

Research Methodology and Orientation of Papers Published from 1980 to 2019 in Applied Linguistics Journals

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Abstract

This study explored the research methodology and research orientation of the papers published in seven world-leading applied linguistics journals from 1980 to 2019. To that end, a corpus including 3491 papers from seven applied linguistics journals was investigated. The papers were examined for their research methodology based on qualitative, quantitative, and mixed-methods methodologies and their research orientations based on ten research orientations that were the main focus of applied linguistics studies. The research orientations were obtained from the topics of special issues of the applied linguistics journals. The papers were extracted and analyzed for their research methodologies and orientations according to the three research methodology types and ten research orientations. The results of the study indicated that from 1980 to 2000, the dominant research methodology was quantitative one, while from 2001 to 2019, the qualitative research methodology had an increasing trend of being used by applied linguistics researchers. Moreover, the results of the current study showed that from 2010 to 2019, the applied linguistics researchers showed positive attentions to use mixed methods methodology in their research studies. Furthermore, the corpus analysis from 2000 to 2019 indicated that teaching, teachers, and assessment issues started to show an increasing trajectory of being addressed in the applied linguistics papers. Thus, this study's findings can help the researchers, especially the less experienced ones, refine their knowledge about what has already been done in the field to focus their research studies on the less-examined issues.

Keywords: Applied linguistics, research methodology and orientation, journals

INTRODUCTION

Researchers of different fields are known as the actors of those fields who promote scientific progress through their research (Kuhn, 2012). By the same token, as the actors have their approaches and methodologies to appropriately conduct their roles, researchers also have their methodologies to conduct their research to be acceptable by the scientific community. The scientific research will be sound if the researchers do their best to adopt appropriate methodologies in their research (Sahragard, 2004; Zand-Moghadam & Meihami, 2016, Zand-Moghadam, Meihami, & Ghiasvand, 2018). Consequently, there is always a keen research interest in how scientific networks of various disciplines try to use sound and appropriate research methodologies. The results of that research interest have been manifested in the scientometrics research studies about different aspects of how studies are approached; such as addressing topics of scientific studies (e.g., Ma & Porter 2014; Mao, Cao, Lu & Li 2017; Trofimenko 1990), and analyzing the rhetoric of the scientific studies (e.g., Hartley, Pennebaker & Fox 2003; Rashidi & Meihami 2018; Sahragard & Meihami 2016a).

There are two different, somehow paradoxical views about why the researchers select different research methodologies in different research studies. The first view believes in researchers' desire to develop their understanding and decrease their illusion (Sayer, 1992). This view emphasizes the development of understanding as the main reason for using different research methodologies by the researchers. However, the second view emphasizes the definition and level of understanding and declares that since the researchers have different understanding levels about an issue, they try different research methodologies to conduct a study (Bachman 2006; Sahragard & Meihami, 2016b). Moreover, one can add to the second view that the researchers have different understandings about the research methodologies.

There are three main research methodologies, including quantitative, qualitative, and mixed methods. These research methodologies are

descendants from different research paradigms encompassing positivism, constructivism, and pragmatism. The quantitative research methodology, which is attached to positivism, is explanatory (Fishman, 2010). It means that the quantitative research methodology tries to explain variations among the dependent and independent variables. Nevertheless, the quantitative methodology is criticized for ignoring human complexity by the qualitative methodology, which has its basic tenets from constructivism. The qualitative methodology believes that instead of explaining human behaviors, the research methodology should help the researchers understand human behaviors (Riazi & Candlin, 2014). The consistent struggles among the two research methodologies' proponents lead to emerging a new research methodology called mixed methods. The mixed methods research tries to bridge the gaps between the two research methodologies: Quantitative and qualitative (Johnson & Onwuegbuzie, 2004). One of the current study's purposes was to investigate the trends of using different research methodologies in the papers published in applied linguistics journals from 1980 to 2019. In the following section, a more comprehensive explanation will be provided about the three research methodologies.

Quantitative, Qualitative, and Mixed Methods Research Methodologies

As was stated earlier, the quantitative research methodology originates from positivism which was the widespread philosophical view of the 19th century. The proponents of quantitative research methodology assert that the researchers can discover the social principles in the same way as the physical world's principles are investigated (Ary, Jacobs, Sorensen & Walker, 2014). Reaching dependable knowledge through observation is the primary aim of the positivists. Consequently, they try to obtain the information for their research studies through involving in observation. A research study that has a quantitative research methodology should "involve hypothesis testing and objective data gathering to arrive at findings that are

systematic, generalizable, and open to replication by other researchers" (Ary et al. 2014, p. 25). When talking about the quantitative research methodology, one should bear in mind that this research methodology's design is developed before the study. It has a deductive approach to data collection and analysis. Moreover, the quantitative research methodology uses preselected instruments with many participants to make the results of statistical analysis generalizable. There are different types of quantitative research, including survey, correlational, and ex post facto studies; they are used for different purposes.

The qualitative research methodology refers to constructivism, which asserts that human relationships have a complex and multifaceted interconnection. Given that, one's existence is interpreted through others, meaning that everybody has a unique story that needs to be addressed when doing a research study, of course, concerning others' stories. That said, the researcher who conducts qualitative research, metaphorically, is a bricoleur, since they have different tools, methods, and techniques to run their research (Denzin & Lincoln, 2008). The qualitative research methodology is flexible regarding its research design as it evolves through the study in an inductive way of generating new theories. Moreover, the researcher is the main tool for collecting data and analyzing them obtained through a small number of participants. The narrative analysis and interpretation are the main data analysis methods in the qualitative research methodology (Ary et al., 2014). To understand a phenomenon, the qualitative researcher tries to observe the total picture rather than break it into variables by conducting case studies, content analysis, ethnography, grounded theory, historical research, narrative inquiry, and phenomenological studies (Ary et al., 2014).

