originality/Value: A customer-centric hierarchy of goals makes it necessary to monitor students' experiences, respond to their feedback, and personalize and make the educational path more open. As a result, students become co-creators of their education.

Keywords: Customer-centricity, design thinking, students as stakeholders, higher education solutions, research practice.

JEL Classification: E27, I21, I23.

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¹ University of Warmia and Mazury in Olsztyn, Poland, andrzej.kucner@uwm.edu.pl;

² University of Warmia and Mazury in Olsztyn, Poland, wasyluk@uwm.edu.pl;

1. Introduction

Forms, methods, and goals of academic education undergo several transformations nowadays. Affected by technological, social, and economic factors, they are provoked by real needs and expectations of future and current students. They are a significant motivation to study and select a given significant while simultaneously is an essential premise of changes in the scientific and teaching activity of higher education institutions. Customer-centricity is a way to understand educational needs as well as creating and implementing solutions. It is of utmost importance to diagnose the needs of students, engage them in designing solutions, and build lasting relationships impacting the quality of university studies.

The article analyses results of research into customer-centricity in education as a premise of the organizational culture. Another field of interest consists of exploring the research background of design thinking applications as a methodology of diagnosing needs, creating innovative educational services, and team-based diagnosing and solving problems. The study presents work methods and their organization applied when developing Trend Analysis and Creation. The methods of teaching process evaluation are discussed as a way to verify the proposed solution.

Customer-centricity is understood here as a way for the servitization of education. The discussed design process resulted in developing the curriculum of those above majors. The presented values and activities originated as a result of personalizing the teaching process. The study explains the nature of students' participation in co-creating values: what research and promotional activities they were engaged in and what results in all these undertakings brought.

The discussion encompasses the influence of global transformations on the goals and organization of academic education. The jobs of the future and specific expectations expressed by groups of students are scrutinized as well. The conclusions to the conducted analysis contain the results of applying a customer-centric approach in cooperation with students. This part may serve as a guideline in proposing new directions along which the university can develop, bringing about greater openness towards the surrounding world and readiness to embrace generational changes. The presented major is an experimental implementation site of future-oriented educational solutions involving students as creators and evaluators.

The customer-centric approach in education is not widely discussed in the literature. A few publications are devoted to customer-centricity in higher education, e.g., Voropai (2018) and Avilova (2015). Both authors discuss rules according to which customer-centric strategies are built and the impact of such strategies on the new organizational culture of universities. General issues related to customer-centricity are investigated by Robson (2013), Valls Gimenes (2018), and Galbraith (2005). These publications focus on fundamental assumptions of the approach and its practical value for organizations looking for a competitive edge in the modern market. The

application of design thinking methods in educational solutions is also presented by Gilbert, Crow, and Anderson (2018). They point out a specific breakthrough and new challenges awaiting modern universities as adaptive institutions for which present patterns of standardization, traditions, and “rituals” are anti-innovative, as they have long lost their developmental potential.

The authors treat design thinking to transform the presently functioning university into a new, open, and dynamic institution. Their reflections concern American institutions, yet the problems discussed are universal. The application of design thinking at the secondary education level is discussed by Aflatoony, Wakkary, and Neustaedter (2017). They present analyses and results of design processes and evaluation of skills developed by students during the process of solving problems. Customer-centricity in education is also scrutinized by Beligatamulli, Rieger, Franz, and Strickfaden (2019). Their study concerns the long-term experience of teachers who employ design thinking in their work. The benefits worth mentioning include the development of students’ creativity and their participation in co-creating solutions. The applicability of design thinking in solving problems when working in teams is analyzed by Panke (2019). She indicates co-related design approaches, applications, and results in various recipients at universities, e.g., those studying business and management, medical education, humanities, public administration, information science, and interdisciplinary studies. We presented our experience related to establishing educational solutions within customer-centricity in work “Analiza i kreowanie trendów. Projekt i badania” [Trend analysis and creation: Design and research] (Kucner *et al.*, 2015).

2. Literature Review

Customer-centricity, to put it succinctly, is an approach focused on meeting customers’ needs. It is based on human-centered design, which consists of a holistic approach to designing innovations. The critical role belongs here to humans and their needs. According to Norman, “user-centered design is a design philosophy, in line with which the starting point is having a good understanding of human nature and needs that the product is to fulfill” (2018). Human-centered design is an attempt to understand human needs, expectations, and aspirations properly. It is a way of thinking and actions focused on creating positive experiences and delivering specific user values. In this approach, users of solutions are the final beneficiaries of values created by designers.

