Je-LKS
Journal of e-Learning and Knowledge Society
The Italian e-Learning Association Journal

SELF-ASSESSING QUALITY OF SCIENTIFIC JOURNALS

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The case of the Journal of e-Learning and Knowledge Society (Je-LKS)

This report focuses on the procedures and techniques used by the **Journal of e-Learning and Knowledge Society (Je-LKS)** to estimate the quality of the journal and to make improvements. The report begins with an overview on scientific journals, types and their functions. Then, it considers requirements that contribute to journal quality, and indicators for quality control. The purpose of this document is offered an objective insight into performed processes and provided feedback on how improving and increasing the level of quality of the scientific journal.

Scientific Journals

In academic publishing, scientific journals are collections of papers, generally written by scholars and experts in the discipline for an audience whose readers are expected to have specialized knowledge or training, such as specialists and researchers. Scholarly journals are generally specialized for different disciplines, subjects and fields, to increasingly specific topics but may be also multidisciplinary, interdisciplinary, or related to a broad field.

They are also called "periodicals", due to the fact that are published at regular intervals (once a month, quarterly, six-monthly, yearly, etc).

Scientific journals constitute one of the main publication channels for scholarly research, one of the preeminent forms of scientific communication expected to further the progress of science and disseminate research findings. They contain academic articles categorized according to the kind of information they provides (e.g., theoretical articles, empirical research articles, literature reviews, case studies, methodological articles, book reviews, proceedings, communications).

According to Schaffner (1994), scientific journals absolve five functions: building a collective knowledge base, communicating information, validating

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the quality of research, distributing rewards, building scientific communities.

The first intent of scientific journals is that to further the advancement of human knowledge, usually making the benefits of science available to all. So, journals serve to create collective knowledge base that is the need of readers, current and future, and each article that appears in a journal becomes part of an archive available to all.

Schaffner assumes that the function of building a knowledge base is intrinsically linked to the second function, that of communicating information, especially now that publishing can be made «in a remarkable new way that is not only incomparably more thorough and systematic in its distribution, potentially global in scale and almost instantaneous in speed but so unprecedentedly interactive» (p. 36).

Validating the quality of research usually occurs through a process of refereeing, that is the process of subjecting a scholarly article to the scrutiny of reviewers who are peers, namely experts in the same field of the author, before that the article is published in journal. There are two ways that recruiting of reviewers is done: publisher/editor selects researchers inviting them in joining the editorial review board of journal or researcher introduces oneself for serving on a review board. Normally, reviewers don't get paid for their activity since that it is traditionally recognized as part of the professional obligations of researchers. Peer review may be open or blinded. It is open when «the author's and reviewers' identities are known to each other, and the reviewers' names and (optionally) their reports are published alongside the paper» (Ware, Mabe, 2015, p. 47). In the case of single-blind review, reviewer identity is hidden; in the case of double-blind review, author identities will be concealed at reviewers, too. Reviewers report back the results of referring process to journal publisher. Researchers believe that the system of peer review is a good method to maintain standards of quality (Ware, Monkman, 2008), although «research on bias in peer review - predicated on the ideal of impartiality - raises not just local hypotheses about specific sources of partiality, but much broader questions about whether the processes by which knowledge communities regulate themselves are epistemically and socially corrupt» (Lee *et al*., 2013, p. 13). Peer review referring is becoming dysfunctional and, therefore, new methods are needed to maintain quality.

The issue of reward is equally important. Although authors do not profit directly from it, publishing rewards authors indirectly through forms of recognition, prestige arising, and career advancement. Academics are required to write and publish for a wide variety of reasons including cultural, personal, and professional motivations. Wellington (2003) believes publishing is driven by internal and external factors. The external prompts are those are to do with outside pressures such as career enhancement, getting promotion, research

assessment exercise for universities, accountability, professional development, benefits to one's own institution. The internal ones can be regarding the intrinsic motivation to write, the whole gamut of personal outcomes of publishing, and the publishing as part of ethics of responsible research. The first type of internal prompts concerns the intrinsic motivation to write for purpose to clarify and refine one's thinking, while the personal outcomes of publishing are self-esteem, self-fulfilment, respect, credibility, fame, reputation, and satisfaction of making a difference. Finally, the motivations that are included in the idea of responsible development of scientific research has been described as those prompt of authors/scientists who believe research is not complete until published, who are certain of realize the full potential of research through share, communicate, and dissemination, who have faith in the value of dialogue and negotiation inside the research community for contributing to change and improvement.

