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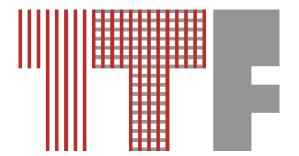
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Quo vadis, Tekstil? Croatian Journal for Textile and Clothing Technology

DAVOR JOKIC

REZUMAT – ABSTRACT

Quo vadis, Tekstil? Revista croată pentru tehnologiile din industria textilă și de îmbrăcăminte

Publicațiile periodice cu informații științifice au fost prezente în industria textilă din Croația timp de 90 de ani, cu cinci reviste succesive. Acestea au reflectat dezvoltarea și nevoile industriei textile prin diferite condiții socio-economice și educaționale-științifice. În acest sens, revista științifică pentru industria textilă și de îmbrăcăminte — Tekstil, care marchează 67 de ani de publicare neîntreruptă, a avut cel mai important rol. Această revistă este sursa cea mai relevantă de informații diverse despre dezvoltarea industriei textile și a tehnologiei textile în Croația și în străinătate. Ca publicație lunară, Tekstil a fost sursa actuală a informațiilor științifice și profesionale recenzate, care încearcă să răspundă nevoilor multor generații de studenți, experți, profesori și oameni de știință din industria textilă. Pe lângă analiza parcursului revistei în cei 67 de ani, acest studiu este o încercare de a indica dificultățile și provocările actuale ale revistei pentru recâștigarea statutului de a fi printre cele mai importante reviste din lume.

Cuvinte-cheie: Tekstil – Journal for Textile and Clothing Technology, revistă științifică, publicație științifică, tehnologie textilă, publicare periodică, vizibilitate științifică, disponibilitate online

Quo vadis, Tekstil? Croatian Journal for Textile and Clothing Technology

Information-professional-scientific periodicals have been present in Croatian textile field for 90 years with five successive journals. They mirrored the development and needs of the textile industry through various socio-economic and educational-scientific conditions. In this sense, the scientific journal for textile and clothing technology — Tekstil that marks 67 years of uninterrupted publication had the most important role. This journal is the most relevant source of various information on the development of textile profession and textile technology in Croatia and abroad. As a monthly journal, Tekstil was the source of the current peer-reviewed scientific and professional information that was trying to meet the needs of many generations of students, experts, teachers and scientists in the field of textiles. Beside the review of the journal development in 67-year period, this paper is an attempt to indicate the journal's current difficulties and challenges in sense of regaining his status among the most relevant world journals.

Keywords: Tekstil – Journal for Textile and Clothing Technology, scholarly journal, scholarly publishing, textile technology, publication regularity, scientific visibility, online availability

INTRODUCTION

The development of professional and later scientific, periodicals related to textiles, that is, textile technology, is conditioned by the development of the textile industry. The period between the two World Wars in the territory of the former Yugoslavia was marked by the general development of the industry. At the level of the entire economy of the former Yugoslavia, textile industry, according to the number of employees, held the first place [1]. During this period, and especially after II World War textile industry became an important factor in the national economy. Production and trade in textiles become one of the most important economic activities in the former Yugoslavia. In the context of the increasingly complex issues of production and trade in textiles, there was a need for the establishment of a journal as a medium of information on current technical progress, solutions to specific problems in production and economic developments in Yugoslavia and abroad [2].

The journal *Jugoslavenski tekstilni vjesnik* (Yugoslav textile newsletter) was founded in 1927 as the first serial publication in the territory of former Yugoslavia with the goal of informing experts and other interested

parties around the textile industry [3]. The journal was published until 1941 in a dynamics of 12 numbers per year, which is a direct indication of the development of the textile industry and the existence of a critical number of readers and their great interest. Based on the geopolitical changes in 1941, the journal Jugoslavenski tekstilni vjesnik was renamed into the Tekstilni vjesnik (Textile newsletter), and in the same dynamics and an equal structure of content, it was published until mid-1945. His successor became the journal Vjesnik za kožu i teksti (Leather and textile newsletter), which was published until the end of 1946. After that, in only two issues, from the end of 1946 to the beginning of 1947, the journal Tekstilac (Textiler) was published as the last attempt to continue the tradition of the journal Jugoslavenski tekstilni vjesnik [4].

With the 1947, a five-year period occurred in which no serial publication related to the textile profession was published. This period is very likely linked to a difficult postwar period characterized by an administrative-centralist mode of governance. All political, economic and social functions were centralized.

The beginning of the 1950s brought about a change in the statist concept of governance into social self-management. Production planning in the industry became independent. The products were planed according to the market needs [5]. Within the working collectives, a certain level of autonomy in management was introduced within workers' councils [6].

