



# THE INTERNATIONAL POPULARISATION OF LESSON STUDY: EARLY STUDIES AND THEIR RELEVANCE IN LATER LITERATURE

## LA INTERNACIONALIZACIÓN DEL *LESSON STUDY*: PRIMEROS ESTUDIOS Y SU RELEVANCIA EN LA LITERATURA POSTERIOR

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### ABSTRACT

Lesson study (LS) is a teachers' professional development practice with a Japanese origin that, at present, is practiced in more than 30 countries. Literature on LS acknowledges the works of Stigler and Hiebert and of Yoshida in 1999 as the origin of its internationalization. However, earlier studies described its practice and have mostly remained under the radar of LS previous research. This historical and documentary literature review sheds light on these previous studies describing LS, analyses their bibliometric relevance, and uncovers the first use of «lesson study» as the terminology adopted in the international literature. Results reveal eight studies clearly describing LS before 1999 and more oblique references in the 1980s. «Lesson study» appeared first in 1997, but we make the case for the previous use of other terminology. Findings also show that only those studies written by authors who later became key in the field of LS have received a high number of citations. These results bring attention to LS-related literature that has infrequently been cited, granting it recognition in the international history of LS, and expanding our current view in relation to its practice.

**Keywords:** Lesson Study, History of Education, Internationalization, Literature Review.

## RESUMEN

El *lesson study* (LS), frecuentemente traducido al español como «estudio de clases» o «estudio de lecciones», es una práctica de origen japonés relacionada con el desarrollo profesional del profesorado que, en la actualidad, es practicada en más de 30 países. La literatura sobre LS reconoce los trabajos de Stigler y Hiebert y de Yoshida (1999, ambos) como el origen de su internacionalización. Sin embargo, estudios previos describían su práctica y han permanecido mayoritariamente bajo el radar de la investigación sobre LS. Esta revisión histórica y documental de la literatura, arroja luz sobre estos estudios anteriores, describiendo el LS, analizando su relevancia bibliométrica, y descubriendo el primer uso de «*lesson study*», terminología adoptada en la literatura internacional.

Los resultados revelan –previamente a 1999– ocho estudios que describen el LS y más referencias indirectas ya en los años 80. El concepto de «*lesson study*» apareció por primera vez en 1997, pero aquí se analiza en relación con el empleo anterior de esa terminología. Los resultados también muestran que únicamente aquellos estudios escritos por autores, que luego han sido clave en el campo del LS, han recibido un alto número de citas. Estos resultados llaman la atención sobre la literatura relacionada con el LS poco citada, otorgándole reconocimiento en la historia internacional de este término para expandir nuestra visión actual sobre su práctica.

**Palabras clave:** estudio de clases, estudio de lecciones, historia de la educación, internacionalización, «*lesson study*», revisión de literatura.

## INTRODUCTION

Lesson study (LS) is a Japanese originating practice that is a central component of the professional development and in-service training (*kounai kenshuu*) of Japanese teachers (Fernandez & Yoshida, 2004; Stigler & Hiebert, 1999). LS consists of a process through which groups of teachers collaborate to plan and design a research lesson, teach, and observe its instruction, and discuss and reflect about it (Ermeling & Ermeling, 2014; Hervas & Medina, 2020; Stigler & Hiebert, 1999; Takahashi & McDougal, 2016); a cycle that, optionally (Fernandez & Yoshida, 2004; Lewis, 2009), can continue with a new instruction of the revised lesson and the public report of the lesson and what has been learned through the process. Given this process, it is considered that LS supports teachers' learning (Bocala, 2015; Dudley, 2013; Perry & Lewis, 2009) and efficacy (Chong & Kong, 2012) and that it contributes to enhance teaching and instruction (Hiebert & Stigler, 2017; Lewis *et al.*, 2006) and to develop the pedagogical content knowledge (Coenders & Verhoef, 2019). These positive outcomes have contributed to the international growth of LS since the end of the 1990s and to its transference to different educational levels and contexts, including higher education (Hervas, 2021).

