The geopolitics of research in teaching and learning in the university in Latin America

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ABSTRACT

Over recent decades, research and scholarship on teaching and learning in higher education have focused on (i) how to promote student learning in tertiary education through good teaching practices and (ii) on teaching and learning as an area of study of its own. However, there is a meta-component that needs to come into play: (iii) the geopolitics (de Sousa Santos 2014; Connell 2007) in which teaching and learning processes take place. In this paper, I take up this last aspect and offer a perspective on teaching and learning as geographically located in particular countries, focusing especially on the South and especially on Latin America. A search was conducted of papers on teaching and learning that were included in the Web of Science database, and produced by authors in Latin-American universities, between 2000 and 2015. The findings show that the scholarly research on teaching and learning in mainstream journals is dynamic and growing in the region. However, it also shows that most of the academic productivity in the area draws on theories produced in the North and lacks a geopolitical perspective. These findings help to illuminate the challenges faced by researchers on teaching and learning in Latin America, and prompt reflection as to how to make more visible the knowledge produced in the South.
Introduction

In this paper, research and knowledge produced around teaching and learning in the university in Latin America is examined. Drawing on literature that addresses the geopolitics of the construction of knowledge and particularly the North/South divide (de Sousa Santos 2010, 2014; Levander & Mignolo 2011; Connell 2007; Appadurai 2000), this paper critically examines the main trends in the use and production of theories of teaching and learning by Latin-American scholars and the extent to which they follow patterns similar to those of the North.

There is a body of mainstream literature produced in the North regarding the promotion of students’ learning and well-founded teaching approaches in tertiary education. Nevertheless, the conception of teaching as an individual standardized task has been criticized (Fanghanel 2009; Malcolm & Zukas 2001). Also, some of this mainstream literature has been developed in the context of quality measures and the competition for prestige among universities (Hazelsnorn 2016; Shahjahan, Wagner & Wane 2009), and does not take into consideration the complexity and richness of teaching and learning in specific contexts and in peripheral regions such as Latin America.

The countries of the Latin American region each contain their own complexities and diversity. Indeed, Latin-American higher education institutions, and particularly universities, “retain a rich diversity in governance structure and control, funding schemes, mission and scope of activity” (Guzmán-
Valenzuela & Bernasconi, forthcoming). Therefore, understandings of teaching and learning in the Latin-American region have to start from the recognition of that diversity and richness.

Through a meta-analysis of papers published on the topic of teaching and learning in high-ranked journals, this paper firstly offers an overview of the main trends in research on teaching and learning across the region. Secondly, the nature of knowledge and understanding of teaching and learning in higher education are analyzed. A descriptive analysis of data, and an analysis that includes a geopolitical perspective, lays the ground for the final discussion.

Geopolitics in the construction of knowledge
Historically, the North – which mainly includes advanced-economy countries – has been constructed as a reference point for the world in economic, political and cultural terms. At the same time, the North has established limits in the construction of knowledge (Epstein 2007; Connell 2007; Appadurai 2000).

The distinction between the North and the South refers to a set of power relationships between the ‘metropole’ and peripheral countries, and involves financial, political, cultural, social and epistemological dimensions (Connell 2007). In the North/South literature, the dominant idea is that powerful knowledge and theories are mainly built in the North while knowledge produced in the South is neglected.

Boaventura de Sousa Santos (2010, 2014) refers to ‘abyssal thinking’ as a process through which certain type of knowledge produced in peripheral countries is actually made invisible. Abyssal thinking therefore involves two dimensions: first, it accords value and power to one type of knowledge (that produced by and in the North), and a second dimension that actively devalues knowledge produced in the South since it is perceived to lack value. Promoting knowledge of the North and making invisible knowledge produced in the South are therefore interrelated parts of an ‘abyssal thinking’. In turn, and just as significantly, educative and social phenomena in the South are understood, explained and interpreted through the lens of the North. However, knowledge produced in the North fails to give an account of the specificities of the South (Connell 2007).

The following section considers the mainstream research on teaching and learning produced in the North.

Research on teaching and learning in the university
Teaching and learning processes have been extensively investigated over the last forty years or so within different disciplines and perspectives, and have been examined as interrelated processes (Parpala et al. 2010; Ramsden 2003). However, although teaching and learning are situated in particular countries and contexts, most of the research about this has been conducted in advanced-economy countries with particular cultural features which differ from teaching and learning processes in peripheral countries and their contexts.