The long and critical debates among the proponents of quantitative and qualitative research methodologists lead to a new paradigm in research methodology called mixed-methods. This research methodology favors a pragmatic approach in which it searches for "what works" to address a research question. The tenets of mixed methods methodology assert that combining qualitative and quantitative research methodologies in

conducting a study can help obtain more robust results. However, according to Creswell (2007), mixed-methods studies are more than combining quantitative and qualitative research methodologies in a study, meaning that mixed methods' synergic essence helps the study be more significant in terms of overall methodological strength. The mixed-methods methodology addresses both deductive and inductive reasoning to predict human being's behaviors. Through the triangulation of methodology, the mixed methods methodology corroborates the findings to reach sound generalization. The knowledge about these paradigms helps the researchers to be able to select among them when they conduct research studies with different purposes.

Research Orientation

Research orientations refer to the topical issues which each research study tries to investigate. They are the main thematic issues in each discipline. For instance, second language learning's main research orientations are teaching L2, L2 material development, L2 assessment, L2 learning, L2 skills, L2 learner, and teacher, among others (Sahragard & Meihami, 2016b). Each of these orientations has its dichotomies, meaning that they can be divided into different sub-orientations. For example, L2 assessment can be categorized into studies related to validity, reliability, language skills assessment, washback, etc. to name a few. According to Sahragard and Meihami (2016b), the journals' research orientations are dynamic. Different factors such as the journal's policy, the universal trend of the field, etc. have direct and indirect impacts on research orientations.

Research methodologies and orientations of the papers published in applied linguistics journals have been sporadically investigated; however, there is a paucity of research to show a comprehensive picture of using different research methodologies in papers with different research orientations. Given the importance of knowing about the research methodologies and orientations of the papers published in applied linguistics journals, the current study was an attempt to investigate these issues from

1980 to 2019 in the papers published in seven world-leading applied linguistics journals.

LITERATURE REVIEW

Although the two terms of research method and methodology are used interchangeably, they have their specific definitions. While the method is a set of particular procedures with specific tools and techniques to run a research study, the methodology is a framework helping the researchers address their research issues under investigation based on what they have already known about the issues (Riazi & Candlin, 2014). To put it another way, when the researchers select their techniques and tools based on the research requirements, they develop their research methodology. However, if the researchers go through the predetermined steps to address the research issues, they should follow a specific predetermined method. The suffix "logy" in methodology connotes that the researcher is at the professional level to develop their studies' design. However, it should not be thought that the researchers do it without any previous knowledge or experience. They need to have a vast knowledge of methods to integrate them for different situations and develop rigorous methodologies. Different scientometrics studies have been conducted to investigate the methodologies used in the articles published in the applied linguistics journals to obtain an overall picture during different time intervals (e.g., Lazaraton, 2000; Lei & Liao, 2017; Yihong, Lichum, & Jun, 2001)

In a study conducted by Lazaraton (2000), the published papers of applied linguistics journals, namely, *Language Learning*, *Modern Language Journal*, *Studies in Second Language Acquisition*, and *TESOL Quarterly*, were investigated from 1991 to 1997. Lazaraton (2000) selected 332 empirical research from the mentioned journals. The results of her study indicated that 292 (88%) were quantitative; 33 (10%) were qualitative, and 7 (2%) were partially qualitative. In another section of her research, Lazaraton (2000) analyzed the quantitative research studies'

statistical analyses. The results indicated that 40% used ANOVA, 26% used Pearson correlation, 23% used t-test, 13% used regression analysis, and 12% used chi-square.

Yihong, Lichum, and Jun (2001) conducted a comparative study to investigate the research methodology of the papers published in the Chinese and Western applied linguistics journals. They selected four Chinese applied linguistics journals published from 1978 to 1997 and four English applied linguistics journals from 1985 to 1997. The entire corpus of their study included 2486 papers. They opted to categorize the research methodologies into three groups of quantitative, qualitative, and non-empirical. The results of Yihong et al. (2001) showed that the Chinese applied linguistics journals were on the positive trajectory of publishing more empirical studies, especially the quantitative ones, while in the Western journals, the trajectory of publication of quantitative studies was challenged by conducting qualitative studies.

Benson, Chik, Gao, Huang, and Wang (2009) investigated the status of doing qualitative research in 10 journals of applied linguistics from 1997 to 2006. They investigated 2202 papers. The results revealed that 22% (477 papers) of all published studies from 1997 to 2006 had a qualitative methodology. The results also indicated that there was a stable rate of qualitative publication during the 10-year-period. Finally, this study's findings illustrated that researchers tried to go through methodological eclecticism rather than the traditional routines established about doing qualitative research.

Richards (2009) conducted a state-of-the-art article to investigate qualitative research developments in language teaching to identify issues that emerge from 2000 to 2009. Richards (2009) also aimed to investigate those areas of language teaching, which could use the potentialities of qualitative research to be investigated. After investigating the qualitative studies published in 15 applied linguistics, Richards (2009) concluded that the qualitative research studies published in applied linguistics journals were less confrontational and more theoretical. For the first time, based on

this study's results, Richards (2009) showed a shift toward using mixed methods research, and he believed that it is emergent from qualitative research.

Moreover, Sahragard and Meihami (2016b) conducted a study to investigate the research methodologies and research orientations of the papers published in the journal of *Teaching Persian to Speakers of Other Languages* from 2012 to 2015. They investigated 58 papers published in this journal. The results of their study revealed that the journal enjoyed publishing quantitative and qualitative research studies, but not mixed methods studies. The results of the research orientation analysis indicated that learning and learner orientation studies enjoyed more frequencies while there were very few research studies on teacher and assessment orientations.