This development of the situation has triggered various labor activities. It is also very likely that it encouraged the *Sekcija tekstilaca Društva inženjera i tehničara Hrvatske — DITH* (Textile Section of the Croatian Society of Engineers and Technicians) initiative to launch a professional journal that would end the long-standing lack of professional periodicals and satisfy the needs in textiles [7].

Tekstil: stručni časopis za pitanja tekstilne proizvodnje i prometa (Textile: professional journal for textile production and trade) was established in February 1952. According to the introduction letter of the first issue of the journal DITH wants for "our experts, readers and contributors, to get in the monthly journal their assistant, informer and messenger", who "he will help them overcome future problems, in introducing new economic measures in the procurement, production and sale of textile raw materials and products. "Accordingly, Tekstil has the task of "serving textile professionals, production and trade in further advancement, introducing the latest achievements and progress and to make accessible anything that can contribute the improvement of the production and quality of textiles" [8].

The enthusiasm of textile experts, at a favorable political and economic situation, spawned the much-needed professional textile journal. The dynamics of the monthly publication of journal *Tekstil* reflected the need for professional publication readership and provided insight into the current and relevant developments and achievements in the field. The role of the journal *Tekstil* has gained additional importance if one takes into account the lack of domestic professional literature at the time as well as financial and language barriers of most experts in the monitoring of foreign journals.

DEVELOPMENT OF THE JOURNAL TEKSTIL – PRESENT DIFFICULTIES

An interesting angle of journal development observation are difficulties that the editorial board faced through the first two decades of publishing. Instead of the usual chronological journal development overview, the paper will show the publishing difficulties that point to the very essence of journal development through editorial and readership relationships.

Gathering associates

The socio-political changes in the former Yugoslavia, which occurred during the first two decades of the journal *Tekstil*, created the conditions for the professional (secondary and tertiary/higher) education of new technical personnel, of which many have opted for the textile profession. This positive increase mitigated

STRUCNI CASOPIS ZA PITANJA TEKSTILNE PROIZVODNJE I PROMETA IZOAIE: DRUŠTVO 1922 SNJERA I TENNICARA, SERCIJA TEKSTILACA, ZAOREB SPECIAL JOURNAL FOR FOGLING OF IESTILE PRODUCTION AND TRADE REVUE SPECIAL JOURNAL FOR FOGLING OF IESTILE PRODUCTION AND TRADE REVUE SPECIAL JOURNAL FOR FOGLING OF LA PRODUCTION ET DU COMMERCE TENTILE ENGLISHED OF LA PRODUCTION ET DU COMMERCE TENTILE ENGLISHED OF LANGUAGE TO COMMERCE TENTILE PRODUCTION ET DU COMMERCE TENTILE PRODUCTION ET DU COMMERCE TENTILE ENGLISHED OF LANGUAGE O

Fig. 1. The first (introductory) page of the journal *Tekstil* in February 1952

the consequences of the trend of foreigners' departure from domestic enterprises, expansion of capacity and the increase in the textile industry production. Nevertheless, until the early 1970s, the lack of professional personnel in the textile industry continued to be present [9–11]. This was one of the reasons for the difficulty in engaging professional associates to publish in the journal.

The other side of the problem was present in the smaller part of the existing established experts who rarely or did not at all send their manuscripts for publication. They mostly reffered to the professional secrecy in trying to protect their own observations and solutions to specific problems in their area [12]. In this way, the journal was deprived of certain knowledge of textile experts that would surely benefit the textile community to which *Tekstil* was the key source of professional information.

Although there was a critical number of experts still the circle of associates was too tight. For animating new authors, the editorial board called for manuscripts on some current topics. The received manuscripts were honored, and the best of them were especially rewarded. In terms of attracting and encouraging younger authors, the editorial board provided assistance in compiling papers. In addition, papers from various symposiums were published, and some journal issues were thematically adapted, or they brought a review of the professional problems of specific field [13].

In order to improve the cooperation with abroad, the editorial board has managed to build a relationship of

papers and whole issues exchange with editorial boards of foreign journals. Such a relationship has enabled domestic experts to read high quality foreign papers, while opening the possibility for domestic papers to be read and cited in foreign journals [14]. Editorial board engagement regarding the expansion of the professional associates circle led to the crystallization of new insights and different potential solutions to the existing problems. Thus, the journal *Tekstil* became the foundation of professional communication in the field of textiles in the territory of former Yugoslavia.

After 1970, the trend of building new factories begins to stop due to the market saturation. In such circumstances, the existing secondary and higher textile schools including comprehensive five-year Textile Study at the Faculty of Technology in Zagreb established 1971, fully met the needs of the industry with all the profiles of personnel. The time that follows is marked by the rise in the quality of education [15–16].

Maintaining the level of writing

The main task of the editorial board is to invest effort in the highest possible quality of the papers. In addition to building the reputation of the journal itself, the editorial board by selecting quality papers directly influences the development of the profession by providing its readers with verified, useful and current informations [17].