The last function identified by Schaffner is the visibility of groups of researchers that, around to academic journals, build their identity of scientific community working in a particular field of science. Solomon (2008) gives some examples of how journals forming and maintaining scholarly communities: «editorials, opinion articles and letters to the editor often serve as a forum to debate the current issues in the discipline. Sometimes they are substantive and sometimes they extend to related areas, such as the social implications of findings, funding and/or training issues within the fields. Journals also commonly serve as a forum for news such as appointments to major positions or the passing of a well-known member of the community» (p. 14-15).

In the past, when journals were available only in print and the printing process was expensive, readers had to pay a subscription price or licensing fees for home delivery. Now, most of journals are available electronically via online archives. Access may be purchased with a subscription to journal's archive; or else it is possible to get issues and single article delivered to the reader's device or desktop. But access may also be free. When journals can offer free content means that the cost of peer review management, journal production, and online hosting and archiving is borne by academic institutions, scientific societies or research groups that have accepted responsibility for the activity in question.

Many journals have reduced the barriers to access to information, adopting policies of Open Access. «Open access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions» (Suber, 2012). This does not, of course, mean that all open journals offer free access to content. Willinsky (2006) distinguishes ten models of open access (home page open access, open access e-print archive, author fee open access, subsidized open access, dual-mode open access, partial open access, per capita open access, open access indexing, open access cooperative) that are according to

him demonstration not so much diffusion of many forms of opening access as adherence to "the access principle", which is concerned with impact, participation, and circulation of knowledge. In fact, he stresses the ethical imperatives connected with the open access publishing systems, which not only make knowledge freely available to all but also turn "this knowledge into a greater vehicle of public education".

Open access journals are electronically, quickly and easily searched through the use of online databases and search engines, which index information gathered. Indexing helps journals to achieve purpose of being accessible to a wide audience and being accessible in turn improves journals' reputation since indexed journals are considered to be of higher scientific quality. There are several indexation services available today. Each one works in a different way for scanning information (such as manuscripts, abstract of articles, and keywords) and uses different criteria to evaluate journals' suitability. Typically, a journal has to submit a formal application and provides evidences supporting its application. If journal meets all criteria, it gets indexed.

How self-assessing quality

Quality is a central element in academic research, and assessing quality of scientific journals has long been a major goal for researcher, institutions, and journals themselves. The several reasons for assessing quality of scientific journals are essentially the viewpoint of such stakeholders. Quality assessment is considered to be highly relevant for scientific journals not only to achieve higher quality but also to attract more or better authors, get recognition, and widen dissemination. For academic authors, it becomes a criterion to choose where to submit manuscripts since through publication in a high-quality journal the authors often obtain international recognition and scientific quality improvement. Universities have also need to know lists of reputed journals to evaluate its researchers or the aptness of a researcher, and to choose subscriptions for the library for the convenience of students, faculty, and researchers.

Assessing of quality of scientific journals is done using a set of statistical and mathematical indices called bibliometric indicators. Bibliometric indicators are important since they are widely used to compare the performance of the journals. Usually, some of the currently bibliometric indicators and a combination of these are used by the most important databases in order to select journals and to compare scientific impact of these.

In this case, yet, the goal is not to compare scientific impact of the journal but to identify strengths and weaknesses for choosing areas to improve and, consequently, increasing the level of quality of the journal. The purpose of

self-assessing quality is to make improvements. Therefore, this part of the document presents a pattern for self-assessing quality that seeks to capture general determinants of quality of a scientific journal starting from the assumption that assessing scholarly journals is a complex task that ideally examines complex multidimensional factors. First, the requirements will be identified; second, the requirements will be segmented in indicators describing such identified requirements and pointing to aspects that influence quality and should be managed.