Most of this academic production on the topic has been published in mainstream journals and also in books by researchers in countries such as Finland, the UK, the Netherlands and Australia. Some of
them have proposed the well-known distinction between deep and surface learning (Biggs & Tang 2011; Bowden & Marton 2004; Biggs 1999; Prosser & Trigwell 1999), while other authors have been focused on the interrelated concepts of conceptions and teaching approaches (González 2011; Postareff & Lindblom-Ylänne 2008; Akerlind 2003, Samuelowicz & Bain 2001; Kember & Kwan 2000; Prosser & Trigwell 1999; Kember 1997; Trigwell & Prosser 1996a, 1996b; Dall’Alba 1991). These lines of inquiry have laid the ground for a complex set of literatures involving insights into measures of the quality of pedagogy, learning, curricula and students’ experiences (Ginns, Prosser & Barrie 2007; Entwistle, McCune & Hounsell 2003).

These two sets of literature (one being focused largely on students’ learning and the other on teaching conceptions and approaches) have been criticized, since it is said that teaching has been reduced to a “performative, individualized and psychologised task” (Fanghanel 2009:17). Also, it has been suggested that this research approach does not take into account the context in which teaching-learning practices take place (Guzmán-Valenzuela 2013; Ashwin & McLean 2005), and so fails in capturing the “richness and complexity of teaching in higher education” (Guzmán-Valenzuela 2013:69). Additionally, a tendency to measure teaching quality and learning through indicators of effectiveness and performativity has led to criticisms of the commodification of teaching and learning in higher education (Naidoo & Jamieson 2005).

Another set of literature on teaching that was well developed in the USA and the UK, especially in the 1980s, focused on teaching practices as “knowledge in action” (Schön 1983, 1987; Argyris & Schön 1978) in which teaching knowledge is conceived as practical knowledge rooted in communities of practices and experience (Wenger 1999; Jarvis 1999). Most of the attention here is paid to micro-practices, specific institutional contexts or national policies that shape such processes (Bamber, Trowler & Saunders 2009).

More recently, a literature has been developing that gives prominence to the geopolitics in the construction of knowledge (de Sousa Santos 2015; Connell 2007), and particularly to culturally rooted knowledge about teaching and learning, (Alkema 2014; Nakata et al. 2012; Thaman 2003; Sonn, Bishop & Humphries 2000). This literature has emerged as a counter-discourse to dominant trends in research in teaching and learning, especially in countries colonized by Anglo-Saxon nations and those whose population have indigenous or black-mixed backgrounds. However, academic production on the topic is not usually published in mainstream journals.

The empirical work

In this study, a review was conducted of papers on teaching and learning by Latin-American authors between 2000 and 2015 on the Web of Science (WoS).¹² A total of 130 papers were identified and

¹ Web of Science is a well-recognized database that includes the references of the main scientific publications of any discipline of knowledge. Other kind of academic production (for example, papers included in Scopus or SciELO databases), books and book chapters were not included in this search.

² WoS indexes included were Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), and Arts & Humanities Citation Index (A&HCI) for the topics ‘higher education’, ‘university education’ and ‘tertiary education’. In refining the search, the following categories were used: ‘education educational research’, ‘education special’, ‘education scientific disciplines’ and ‘psychology educational’.

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classified by topics following Tight’s (2003, 2012) classification which included: teaching and learning, course design, the student experience, quality, system policy, institutional management, academic work and knowledge and research. In this paper, the 34 articles devoted to teaching and learning are examined.

Descriptive analysis
Results show (graphic 1) that, between 2000 and 2007, there were no publications in teaching and learning. From 2008 to 2011, there is an upwards trend that started with one publication, reaching a peak that remained constant from 2011 to 2013. From 2014 onwards, the production slowly decreased. Between 2012 and 2015, 19 papers were published, which represents almost the 60% of the total.

Graph 1: Evolution of Latin American Teaching and Learning publications per year (2000-2015)

Between 2008 and 2015, a total of 34 articles on teaching and learning by Latin-American authors were published. Table 1 shows the main features of these papers:

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Number of Authors</th>
<th>Country (countries)</th>
<th>Affiliation</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2008 Innovations in Education and</td>
<td>1</td>
<td>1 Colombia</td>
<td>1. Pontificia Universidad Javeriana</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td>Teaching International</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>2009 Computer Applications in</td>
<td>2</td>
<td>1 Chile 2 Chile</td>
<td>1. Universidad de Tarapaca 2. Pontificia Universidad Católica de Chile</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Engineering Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>2009 Higher Education</td>
<td>1</td>
<td>1 Chile</td>
<td>1. Pontificia Universidad Católica de Chile</td>
<td>Qualitative</td>
</tr>
<tr>
<td>4.</td>
<td>2009 Revista de Educacion</td>
<td>1</td>
<td>1 Uruguay</td>
<td>1. Universidad ORT</td>
<td>Conceptual</td>
</tr>
<tr>
<td>5.</td>
<td>2010 Revista Brasileira de Ensino de</td>
<td>3</td>
<td>1 Brazil</td>
<td>1. Universidad de Sao Paulo</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Fisica</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>2010 British Journal of Music</td>
<td>1</td>
<td>1 Brazil</td>
<td>1. Universidade Federal de Minas Gerais</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>2010 Studies in Higher Education</td>
<td>1</td>
<td>1 Chile</td>
<td>1. Pontificia Universidad Católica de Chile</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td>Year</td>
<td>Journal Title</td>
<td>Country(s)</td>
<td>Institutions</td>
<td>Research Types</td>
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</tr>
<tr>
<td>8.</td>
<td>2010</td>
<td>Computers and Education</td>
<td>2</td>
<td>1 Chile</td>
<td>1. Universidad de Chile</td>
</tr>
<tr>
<td>9.</td>
<td>2010</td>
<td>Cultura y Educacion</td>
<td>3</td>
<td>1 Mexico 2 Spain</td>
<td>1. Centro Nacional de Investigación y Desarrollo Tecnológico 2. Universidad de Barcelona</td>
</tr>
<tr>
<td>10.</td>
<td>2011</td>
<td>Computers and Education</td>
<td>3</td>
<td>1 Chile 2 Spain</td>
<td>1. Universidad Católica del Norte 2. Universidad de Sevilla</td>
</tr>
<tr>
<td>13.</td>
<td>2011</td>
<td>Teaching in Higher Education</td>
<td>1</td>
<td>1 Chile</td>
<td>1. Pontificia Universidad Católica de Chile</td>
</tr>
<tr>
<td>14.</td>
<td>2011</td>
<td>Comunicar</td>
<td>3</td>
<td>1 Chile 2 Spain</td>
<td>1. Universidad de Valparaíso. 2. Universidad de Barcelona.</td>
</tr>
<tr>
<td>15.</td>
<td>2011</td>
<td>Educational Technology and Society</td>
<td>2</td>
<td>1 Chile 2 Australia</td>
<td>1. Universidad Adolfo Ibáñez. 2. University of Sydney</td>
</tr>
<tr>
<td>16.</td>
<td>2012</td>
<td>Journal of Chemical Education</td>
<td>3</td>
<td>1 Brazil</td>
<td>1. Universidade Caixas do Sul</td>
</tr>
<tr>
<td>17.</td>
<td>2012</td>
<td>Instructional Science</td>
<td>1</td>
<td>1 Chile</td>
<td>1. Pontificia Universidad Católica de Chile</td>
</tr>
<tr>
<td>18.</td>
<td>2012</td>
<td>Innovations in Education and Teaching International</td>
<td>2</td>
<td>1 Panama 2 England</td>
<td>1. Universidad Tecnológica de Panamá. 2. Kings College London</td>
</tr>
<tr>
<td>20.</td>
<td>2012</td>
<td>Education Educational Studies</td>
<td>2</td>
<td>1 Chile 2 USA</td>
<td>1. Universidad Católica del Norte 2. California State University</td>
</tr>
<tr>
<td>21.</td>
<td>2012</td>
<td>Cultura y Educacion</td>
<td>2</td>
<td>1 Venezuela</td>
<td>1 Universidad Simón Bolívar</td>
</tr>
<tr>
<td>23.</td>
<td>2013</td>
<td>Ensenanza de las Ciencias</td>
<td>2</td>
<td>1 Brazil</td>
<td>1 Universidad Federal de Santa Catarina</td>
</tr>
<tr>
<td>24.</td>
<td>2013</td>
<td>Revista Latinoamericana de Investigacion en</td>
<td>3</td>
<td>1 Mexico</td>
<td>1 Universidad Autonoma de Yucatan</td>
</tr>
</tbody>
</table>
Table 1: WoS papers on teaching and learning in Latin America (2008-2015)

Graph 2 shows those journals where papers on teaching and learning were published. The two most-preferred journals for publication were: *Comunicar* (Spain), with four publications and *Innovations in Education and Teaching International* (UK) with three publications. Two papers were published in each of the following journals: *Computers and Education* (UK); *Journal of Chemical Education* (US); *Revista Brasileira De Ensino De Fisica* (Brazil); and *Revista Latinoamericana de Investigacion en Matematica Educativa-Relime* (Mexico).
Regarding the type of papers, 15% were conceptual papers (five papers) and 85% were empirical papers (29 papers).