Tekstil editorial board has recognized the importance of controlling the level of writing the papers it publishes but for objective reasons it was not able to systematically direct it. Due to the afore mentioned problem with the co-authors, the editorial board could not count on the appropriate level of writing with the existing authors while at the same time reader's level of education increased [18].

The level of the journal was directed at the professional interests of middle and senior technicians and more educated highly skilled workers, on which the textile industry has relied. Many of them did not speak foreign languages so the *Tekstil* as a domestic professional journal was of great importance for the monitoring of new developments and the application of new technological solutions.

The awareness of the scientific approach to the professional issues gradually rises. On one hand, the editorial board points out that importance of developing in a scientific direction, which would significantly improve the level and reputation of the journal, but on the other hand, there were doubts about the interest and ability of most readers to follow up the content [19].

In the mid 1960s, the increasingly frequent use of scientific methods of research reflects the content of the journal *Tekstil*. There is a positive trend in the publication of quality professional and later original scientific papers [20].

The concentration of a growing number of scientific papers and scientific status of the journal Tekstil directly relates to the development of higher education. Existing Textile Study, founded in 1960 at the

Faculty of Technology, in 1974 obtained its administrative autonomy by establishing OOUR Tekstilno inženjerstvo (The basic organization of associated labor - Textile Engineering) which became the organizer and holder of the study. In 1978 OOUR Tekstilno inženjerstvo, through the transfer of a large number of teachers and scientific staff from other OOURs from the Faculty of Technology, gained the status of a scientific organization, and soon changed its name to the OOUR Institut za tekstil i odjeću (The basic organization of associated labor - Textile and Clothing Institute). The institute in 1983, with the merger of all higher textile schools, became a unique organization with overall higher educational and scientific activities in the field of textiles in Croatia. Shortly thereafter, in 1990, a special scientific subfield of textile technology was established in the field of technical sciences, and in 1991 the Faculty of Textile Technology of the University of Zagreb was founded [21]. The vast majority of scientific papers of authors from these institutions filled the pages of the journal Tekstil [22].

The scientific character of the journal *Tekstil* also reflects through the new journal format introduced in 1987. With the development of textile technology, there was a growing need for more detailed display of complex images that could not be adequately displayed in the earlier small format. The large format also had an economic background because of the representativity of the ads them selves. This format has been preserved to this day. The first issue of 1987 is shown in figure 2.



Fig. 2. The front page of the journal *Tekstil* first issue in 1987 in the new larger format

The content and selection of articles

In the context of the mentioned difficulties, the selection of received papers, in fact, did not exist, which is understandable. The editorial board generally accepted all paper after the examination of experts in the field. Although the awareness of the peer review in the journal *Tekstil* existed, at the beginning of the publication for the abovementioned reason, it could not be fully implemented.

The diversity of processed textile technology topics has crystallized by itself as a reflection of the author's diverse interests and the topics they have chosen. The distribution of content by professional fields was not possible due to limited numbers of experts in a particular field [23]. This situation did not allow the systematic monitoring of certain problems.

Over time, the situation has improved so the journal was bringing the latest achievements in the field of engineering, technology, production, organization and management in the textile and clothing profession. A growing number of authors, profiled by fields of activity, regularly published scientific and professional papers and information on practical experience in all areas of the textile and clothing industry [24].

Publishing regularity

One of the key indicators of the journal professionalism and quality is regular publishing without delay and disruption [25]. The regular proper publication reflects the stability of the journal and is the basis of trust among potential authors [26].

Since the journal launch, editorial board has been working hard to keep monthly publishing frequency, but it faced difficulties of technical nature. Although all the material for the press was timely prepared, the difficulties in printing office like the lack of professional personnel, limited capacity of the printer and the lack of electricity affected the delay of certain numbers on an annual basis.

The delay in publication was present as long as the printing office could not technically meet the needs of the journal. As the number and diversity of the received manuscripts were never the reasons for the delay it can be freely said that, the status of the journal was at a high level.

The editorial board, for many years, successfully maintained a high level of expertise in publishing policy through regular frequency, appropriate content and volume of papers. Only by the end of 2007 the first double issue 11–12 was published not following a specific theme. After this, the first irregular publication appears in 2012. The journal was published in two issues only, named issue 1–6 and issue 7–12. From 2013 the journal has a frequency of six double issues a year.

The exception to the regularity of publishing in terms of one number per month, besides the above, was a double issue 7–8 in 1952. The reason for double issue was of technical nature since the journal was launched in February of 1952, and the default issue

per month publication frequency of the journal was to be held [27].