In order to identify the requirements of the self-assessing pattern, a search was made for the principal assessing models of academic journals from which to derive the requirements used most frequently. They concern credibility, relevance and visibility of journal, editorial management of publication and scientific quality of content. Defining and classifying the indicators proved more difficult since the choice of indicators reflects the value judgements and priorities to promote.

Table 1 below represents the chosen indicators. Each description is followed by a short commentary suggesting some aspect, which are required to make the indicator more comprehensible, in terms of its meaning and its purpose.

Self-assessing the quality of the Je-LKS

The *Journal of E-Learning and Knowledge Society* (Je-LKS), launched in 2005, is an Italian open access journal for disseminating of research in the fields of e-learning, educational technology, Information and Communication Technologies (ICT), and Knowledge Management. It is published electronically (http://www.je-lks.org/) and the papers are provided in PDF format.

The types of articles published are "invited papers", that are a selection of articles regarding relevant themes or written from internationally renowned experts (normally, the editorial board invites authors), or "peer reviewed papers" and "peer reviewed communications", that are articles or short papers that have passed a peer double blind review.

In this part of the document the last year is analyzed in detail to determine what requirements the journal meets and indicators for quality control. The purpose of this section of the document is offered an objective insight into performed processes and provided feedback on how increasing the level of quality of the journal.

Journal credibility

The notion of credibility concerns the quality of being believable or worthy of trust and may be assessed by examining how much a journal is sensitive to

safeguards intellectual property rights, guarantee the validity of the contents, and improve its profile making public bibliometric indices.

Table 1

OVERVIEW OF REQUIREMENTS, INDICATORS, AND REQUIRED DEVELOPMENT

INDICATOR	DESCRIPTION	REQUIRED DEVELOPMENT
CREDIBILITY		
Bibliometric indicators	Some of the currently used bibliometric indicators are impact factor, crown indicator, h-index and so on.	Bibliometric indicators are widely used to compare the performance of the journals.
Digital Object Identifier (DOI)	The DOI system is an international standard, developed by the "International Organization for Standardization", that identifies and describes digital objects.	DOI is important for dissemination of content on electronic networks.
International Standard Serial Number (ISSN)	The ISSN is the international standardized code, which identifies all serials, journals, magazines, periodicals in printed or digital form.	A journal may have two ISSNs: an ISSN for the print version and an ISSN for the electronic version. This information have to be on the website.
International editorial board	The reputation of the editorial board is a good indication of the journals credibility.	Membership of the journal's editorial board has to be recognized experts in the field and available on the journal's site.
RELEVANCE		
Supported by reputable publisher or scholarly society	One indication to journal quality is the general reputation of the publisher, association, society or organisation publishing the journal.	Journals may have affiliation or sponsorship relationships with reputation publisher, association, scholarly society or scientific community.
Active role in the dissemination of research	Publishing activities serve the central mission of dissemination of knowledge in a specialized field.	Perception of the active role of a journal in the dissemination of research depends on the scientific community's own particular viewpoint and traits.
Relevant scope	Journal clearly indicates a mission to disseminate research content.	Relevance of the scope depends on the scientific community's own particular viewpoint and traits.
Excluded from the lists of predatory journals	Predatory Open Access Publishers are bogus open access journals that promise quick publication on payment of a fee.	Relevant journal must not be included in the lists of predatory journals.
VISIBILITY		
Presence in databases	Another indication to the quality of a journal is the number of journal databases, which index articles from the journal.	This information have to be on the website or available through UlrichsWeb.
Journal website	Journal should ensure that it is distributing its content appropriately, and that the website works.	Journal website is easy to locate or identify, and explains any publishing information in a clear manner.