In a bibliometric study conducted by Lei and Liao (2017), China's development of linguistics research from 2003 to 2012 has been examined. The information about the linguistics research published in the journals indexed in Web of Science by the researchers from Mainland China, Taiwan, Hong Kong, and Macau was collected. In this study, the researchers examined indices, such as the number of publications, impact factors, publication citations, and publication in high-impact and popular journals. The study's overall results indicated that the number of linguistics research published in the linguistics journals developed from 2003 to 2012 in the four examined regions. The researchers concluded that China's rapid development in linguistics research could be due to ambition in higher education and increasing investment in social sciences such as ad linguistics research.

In 2018, Lei and Liu conducted a study to investigate the research trends in applied linguistics from 2005 to 2016. They analyzed the papers published in 42 Social Sciences Citation Index journals of applied linguistics for their topics, the most highly cited publications, and the change in their research trends. Their study showed that the most frequently researched topics in applied linguistics were sociocultural,

functional, and identity issues. Moreover, the results indicated a decrease in phonological, grammatical, and generative linguistic topics. Furthermore, their studies showed that the number of publications in countries such as the USA, which are considered powerhouses, decreased, and other countries such as China had an increasing publication rate.

The review of the studies mentioned above shows some limitations which need to be addressed. First, except for one study (Yihong et al., 2001), the other studies had a corpus with a time interval of about ten years, which does not lead to a clear overall picture of the trend of publications' trends. Second, the research orientations were not considered in the papers published in the applied linguistics journals, so one cannot figure out which topics adopt which research methodologies. Third, there is no clear procedure of why only those journals of applied linguistics had been selected, and others were not. Consequently, clear criteria for journal selection should be proposed. That said, the current study aimed to address these limitations to obtain rigorous findings.

PURPOSE OF THE STUDY

The field of applied linguistics is considered an interdisciplinary enterprise (Riazi & Candlin, 2014) in which the applied linguists go through different research methodologies to investigate various research orientations. Addressing the research methodologies used to investigate different research orientations in applied linguistics helps the researchers of the field find a proper understanding of how knowledge is identified in this field. Furthermore, the philosophical orientations of the researchers, journals, and policy-makers of applied linguistics become clear for us if we investigate the trends of research methodologies and research orientations of the research published in the field of applied linguistics (Richards, 2009). Consequently, by researching the research methodology and research orientation of the papers published in applied linguistics journals, the researchers make informed decisions on which research methodologies

to use to examine the uninvestigated topics. Moreover, academic institutions can ask their researchers to investigate the less examined research orientations. (Lei & Liu, 2018). Moreover, obtaining the trends of research methodology and research orientation of the journals in applied linguistics can have some contributions to the researchers of the field. First, the less experienced researchers in applied linguistics will figure out what the current status of the research methodology and research orientation is and what the past was. Second, it will be helpful for the M.A. and Ph.D. students to select novel research orientations and reliable research methodologies when trying to conduct their theses and dissertations. Finally, the editorial of applied linguistics journals will obtain information about their journal's research methodology and research orientation trends in the past and during different time intervals to address their publication policy for the future. Furthermore, this study included a wider time interval, from 1980 to 2019, and a larger corpus, 3491 articles, which can lend a diachronic picture of the research methodology and research orientation of the papers published in the applied linguistics journals when compared with the previously done studies (e.g., Benson et al., 2013; Lazaraton, 2000, Richards, 2009). Hence, the study can map out the research methodologies and research orientations of the papers published in the applied linguistics journals for different stakeholders, including policy-makers, editors, researchers, and teachers. That said, the current study aimed to investigate the research methodology and research orientation trends in the publications of seven world-leading journals of applied linguistics. The study addresses the following research question:

- What are the research methodology and research orientation trends of the papers published in the applied linguistics journals from 1980 to 2019?

METHOD

Corpus of the Study

To address the current study's purpose to obtain the trend of research methodology and research orientation of the papers published in applied linguistics journals, the researcher selected seven world-leading applied linguistics journals to be examined. These journals were among the high-rank journals of applied linguistics reported by Web of Science and Scopus in 2018. Moreover, the corpus was narrowed down to those applied linguistics journals, which had publications since 1980. The corpus includes research papers published during the last 40 years. Accordingly, the seven world-leading applied linguistics journals whose main scopes were on applied linguistics issues were *Annual Review of Applied Linguistics*, *Applied Linguistics*, *Modern Language Journal*, *TESOL Quarterly*, *Studies in Second Language Acquisition*, *Language Learning*, and *System*. Publication information about these journals is provided in Table 1.

After selecting the journals, the researcher started to extract the papers published for four decades (1980-2019). Knowing that the journals published different documents such as empirical studies, review papers, forums, commentary, etc., the researcher extracted the empirical studies. The empirical studies are described as the research papers with research methodologies aiming to explore an issue in applied linguistics. Moreover, to relive one of the limitations in selecting the empirical papers for analysis, the researchers chose those papers whose research methodologies and research orientations were clearly stated in their researchers' papers. Given that, 3491 empirical studies (original papers) were extracted to investigate their research methodology and research orientation.

Table 1: Publication information of the applied linguistics journals used as the corpus of the study

Journal	Publisher	Starting date	Number of volume*
Annual Review of Applied Linguistics (ARAL)	Cambridge Core	1980	39
Applied Linguistics (AL)	Oxford Academic	1980	40
Modern Language Journal (MLJ)	Wiley Online Library	1916 (<i>for this study, data were gathered from 1980</i>)	103 (64-103 were examined)
TESOL Quarterly (TQ)	Wiley Online Library	1980	53
Studies in Second Language Acquisition (SSLA)	Cambridge Core	1980	41
Language Learning (LL)	Wiley Online Library	1940 (<i>for this study, data were gathered from 1980</i>)	69 (30-69 were examined)
System	Elsevier	1973 (<i>for this study, data were gathered from 1980</i>)	85 (8-85 were examined)

* Note: Information was for July 2019.