In customer-centricity – analogously to human-centricity – customers’ needs are the starting point of all business activities. This approach developed as a response to a market abundant with similar goods and services. It serves to establish a market advantage by appealing to the individual needs and aspirations of customers. Its essence can be encapsulated in the following statement: “what is good for our customers is good for our business.” It allows one to provide customers with comprehensive solutions resulting from a complete understanding of their needs. Customers are at the center of the created processes and solutions. Customer-centricity means thinking about end-users and building

lasting relationships with them, which requires a thorough understanding of users' habits, culture, social context, and motivation. It also requires adjusting the organization's proposals to these conditions. Personalization gives recipients a sense of uniqueness and exclusivity, and at the same time, it provides the organization with benefits that occur as a result of recognizing users' specific needs, preferences, and values.

The customer-centric orientation is determined by the logic of the experience economy, which appeared along with the digital transformation of various areas of reality. According to Valls Gimenez, thanks to digital tools, the consumer began to dictate the rules in the market game, enabling them to participate in the production of goods and services, providing them with more excellent knowledge about the functioning of the market and influence on its development. A stronger position of the customer increased their consumer expectations (Valls Gimenez, 2018). In the experience economy, focusing business activities on the customer is not just an option anymore; it became an imperative (Galbraith, 2005). What matters in this type of economy is the way of experiencing services and products and the impressions and emotions of the customer. Understanding the motives behind their actions makes it possible to deliver the right products and services. The key is to investigate people's actual experiences and use this knowledge to create particular business solutions. The experiences of their recipients are not elusive – they are as accurate as a service or a product so that they can be designed analogously.

Customers who buy experiences pay for an unforgettable event that engages them personally. That is why in the experience economy, it is essential to create unlimited choices and comfort. This affects relationships between customers and the company, which sometimes become more important than the purchased service or product. A relationship with a customer is not based on a series of individual transactions but on building lasting connections. To emerge, it becomes crucial to understand people's motives and know what they will do in the future (Kelley and Kelley, 2019). The experience economy is a conceptual alternative to the mass production economy – goods are designed to provide customers with positive and personalized experiences. This is in line with customer-centricity, as the value of business activities shifts from products and services to an experience. It becomes the fundamental value and profit in the process of market exchange. It also makes the product or service precisely tailored to the customer's needs. Thanks to this, customer-centricity facilitates building strong bonds between the customer and the business, i.e., lasting partnerships. These bonds condition mutual trust and determine the value of business activities (Robson, 2013). The purpose of customer-centricity is to co-create values with customers. It is essential to focus on a particular recipient, their subjective experience, and individual needs. The idea of co-creating values with customers results from the limited resources of each organization. They must be supplemented all the time, and their suppliers are often the customers themselves.

Customer-centricity reorientation of education: Thanks to its product and service innovations, customer-centricity has the potential for various educational solutions. It can be understood as: 1. a way to get to know and understand humans in the ecosystem of services and products; 2. perceiving people as subjects in the design process; 3. a

requirement for products and services to become useful, useable, and desirable; 4. involving customers in the process of designing products and services.

Customer-centric educational solutions require a dramatic change in how the role and methods of creating educational services are understood. Recognizing the critical role of the service recipient means that the most important educational goals and measures should be based on the needs, expectations, and experiences of users, i.e., students. When creating educational solutions at the university level, the aspect of needs is not considered. What is deemed more important are the requirements of the labor market and the necessity of adjusting effects achieved by graduates to these requirements. One of the indexes showing that is the employment rate of graduates.

Services are supposed to provide values. The value of a given service is not tantamount to the product but to the way it is delivered to the recipient and used by them. This principle applies to all services, including education. The traditional approach to goals and organization of the teaching process perceives the student as the recipient of the final solutions. These are ready-made learning paths consisting of subjects, content, methods, and teaching tools to achieve the set goals. The recipient does not have any real impact on the content, and the way it is organized or this impact is hardly taken into account. Even if its image has been slightly simplified, the currently offered educational service is a closed and inbred system of operation, subordinated to the effects assumed in advance. In such a model, values are implemented in an autarkic manner, and the effects achieved by students verify their significance.

