

Citation indexes and users' (in)formation needs. The University of Milan biomedical librarians experience

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Abstract

The University of Milan has a 40 years long citation experience. The library of Pharmacy (then library of the Institute of Pharmacological Sciences, director: Prof. Rodolfo Paoletti) purchased the Science Citation Index (SCI) in 1979 (Printed Science Citation Index since 1979-93, CD-ROM in 1994-2000; Journal Citation Reports (JCR) 1981-2000). The online version has been available since 2000 for Web of Science (WOS) and JCR, following the University of Milan subscription. Scopus has been available since 2009, after an agreement between Elsevier and the CRUI (The Conference of Italian University Rectors).

Since its inception, SCI and JCR (which were quite expensive) attracted external users interested in assessing citations and in the Impact Factor (IF). Conversely, the use of such indexes for research evaluation had been minimal among professors or researchers, until the debut – in 2012 – of the Abilitazione Scientifica Nazionale (ASN; National Scientific Qualification).

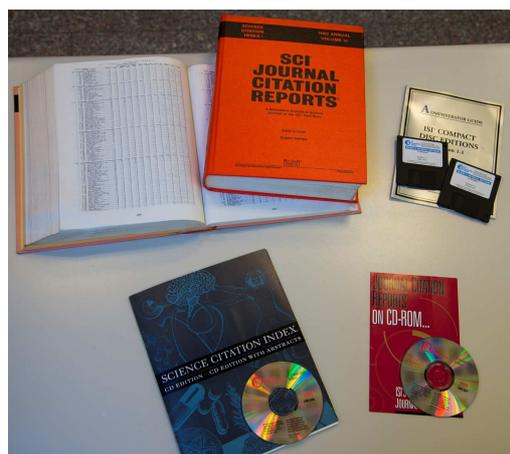
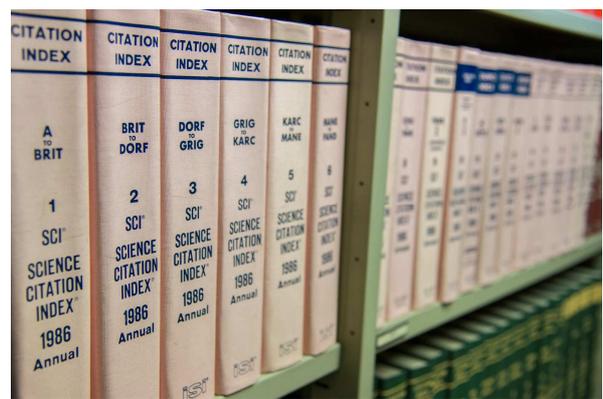
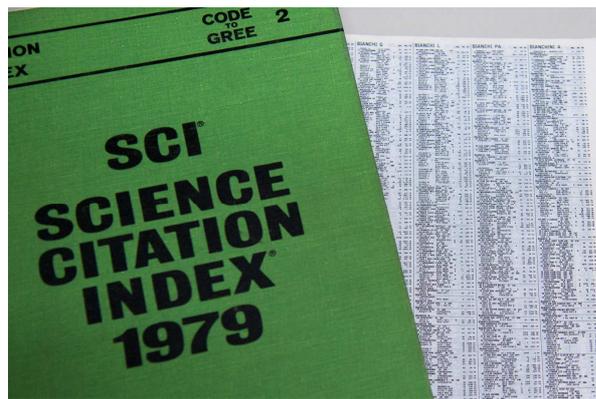
At the end of 2001, the Sistema Bibliotecario di Ateneo (SBA; University Library System) activated courses on the use of WOS and JCR. Scopus was introduced in 2010, under the supervision of biomedical librarians.

At the beginning, the majority of participants were only interested in traditional bibliographic searches, with the exception of some researchers who spent some time abroad and some questions on the IF. With the activation of the ASN, the attendees' profile has radically changed. In addition to the increasing number of participants to the courses on WOS, JCR, and Scopus, their (in)formation needs also greatly changed. Specifically, instead of a mere bibliographic search most users are now interested in bibliometrics, i.e. calculate the H-Index and contemporary H-index, or in solving ambiguities with authors' names, cleaning up erroneous data, adding missing data, and learning how to use Google Scholar. The average users' age is decreasing; there are more graduate students and researchers than professors, and participants take more active part to the lessons than before, asking questions about citation analysis and their CV.