Joining certain issues of the journal in a multiple issue is never really a desirable solution regardless of the cause. If there was an extraordinary inflow of new manuscripts of a particular topic driven by some conference or symposium it is always better to publish a special issue dedicated to the occasion. In the contrary case for lack of new manuscripts for some period, it would be better, with an editorial board explanation to reduce the number of issues per year to a more realistic frequency. The trend of maintaining only the nominal publishing frequency through publishing multiple issues will be discussed later in the text.

Financing the journal

Initial substantial source of funding of the journal Tekstil, except DITH (Textile Section of the Croatian Society of Engineers and Technicians) as a founder, was advertising. Additional sources were working organizations subscriptions. Fruitful advertising marked the first four decades of the journal, mostly from foreign companies that found interest in cooperation with domestic industry. Due to limited financial resources, domestic companies were not able to advertise as much [28]. However, several domestic companies regularly advertised through all the years of journal publication. These are: Varteks, Pamučna industrija Duga Resa and Textile Import-Export. From major foreign companies that have advertised, and editorial board held advertising and business relationship, are: Bayer, Badische Anilin und Soda Fabrik (BASF), Benninger, Geigy, Glanzstoff, Mayer and others. The list points to theimportance and development of the textile industry at that time.

In this way, the journal independently financed itself and with DITH, later the SITTH (Alliance of Croatian Tehnicians and Textile Engineers), contributed to the acquisition of foreign and domestic scientific and professional books and journals. The rich library of SITTH was a witness to that [29]. Financial results of the journal's management were positive. By the end of the 1970s, the journal applied to the Republic announcement for co-financing of scientific and professional journals. Since then it has received state financial support.

Over time, publishing costs became higher than readership subscription income. The cost of paper, printing and author's fees was steadily increasing, as the subscription price did not follow that trend. Additionally, the salaries of employees should be added, after which the costs of printing with 50% of the shares were the highest. After them per share were royalties. To the unsustainability of the revenue and expenditure ratio, the reduced response of domestic advertisers contributed because of lower domestic industry finances. Due to the financial disadvantage, the editorial board has stopped paying royalties to the authors. In 2013, publication charge was introduced because of the difficulties in journal financial management [30]. Article processing charges

is current fully accepted business model of most of the journals [31].

In the late 1980s and early 1990s textile and clothing industry suffered significant losses due to policy of overvalued Yugoslav dinar (former currency) and uncontrolled liberalization of import of textile products [32]. There was a decrease of business activity through a decline in production, labor productivity and capacity utilization [33]. War destruction that followed shortly after and poorly regulated process of transformation and privatization further downgraded Croatian textile industry.

With the collapse of the socialist system and the market of the former Yugoslavia, the textile and clothing industry of the independent Republic of Croatia, which was both the purchase and sales oriented to this market, found itself at a disadvantage. In addition, at the global level there has been a migration of production to low labor costs countries, especially the Far East, which caused a decrease in production in Western Europe. The consequences of all these events were reflected to the journal *Tekstil*.

The market reduction caused a decrease in the number of subscribers and advertisers, which directly affected the financial situation of the journal. Between 1990 and 1996, the journal monthly circulation (N = 2,800) was reduced by as much as 46.43% (N = 1,300) [34]. Negative trend remained, so the 1,500 monthly printed copies in 1996 decreased to a monthly circulation of 800 copies in 2016, a further decline of 46.67%.



Fig. 3. First front page wit advertisement, Vol. 40 (1991) Issue 1

Following these events, the journal has become directly dependent on the financial support of the Ministry of Science [35]. The Ministry regularly provided financial support to the journal by 2016, except in 1998 and potentially several previous and later years, due to the financial situation in the state at the time [36]. The reasons for the lack of support in 2017 and later years will be discussed later in the text. With the first issue in 1991, the editorial board intro-

With the first issue in 1991, the editorial board introduced advertisements on the front page to improve the financial situation of the journal. Such practice in journal publishing is quite common. The front page of the journal *Tekstil* with the advertisement is shown in figure 3.

JOURNAL DEVELOPMENT - CREDITS

Despite all difficulties, the editorial board of *Tekstil* managed to make many positive developments for the profession and the society in general. Their most important achievements were focused on the development of education, professional terminology and scientific approach to problems.

Investments in education and profession

The editorial board of *Tekstil* from its very beginnings, besides publishing the journal, advocated publishing of professional literature. Existing scripts, manuals, and textbooks were considered important factors for the advancement of textile technology, professional education and training of staff. In this regard, there were many attempts to publish but in most cases, in the beginning, the realization was somewhat weaker because of the obsolescence of information, following the rapid technological progress and financial justification of the issue, meaning the unfavorable proportion of printing costs and the number of potential users [37].