Table 2 indicates the number of empirical studies extracted from each applied linguistics journals from 1980 to 2019.

Table 2: Number of empirical studies investigated

Journal	1980-1989	1990-1999	2000-2009	2010-2019	1980-2019
(ARAL)	38	75	100	78 (up to September 2018)	291
(AL)	45	90	101	120 (up to June 2019)	356
(MLJ)	125	178	100	125 (up to Summer issue 2019)	528
(TQ)	140	100	113	181 (up to June 2019)	534
(SSLA)	90	105	150	170 (up to May 2019)	515
(LL)	80	95	115	175 (up to June 2019)	465
System	145	192	150	315 (up to October 2019)	802
Total	663	835	829	1164	3491

Data Analysis

To obtain the trend of the research methodologies and research orientations of the papers published in applied linguistics journals, the researcher used two analytical frameworks obtained through the meticulous analysis of the theoretical frameworks related to research methodology and research orientation classification. Table 3 showed the framework developed by Ary et al. (2014) based on which the research methodologies of the published papers were categorized.

Table 3 Research methodology framework

Research methodology	Taxonomies	Example
Qualitative	Case studies	<i>Using Evidence in L2 Argumentative Writing: A Longitudinal Case Study Across High School and University</i>
	Content analysis	<i>An exploratory study of collocational use by ESL students – A task-based approach</i>
	Ethnographic studies	<i>Blurred genres and fuzzy identities in Hong Kong public discourse: foundational ethnographic issues in the study of reading</i>
	Grounded theory studies	<i>Exploring Inner Speech as a Psycho-educational Resource for Language Learning Advisors</i>
	Historical studies	<i>Changing Directions in Language Curriculum Design</i>
	Narrative research	<i>Researcher Identity, Narrative Inquiry, and Language Teaching Research</i>
	Phenomenological research	<i>Conditions that Create Therapeutic Connection: A Phenomenological Study</i>
Quantitative	Survey studies	<i>Listening comprehension: The learners' perspective</i>
	Correlational studies	<i>Multiple intelligences and language learning strategies: Investigating possible relations</i>
	Ex post facto studies	<i>An analysis of discomfort, risk-taking, sociability, and motivation in the L2 classroom</i>
Mixed methods studies	Sequential and concurrent	<i>A mixed-methods study of the impact of sociocultural adaptation on the development of pragmatic production</i>

The other framework used to investigate the published papers for their research orientations was the one used by Sahragard and Meihami (2016b). Moreover, other orientations related to applied linguistics had been used to make this framework more comprehensive. To that end, the researcher scrutinized the topics of the recent special issues of the seven applied linguistics journals investigated for their research methodologies and research orientations. By so doing, in addition to six research orientations retrieved from Sahragard and Meihami (2016b), four other research orientations had been added to the framework, including identity, language learning and technology, English for academic and specific purposes, and pragmatics and discourse studies. It worth mentioning that the researcher obtained the four research orientations by thematically investigated the seven applied linguistics journals. The four research orientations were more frequently selected as the topics for special issues. As a whole, the framework has 10 components indicating the main research orientations addressed in applied linguistics journals.

- Teaching orientation: studies focusing on the process of teaching L2. The methods, techniques, and activities which are used in L2 classrooms to promote teaching aspects.
- Material orientation: studies highlighting the materials used in L2 teaching. Analyzing the materials is also placed under this research orientation. Moreover, the investigation on how to produce new materials for L2 classrooms based on different criteria is within this research orientation realm.
- Assessment orientation: as the name suggests for itself, the description for assessment orientation studies can be related to the investigation focusing on the assessment and evaluation of L2 learners in the process of learning L2. Moreover, the evaluation of the programs.

- Learning orientation: the studies focusing on the process of learning and the cognitive aspects of learning. Furthermore, how learning in different situations may affect L2 learning is categorized under learning oriented research.
- Learner orientation: the studies focusing on how learners' traits can impact on learning and teaching process. One example is studying the personality traits of L2 learners and drawing correlation with other L2 learning factors.
- Teacher orientation: the studies which are seeking the teacher aspect of L2 learning. To put it another way, teacher education is an aspect of teacher-oriented research focusing on how to prepare teachers for L2 teaching (Extracted and used from Sahragard & Meihami, 2016b)
- Identity orientation: the investigations aimed at identity construction and reconstruction and different types of identity development including professional identity, cultural identity, social identity, etc.
- Language learning and technology orientation: studies which are about the use and integration of technology in language teaching and learning.
- English for academic and specific purposes orientation: studies whose topics are relevant to English teaching and learning for specific and academic communities. The specialized need analysis, curriculum design, etc.
- Pragmatics and discourse analysis orientation: the studies about the meaning of spoken and written utterances (pragmatics) and with regard to social contexts (discourse).

Table 4 shows examples of the papers published in the seven world-leading journals of applied linguistics from 1980 to 2019 with different research orientations.