INDICATOR	DESCRIPTION	REQUIRED DEVELOPMENT
Internationalization of knowledge	Scientific journals have been encouraged to internationalize, so that the production of knowledge can be disseminated beyond the National boundaries, in order to increase their visibility.	The publication in English can increase the visibility but the biggest challenge is to attract readers from various countries and foreign authors interesting in publishing. Content should be readable for an international audience. The aims and scope should be of interest to a wider international scientific community within a specific subject field. Journal may have an International board to represent it internationality.
Discrete advertising	Predatory Open Access Publishers advertise by sending spam messages to academic email addresses, something that reputable journals almost never do.	Advertising must be relevant, useful, and non-invasive. Journal is able to develop and implement effective promotional activities to increase the visibility, including the use of social media.
EDITORIAL MANAGEMENT		
Currently in-print	Opposite of out of print, currently in-print refers to an journal that is published.	Journal must regularly publish its numbers.
Managing publication phases	Journal organizes the editorial process from when authors submit their manuscript to publishing, as well as all other editorial activities.	A journal have to meet the challenges of rapidly changing technology, manage contacts and multiple activities, hire, manage, mentor and develop editorial staff, develop organizational, interpersonal, communication and presentation skills and create a collaborative and team-oriented mindset and attitude.
Instructions for authors	Instructions for authors are available.	A journal offers guidelines explaining to authors the manuscript submission process and acceptance criteria.
Instructions for reviewers	Journal provides adequate guidance for the reviewers.	A journal offers guidelines explaining to authors the manuscript submission process and acceptance criteria.
Ethics statement	Ethical issues in editing scholarly journals regard such issues as plagiarism, confidentiality, fabrication or falsification of data, conflicts of interest etc.	A journal offers guidelines explaining to authors the manuscript submission process and acceptance criteria.
SCIENTIFIC QUALITY OF CONTENT		
Peer reviewed	Peer review is the process to ensure that the articles meet the accepted standards of the discipline.	Adopting a peer review model and acknowledging reviewers article may ensure more responsible publishing.
International guest editors	Guest editors acquire content, and lead review process for a special issue. Usually, a guest editor is an expert in the specific research field of special issue and edits the editorial of special issue.	Guest editors have to be recognized experts in the field of the special issue. Aside from providing prestige, a guest editor engages other experts in the same discipline to submit manuscripts for special issue.
High-quality of editorials	In editorial an editor discuss themes of the issue, and describes the content.	Editorials of quality are good examples of argumentation, clear expression, and of a formal style of writing.

INDICATOR	DESCRIPTION	REQUIRED DEVELOPMENT
High-quality research of articles	Scientific journals contain articles describing high quality research that has been reviewed by experts in the field prior to publication.	A high quality research article must be focused on the research problem under investigation, fit with the acceptance criteria of the Journal being targeted, show that the authors understand the nature, the nuances and the complexities of the theme.
Formal style of writing of articles	Writing for a scientific purpose requires the formal style.	Academic writing must be grammatically correct and accessible to the readers, must have graphs and diagrams be well labelled and in good alignment with the text.
Articles are within the scope of the journal	Articles are within the scope of the journal and meet disciplinary standards.	Papers have to address important themes concerning journal scope.
High rejection rate	The higher the rejection rate seems to be correlated with the higher the journal quality.	Rejection/acceptance rates have to be available on the journal's site.

Je-LKS has two International Standard Serial Numbers (ISSN), an ISSN for the print version and an ISSN for the electronic version, and assigns a Digital Object Identifier (DOI) to all published articles in order to grant a persistent and unambiguous identification, and improve their accessibility and visibility.

Another good indication of the journals credibility is the reputation of the editorial board. Membership of the journal's editorial board is recognized experts in the fields of knowledge related to the profile of the journal, and is readily visible on the journal website. Aside from providing prestige, the functions of the editorial board include suggesting and writing a critical review of a book or a book chapter, proposing and editing special issues, evaluating the quality of the journal.

As far as the latter is concerned, the members of the editorial scientific committee have completed a questionnaire that asked for the level of expert agreement on a 5-point scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) about six statements for each of the three requirements (scientific quality of the content, relevance and visibility of the journal). The questionnaire sent to the 27 members of the scientific editorial board, obtaining a total of 44% (12 responses) usable answers. Seventy-five percent (9 out of 12) of respondents are involved in the sector of Higher Education in the fields of Educational Sciences (5 out of 12), Engineering (3 out of 12), Computer and Information Sciences (2 out of 12), Psychology (1 out of 12), and other (1 out of 12).