The situation changed significantly with incresament of the personnel number at all levels of education and expertise and with the better financial standing of journal in the late 1950s and until the 1970s. The first published book was Chemical Technology of Textile Fibers by Matija Krajcinovic in 1959 [38]. Scripts of various themes, books and proceedings from congresses and symposiums were published regularly within the extended publishing activity of the journal [39, 40].

DITH, later SITTH, for the purposes of the then Textile Study, and later the Institute, provided various teaching aids for the professor's cabinets, production equipment for teaching needs, a number of deficit teachers were educated, tenders were announced for the award of the best master and doctoral theses etc.

Due to lack of adequate handbooks, editorial board published articles showing the basics of technological processes, the state of certain technologies and the like. Editorial board introduced translations of foreign professional and scientific papers in their own assessment but also in cooperation with foreign authors and manufacturers of machines and dyes. In

addition, the previously published papers that were of wider importance were published and separately printed. All these efforts have further enriched the content of the journal and contributed to the quality of education for students as they rewarded the journal in return with a large number of subscriptions.

The important role of the journal *Tekstil* in education of personnel in the textile industry and profession is also supported by the results of the survey from 1986 on the impact of the journal on education and self-education of personnel in the textile and clothing industry. According to experts in the field of textile technology, where the survey was conducted, the journal *Tekstil* was a modern educational medium focused on secondary, tertiary and high education, professional development and self-education of individuals [41].

The editorial board of *Tekstil* considered the professional training of the personnel and the education of the young people among the priorities of their work. Co-financing was provided for professional travel, participation at domestic and foreign congresses, conferences and symposiums. With its own funds the journal in 1959, bought the land for the construction and extension of the Textile School Center in Zagreb, where present Faculty of Textile Technology and High School for Fashion and Design are located [42, 43]. All this is evidence of professional and social responsibility and strength of the journal *Tekstil*.

Development of professional terminology

A very important role of Tekstil in all areas of textile technology is manifested through the development of professional terminology. The initial scarcity of professional terminology or exclusively foreign terms for different technological processes, parts of machines and the like editorial board approached very seriously. From the very first issue of the journal a section Terminology was introduced under the initiative of creating a terminology of weaving technology [44]. The new terms were regularly formulated, and remarks, on some of the terms that came to the editorial office, witness the significant interest in creation of professional terminology. At first, the terminology was most developed in the spinning and finishing, and later in the knitting and clothing technology [45]. Through symposiums, formal and informal conversations, meetings and sessions appropriate terms for processes in textile technology were found. In addition, the editorial staff has collaborated with linguists. By publishing new vocabulary titles through discussions and articles in the first ten years of the journal publication, a rich professional terminology was created, which became the basis for the publication of a new professional literature, which was an extraordinary contribution to the profession and to the richness of the Croatian language [46].

The greatest merit of the editorial board of *Tekstil* in terms of the development of professional terminology is the implementation of the unique use of technical terms in published papers. In this way, professional

terminology was systematically created. The development and existence of professional language is one of the fundamental factors for the development of the profession. It is especially important as a new generation fully adopted the professional terminology and thereby developed the profession.

Scientific approach to problems

In the context of this paper, in general, about the development of scientific research within the textile and clothing industry in the former Yugoslavia, three periods can be mentioned. The industrial period until the beginning of the 1950s is characterized by empirical means of process and progress in terms of rationalizing the plants without the intervention in technological processes. The industrial era period between the 1950s and 1980s has been characterized by the application and development of scientific research methods as well as significant changes in the management of technological processes in terms of automation. The post-industrial period lasts from the 1980's. It is characterized exclusively by the scientific research work and the introduction of computer and information technology in the production process management, which further enhances the automation of machinery and plant, as well as the entire production process [47-49].

The launch of the journal Tekstil occurred at the same time as the world's technical and technological progress, following which the empirical way of conducting the process was abandoned. Due to the dynamics of development, the scientific methods of research have been introduced and applied globally in order to be able to offer timely responses to emerging demands and challenges. The initial lack of original scientific papers in the journal was conditioned, as already stated, with insufficiently developed education and generally unfavorable situation with regard to the formation of appropriate professional personnel. With progress, over the years, especially since the mid-sixties, the journal has brought more and more scientific-based research. The form of the papers has gained on scientific status by introducing a list of used literature and abstracts in English, German and French. The scientific character of the journal Tekstil was fully endorsed by introducing the categorization of papers and by classifying papers according to the Universal Decimal Classification (UDC) with the first issue of 1980. Since then, after each peer review, the editorial board has assigned the papers an appropriate category. Leading categories were: original scientific paper, preliminary communication, review, presentation from a scientific or professional symposium and professional paper [50]. Key words were introduced, later on, in the first issue of 2007 in accordance with the practices of leading scientific journals.