Following an analysis of participant satisfaction surveys and according to the most common questions asked by attendees, librarians fine-tuned their programs to greatly increase the proportion of citation database use vs. a traditional bibliographic search.

Introduction

This is the analysis of attendance to citation index databases training courses at the University of Milan since 2001. Why are biomedical librarians involved in this experience?



Pictures from Science Citation Index and Journal Citation Reports collections at the library of Pharmacy

In November 2000, when I started working at the library of Pharmacy, I found the print and CD editions of Science Citation Index (SCI) and Journal Citation Reports, that the library of Pharmacy had been purchasing since 1979. These resources were quite expensive and they attracted mainly external users interested in assessing citations and the Impact Factor. University staff from other departments seemed not to be interested. Anyway, the print edition is easy to use and people

quickly learnt how to consult citation data through word of mouth, with or without librarian's involvement.

Promoting online resources utilization through users' training has been a strategic goal for the library system since 1998. The online versions of Web of Science (WOS) and JCR are available since 2000 following the University of Milan subscription. Scopus is available since 2009, after an agreement between Elsevier and the Conference of Italian University Rectors (CRUI).

I started teaching Web of Science research skills in 2001, because of my knowledge of the print edition and I was the only trainer. As WOS is a bibliographic database composed by references for citation analysis, it can be used for traditional research purposes too. Therefore, courses programs cover both the bibliographic and the citation aspects of research. Since 2009, a colleague from another medical library and I have been teaching together. Therefore, we can assess that citation analysis is a "biomedical experience" at University of Milan.

Factsheets

Courses are open to all University staff including Librarians, Technical, members of the Techno-Scientific and Data Processing teams, Research Fellows and Post-Docs, PG students, and UG students¹. Figure 1 shows the number of participants per year on different courses. Between 2001 and 2009 we organized 3 hours training sessions with the following goals: how to do bibliographic and citation reference researches and how to find Impact Factor values (Type 1 courses). We found that the attendance was low, it was hard to involve professors and researchers, and many people disapproved IF as evaluation criteria. Following the analysis of participant satisfaction surveys and according to the most common questions asked by attendees, librarians fine-tuned the program of the courses. In 2010-2011, after subscribing to Scopus, we changed the program of the courses. We proposed 3 hours training courses for each database and a lecture on H-index calculation in a week, with the same goals as before, including how to calculate H-index (Type 2 courses).