Countries with the highest number of publications across Latin America were Chile (13 articles), followed by Brazil (seven articles), Colombia (five articles) and Mexico (three articles) (see table 2).

<table>
<thead>
<tr>
<th>Countries</th>
<th>N Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>13</td>
</tr>
<tr>
<td>Brazil</td>
<td>7</td>
</tr>
<tr>
<td>Colombia</td>
<td>5</td>
</tr>
<tr>
<td>Mexico</td>
<td>3</td>
</tr>
<tr>
<td>Argentina</td>
<td>1</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1</td>
</tr>
<tr>
<td>Cuba</td>
<td>1</td>
</tr>
<tr>
<td>Panama</td>
<td>1</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

Table 2: Number of publications by country (2008-2015)

The main languages used for publication were English (20 papers) and Spanish (nine); four papers were published in both English and Spanish, and one in Portuguese.

On the basis of this descriptive analysis, it is possible to identify two significant trends regarding work on teaching and learning in higher education in Latin America:

a) The production of papers increased since 2010, with Chile contributing the largest amount of papers.
Research on teaching and learning in Latin America: some key issues

In this section, key issues are explored in relation to (i) disciplinary aspects, (ii) place of origin of empirical work in the studies, (iii) country specificities, and (iv) theories used by the authors of the papers.

(i) Disciplinary aspects:
Most of the papers (20) referred to the teaching and learning task in concrete environments with particular pedagogical resources. The teaching context was usually within a particular disciplinary subject such as chemistry, mathematics, computer science, geography engineering, physics, natural sciences, foreign language studies, teacher education, music, business, administrative and industrial sciences or health sciences, while the rest were multi-disciplinary in nature or not specified. This suggests that the investigation and theorization of teaching in higher education revolved around teaching a specific discipline in a particular context (a particular classroom in a specific institution). Additionally, a significant number of papers (13) analyzed the use of technologies in the classroom either for teaching or learning, which in turn demonstrates the importance assigned to pedagogical technologies (particularly through virtual learning environments or technologies in the classroom). Characteristically, these types of papers did not employ a geopolitical dimension.

(ii) Place of origin of the empirical work
Most of the studies in view here (16) involved either Latin-American students or teachers, although a number of studies (nine) included students and/or teachers from the North, while five studies involved students or teachers coming from both Latin America and a country from the North (thus providing a comparative dimension, for example, paper 32 in table 1). Only 55% of the empirical papers produced in Latin America on teaching and learning involved fieldwork in the Latin-American region.

(iii) Cultural specificities
Only ten of the papers (29%) that were analyzed included specific information regarding students’ cultural characteristics (linked to, for example, their ethnicity). Additionally, in only five of these ten papers were cultural issues explicitly included in the discussion – either in comparison with the teaching and learning processes in countries in the North or in critically discussing differences that appeared in teaching and learning processes as a consequence of cultural differences between countries across regions. In this respect, one might have expected that comparative studies involving both students/teachers from countries in the South and the North would examine cultural specificities in teaching and learning to explain their empirical results. However this is not commonly evident since only three of these ten papers took cultural specificities into consideration. This is a significant finding since it suggests that authors addressed the processes of teaching and learning as taking place in a cultural vacuum and implicitly considered teaching and learning to be universal in nature rather than being culturally shaped. One example is that of studies focusing on the use of technologies in the classroom to improve learning (for example, papers number 15 and 22 in table 1). In these studies,
the characteristics of students and teachers in a particular country were rarely embraced. Something similar is present in studies using theories of teaching and learning that were created in the North and then applied to Latin-American contexts with scant discussion of cultural specificities (for example, papers 8 and 18 in table 1).

(iv) Theories used by the authors of the papers on teaching and learning
It appears that most of the papers used theories about teaching and learning that derived from the North, and mainly drew on authors from the North. There was only one exception where a paper was based on the work on the Brazilian educator Paulo Freire (paper 23 in table 1). Specifically, eight papers referred to the university teaching task as the core content of the paper. Half (four papers) were focused on teaching conceptions/approaches – as noted earlier, a well-developed literature in the North. The other four papers drew upon key concepts developed in the North, namely community of practice, teaching models underpinning the teaching task, a model for the enrichment of the learning experience, and the use of conceptual maps to promote evaluation in the classroom. Other popular theories were theories from psychology, including social activity theory (Vygotskian theory) as well as theories attached to the use of technologies in teaching and learning. This finding is particularly revealing since it confirms that the research on teaching and learning in Latin America that is published in mainstream journals is mainly fed by theories originating in the North. Latin-American researchers, therefore, are tending to rely on the North for intellectual resources in investigating teaching and learning processes.