The application and development of scientific research within the textile industry enabled the reduction of production costs, better utilization of raw materials, increased productivity and product quality improvement [51]. In this sense, scientific information

has become an increasingly important developmental factor, and the speed of information accumulation is an indicator of development. Dissemination of information collected through scientific research is gaining importance since the results of scientific research are thus made available to a wide audience of interested scientists, researchers and experts from a particular area [52]. Publication of categorized papers is of particular importance to profession and science, and is a major responsibility for the editorial board of a journal. It is a systematic flow of scientific information that depends on the reputation of the journal, its international visibility and the ability to exchange scientific ideas and achievements. It was this cardinal role that belonged to the journal *Tekstil*, which, by dissemination of valuable information, provided the foundation for the development of textile technology in Croatia.

REVIEW THE CURRENT STATE OF THE JOURNAL TEKSTIL

The best description of the current state of the journal *Tekstil* is the fact that the monthly circulation in the last 28 years, since the collapse of the former Yugoslavian market, was reduced by 71.43% or by 2,000 copies. The monthly circulation in 1990 was 2,800 copies, and today it is 800 copies. The reasons behind the low circulation are of already mentioned socio-economic character, but also of scientific publishing character, which includes new trends of communicating, primarily online publishing. All current difficulties of the journal's unfavorable status will be presented in the following chapters.

Indexing of the journal Tekstil in relevant secondary publications

The scientific status of a journal depends entirely on the importance of the published content for the community of experts to which it is intended. In terms of measuring the significance of the journal and a comparison with other journals in the domain of science in the world, there are secondary publications that do this very thing. The background of secondary publications in the form of available bibliographic and citation databases is quite well known. In the context of this paper, it can be repeated that they are the publications that, based on certain criteria, select the primary publications, in this case the scientific journals, and in their corpus they include only those they consider to meet the set criteria or that are significant for a particular scientific field.

Today there is a large number of different sources of scientific and professional literature, in primary and secondary form. However, in the system of international scientific research evaluation, two professional bibliographic multidisciplinary databases are used which, through the literary sources mentioned in the scientific papers, bring these scientific papers, indirectly and the journals in which they are published, in the relations. The basis of these relationships are the citations or parts of the contents of the previously written scientific papers that are meaningful and

objectively incorporated in the works that these contents are needed to argue the arguments put forward. Based on this, these databases, apart from the bibliographic, are also citation databases. They are Web of Science and Scopus.

The indexation of the journal in the most important world's bibliographic and citation databases, and especially when it comes to a scientific environment with relatively small scientific production such as Croatia, confirms the journal authority in the field of activity and places it in the probing group of the most important scientific journals visible to the relevant global scientific community.

By the wise editorial guidance, *Tekstil* has been indexed in several of the world's most significant secondary publications by the end of the 1960s. Apart from the only such domestic publication, the Bulletin Scientifique, *Tekstil* was, according to the 1978 data, indexed in the American Chemical Abstracts, Textile Technology Digest and Art and Archeology Technical Abstracts, British World Textile Abstracts, French Bulletin Signaletique and Russian Referaturnyi Zhurnal [55]. The list of secondary publications that indexed *Tekstil* has changed in relation to the development of the journal and changes within these publications themselfs. It can be generally said that *Tekstil* has always been present in the world's relevant secondary information sources.

In addition to the quality of the journal, goes the fact that it was indexed in two above-mentioned, most important bibliographic and citation databases, Web of Science and Scopus.

Materials Science Citation Index and Research Alert, as one of the predecessors of today's platform, of several Web of Science databases, former Institute of Scientific Information, began indexing the journal *Tekstil* in 1993. Back then, these publications marked the most selective choice of scientific journals from around the world. Presence in them was a matter of prestige because they selected roughly 7% of the most important journals of natural and applied sciences in the world [56, 57].

The Scopus database, from Elsevier the world's largest publisher of scientific information, was founded in 2004, and in 2007, the journal *Tekstil* met the set criteria and positioned itself among the world's top-ranked journals from their list.

The presence of the journal *Tekstil* in these two most important bibliographic and citation databases, including other relevant secondary publications, has given it prestige status.

Unfortunately, in the last decade of publication some difficulties had a negative impact on the state of the journal. In short, Web of Science has stopped indexing the journal *Tekstil* in 2012 and the Scopus database in 2016. Concrete reasons will be discussed in the next chapter.

Key drawbacks and suggestions for the development of the journal *Tekstil*

Currently, key disadvantages of the journal are poor availability, problematic frequency and delays in the release, exclusion from the most relevant global databases, lack of papers by well-known international researchers and the role of editorial staff. All of this is directly related to the financial condition and the survival of the journal.