Table 4: Examples of the papers with different research orientations

Research orientation	Example
Teaching orientation	<i>Multiple intelligences and language learning strategies: Investigating possible relations</i>
Material orientation	<i>Changing Directions in Language Curriculum Design</i>
Assessment orientation	<i>Self Assessment of Foreign Language Skills: Implications for Teachers and Researchers</i>
Learning orientation	<i>An analysis of discomfort, risk-taking, sociability, and motivation in the L2 classroom</i>
Learner orientation	<i>Listening comprehension: The learners' perspective</i>
Teacher orientation	<i>Teachers' cognitions of corrective feedback on pronunciation: Their beliefs, perceptions, and practices</i>
Identity orientation	<i>Theorizing Social Identity; What Do We Mean by Social Identity? Competing Frameworks, Competing Discourses</i>
Language learning and technology orientation	<i>University English language learners' readiness to use computer technology for self-directed learning</i>
English for academic and specific purposes orientation	<i>Languages for specific purposes curriculum creation and implementation in Australasia and Europe</i>
Pragmatics and discourse analysis orientation	<i>Pragmatic comprehension in learner- native speaker discourse</i>

The coding procedure was a straightforward one in which the coders read the papers and categorized them according to the two frameworks. To obtain dependent results in the corpus studies, the researchers need to address the reliability of data analysis (Ary et al., 2014). This is a crucial step to avoid bias in the procedure of data analysis. In the current study, to address the reliability of the data analysis, the researcher asked another coder who held an M.A. in applied linguistics and was well-aware of the study's purpose to codify the corpus based on the a priori frameworks. By the way, before starting the codifying, the researcher explained the two frameworks and how to use them for the second coder. The agreement obtained by MAXQDA 10 was up to 90%.

RESULTS

The current study's first research question was to investigate the research methodologies and research orientations of the papers published in the applied linguistics journals from 1980 to 2019. The papers extracted from the applied linguistics journals were investigated for their research methodologies and research orientations. Table 5 shows the results of data analysis for the seven journals investigated.

Table 5: Research Methodology of papers published in applied linguistics journals from 1980 to 2019

Research methodology	Journals	1980-1989	1990-1999	2000-2009	2010-2019	1980-2019
Qualitative	ARAL	9 (3%)	23 (8%)	34 (12%)	39 (13%)	105 (36%)
	AL	4 (1%)	8 (2%)	6 (2%)	4 (1%)	22 (6%)
	MLJ	27 (5%)	73 (14%)	20 (3%)	35 (6%)	155 (30%)
	TQ	35 (6%)	38 (6%)	52 (9%)	71 (13%)	196 (37%)
	SSLA	28 (5%)	16 (3%)	75 (15%)	70 (13%)	189 (36%)
	LL	20 (4%)	30 (6%)	26 (5%)	39 (9%)	115 (24%)
	System	30 (4%)	28 (4%)	27 (3%)	60 (7%)	145 (17%)
Total		153(23%)	216 (25%)	240 (28%)	318 (28%)	927 (26%)
Quantitative	ARAL	27 (10%)	52 (18%)	64 (22%)	31 (11%)	174 (61%)
	AL	41 (12%)	82 (24%)	90 (25%)	98 (27%)	311 (88%)
	MLJ	95 (18%)	101 (19%)	74 (13%)	78 (14%)	348 (64%)
	TQ	103 (20%)	60 (11%)	55 (10%)	90 (18%)	308 (59%)
	SSLA	72 (14%)	89 (18%)	70 (13%)	85 (16%)	316 (61%)
	LL	60 (13%)	65 (14%)	89 (19%)	130 (28%)	344 (74%)
	System	112 (15%)	163 (21%)	117 (14%)	210 (27%)	602 (77%)
Total		510 (77%)	612 (75%)	559 (68%)	722 (62%)	2413(70%)
Mix	ARAL	-	-	2 (1%)	8 (2%)	10 (3%)

AL	-	-	5 (2%)	18 (4%)	23 (6%)
MLJ	-	1	6 (2%)	12 (4%)	19 (6%)
TQ		2	6 (1%)	20 (3%)	28 (4%)
SSLA	-	-	5 (1%)	15 (2%)	20 (3%)
LL	-	-	-	5 (2%)	5 (2%)
System	-	-	5 (.1%)	45 (5%)	50 (5%)
Total	-	-	29 (3%)	123 (10%)	155 (4%)

Table 5 shows valuable information about the methodological trends of the papers published in applied linguistics journals from 1980 to 2019. The first point capturing one's attention while looking at Table 5 is that from 1980 to 1999, there was a minimal number of studies which enjoyed mixed methods methodology (three papers). However, there is a developing trajectory in the number of published papers with mixed methods research methodology from 2000 to 2019. During this time interval, almost every applied linguistics journal had a paper with mixed methods research methodology. Table 5 also indicates differences existing between the number of published papers with qualitative and quantitative research methodologies. However, as shown in Table 5, the number of published papers with quantitative methodology was more than their qualitative counterparts in all time intervals. Overall, there can be a smooth developing trajectory in the number of published papers with qualitative research methodology from 1980 to 2019. This developing trajectory can be seen in some journals such as *ARAL*, *TQ*, and *System*.

To obtain the papers' research orientations published from 1980 to 2019 in applied linguistics journals, the second research question, the selected corpus, was examined based on Sahragard and Meihami's (2016b) framework. Table 6 indicates the results. Table 6 indicates that there are discrepancies regarding research orientations of published papers across and within different journals.