## BACKGROUND

In the English language, the history of LS in Japan has been addressed in different studies (Fernandez & Yoshida, 2004; Ishii, 2016; Isoda, 2007; Makinae, 2019; Sarkar Arani *et al.*, 2010; Shimizu & Chino, 2015). Also, while not explicitly describing LS, Sato (1991, p. 6) wrote about its origin and linked it to the Herbartians' formal five steps. These studies generally set the emergence of LS-related practices in Japan at the end of the 19<sup>th</sup> century or the very beginning of the 20<sup>th</sup>, within the Meiji era (1868-1912), although we find a work

that, differently to others, briefly addresses this topic and points out a more contemporary origin for LS itself (Matoba, 2017).

Currently, we find LS in different international educational contexts, where there have been found misconceptions (Fujii, 2014) and variations (Norwich, 2018) in its practice; among these variations, learning study –an approach that was developed integrating design experiments with LS and incorporating elements from variation theory (Pang & Marton, 2003; Marton & Pang, 2006)– has been the most successful.

The popularisation of LS, as a significant process for teachers' induction and acculturation (Howe, 2006) occurred after a period of increasing interest in Japanese education during the 1980s and 1990s, in many cases focused on comparing it with US education. The list of English references from this period is long and, but the work by authors such as Beauchamp (1991), Cummings (1980), Horio (1988), Lewis (1995), Rohlen (1983), Rohlen and Björk (1998), Rohlen and LeTendre (1996), Shimahara and Sakai (1995), Stevenson (1991), and Stigler *et al.* (1987) deserves highlighting. Most of these texts address practices and activities that Japanese school and high-school teachers carried out, although they do not provide a clear description of LS. However, they are of interest in the context of this study because they had an impact on authors who later wrote about LS, or they were written (or contained texts written) by authors who are fundamental to understanding the expansion and our current comprehension of what LS is; that is the case of Hiebert, Fernandez, Lewis, Stigler, and Yoshida.

To this day, a vast number of studies, written also by Japanese authors, acknowledge Stigler and Hiebert (1999) and Yoshida (1999a) as key studies for the international popularisation of LS (e.g., Bjuland & Mosvold, 2015; Fujii, 2014; Saito, 2012; Shimizu & Chino, 2015; Takahashi & McDougal, 2016). Stigler and Hiebert's is a book in which LS is defined as a useful approach for the improvement of teaching and in which its potential transfer to the US is discussed. In contrast, Yoshida's is an unpublished dissertation based on the author's ethnographic work in Japan. Fortunately, Yoshida gave visibility to his dissertation through a conference paper (Yoshida, 1999b) and, especially, through a book published years later with Fernandez (Fernandez & Yoshida, 2004).

The relevance of Stigler and Yoshida as key authors for the internationalisation of LS is not coincidental; the authors knew each other and, especially between 1993 and 1996, collaborated on different papers with Fernandez (e.g., Stigler *et al.*, 1996). However, the well-deserved acknowledgment of their 1999 work has sometimes come through statements that might have given the impression that they were the first to talk about LS to an international audience. Pang and Marton (2003, p. 175) claimed that Stigler and Hiebert were responsible for the introduction «to the West of the Japanese approach of “lesson study”», Doig and Groves (2011, p. 77) described Stigler and Hiebert's work as the means through which LS 'was released outside Japan', and Crockett (2002, p. 610) went even further and wrote that when she met Stigler, Hiebert and Yoshida in 1997 «there were virtually no English language materials available on Japanese professional development». These authors did not state that Stigler and Hiebert and Yoshida were the first to introduce and inform us about LS outside of Japan, but these types of assertions –common in LS-related literature– illustrate that it might have been not difficult for their readers to draw these conclusions.

This potential misconception is precisely what set this study in motion. Stigler and Hiebert (1999) wrote that «very little has been written about the process of «lesson study». An interest in knowing their sources and references, in exploring if we were missing previous studies informing us about LS, and in granting any earlier studies their place in the history of LS, all together, was transformed into the research questions that this study aims to answer.