Availability

Along with the extremely difficult social and economic circumstances of the 1990s and 2000s, the state of the journal was influenced by changes in world scientific publishing. The most significant trend that has globally affected the reduction of the publication of scientific journals is the general acceptance of the Internet as the media of communication. In this regard, in an online environment, it is not even about the significant increase in the use of journals in electronic form, but the complete dominance of this form of publishing and presence on the international scientific scene [58]. Although already mentioned, the decline in the monthly circulation of Tekstil can not be directly justified by this cause because the editorial board failed to realize the availability of the online version of the journal on the home web page. This cause affected Tekstil with time lag.

By creating favorable conditions for the publication of electronic content on the Internet at the beginning of the 2000s, until now, the entire worldwide scientific communication has shifted from printed to electronic or online form [59]. This global change in scientific communication also influenced the secondary sources of information, databases. Having in mind greater access to content and thus greater visibility, the Scopus database has set the online availability of content as one of the basic criteria for indexing scientific journals. At the Web of Science database, such availability of journal content is not necessary, but it is certainly desirable.

Regarding that the editorial board of Tekstil made the first step, creating a web page of the journal. Unfortunately, it has failed to make available complete content of the journal in electronic form. This has created the underlying problem of reaching to the existing, but more importantly, potential new authors and associates as well as readers. This problem had a direct impact on the discontinuation of indexing in Scopus, and indirectly to the discontinuation of indexing in Web of Science. The reason for the absence of published papers in electronic form on the journal web page is unknown. It can be argued that today's absence in the online environment, which has become exclusively in terms of communication, is a huge handicap. In the context of the previous printed form of communication, it is an equivalent difference, compared to manual writing.

With the introduction of the Portal of Croatian scientific and professional journals- Hrcak in 2006, all Croatian scientific journals were given the equal opportunity to make all the previously published and future papers available online on their own journal profile within the common platform. The same year, editorial board registered *Tekstil* on the Hrcak portal, suggesting an understanding of the importance and

benefits of online availability [60]. However, surprisingly, no subsequent year is completely stored, and some years are completely missing. Positive moves have recently been made. Last five years of the journal are available on Hrcak portal.

The problem of poor visibility of the journal at the global level significantly reduced the possibility of submission of newspapers both foreign and domestic authors. Indeed, the absence of the journal's coverage in relevant databases negatively affects the affirmation and promotion of domestic authors and researchers. This generally undermines the journal status, and in particular its international aspect.

Therefore, it would be advisable for the editorial board to set up a fully functional web page in the shortest possible time to reduce the time lag in the availability of complete content. It is extremely important that all the content in electronic form, which was published in the print version of the journal, and in particular, the most recent one is made available on the web page. This would maximize the reach to users in terms of the availability of potentially useful current content, and on the other hand, it would increase the visibility of the journal itself. In the near future, it would be desirable to digitize all previous volumes and make them available on the web page. About this idea, the editorial board showed the awareness in 2011, but due to the lack of financial resources, the realization failed [61]. This would be the best promotion of the long tradition of the journal Tekstil and its importance for the development of the textile industry, textile as a profession and textile technology as a scientific field of technical sciences. Otherwise, all electronic editorial work that is owned by editorial board is a dead capital.

Of course, all the content on the web site should be in open access and English language. Doing this editorial board would completely direct the journal to an international environment that would open the possibility of inflow of current and interesting papers that would revive currently stumbled *Tekstil*. In that way, it would not be the medium of communication primarily for domestic experts and scientists in the field of textile technology but a mean of communication within the same field at the global level with the benefit of affirming domestic authors at the highest level.

In the wake of the open access journal should be applied and recognized in the relevant international scientific base open access journals Directory of Open Access Journals (DOAJ) that would certainly contribute to the reputation of the newspaper in terms of promoting free access to scientific information.

Publishing frequency

Apart from the lack of online availability, the most important problem is the irregular publishing. The importance of regularity of publication and avoidance of delays has been already highlighted as a mirror of professionalism, quality and stability of the journal. This problem is the basic reason of discontinuation of the journal in the most relevant international databases, Web of Science and Scopus.

In the context of this problem, it should be pointed out the actual publication of double issues. In addition to potential attempt to compensate for the delay, the background of publishing double issues can reflect over income of new manuscripts. The specific reason for the delay is unknown but it raises the question of justification, very frequent, monthly publication of the journal.

As already mentioned, the publication of double issue is always accompanied by some extraordinary event that is the reflection of that double issue. Whether it is a symposium or a conference, which this special issue is reporting about or is a problematic situation whose adverse consequences are being mitigated, an example of such a situation is the first issue of the journal Tekstil, which was launched in February of 1952, and the intention of the editorial board was to be a monthly journal and to be published 12 times a year. The lack of the January was overcome with the release of issue 7-8, which was in this case a justified and reasonable solution. In addition to the lonely twelfth 11–12 of 2007, for which the reason is unknown, the journal has been running regularly for many years until 2012. Then it was published in only two issues. As the editorial board did not indicate the reasons of discontinuity of monthly publication and release of only two issues coincides with the discontinuation of the journal in the Web of Science, with the reason of irregular publication, obviously it was the inability of the editorial board to establish a regular publishing without delay. It is a pity that these two issues were not used for a thorough solution to the problem of delay. From 2013 onwards, until today, the journal is published in six issues. As has already been said, double issues are completely unacceptable in scientific publishing due to the negative connotations of the causes and consequences of such a publishing form.