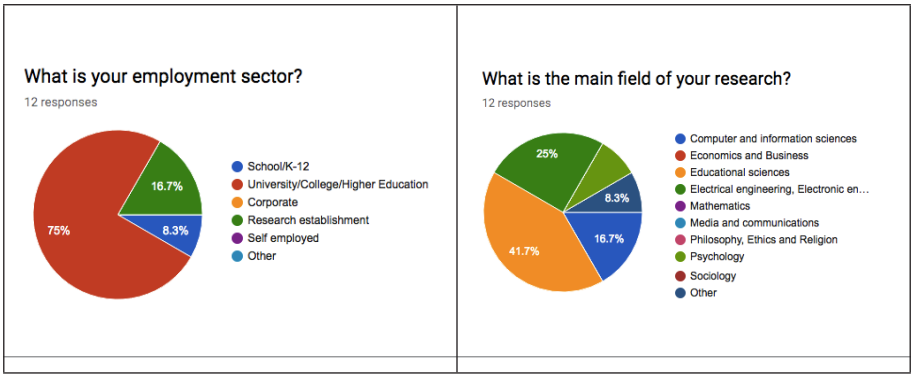

Fig. 1 - the employment sectors and the research fields of the board members.

The outcomes of the data analysis will be used and disseminated in the following sections of this document.

Journal relevance

Relevance concerns the impact of a journal to scientific community. This requirement tends to rely on a mix of subjective and objective indicators as part of a larger pertinence assessment process. The indicators are four. Two concern objective aspects such as the scholarly society that supports the journal and the exclusion of the journal from the lists of predatory journals. The other two (active role in the dissemination of research and relevant scope) depend on the scientific community's own particular viewpoint and traits and, accordingly, varies significantly by each discipline. Therefore, they will discuss on the basis of the experts' opinions, namely, of the members of the editorial scientific board.

Scientific societies aim to foster and disseminate knowledge about an academic subject area, and to enable the advancement of public education in such area. Societies work towards these aims in a variety of ways, including publishing journals. Publishing activities serve the central mission of the society by enabling the dissemination of information about the society's subject area within the scientific community that joins around such society. Therefore, the journal becomes relevant for that scientific community. Je-LKS is the official organ of scientific diffusion of SIe-L (Italian e-Learning Society), a non-profit association that promotes scientific research on e-learning and distance education, considering them strategic for education of citizen and training of practitioners.

The scope of the Je-LKS is the dissemination of research in the fields of e-learning, educational technology, Information and Communication

Technologies (ICT), and Knowledge Management. The relevance of such scope cannot be measured and evaluated objectively, but can be only detected through the opinions and viewpoint of the specific scientific community. Seventy-five percent of respondents expressing an opinion somewhat agree or strongly agree that the scope of the journal is relevant for own research.

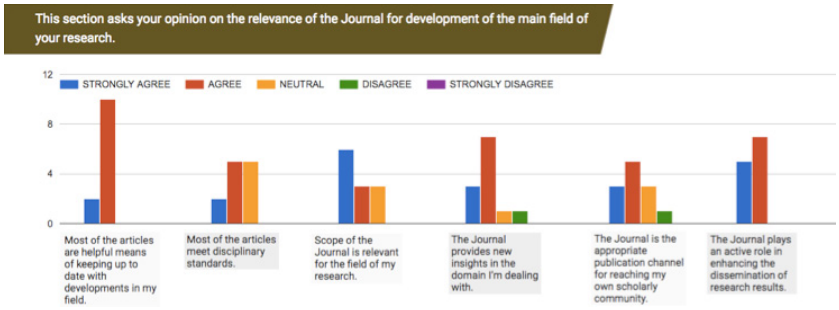

Fig. 2 - the opinions of the board members about the relevance of Je-LKS.

The limited number of answers does not allow reflecting critically on the relationship between the relevance of the scope and the research field of the respondents. However, it should be noted that there are no notable differences of opinions among the scholars, albeit few, in the fields of Computer and Information Sciences and Educational Sciences.