Table 6. Research orientations of the papers published in applied linguistics journals from 1980 to 2019

Journals	Research Orientation	1980-1989	1990-1999	2000-2009	2010-2019	Total
ARAL	Teaching	13 (34%)	20 (26%)	10 (10%)	6 (8%)	49 (17%)
	Material	12 (31%)	25 (33%)	15 (15%)	7 (9%)	59 (20%)
	Assessment	1 (3%)	3 (4%)	20 (20%)	10 (13%)	34 (12%)
	Learning	2 (5%)	4 (7%)	14 (14%)	7 (9%)	27 (9%)
	Learner	5 (13%)	5 (7%)	11 (11%)	6 (8%)	27 (9%)
	Teacher	1 (3%)	2 (3%)	4 (4%)	9 (11%)	16 (5%)
	Identity	-	-	1 (1%)	13 (16%)	14 (5%)
	Tech & Lan.	2 (5%)	3 (4%)	12 (12%)	11 (14%)	28 (10%)
	EAP & ESP	1 (3%)	1 (1%)	3 (3%)	2 (3%)	7 (2%)
Prag. & Dis.	1 (3%)	12 (15%)	10 (10%)	7 (9%)	30 (11%)	
Total		38	75	100	78	291
AL	Teaching	11 (24%)	12 (13%)	14 (14%)	12 (10%)	49 (13%)
	Material	4 (9%)	15 (17%)	13 (13%)	11 (10%)	43 (12%)
	Assessment	1 (2%)	11 (13%)	11 (11%)	10 (8%)	33 (9%)
	Learning	3 (7%)	10 (11%)	16 (16%)	23 (19%)	52 (15%)
	Learner	4 (9%)	12 (13%)	10 (10%)	17 (14%)	43 (12%)
	Teacher	3 (7%)	10 (11%)	7 (7%)	11 (10%)	31 (9%)
	Identity	-	1 (1%)	4 (4%)	16 (13%)	21 (6%)
	Tech & Lan.	-	-	-	2 (2%)	2 (1%)
	EAP & ESP	2 (4%)	6 (7%)	12 (12%)	9 (7%)	29 (8%)
Prag. & Dis.	17 (38%)	13 (14%)	14 (13%)	9 (7%)	53 (15%)	
Total		45	90	101	120	356
MLJ	Teaching	13 (10%)	24 (14%)	10 (10%)	9 (7%)	56 (11%)
	Material	15 (12%)	38 (21%)	6 (6%)	7 (6%)	66 (13%)
	Assessment	10 (8%)	21 (12%)	10 (10%)	9 (7%)	50 (10%)
	Learning	25 (20%)	32 (18%)	10 (10%)	22 (19%)	89 (17%)
	Learner	35 (28%)	23 (13%)	15 (15%)	27 (21%)	100 (19%)
	Teacher	15 (12%)	20 (11%)	17 (17%)	24 (19%)	76 (14%)
	Identity	-	3 (2%)	6 (6%)	5 (4%)	14 (2%)
	Tech & Lan.	8 (6%)	10 (5%)	18 (18%)	12 (9%)	48 (9%)
	EAP & ESP	2 (2%)	2 (1%)	3 (3%)	5 (4%)	12 (2%)
Prag. & Dis.	2 (2%)	5 (3%)	5 (5%)	5 (4%)	17 (3%)	
Total		125	178	100	125	528
TQ	Teaching	28 (20%)	10 (10%)	10 (9%)	20 (12%)	68 (14%)
	Material	25 (18%)	23 (23%)	13 (12%)	30 (16%)	91 (17%)
	Assessment	17 (12%)	13 (13%)	10 (9%)	21 (12%)	61 (11%)
	Learning	20 (14%)	22 (22%)	20 (18%)	35 (19%)	97 (18%)

	Learner	30 (21%)	10 (10%)	22 (19%)	26 (14%)	88 (16%)
	Teacher	10 (7%)	7 (7%)	10 (9%)	17 (9%)	44 (9%)
	Identity	1 (1%)	7 (7%)	11 (9%)	13 (7%)	32 (6%)
	Tech & Lan.	-	-	5 (4%)	7 (4%)	12 (2%)
	EAP & ESP	8 (5%)	2 (2%)	5 (4%)	9 (5%)	24 (4%)
	Prag. & Dis.	1 (1%)	6 (6%)	7 (7%)	3 (2%)	17 (3%)
	Total	140	100	113	181	534
SSLA	Teaching	15 (17%)	15 (14%)	21 (14%)	31 (18%)	82 (16%)
	Material	18 (20%)	17 (16%)	33 (22%)	28 (17%)	96 (19%)
	Assessment	5 (5%)	8 (8%)	19 (13%)	21 (12%)	53 (10%)
	Learning	20 (23%)	27 (26%)	35 (23%)	38 (22%)	120 (23%)
	Learner	23 (26%)	22 (21%)	32 (21%)	41 (24%)	118 (23%)
	Teacher	5 (5%)	7 (7%)	8 (5%)	10 (6%)	30 (6%)
	Identity	1 (1%)	-	1 (1%)	1 (1%)	3 (.5%)
	Tech & Lan.	-	-	1 (1%)	-	1 (.5%)
	EAP & ESP	-	-	-	-	-
	Prag. & Dis.	3 (3%)	9 (8%)	-	-	12 (2%)
	Total	90	105	150	170	515
LL	Teaching	10 (13%)	14 (15%)	17 (16%)	25 (14%)	66 (15%)
	Material	15 (19%)	20 (22%)	17 (16%)	35 (20%)	87 (19%)
	Assessment	3 (4%)	5 (5%)	6 (5%)	12 (7%)	26 (5%)
	Learning	22 (28%)	25 (26%)	24 (21%)	40 (23%)	111 (24%)
	Learner	20 (25%)	20 (21%)	27 (23%)	40 (23%)	107 (24%)
	Teacher	2 (2%)	3 (3%)	6 (5%)	14 (8%)	25 (5%)
	Identity	3 (3%)	2 (2%)	5 (4%)	1 (1%)	11 (2%)
	Tech & Lan.	3 (3%)	2 (2%)	5 (4%)	2 (1%)	12 (2%)
	EAP & ESP	1 (1%)	1 (1%)	1 (1%)	2 (1%)	5 (1%)
	Prag. & Dis.	1 (1%)	3 (3%)	7 (5%)	4 (2%)	15 (3%)
	Total	80	95	115	175	465
System	Teaching	22 (16%)	28 (15%)	18 (12%)	54 (17%)	122 (15%)
	Material	27 (19%)	21 (11%)	18 (12%)	57 (18%)	123 (15%)
	Assessment	7 (4%)	28 (15%)	16 (11%)	18 (6%)	69 (9%)
	Learning	38 (26%)	36 (19%)	17 (11%)	53 (17%)	144 (18%)
	Learner	27 (19%)	33 (17%)	25 (17%)	44 (14%)	129 (16%)
	Teacher	7 (4%)	12 (6%)	8 (5%)	29 (10%)	56 (7%)
	Identity	-	-	-	24 (7%)	24 (3%)
	Tech & Lan.	12 (8%)	21 (11%)	24 (16%)	6 (1%)	63 (8%)
	EAP & ESP	3 (2%)	10 (5%)	7 (4%)	12 (4%)	32 (4%)
	Prag. & Dis.	2 (2%)	3 (1%)	17 (11%)	18 (6%)	40 (5%)
	Total	145	192	150	315	802