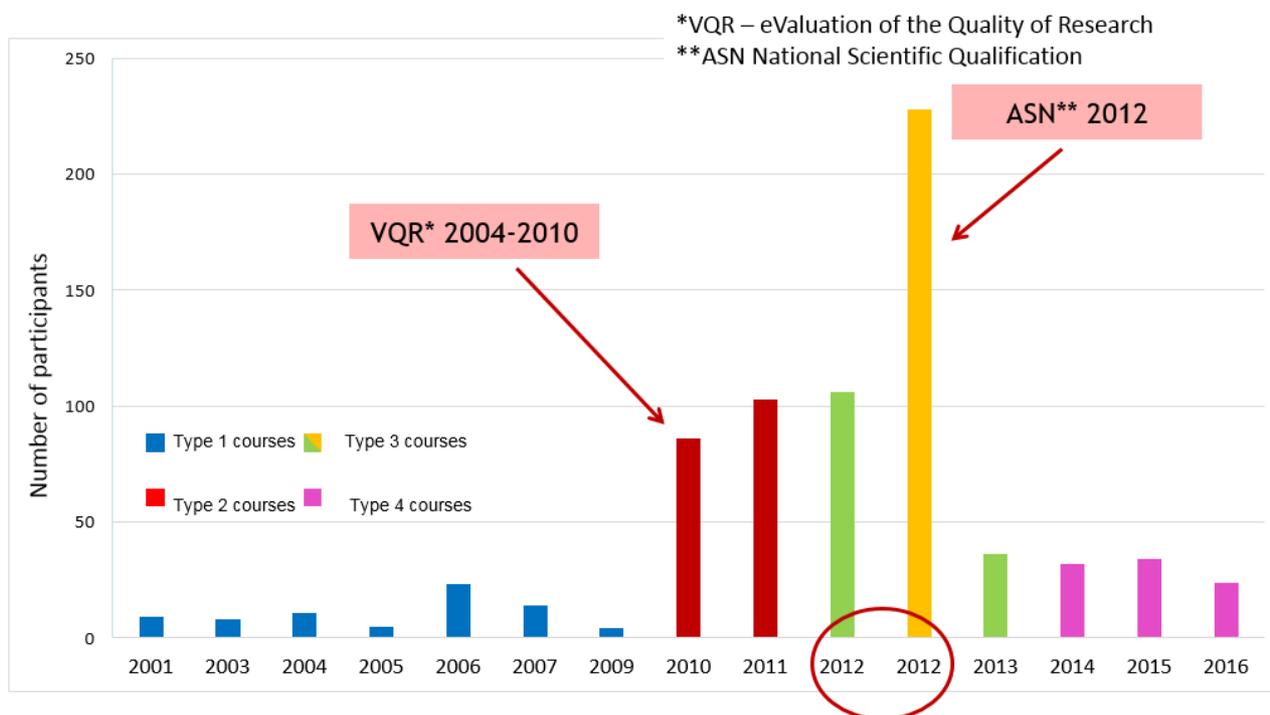


Figure 1. Number of participants per year

¹ Web of science, Scopus, Journal Citation Reports, Google Scholar, depending on years

The sudden increase in the number of attendees in 2010 is probably due to the VQR eValuation of the Quality of Research. Even if we strongly suggest attending WOS and Scopus courses as preparatory to the H-index calculation lecture, many of the attendees expected to be able to follow the H-index course without prior knowledge of WOS and Scopus. This caused a waste of resources during the H-index calculation lecture. In 2011 we observed an increase in attendance of Scopus and H-index courses and a decrease in WOS one. Figure 2 provides snapshot of the evolution in participants' distribution at 2010-2011 courses.

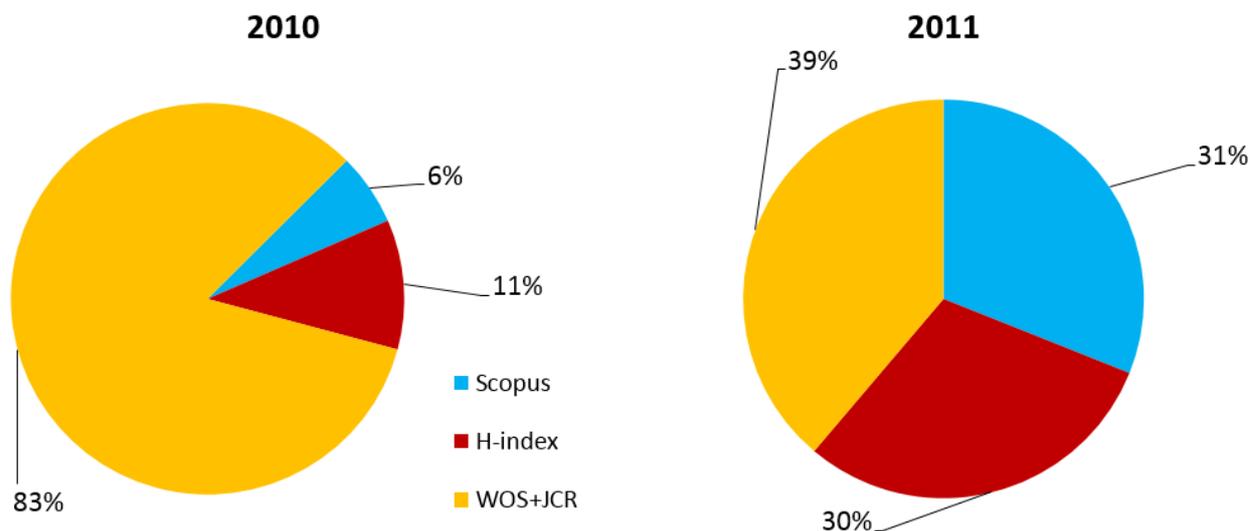


Figure 2. Participants' distribution per course

Between 2010-2012 PG students were the largest number to attend the courses, as in the following years as well, even if the total number decreased after 2012. Figure 3 represents the evolution of participants' distribution per users' category. Librarians, Technical, Techno-Scientific and Data Processing people represent a large portion of the audience of citation analysis courses too.