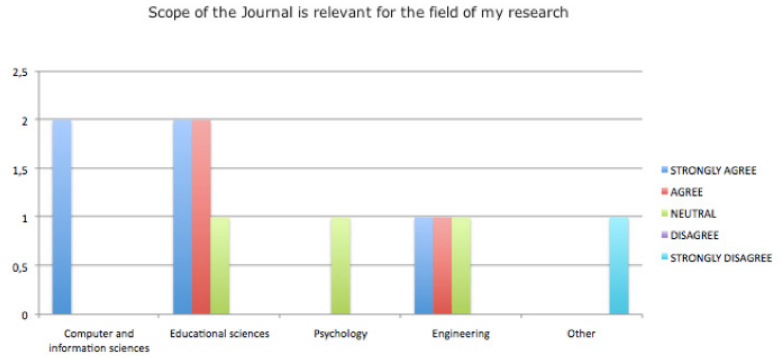

Fig. 3 - the opinions of the board members about the relevance of the scope.

Only two members of the board have suggestions advice on how the publisher can improve the relevance of the Journal. The first one proposes to make the journal better known outside Italy, striving to be included in the JCR listing. The second one suggests make a congress.

Journal visibility

A journal should promote and make the content visible in a timely way to potential readers and authors. The visibility of a journal can be increased in a variety of ways through traditional marketing, the use of libraries, the media, professional networks, and social media.

In this report the requirement of the visibility has been segmented into four indicators concerning presence in databases, journal website, internationalization of knowledge, and advertising.

Currently, SCOPUS, EBSCO, Google Scholar, Elsevier, Thomson Reuters Journal Citation Reports, and DOAJ, among other databases, indexed Je-LKS. Once a journal is indexed by a database, it is immediately made available to all users of that database. Indexing and abstracting services facilitate the visibility and, in turn, the credibility of the journal.

The website of Je-LKS is easy to locate and includes important information about all aspects of the process of refereeing, how submit a paper, the editor and publisher, structure and names of the editorial boards, author guidelines explaining the manuscript submission process, ethical code, reference to SIe-L.

Je-LKS can certainly be considered an International journal since published in English (the most common language for international communication in scientific publishing), its aims and scope are of interest to a wider international scientific community within the specific subject field of e-learning and knowledge management, and the members of the editorial board are internationally renowned experts.

Finally, advertising must be relevant, useful, and non-invasive and Je-LKS implements promotional activities to increase the visibility, including the use of Facebook.

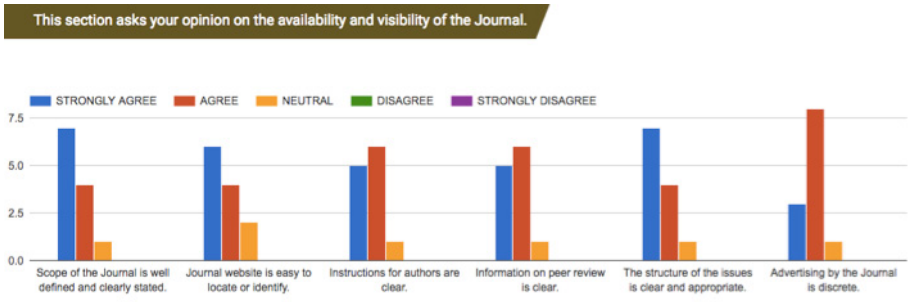

Fig. 4 - the opinions of the editorial board members about the visibility of Je-LKS.

Only two members of the editorial board have suggestions advice on how the publisher can improve the visibility of the Journal. The first one stressed

internationalization of the journal while the second one proposed to use the tools of web 2.0.

Editorial management

Editorial management of a journal involves responsibility for double-blind review process management of journal, namely, from when authors submit their manuscript to publishing, as well as assurance all editorial activities such as coordinating deadlines so that they may met in timely fashion, building PDF for authors, writing call for papers, promoting alternate authors, creating original news, and so on.

This requirement of quality implies that the journal is active, published, and regularly makes available its numbers. Furthermore, a journal may offer guidelines explaining to authors the manuscript submission process and acceptance criteria, a review form clearing up to reviewers acceptance criteria and how assess the quality and importance of submitted manuscripts, and ethical code for publications. Je-LKS meets all the indicators of this requirement.