Table 6 indicates that there were differences across the applied linguistics journals regarding the research orientations they had addressed. For instance, while published papers with identity, technology, and language learning, EAP and ESP, and pragmatics and discourse orientations had a smooth developing trajectory in *ARAL* and *TQ*, *SSLA* did not possess such a trend. Moreover, the differences in research orientations can be observed within each applied linguistics journal during different time intervals. More papers with teaching and material orientations were published from 1980 to 1999 compared with 2000 to 2019 in *MLJ*. Overall, Table 6 shows that there are ups and downs regarding the research orientations of the papers published in applied linguistics journals during different time intervals. Some of the orientations were addressed less at some intervals compared to other intervals. It means that some of the research orientations had been paid more attention in some time intervals than other time intervals.

Finally, to obtain the overall trends of research orientations of the papers published in applied linguistics journals from 1980 to 2019, the researcher used information obtained from Table 6. Given that, the information regarding each applied linguistics journal's research orientation was added to the information of that research orientation of the other journals. Table 7 shows the research orientations of the papers published in applied linguistics journals from 1980 to 2019.

Table 7. Overall trends of research orientations of the papers published in applied linguistics journals from 1980 to 2019

Research Orientation	1980-1989	1990-1999	2000-2009	2010-2019	1980-2019
Teaching orientation	112 (17%)	123 (15%)	100 (12%)	157 (14%)	492 (14%)
Material orientation	116 (17%)	159 (19%)	115 (14%)	175 (15%)	565 (16%)
Assessment orientation	44 (7%)	89 (11%)	92 (11%)	101 (9%)	326 (9%)
Learning orientation	130 (19%)	156 (19%)	136 (16%)	218 (19%)	640 (19%)
Learner orientation	144 (22%)	125 (16%)	142 (18%)	201 (17%)	612 (18%)
Teacher orientation	43 (7%)	61 (7%)	60 (7%)	114 (10%)	278 (8%)
Identity orientation	5 (1%)	13 (1%)	28 (3%)	73 (7%)	119 (3%)
Language learning and technology orientation	25 (4%)	36 (4%)	65 (8%)	40 (3%)	166 (5%)
EAP and ESP orientation	17 (2%)	22 (2%)	31 (4%)	39 (3%)	109 (3%)
Pragmatics and discourse orientation	27 (4%)	51 (6%)	60 (7%)	46 (4%)	184 (5%)
Total	663	835	829	1164	3491

Table 7 indicates valuable information on the papers' overall trends of research orientation published from 1980 to 2019 in applied linguistics journals. As shown in Table 7, the most published papers had learning and learner orientations (about 19% of the entire examined corpus). Then, papers with material orientation enjoyed 16% of the published papers. The least published papers had teacher orientation. Moreover, papers with assessment and teaching orientations included 9% and 14%, respectively, in the entire investigated corpus. Table 7 also showed that pragmatics and discourse orientations and language and technology orientation had been the topic of 5% of research in applied linguistics journals from 1980 to 2019. Finally, it can be seen in Table 7 that identity, EAP, and ESP orientations had been addressed in 3% of studies published in applied linguistics journals. The interesting point about identity orientation is that it has a decreasing trajectory from 1980 to 2019, showing the growing interest in identity orientation research.

DISCUSSION

This study was an attempt to investigate the research methodology and research orientation of the papers published in applied linguistics journals from 1980 to 2019. The empirical evidence obtained through the corpus analysis showed an increasing trend of using qualitative methodology and a decreasing trend of using the quantitative methodology in the papers published from 1980 and 2019 (Table 5). The results indicated that mixed methods methodology is on its early edge, requiring more explorations in the future. Moreover, the results revealed that applied linguistics journals tended to publish papers that had learning, learner, material orientations more than teaching, assessment, and teacher orientations (Table 7). Moreover, the results indicated that papers with identity, EAP, and ESP orientations are on a developing trajectory of publication in recent years (Table 7).

Applied linguistics is a myriad of issues about learning and teaching

L2 with complex notions to be empirically investigated. Moreover, applied linguistics addresses the language-based problems in the real world (Grabe, 2001). Consequently, the researchers do their best to select the most relevant and effective research methodologies in their papers. Magnan (1997) stated that qualitative methodology challenges quantitative methodology. The current study's findings showed the same point in that it was observed that using qualitative methodologies increased among the applied linguists to address their research questions. Given that the applied linguists try to delve into the issues qualitatively to obtain the core story of those issues, it can be stated.

Furthermore, there is other evidence in the sociolinguistics that complexity results from the globalized world and communication difficulties that had made it difficult to investigate the teaching and learning process among different contexts by using pure quantitative methodologies (Dornye, 2007). The applied linguists are trying to delve into the fundamental aspects of L2 teaching and learning by using qualitative research methodologies. Moreover, one can state that in the future, the mixed methods methodology will challenge the two paradigms in which researchers try to use mixed methods studies to investigate the issues related to applied linguistics.