To sum up, the papers analyzed here exhibited particular characteristics such as: the dominance of English as language of publication; the place of origin of both the journals and the participants involved in the research – with almost half from the North; the scarce reference to specific aspects of teachers and learners in a particular country; and the predilection for authors and theories from the North. Taken together, these patterns indicate that research on teaching and learning in Latin America relies heavily on the work of scholars and the knowledge produced in the North, at least as far research published in journals included in the WoS database is concerned.

Toward a geopolitics of research on teaching and learning
Results examined here need further investigation and analysis, not least because they are derived from an analysis of World of Science (WoS) papers. While it is considered to be one of the most prestigious databases in the academic world, WoS has also being criticized within the academic community mainly because (a) it promotes academic capitalism (Slaughter & Rhoades 2004; Slaughter & Leslie 1997) by giving a high weighting to international rankings, impact factors and citation indexes rather than to the quality of knowledge produced (Canagarajah 2014); it also incentivizes a reputational competition among universities; (b) it favors papers in the so-called pure/hard disciplines rather than in the social sciences and humanities (Pontille & Torny 2010; Archambault et al. 2006), where research in teaching and learning in higher education is anchored, and (c) it underplays publications in non-English-speaking academic communities (Belcher 2007; Archambault et al. 2006). While (a) and (b) affect the academia across the North and the South, (c) has a negative impact on academic production within Latin America.
That most of the examined papers here were in English shows not only the nature of the WoS database but also of the engagement of global research in what Marginson calls a “single global conversation” (Marginson 2016:19), which is addressed to an audience mainly in English-speaking countries. Additionally, the use of theories produced in the North by Latin-American scholars, while neglecting cultural differences across regional contexts, might be understood as part of a rational strategy to be published in high-ranked journals located in and for the North. Consequently, the use of theories of the North in research on teaching and learning might be understood as exemplifying an explicit process of abyssal thinking (de Sousa Santos 2014), making invisible the knowledge that is locally produced in peripheral countries. Further investigation of publications in other academic databases such as Scopus or SciELO is needed (the latter is a popular database in Latin America which has been criticized for not always ensuring the same standard of rigorous peer-review processes as those in the North).

Another matter arising here that warrants investigation is the matter of whether, or to what extent, co-authored publications (between authors in the North and in the South) are collaborative in nature or promote a relationship of epistemological dependency (Naidoo 2008). As shown in here, in a number of papers, fieldwork was conducted in countries in the North (involving either teachers or students) so the research processes were rather far from Latin America. Also, when comparing teaching and learning from both hemispheres, cultural differences were not taken into account and research was driven by northern theories. Again, one might speculate that co-authorships were strategically used by authors in the North and South in order to play to the process of gaining publication in high-ranked journals: authors from the North were able to publish papers with a more international character, while authors from the South could strategically engage with their colleagues in the North who typically enjoy a higher international reputation.

Conclusion

In this paper, an overview of some patterns in research on teaching and learning in higher education in Latin America has been offered. Results show that research published in papers by Latin-American scholars included in the WoS database followed a similar pattern to that in the North. That is to say, research was (mainly) guided by the mainstream literature produced in the North in terms of topics addressed and the theories used. Also, most of this research did not take into consideration particular contexts and local knowledge. These tendencies, therefore, gave value to knowledge on teaching and learning produced in the North while rendering invisible both knowledge of the South and its contexts.

Academic capitalism and its impact on scientific production – and the tension experienced by researchers in the humanities and the social sciences in having to publish in very few, competitive leading journals – is affecting academia across the world. However, research on teaching and learning in higher education faces additional challenges. On the one hand, research on the topic that has adopted a geopolitical perspective tends not to be included in high-ranked journals. On the other hand, and particularly in the Latin-American region, researchers strategically seek to engage with the community in the North so as to be published in prestigious journals by writing in English, drawing on literatures produced in the North, and developing patterns of collaboration, even though this is based, to some extent, on forms of epistemological dependency.
Accordingly, in the South, there is a need to create and promote counter-narratives in research on university teaching and learning that do not follow the powerful parameters produced in the North. Such a program poses a challenge of developing research and knowledge on teaching and learning in the South for the South.

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