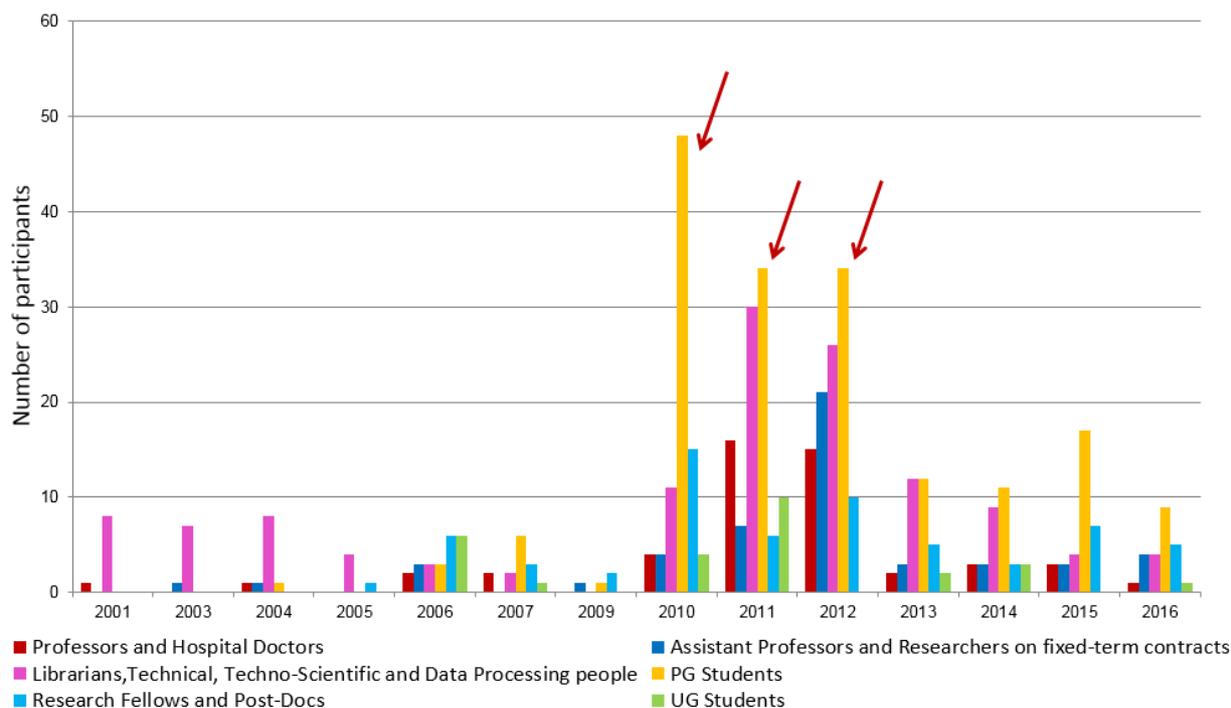


Figure 3. Participants' distribution per users' category.

Even if training programs focused on citation analysis and H-index in 2010 in order to meet the demands of VQR users, in a satisfaction survey after a WOS course a medical oncology resident wrote that trainers didn't talk about "Impact factor to evaluate authors not only journals" (Figure 4). It was frustrating! During the course, 6 slides out of 22 were about H-index.

SECONDO TE, QUALI ARGOMENTI NON SONO STATI TRATTATI?
 IMPACT FACTORS PER VALUTARE L'AUTORE E NON
 SOLO LA RIVISTA

Figure 4. Anecdote from a satisfaction survey in 2010

In 2012, many people had to deal with the first National Scientific Qualification that shook Italian universities. The bar chart for year 2012 in Figure 1 represent two type of lectures we organized that year (Type 3 courses). The green bar represents traditional courses attendance (both bibliographic and citation analysis research); the yellow bar represents the attendance to special lectures focused on ASN indicators.

In 2012-2013 we organized 3 or 4 hours training courses with different goals:

- Attendees should learn how to do bibliographic research in WOS & Scopus (addressed to UG students too) in a 3 hours session.
- Attendees should learn how to calculate H-Index and Contemporary H-Index, solve ambiguities with authors' names, clean up erroneous data, add missing data after using both DB; in a 4 hours sessions they should also learn what Researcher ID is, (not for UG students).