The concept of methodology tension (Firth & Wagner, 1997) can be used to interpret the trends of research methodology in the papers published in applied linguistics. The methodology tension claims that there are huge boundaries among the research methodologies causing the researchers to choose and follow one of them. The boundaries are dichotomized into cognitive/mentalistic (for quantitative research) and social/constructivists (for qualitative research). According to Benson et al. (2009), following the Chomskyan approach, which asks for the quantitative methodology to conduct research studies, the applied linguists tried to follow this approach. By knowing that the Chomskyan approach was dominant in the 1960s to 1990s, the results of the current study prove that from 1980 to 2000, the quantitative research methodology was dominant. However, since the

1990s, the emergent of the Vygotskian approach to applied linguistics, which asks for constructive and social approaches to study language learning might lead the applied linguists to start using the qualitative methodology from 2000 to 2019.

The journals have their situational options (Sahragard & Meihami, 2016a) which impose some constraints (Ortega & Shea, 2005) to the researchers. Consequently, the researchers need to follow the rules to increase the probability of their research publications. The editorial policy that is continually changing due to the changes in the editorial boards of the journals (Whissell, 2013) may push the researchers to select their research methodologies to be in line with the editorial policies to increase the probability of publication. The researcher's hypothesis in this study is that the change in the editorial boards of the investigated applied linguistics journals during different decades from 1980 to 2019 can be mentioned based on which the journals experienced different research methodologies. However, this hypothesis needs to be explored empirically in the future.

The researchers in applied linguistics participate in a community of practice (Wenger, 1998), which engages them in specific types of activities. The world-leading applied linguistics journals are the venues in which the researchers can play their roles. Based on the journals' research policies in a community of practice, the applied linguists try to construct their professional identity. That said, the researchers try to engage themselves with the current issues in applied linguistics to hold on to themselves in this community of practice. In doing so, they try to follow what has been practiced in the community. Consequently, the reasons for which some of the research orientations or research methodologies had decreasing and increasing rates during different time intervals can be due to the efforts exercising by the applied linguistics to be in line with the applied linguistics community of practice.

There is a "publish or perish" policy (Lee, 2014) among the researchers who are following the world-leading applied linguistics journals, which leads them to follow the journals' situational options, including the

editorial policies to publish their papers. It is believed that the less experienced applied linguistics researchers try to choose the topics of their research studies from the current scope of the journals. It can be said that there is a "washback effect" in selecting research topics by the novice applied linguists in that they choose the topics of their research studies from what the status quo of the journals is, instead of their interests. By so doing, these researchers want to suffice the journals' situational options to be able to publish their papers in those journals.

The information obtained about the published papers' research orientations in the applied linguistics journals shows that learning, learners, and materials were the most investigated issues from 1980 to 2019. When looking at the research orientation trend in each time interval, one can observe the mentioned research orientations are on a decreasing trajectory. In contrast, the other research orientations, such as teacher, assessment, and teaching, had a positive and increasing trajectory. The researcher's hypothesis that further research needs to be investigated is that the main topics of applied linguistics since 1980 were learning, learners, and materials that the applied linguists had attempted to investigate from different angles. Now that these topics reach stability, it is time to put energy into investigating other topics such as assessment, teaching, and teachers.

Two hypotheses have been reached through the course of analysis. The first hypothesis is that the change in the editorial boards of the journals in general and applied linguistics journals, in particular, may cause a change in the editorial policies, which in its place can have effects on the way the journals may address the research with different methodologies. The second hypothesis is that research regarding learning, learners, and materials has reached stability. Now, it is time for the researchers to delve into other research orientations in applied linguistics such as teaching, teachers, and assessment. Further research can also be conducted to determine the relationships between the research methodology and research orientation of the paper published in applied linguistics journals. Consequently, such a

research study can help us to know which research orientation uses which research methodology in applied linguistics.

CONCLUSION

This study aimed to describe the research methodology and research orientation of the papers published in applied linguistics journals from 1980 to 2019. Through corpus analysis, it was revealed that from 1980 to 2000, the dominant research methodology was quantitative, while from 2001 to 2019, the qualitative research methodology had an increasing trend of being used by the applied linguistics researchers. Moreover, the results of the current study showed that from 2010 to 2019, the applied linguistics researchers showed positive attentions to use mixed methods methodology in their research studies. The findings showed that the most research orientations that the papers published in applied linguistics journals addressed from 1980 to 2019 were learning, learners, and materials while the least issues addressed were teaching, teachers, and assessment. However, the corpus analysis from 2000 to 2019 indicated that teaching, teacher, and assessment issues started to show an increasing trajectory. Thus, it can be concluded that the applied linguistics journals have passed through the different paradigms of research methodologies and research orientations from 1980 to 2019 which can be due to different reasons such as editorial policy, situational options, and methodology tensions. Knowing these issues is important for the researchers, especially, less experienced researchers, to publish their research studies.

It is without a doubt that no study is without limitations. In the current study, the researcher did his best to reduce the number of limitations by 1) choosing the applied linguistics journals whose academic ranks had been reported by Web of Sciences and Scopus, 2) selecting the papers whose research methodologies were declared by their authors, and 3) asking another coder to analyze the corpus for the research methodologies and research orientations. One of the limitations of this study was that it was not

applicable for the researcher to expand the research methodological taxonomies due to the paper's limitation in length. However, future researchers can investigate the research published in applied linguistics journals for different research taxonomies such as content analysis, grounded theory, ethnography, etc. Moreover, the researchers can research to specifically address the reasons for the changes observed in the research methodology and research orientations of the published papers during different time intervals in the future.

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No potential conflict of interest was reported by the authors.

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