Customer-centricity re-orientates the way educational solutions are created. It requires determining what and how to learn, whose needs and experiences should be followed, and how to define goals, methods, and tools essential in education. Each of these issues is related to specific values. Their selection should be based on recognizing recipients' real needs and experiences and their direct participation in the selection process. Moreover, a qualitative turn brought about by the presence of generation Z at universities ranges in the forms of communication, cooperation, teaching methods and tools has become inevitable. Personalization as a change in the role played by the student in the learning process results not only in the creation of optional paths of selection but also in the use of educational innovations that guarantee commitment, skills development, teamwork practice, and flexible teaching. When the right to choose is guaranteed, this allows students to share responsibility for the teaching-learning process. Importantly, this also informs to what extent the university is adjusted to students' needs (Welcome to Generation Z. Deloitte).

So far, changes in the organization and management of education have been top-down and formalized. They have adjusted universities to external conditions only to a small degree, and in some respects (e.g., when confronted with global trends), they have proved to be backward, which is visible in such phenomena as disciplinary

parameterization as well as limiting the inter-and transdisciplinary development of research and education (see The OECD Learning Compass 2030).

3. Research Methodology

The design process was motivated by the conviction that the perspective of the customer's needs is the critical determiner in building an innovative educational concept. In order to limit the risk of designing a solution that is not adjusted to the real needs of students, the students of undergraduate studies of the same major were invited to get involved in the design process. Work on the concept of graduate studies was undertaken, bearing in mind a hypothesis that adapting it to the needs of students and job market requirements involved more engagement on the part of stakeholders and qualitative research. Design thinking was selected as the methodology to be employed.

To carry out the project, an interdisciplinary design team was established, comprised of academics from four faculties of the UWM in Olsztyn, BA students of Trend Analysis and Creation, and employers. A design thinking moderator supervised the process. Qualitative studies carried out among students and employers were aimed at analyzing their needs and experiences. Semester teaching quality assessment questionnaires filled in by the BA students were also analyzed. The analysis embraced trends concerning competencies and jobs of the future and the main directions of social and economic changes.

Based on all the results and conclusions, personas and maps of the users' experience were created. Ideation of the solution was performed, and a prototype of the MA curriculum was made. The latter was tested and optimized, considering students' opinions. It was also assumed that evaluation and improvement of the solution would be conducted in studies. This step was to be performed based on semester questionnaires in which students report their experiences. Planning the curriculum, we took into account our earlier cooperation with students over several research and design projects, which were realized parallelly to the basic teaching process. We also assumed that opinions shared by Trend Analysis and Creation BA students in their teaching quality assessment questionnaires were going to be guidelines in further adjustments of the curriculum.

4. Results and Discussion

Determining premises and designing solutions for the major of Trend Analysis and Creation, we assumed that it would be interdisciplinary and innovative. We also desired that its graduates be able to use the acquired knowledge in practice. The effect of education was to encompass broadly understood analytical skills, facilitating independence or teamwork. When planning the development strategy of the major, we focused on linking curriculum and organizational changes with the changing preferences concerning the market, consumer, and culture, and the need to react in an innovative way to ensuing expectations and needs. Hence it shows that we assumed

that the major would be customer-centric. We also planned to implement any needed alterations based on the project method, which is by definition user-oriented.

One of the most critical goals in the process of designing educational solutions was personalization. Activities focused on personalization took place in the empathizing phase, i.e., recognizing the needs and experiences of users. These activities consisted of research on a group of users which allowed us to create personas and empathy maps reflecting the expectations and values of generations Y and Z, which are the two currently studying generations. The applied techniques and tools combined the subject-matter-related requirements of the curriculum with the specific generational needs and experiences of real users. We wished to consider the expectations and ideas of students, as this made it easier to personalize the curriculum.

The next stage of personalizing solutions consisted of ideation. During this phase, with creative work techniques, the team created a solution comprised of elements of the curriculum corresponding to the project challenge, which had already been formulated. The challenge required determining goals concerning knowledge and skills as well as proposing ways to attain them. Among other elements, the solution included analyses of trends in the future field of competencies and professions. Later in the process, a prototype of the solution was constructed, presenting the curriculum assumptions in a visualized and schematic form. On this basis, tests were carried out in order to criticize, evaluate and optimize the solution. As a result, the curriculum took into account many ideas submitted by the students themselves or those that appeared during discussions in which they participated.