In 2012, we also delivered two lectures in a week with the aim of teaching how to calculate H-index (the best H-index combining data from WOS and Scopus), and Contemporary H-index, and to export citations from WOS and Scopus in CSV or TXT file types. It seems unbelievable, but many people interested in scientific qualification could not do it. These lectures were delivered only in 2012 and they were a real success, since we had 228 participants in a week (Fig. 1). This attendance confirmed that it is successful to organize training activities that could be useful in career ladder during evaluation sessions.

In 2013, we observed a decrease in Citation analysis courses attendance (Fig. 5), maybe because somebody chose the wrong course compared to his or her needs, which satisfaction surveys analysis seem to suggest.

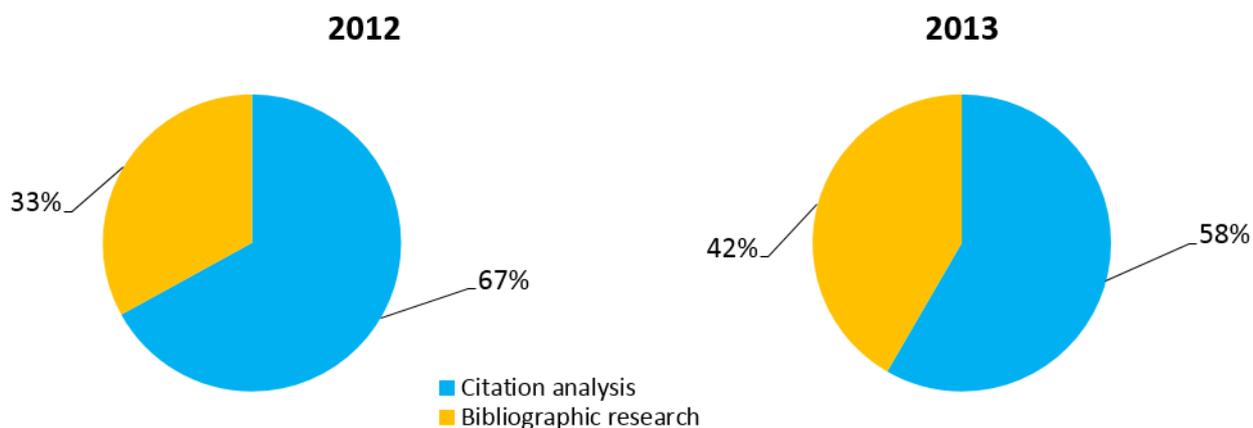
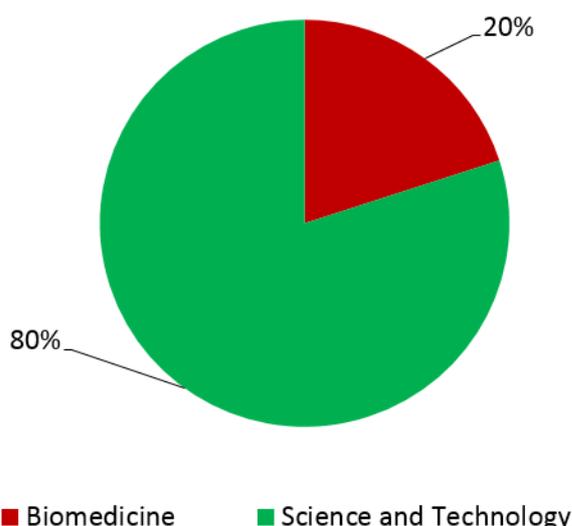


Figure 5. Participants' distribution per course in 2012 and 2013

In 2013, we started identifying participants by discipline. Figure 6 provides a comparison between disciplines per course in 2013. We can notice that attendees of bibliographic research courses were mainly from Science and Technology departments. This is the reason why biomedical librarians gave up delivering bibliographic research skill. Therefore, programs changed again in 2014 (Type 4 courses). Now we deliver 4 hours training courses (not for UG students), with the aim of improving participants knowledge of evaluation research tools. Attendees should learn how to calculate H-Index and Contemporary H-Index, solve ambiguities with authors' names, clean up erroneous data, add missing data; create a Google citation profile. They should also learn what ORCID and Researcher ID are, where to find IF, SNIP, SJR, PPI values. Unfortunately, some UG students attended courses; since they need to learn how to do bibliographic research and they are not interested in citation analysis, they sometimes complain about it.