## METHODS

### Focus of this Research

The aim of this study is to answer the following questions:

- a) Prior to Stigler and Hiebert and Yoshida, do we find studies clearly describing LS? If so, what are these studies?
- b) Was the term «lesson study» used before 1999? If so, when was it used for the first time? Do we find alternatives in earlier literature?
- c) If there are studies before 1999 describing LS, how many citations have they received and how much are they cited, if we compare them with Stigler and Hiebert, Yoshida, and other relevant studies published to date?

### Procedure, Data Collection and Analysis

The methodological design of this study combined: a) search and review of the literature adjusting the PRISMA guidelines (Moher *et al.*, 2009), as this research was more of a historical nature; b) systematic backward snowballing (Jalali & Wohlin, 2012); and c) bibliometric search.

Google Scholar was used to conduct the literature search and obtain bibliometric information because recent scientometric studies have found that it is the most comprehensive academic search engine and bibliographic database (Gusenbauer, 2019) and that it offers significant additional coverage compared to World of Science and SCOPUS (Martín-Martín *et al.*, 2018).

The procedure conducted was as follows:

- a) Preliminary literature search to find any LS-related studies published before 1999 and to collect LS-related studies published during the first years of the international popularisation of LS (1999 to 2006). This was done to use their reference lists to go back in time for earlier publications by conducting a backward snowballing review of the literature, a powerful method to detect, precisely, less visible references (Greenhalgh & Peacock, 2005).

For this preliminary search, «lesson study» as used as a key term and combined through Boolean operators (OR and AND) with terms such as «Japan», «education», «teacher», «training», «collaboration», «expansion», «origin», «history», «popularisation», «lesson design», «research lesson», etc. All types of documents (book chapters, journal and conference papers, theoretical studies, etc.) were collected for the later backward snowballing if they met two inclusion criteria: written in the English language and until 2006. The limit was 2006 because the first international conference of the World Association of Lesson Studies took place that year and it was when one of the most-cited LS-related texts (Lewis *et al.*, 2006) was published. we took these facts as evidence that by 2006, LS was already an internationally recognised practice.

- b) Removal of duplicates and screening of title and abstract to determine if the references found in the preliminary search were LS-related.

- c) Backward snowballing of the reference lists of the studies that passed the screening to find potential LS-related references from before 1999.
- d) Removal of duplicates and screening to examine if the new references found and published before 1999 were LS-related.
- e) New backward snowballing of the reference lists of the studies that passed the screening. This backward snowball search finished when no new LS-related references published before 1999 were found.
- f) Full-text review and content analysis (Hsieh & Shannon, 2005) of the all the selected LS-related references published before 1999 to identify excerpts that were clearly describing LS and examine the terminology used.

In this research, a clear description of LS is defined as:

1. Not fragmented through many different paragraphs or pages.
  2. Mentions design, teaching, observation, and discussion of a lesson conducted by Japanese teachers.
  3. Indicates the collaborative nature of the process starting from the design of the lesson.
- g) Bibliometric search in Google Scholar with two goals:
1. To find out the number of citations of the selected studies, their origin and year of publication.
  2. To find out the most-cited LS-related reference published each year until 2019 (last year completed when this research has been conducted) and its numbers of citations.

## FINDINGS

The previous analysis allowed us to answer the three research questions. Table 1 answers the first question by presenting the studies that clearly described the practice of LS before 1999.