Scientific quality of content

This is absolutely the most important requirement for a scientific journal and concerns a set of indicators connected with peer review, guest editors, editorials, research articles, formal style of writing, and high rejection rate. Je-LKS is a peer double blind reviewed journal and through this referring process ensures the quality of content. Adopting peer review model should ensure more responsible publishing. Je-LKS offers a review form that explaining acceptance criteria and help to judge the quality and importance of submitted manuscripts. The review process aims to raise the quality of papers, that will be so good examples of argumentation, clear expression, formal style of writing, grammatical correctness, accessibility for readers, centered on the research problem under investigation, fitted with the acceptance criteria, and with a solid understand the nature, the nuances and the complexities of the theme.

In 2016 Je-LKS did not have international guest editors and the members of the scientific board have considered the guest editors have been experts in their field of research. The members of the editorial scientific board are appreciated the quality of editorials. The quality of articles is judged positively by the Scientific Committee and is also confirmed by the high percentage of rejection rates. In fact, only 40 articles were published of the 125 received in 2016 (perceptual of acceptance of manuscripts: 32% and perceptual of rejection of manuscript: 68%).

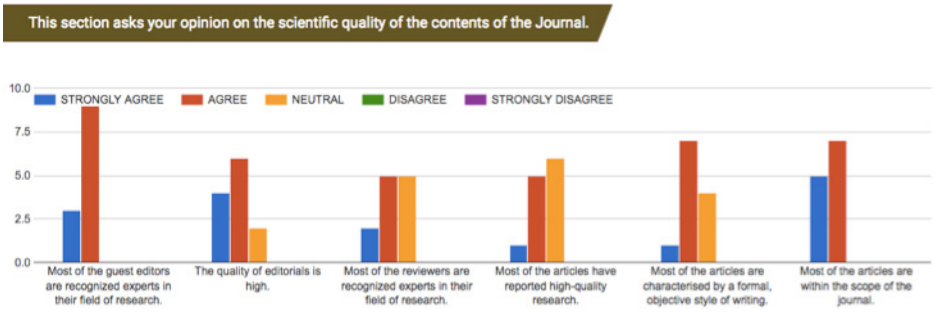

Fig. 5 - the opinions of the editorial board members about the contents of Je-LKS.

Only two members of the editorial board have suggestions advice on the quality of the content of the Journal. The first one suggested to negotiate criteria more shared among the reviewers. Instead, the second one proposed to add other members to scientific editorial board.

Conclusions

This report focused on the self-assessment process used by the Journal of e-Learning and Knowledge Society (Je-LKS) to estimate the quality of the journal and to make improvements. The aim was to offer an objective insight into performed processes and provided feedback on how improving and increasing the level of quality of the scientific journal.

Therefore, it is advisable:

- ***Improving the involvement of the members of the scientific editorial board.*** Members of the scientific editorial board represent the journal in the world. Other members could be added to the scientific editorial board. The scientific editorial board may be involved in telematic half yearly meetings, asking to write critical review, editing special issues, and acting as a group of self-assessment.

- ***Clarifying and write better the aims and scope of the journal website.*** The scope of the Je-LKS is the dissemination of research in the fields of e-learning, educational technology, Information and Communication Technologies (ICT), and Knowledge Management. It is necessary clarify better the aims and scope of the journal in order to interest to a wider international scientific community within of the specific subject fields.

- ***Adding the manuscript acceptance criteria to the author's guidelines available on the site.*** It is very important that who want to submit manuscript know the acceptance criteria of the journal, not only in order to submit a paper fitted with the acceptance criteria of the Journal, but primarily to communicate that Je-LKS accepts high quality research articles, focused on the research problem under investigation, with solid knowledge on the nature, the nuances and the complexities of the theme, grammatically correct, and graphs and diagrams well alignment with the text.

- ***Journal Citation Reports (JCR) listing.*** According to one of the members of the editorial board, «the journal is already very well indexed. Next step is becoming JCR».

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