The participation of students and other stakeholders in all the stages of the design process gave them a tangible impact on the improvement and the final form of the curriculum. This kind of approach proved to be engaging for its participants, which made it possible to combine and use the potential of an interdisciplinary team, whose members belonged to different generations and represented different competencies and experiences.

Co-creating values with the user: Co-creating values as a result of continuous cooperation with the user (in this case, the student) have communication-related, organizational and axiological significance: 1. it corresponds to an organizational culture focused on openness, partnership, transparency, and hierarchy; 2. it creates mutual trust, fosters dialogue, a sense of co-deciding and agency; 3. it allows one to achieve such values as responsibility, a sense of identity and commitment. Such conditions facilitate diagnosing and solving problems and implementing joint initiatives (e.g., research and projects). Cooperation is associated with the assumption that the durability of relationships, learning by doing, sharing experience, and the effectiveness of undertaken actions are all values.

To properly understand the innovativeness of such cooperation, it is necessary to refer to patterns prevalent in the organizational culture of universities. They are highly

hierarchical, structured institutions with little potential for open and flexible cooperation. Their operation is subject to formal rules and patterns of action resulting from their hierarchy, bureaucratic management, and a rigid division of competencies. As a consequence, they are characterized by performing procedural actions. Their organizational culture is authoritative and control-oriented (Weber, 1947). In such conditions, orientation towards the needs and experiences of students is limited. Understanding this is easier when their activity is compared to a product-oriented rather than a customer-oriented organizational model (Galbraith, 2005).

Co-creating values resulting from working together consist of using the existing and creating new opportunities for cooperation aimed at goals aligned with the interests and expectations of each of the parties. The major of Trend Analysis and Creation and the concept behind its functioning from the very beginning have been based on the assumption that students should be involved in matters concerning them or affecting their course of studies as widely as possible. In organizational approaches, such experiences resemble the clan culture or bear some of its hallmarks. They make it possible for students to treat the university as a friendly place where relationships are direct, not formalized, based on mutual trust and benefits from various forms of cooperation (Cameron and Quinn, 2003).

During the academic year, we implemented many co-creative projects. We organized joint workshops with students and developed a promotional strategy for the significant and promotional projects. As a rule, students co-create communication, create the image and brand of the significant, co-run social media profiles for Trend Analysis and Creation. The multiplicity of actions is conducive to becoming pro-active and independent in taking new initiatives; it increases students' involvement in projects organized by them at other faculties and outside the university.

Achievements documenting our research collaboration with students include a report entitled "Turystyka Warmii i Mazur" [Tourism of Warmia and Mazury] (2018), which was prepared by a team of employees and students in cooperation with the Marshal's Office in Olsztyn (Wasyluk, Kucner, Sierocki, Kuczyński, Romancewicz, Wieczorek and Żurowska, 2018). It required students to undertake tasks typical of scientific research.

Co-creating values with students of Trend Analysis and Creation: It is not enough to properly understand customers' needs in today's market and offer them a matching product or service. Nowadays, it is necessary to understand the way values are created and implement the practice of their co-creation with the customer. Value co-creation depends on personalization, i.e., creating and implementing solutions in line with the individual needs and expectations of the customer. The value of a given solution results from the choices that are crucial for the customer. Another advantage of the concept is that it involves the customer in the co-creation process (creating the so-called "active audience"). Co-creation is a crucial way to build or sustain a relationship with customers.

The presented mechanism of co-creating values was used in managing Trend Analysis and Creation in a few areas. We employed it when developing the promotional strategy for the major and designing promotional solutions for UWM Open Days in Olsztyn. Each time more than ten students participated in the organized design workshops. Most of their ideas and solutions were ultimately used to promote the major. Co-managing social media profiles of the major can also be considered a concrete manifestation of co-creating values. The latter is also fostered by people managing the studies in closed social media student groups, which are a forum for exchanging ideas and expressing expectations regarding the curriculum or the organization of the teaching process. Several such comments and suggestions are taken into consideration when introducing corrections in the curriculum. Co-creation of values manifested itself the most when designing the concept and assumptions of the Master's program. Four students of the BA studies participated in this workshop. They actively worked at all stages of the process, submitted ideas and specific solutions, and their proposals (e.g., subjects of some classes) were included in the final curriculum.