### *Studies Before 1999 Clearly Describing LS and Number of Citations*

Reference	Excerpt that we can relate to LS	Number of citations
Shimahara (1998, p. 456)	«Preparation for each demonstration class involves extensive peer participation lasting two to three months. At each grade level teachers are chosen to be observed on a rotational basis, and faculty of each grade group collaborate in helping those chosen teachers to prepare their lessons. After a demonstration, staff members meet to review their observations and critique the class».	146

Lewis and Tsuchida (1998, pp. 48-49)	«Research lessons are actual classroom lessons, taught to one's own students, but they embody a number of special features that set them apart from an everyday class: They are observed by other teachers, [...], they are carefully planned, usually in collaboration [...], they are recorded [...], they are discussed [...].».	690 (includes citations from the same paper published in a different journal during 1999)
Lewis and Tsuchida (1997, pp. 320-321)	«[...] research lessons are designed to show how an abstract goal can be fostered in the classroom, or to demonstrate innovations in curriculum materials [...] is ultimately taught by one teacher - with many colleagues crowded into the sides of the classroom to observe and record — it is often planned and tested by a group of teachers working collaboratively for many months».	159
Stigler and Hiebert (1997, p. 62)	«A key part of this process is their participation in "lesson study groups". Small groups of teachers meet regularly, once a week for about an hour, to plan, implement, evaluate, and revise lessons collaboratively».	603 (includes citations from the same text published both as a conference and a journal paper)
Ichimura, 1993 (1993, pp. 8-9)	«[...] material used in the classroom study is [...]. The aim of this class, which teachers had earlier agreed on [...]. The classroom observation report involving the teaching [...] was presented by three teachers and it was followed by comments from participants and advisers».	9
Nagasaki and Becker (1993, p. 8)	«[...] any such experiences are classroom and research-based in that teachers develop a lesson plan cooperatively, then one teacher (a representative of the group) teaches the lesson while the other teachers observe the lesson in progress, and afterward a record of the lesson is written and the teachers discuss it».	29
Takemura and Shimizu (1993, pp. 31-32)	«[...] newly recruited teachers would be given the chance to demonstrate lessons for experienced teachers [...]. During the demonstration, the experienced teachers would observe the class of the newly recruited teacher [...]. The meeting for evaluating and improving the lesson of the newly recruited teacher's lessons, is determined during this gathering. After the teacher's demonstration, each group of teachers presents the newly revised lesson plan [...]. Each group of teachers can present a new lesson plan to the workshop participants».	19
Stevenson and Stigler (1992, p. 160)	«She and her colleagues spend a good deal of their time together working on lesson plans. After they finish a plan, one teacher from the group teaches the lesson to her students while the other teachers look on. Afterward, the group meets again to evaluate the teacher's performance and to make suggestions for improvement».	2830

The analysis of studies in Table 1 allows to respond the second research question and reveals that the first explicit use of the terms «lesson study» appeared in Stigler and Hiebert (1997, p. 62) when they wrote: «A key part of this process is their participation in “lesson study groups”». However, the analysis also shows that we find a potential earlier translation in Ichimura (1993, p. 8) as «classroom study».

Beyond these eight studies, there are others –Becker (1989), Cummings (1980), Hawley and Hawley (1997), Hayakawa (1986), Inagaki (1993), King and Mizoue (1993), Obara *et al.* (1993), Leestma *et al.* (1987), Sato (1991), Sato *et al.* (1993), Sato and McLaughlin (1992), Shimahara (1979; 1991), Stigler *et al.* (1996)– in which we find excerpts that, less clearly, we can relate to LS. We even find one study (Nagasaki & Hashimoto, 1984, p. 180) describing the same steps of LS, although in this case they appear as strategies that the participants (teachers) carried out for research purposes, and not as tasks that they performed as part of their job routines.

However, these studies (except for the last one) only display fragmentary or partial depictions of LS and of some of its features, or refer to LS-related practices (e.g., demonstration classes) and, for this reason, they do not offer a clear description of LS as defined in this study. To illustrate these cases not included in Table 1, here follows an excerpt from Sato (1993, p. 133) that offers one of the clearest descriptions of an LS-related practice, only failing to refer to lesson design and its collaborative nature (actually, it seems that the observed teacher designed the activity/lesson alone, as he/she distributed its explanation later, when the group met to reflect on it):

[...] inservice training consists of teachers observing another teacher for one class period [...]. Then, in a teachers’ meeting after school, the observed teacher distributes an explanation of the activity and reflects upon the lesson, including self-evaluation. Following the reflective activity, others contribute comments and questions [...].