The journal *Tekstil* has been for 67 years a reflection of the context in which it was located. Former development of the industry and society has produced monthly frequency, and the current frequency of the double issues is a reflection of the overall economic downturn. In the function of journal survival, the editorial board should adapt to the situation in which it is in and reduce the frequency to four issues per year. An example of the quarterly frequency can be the closest Slovenian journal *Tekstilec*, whose editorial board has completely revitalized the journal. In addition, most of the world-renowned journals from the Material Sciences-Textiles category under the Journal Citation Reports are also published quarterly [62].

At the domestic level, *Tekstil* has been, from the launch until the collapse of Yugoslavia, among the six journals, the leading journal in the field of textiles. The journal also was the only federal journal, which was the formal confirmation of his status. His legacy continued to be confirmed in the independent Republic of Croatia as one of the initially four leading journals in the field of technical sciences [63, 64]. From this aspect, every year, except for the aforementioned 1998, every year, until 2016, it received

financial support from the Ministry of Science. In the period from 2011 to 2015, the journal was among the 39 best Croatian technical journals and received 325,708.00 HRK (aprox. 44,253.00 EUR) from the Ministry of Finance. In 2016, the journal was among the 23 most important technical journals and received 54,163.00 HRK (aprox. 7,359.00 EUR). From the reasons mentioned above online content unavailability, one year delay in publication and double issues Ministry of Science and Education in 2017 terminated financial support for publishing the journal *Tekstil*. Since it is about financial support of existential importance, the journal is currently in a very difficult situation.

Due to the seriousness of the situation and the threat of the existence of the journal, it is necessary to establish a sustainable publishing without delays. To the achievement of this key goal also benefits the quarterly frequency that would allow additional time to prepare for the publication of an individual issue that has not been available so far. Therefore, it is necessary to redefine the frequency of journal publishing with respect to the scientific and technological potentials of the environment and to introduce the quarterly frequency. In addition, one of the primary goals should be the visibility of the journal through its own web page and the portal of the Croatian scientific journals - Hrcak and the DOAJ database. In this respect, all issues available electronically should be stored online in open access.

With these two relatively fast solutions, the editorial board could apply for financial support for the scientific journals of the Ministry of Science and Education for 2019. This would result in funding for the realization of long-term changes.

The first of such changes would be to focus on saving financial resources by reducing the volume of printed copies of the journal to a representative minimum. This would mean that the journal would only be printed for the purpose of exchanging with other scientific journals, article for authors, and targeted users for the purpose of presentations, such as advertisers, various scientific and state institutions, libraries, etc. This would save finances on printing costs, and the journal would focus on online environment. If publishing a journal were still financially unprofitable to the cost of printing and revenue through adverts, it would be advisable to switch to just online version, which is commonly found in the world's scientific publishing [65, 66]. The printed version of the journal as a form of communicating its primacy is lost to the dominant polyvalence of the electronic version in the online environment. Thus, it becomes a form of respect for the tradition of journal and nurturing a certain level of reputation [67].

CONCLUSION

As far as long-term changes are concerned, it is necessary to consolidate the editorial board members in terms of involving the interested younger professionals willing to invest their time and knowledge, and to divide the editorial tasks by direct routing and discard inactive members. An international editorial board is of great importance in which the world-renowned experts from all the fields covered by the journal should be invited. This would be a significant presentation at the international level, and members of the committee themselves would attract additional valuable articles and potential future international cooperation.

The editorial work should be deployed to a number of expert members to carry out the key roles of journal routing, coordination of the review process and the promotion and adaptation of the journal to new trends in scientific publishing. From the concrete present problems, editorial board should be addressed by attracting works of current and attractive topics that would revive the journal. In addition, there should be

a system of citation regulation in terms of excessive self-citation both the author and the journal, as well as the relevance and age of the cited publications. All members of the editorial board should actively work on as much inflow of useful and interesting articles, which is the basic membership duty.

Of course, these changes and recommendations are just a part of what should be done to bring the *Tekstil* back to a deserved status. They were presented with the aim of revitalizing the journal and improving its status both domestically and globally. It would be good if the editorial board in its concept of journal development were to re-apply *Tekstil* into the most relevant Web of Science and Scopus databases, which is the ultimate goal of every scientific journal in editorial sense.

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