Focus on building relationships with the student: Today many business activities focus on building and strengthening relationships with customers. Wishing to understand their needs and seeing the world is a critical factor in building trust between recipients and providers of services. The modern market offers products and services and feelings, prestige, and interpersonal relations (Godin, 2019). Consequently, activities in the service sector require developing an emotional bond with customers and ensuring their satisfaction. Focusing on building relationships changes the organizational model from transactional to relational, which gives a competitive advantage today. Organizations oriented towards relationships with their customers can create more effective marketing strategies and services better tailored to customers' needs, which is an additional value, as customers are more willing to share their resources (knowledge and experience). Many organizations involve them in activities for their benefit and reward them for this, hence adjusting the offer to customers' needs, building unique relationships with them, and defining and delivering values.

We assumed that the offered values would be knowledge and practical skills for managing Trend Analysis and Creation. Many of our activities took the form of optional design workshops with the participation of employees and students. They were devoted to space in the faculty building, preparation of the Master's degree curriculum, or the tourist above report. Twice we participated in the Global Service Jam international project. In addition to improving students' competencies, all these activities were conducive to building partnership-based friendly relations between the staff and students.

Additionally, the projects were valuable because they offered an opportunity for students to receive credits for their internship this way. They were closely related to

the profile of the studies. Another solution implemented to learn about students' experiences was the quality of teaching assessment carried out every semester.

5. Conclusions

Customer-centricity changes the organization of education fundamentally. Can the university become an institution open to the needs and experiences of students? It is worth linking the question to the changes taking place in the university environment. According to OECD data, educating students grew steadily between 1995 and 2015, doubling in thirteen countries. The administrative costs of universities, employee salaries, costs of education, and competition for students increased (Higher Education. Resourcing Higher Education. Challenges, Choices, and Consequences). However, this did not translate into an improvement in the quality of university functioning or the development of solutions adequate to the changes taking place in their environment.

Modern universities are faced with the need to define education priorities and to ensure the participation of students and external partners in the development of educational solutions. It has become a challenge to implement modern technologies in education and adapt them to new generations' ongoing changes and needs. The aim should be to make the paths and forms of education more flexible (cf. Wasyluk, Kucner, Pacewicz, Education of the future. Report, 2020). Students expect the study period to be shortened and adjusted to their needs. The number of people focused on scientific development decreases, and they more often want to confirm the acquired skills with partial qualification. Other challenges are education related to cooperation with the business environment and other institutions and the possibility of combining studies with professional work. In the future, it will be professionally active people who will take up studies (Parker, 2020).

At present, the effectiveness and attractiveness of academic education results from several factors: 1. the availability of knowledge-based resources for various stakeholders (students, organizations, employers), allowing them to combine cognitive values with a practical use as well as flexibility and interactivity of education; 2. innovation of research and openness of teaching to the needs of students; 3. orientation of education towards the future (Przegalińska and Oksanowicz, 2020).

A critical image of the university in the context of competencies developed there and future challenges are presented in the report by Włoch and Śledziwska. Their results show that almost half of the respondents assess their studies as boring, not very engaging, dominated by lectures, and lacking a good number of workshops and project tasks. They are not conducive to developing the ability to solve complex problems. Classes do not involve experts and practitioners from outside the university. Problems also include assessment systems that strongly discourage students from making mistakes and test new ideas experimentally. Students critically evaluate the involvement of their teachers, their lack of response to their interest, and the effects

of their independent work (Włoch and Śledziwska, 2020). The conventional ways in line with which universities operate also pose problems. This can be seen in their employees' attitudes, curricula, and syllabi content, and the organization of the teaching-learning process. Some issues result from the lack of reliable and systematic research on the compliance of the academic offer with the expectations and real experiences of students. The authors offer guidelines indicating the need to create a flexible educational ecosystem for the development of the competencies of the future. They also point out the willingness to solve complex problems, critical thinking, entrepreneurship, creativity, cooperation, commitment, and socialization (Włoch and Śledziwska, 2020). Each of these goals includes the element of a customer-centric approach as an alternative to schematism and formalism in the operation of universities.

In recent years the interest in studying humanities-related as well as newly-created interdisciplinary majors has decreased. Many of them were created as a response to the needs of universities and were managed traditionally. Teams of academics created their concepts and the achieved effect to a small extent taking into account the needs of students and candidates.

Trend Analysis and Creation is a major which can be seen as an ongoing educational and organizational experiment. The use of customer-centricity and design thinking methodology to create and manage this major is an innovation, but it is not the only example of creating practical educational solutions. A similar approach was used a few years ago at the Wrocław University of Economics and Business when creating Market Innovations - Design and Implementation.

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