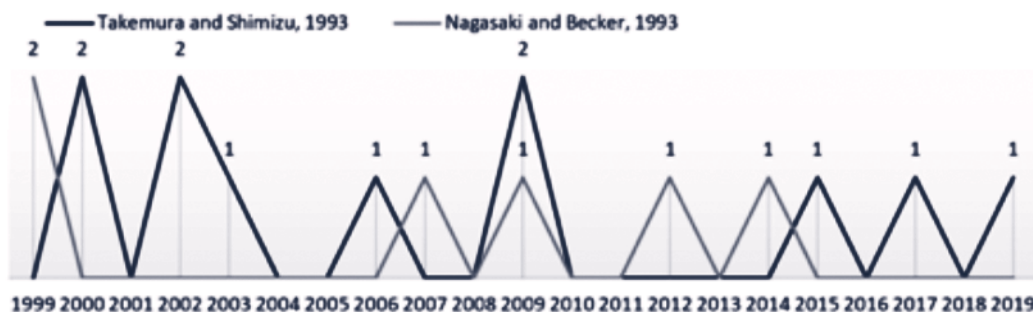
Regarding the third research question, Table 1 displays the number of citations received by the studies found before 1999 and reveals that there are three studies from 1993 with clearly a lower number of citations. The origin of their citations was revised and is shown in Table 2.

#### *Origin of the Citations of the Three Less Cited Studies Published Before 1999*

	Ichimura (1993)	Nagasaki and Becker (1993)	Takemura and Shimizu (1993)
Number of citations	9	29	19
English language citations	9/9	22/29	18/19
Document citing found	9/9	20/22	17/18
Real number of citations once revised	9/9	18/20	15/17
LS-related citations	0/9	6/18	11/15
LS-related citations last 10 years	0	2	3
Observations	-	2/6 studies by Yoshinori Shimizu	4/11 studies by Stigler and/or Hiebert

Also, as Figure 1 demonstrates, the studies of Nagasaki and Becker and Takemura and Shimizu were mainly cited in LS-related studies between 1999 and 2003, with only five citations in the last 10 years; on a different hand, none of Ichimura's citations are LS-related.

*Year and number of LS-related studies citing Takemura and Shimizu and Nagasaki and Becker*



Finally, in comparison with Table 1, Table 3 shows the number of citations for Stigler and Hiebert (1999) and Yoshida's dissertation-related publications, as well as for the most-cited LS-related references published annually from 1999 to 2018.

*Citations of studies published between 1999-2018*

Year of publication	Reference	Number of citations
1999	Stigler and Hiebert (1999)	5848
1999	Yoshida (1999a)	226
1999	Yoshida (1999b)	117
2000	Lewis (2000)	385
2001	Fernandez <i>et al.</i> (2001)	51
2002	Lewis (2002)	1123
2003	Fernandez <i>et al.</i> (2003)	491
2004	Fernandez and Yoshida (2004)	870 (Includes e-book version published in 2012)
2005	Rock and Wilson (2005)	236
2006	Lewis <i>et al.</i> (2006)	920
2007	Isoda <i>et al.</i> (2007)	239 (combining English and Spanish version of the book)



2008	Lee (2008)	128
2009	Lewis <i>et al.</i> (2009)	404
2010	Ono and Ferreira (2010)	267
2011	Murata (2011)	227
2012	Chong and Kong (2012)	164
2013	Dudley (2013)	183
2014	Dudley (2014)	134 (includes an earlier edition of the handbook in 2011)
2015	Bjuland and Mosvold (2015)	66
2016	Takahashi and McDougal (2016)	110
2017	Lewis and Perry (2017)	46
2018	Coenders and Verhoef (2019)	23 (paper published on-line in 2018)

## DISCUSSION

Results show that, before the studies commonly acknowledged as the origin of the internationalisation of LS, there were others in English describing LS with different levels of clarity. Starting at least from Stevenson and Stigler (1992), we find a clear description, but we must wait until Stigler and Hiebert (1997) to find the term «lesson study».