2013 Bibliographic research courses



2013 Citation analysis courses

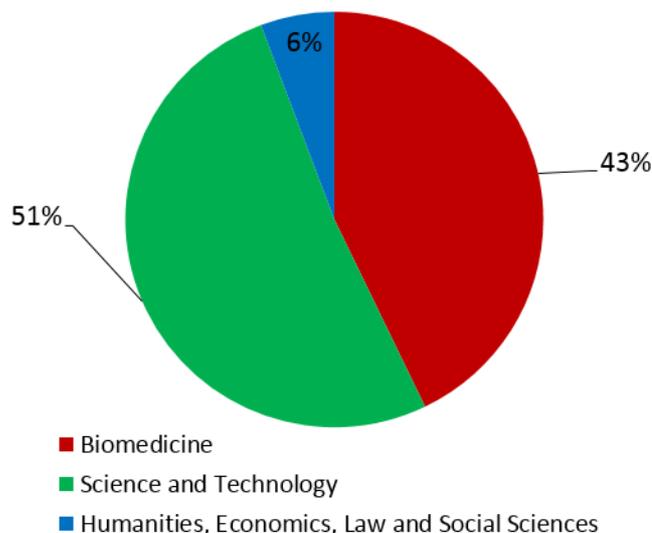


Figure 6. Participants' distribution per discipline

It is interesting to observe that biomedical staff and PG students are decreasing year by year in citation analysis courses (Fig. 7). We should understand whether their information needs on citation analysis are fulfilled elsewhere. Maybe we only need to better timetable courses to accommodate users' needs.

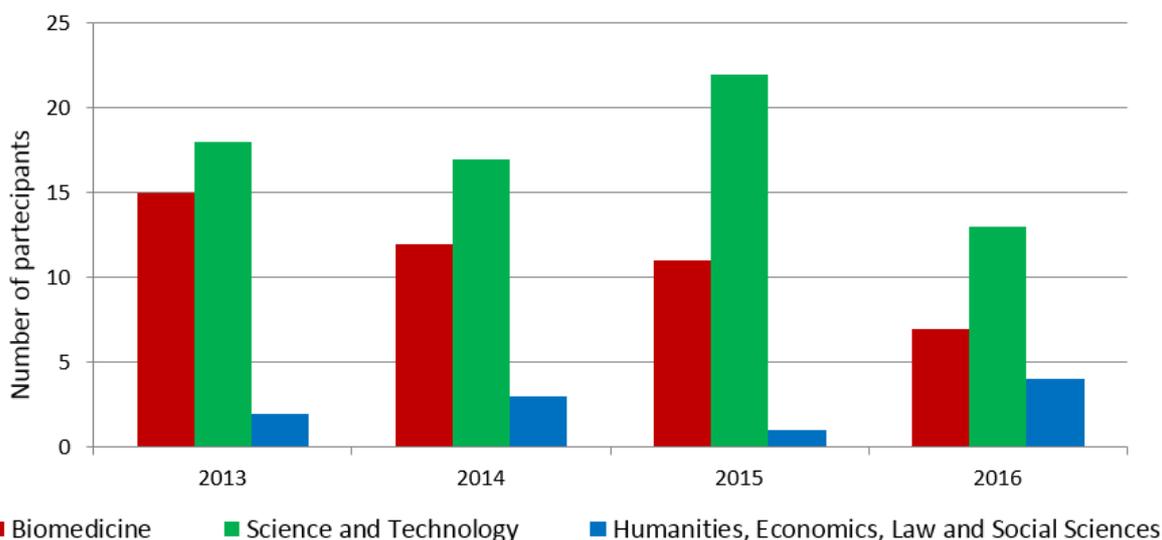


Figure 7. Participants' distribution per discipline in citation analysis courses

Future developments

Considering attendance to bibliographic research courses and attendees discipline, we should resume such kind of courses, both in WOS and Scopus for UG e PG students, involving Science and Technology librarians. We are considering introducing online tutorials as alternative to taught lectures, to improve users' information literacy skills on bibliometric, which can be taken at their own pace, via appropriate e-learning platform. Medical librarians at the University of Milan should improve their e-learning competences on information literacy as teachers to achieve this goal.

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