Stigler wrote for the foreword of Fernandez and Yoshida (2004) that Yoshida was the person who first introduced LS to him; however, we do not have information regarding who decided on an English translation –actually, Stigler and Hiebert (1997) did not make any reference to this or to Yoshida in their paper– and, in consequence, we cannot substantiate Panić’s (2014, p. 84) claim that «the term “lesson study” was coined in 1999 by Makoto Yoshida in his doctoral dissertation». It is also noticeable that, although «lesson study» appears in 1997, the two LS-related references published one year later (Lewis & Tsuchida, 1998; Shimahara, 1998) did not use this terminology. We lack information regarding when, during 1998, Shimahara (1998) was published; the author did not cite the work of Stigler and Hiebert and he used an alternative terminology: «study classes». In contrast, Lewis and Tsuchida (1998) cited the work of Stigler and Hiebert (1997), but they did not use their terminology and only referred to research lessons (interestingly enough, instead of research lesson, Fernandez and Yoshida [2004] preferred to talk about study lessons. See Horio [1988, pp. 250-251] for an interesting political and educational debate about the translation of *kenkyuu* as research or study). In any case, early in January 1999, we already find a text (Shimizu, 1999, p. 112) that uses this terminology and explicitly talks about «lesson study meetings». Notably, this study does not cite Stigler and Hiebert (1997) and was based on an earlier version presented at a conference in 1996 (document not available for reading). If that version from 1996 were also to include the terms «lesson study», it should receive credit for being the first published document using the terminology we use today to translate *jugyou kenkyuu*.

In relation to the terminology used, besides Shimahara’s (1998, p. 456) translation as «study classes», results show that Ichimura (1993, p. 8) might have offered an alternative

nomenclature before 1997: «classroom study» (see Table 1). It is unclear if the author is referring to the practice of analysing classrooms/lessons, but we should consider different arguments that, even if they are not definitive, make a case for an earlier and different LS translation:

- a) In Ichimura (1993) we find a description that we can relate to LS.
- b) In it, we find cited Manabu Sato, a Japanese professor famous for his work in relation to LS and who had earlier talked about «case study workshops» to refer to an LS-related process (Sato, 1991, p4).
- c) Even if *jugyou* can be translated as lesson or instruction, it can also be translated as class (as in «history class»). Shimahara (1998) used that alternative translation in his «study classes» terminology and Shimizu and Chino (2015) also wrote that *jugyou* can be translated as classroom lessons.

Regarding the studies published before 1999 clearly describing LS, as seen in Table 1, Stigler authors two of the eight studies. These two studies have received a significant number of citations, although far fewer than Stigler and Hiebert (1999) (see tables 1 and 3). In Stevenson and Stigler (1992) the description of LS only appears as an explanation of what teachers in a school did, without further details about it or any indication of whether it was a common practice across Japan. In contrast, in Stigler and Hiebert (1997), LS is central to the article's purpose and, therefore we can conclude that its high number of citations might be related to a growing interest in LS.

Table 1 also shows two other studies written by the same authors: Lewis and Tsuchida (1997; 1998). In both articles, research lessons are a central topic, and therefore we can conclude that their high number of citations reflects an interest in LS among citing authors. Also, in the case of the 1998 study, its re-publishing in a different journal the following year might have helped to increase its visibility. However, more than anything, the high number of citations of these studies can find an explanation in the relevance that Lewis has in the field of LS. As Table 3 evinces, her studies appear among the most cited in different years and she receives recognition as key for our understanding of LS and also for its popularisation (Takahashi & McDougal, 2016); an acknowledgment we find even before 1999, when Stigler and Hiebert (1997) invited anyone interested in learning more about LS to read Lewis and Tsuchida (1997), a study still in press at the time.

So far, we have discussed two group of studies before 1999 that clearly described LS. As their number of citations show, these studies are known by other scholars, and they should also receive credit for the international introduction and emergence of LS. However, Table 1 shows four other studies clearly describing LS before that date, but with fewer citations, especially those from 1993. One of them is Shimahara (1998), an article cited in Stigler and Hiebert (1999) and written by a well-known author among those interested in Japanese education. The other three are articles from 1993 that, as their number of citations reveals (see Table 1), have remained clearly underrepresented in later literature. Even more, as Table 2 and Figure 1 demonstrate, a possible explanation for their low number of citations is bibliographic, as they were mainly cited between 1999 and 2003 and many of their citations came from the same authors (especially, Yoshinori Shimizu and Stigler and Hiebert). In consequence, the chances of knowing these three articles are slim if not reading Shimizu, Stigler and Hiebert or if reading LS-related literature after 2003.

Figure 1 also shows that none of these studies from 1993 were cited in relation to LS before 1999, which also means that none of the other studies in Table 1 cited them. On the one hand, Lewis and Tsuchida (1997; 1998) and Shimahara (1998) do not mention them,

although Shimahara refers to other studies from the special issues of the Peabody Journal of Education in which Takemura and Shimizu (1993) and Ichimura (1993) were published. On the other hand, Stigler and Hiebert (1997; 1999) acknowledge the special issues of the Peabody Journal of Education as one of their bases for writing about the Japanese process of teaching improvement. However, while they specifically mention the influence of other authors (Lewis, Tsuchida, Shimahara, Sakai and Yoshida), they do not specify which studies from these issues were used to write their descriptions (Stigler & Hiebert, 1997 p. 21): «[...] a number of written sources, including [...] and two special issues of the Peabody Journal of Education devoted to Japanese teacher education (Spring and Summer 1993)». Later in 1999 (p. 191), they specify the volume and number of the special issue, but the authors remain absent. Despite this, we can assume that Stigler and Hiebert (1999) were basically referring to Takemura and Shimizu (1993), because they cite this study in a different passage and because, as seen in Table 2, in later texts (e.g., Hiebert & Stigler, 2000; Hiebert *et al.*, 2002) they finally mention it as one of their sources for talking about LS.

Although it should not be considered the only criteria, the number of citations of a study speaks, more than about its quality, about its relevance in the literature. As seen for the studies from 1993, even if the information offered by Stigler and Hiebert could have led later researchers to find some of them, their number of citations shows that they have remained in the shadows. The case of Yoshida's dissertation (1999a) also stands out because, despite being recognised as key for the internationalisation of LS, most studies published immediately before or after it (see Table 3) are more cited. This is likely because the dissertation was unpublished, and it brings attention to what makes studies in Table 3 the most cited (scientific quality, authors' relevance, accessibility of the publication, re-publishing in different formats –journal paper, conference paper, book chapter...– self-citations, etc.), a topic that deserves further exploration in future studies.

## CONCLUSION, LIMITATIONS, AND VALUE OF THIS RESEARCH

Stigler and Hiebert (1999) and Yoshida (1999a) have been acknowledged as key for the international popularisation of LS, and their impact in later research has been shown in this study, especially in the case of Stigler and Hiebert's work. However, this research shows that, prior to these, earlier studies offered a clear description of LS beginning in 1992 (and hazier descriptions even earlier), and that the term «lesson study» was first used in 1997, although alternative translation might have appeared before. Some of these studies published before 1999 –written by authors who later became influential in the field of LS– are recognised in the literature, as their number of citations suggests. On the other hand, another group of studies, especially three from 1993, have remained underrepresented in later literature and unknown to most researchers.

Despite these findings, some limitations of this research deserve to be mentioned. First, criteria set regarding what counts as clear description of LS might not be shared by others. Also, further research should approach citations in LS in a more precise manner to uncover the bibliographic relevance across time of different studies. Finally, in spite of conducting this research in Japan, it was not possible to access the conference presentation by Shimizu in 1996 or the dissertations of Sato and Tsuchida, from 1991 and 1993 respectively. Regardless of its limitations, this study reveals and grants recognition to studies that deserve a spot in the international history of LS –and, in consequence, of learning study– and that have been overlooked in later literature. ■

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