

## **The Effect of Teachers' Age on Their Beliefs about Action Research: Implications for Second Language Education**

### **El Efecto de la Edad de los Docentes en sus Creencias sobre la Investigación-Acción: Implicaciones para la Educación de una Segunda Lengua**

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#### **Abstract**

Despite the growing body of studies on action research (AR) in second/foreign language (L2) education, little is known about teachers' beliefs about AR among different age groups. Hence, this study investigates whether L2 teachers' beliefs about AR vary by considering teachers' age. The Inventory on Teachers' Beliefs about Action Research (ITBAR) is a specifically designed questionnaire to investigate the matter and was distributed to 157 Iranian ELT teachers. Then 120 teachers were randomly divided into three age groups, namely starters (20–34 years), middle-aged (35–49 years), and seniors (50+). A one-way ANOVA test was used to test whether the difference among the groups was significant. The findings showed that teachers can experience age effects in the demanding teaching profession. According to the data, younger teachers had the highest mean scores for their beliefs about AR in comparison to their middle-aged and senior colleagues. This might be attributed to the different perspectives of these teachers toward professional development, the role of pre-service teacher programs, and the familiarity of senior teachers with the limitations of conducting AR in real classroom contexts. It is then suggested that designing collaborative AR projects between beginning and senior teachers and institutional support might lead to more fruitful and positive results.

*Keywords:* action research, ITBAR questionnaire, professional development, teachers' age, teachers' beliefs

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## Resumen

A pesar del creciente cuerpo de estudios sobre investigación-acción (IA) en la educación de una segunda lengua/lengua extranjera (L2), se sabe poco acerca de las creencias de los docentes sobre AR entre diferentes grupos de edad. Por lo tanto, este estudio tiene como objetivo investigar si las creencias de los profesores de L2 sobre IA varían según la edad de los profesores. El Inventario de Creencias de los Docentes sobre la Investigación-Acción (ITBAR) se distribuyó a 157 docentes iraníes de enseñanza del idioma inglés. Luego, 120 de ellos se dividieron aleatoriamente en tres grupos de edad, a saber, principiantes (20 a 34 años), de mediana edad (35 a 49 años) y mayores (50+). Para observar si la diferencia entre los grupos era significativa, se utilizó una prueba de ANOVA de una vía. Los hallazgos mostraron que los docentes pueden experimentar los efectos de la edad en la exigente profesión de la enseñanza. Según los datos, los docentes más jóvenes obtuvieron las puntuaciones medias más altas con respecto a sus creencias sobre la IA en comparación con sus colegas de mediana edad y mayores. Esto podría atribuirse a las diferentes perspectivas de estos docentes hacia el desarrollo profesional, el papel de los programas de docentes en formación y la familiaridad de los docentes experimentados con las limitaciones de realizar IA en contextos reales de aula. Entonces se sugiere que el diseño de proyectos de IA colaborativos entre profesores principiantes y senior y el apoyo institucional puedan conducir a resultados más fructíferos y positivos.

*Palabras clave:* investigación-acción, ITBAR, desarrollo profesional, edad de los docentes, creencias de los docentes

## Introduction

Studying teachers' beliefs, as a well-established aspect of teacher cognition (Borg, 2019), has been considered important in the field of second/foreign language (L2) teacher education. This importance arises from the fact that previous research has shown the strong effect of teachers' beliefs on their classroom practices (e.g., Farrell & Ives, 2015; Kuzborska, 2011; Sato & Kleinsasser, 2004), and the important role these beliefs play in influencing teachers' behaviors, actions, and interactions in the classroom (Borg, 2006). However, the main reason for studying L2 teachers' beliefs, according to Borg (2015), is that "they provide insight into the psychological context for teaching and teacher learning which can inform the design of initiatives which encourage teachers to learn, change or behave in particular ways" (p. 501).

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Following such an important reason, teachers' beliefs about action research (AR) in L2 have recently attracted the attention of researchers as these beliefs directly affect conducting AR in the L2 classroom context and influence how teachers approach the task of doing AR. This is because these beliefs "shape teachers' perception, analysis and interpretation of what is happening in their classrooms during the AR process" (Rahmani Doqaruni et al., 2021, p. 429). It has also been proposed that making teachers aware of their beliefs about doing research, such as AR, results in more teacher research engagement (Borg, 2007). In this way, a considerable amount of research has been conducted on the relationship between teachers'

beliefs and doing AR in L2 education (e.g., Atay, 2006, 2008; Mehrani, 2017; Rahmani Doqaruni et al., 2017; Rainey, 2000; Wyatt, 2011).

Even though teachers' beliefs affect conducting AR, the role of different factors in shaping these beliefs in L2 teacher education has not been appropriately investigated. This is an important issue as the beliefs are multi-dimensional; various sources are involved in their formation. As Soodmand Afshar and Ghasemi (2017, p. 175) point out "so many factors such as teachers' age, experience, family traditions, etc., can be effective in shaping their beliefs". One way to gain insight into L2 teachers' beliefs about AR is to see whether their beliefs are influenced by different factors, such as their age. In this order of ideas, the present study's main purpose is to find out whether teachers' beliefs about AR are influenced by their age.

By identifying the matches or mismatches in teachers' beliefs about AR concerning their age, it is hoped to better understand junior and senior teachers' beliefs about AR. Consequently, this understanding helps teacher trainers, in-service teachers, and prospective teachers deal with such beliefs more efficiently. Moreover, as the present study aims to find out teachers' beliefs about AR from different age groups, it provides an opportunity to examine the changes that might have happened in their beliefs over time.

## Research Questions

To shed more light on teachers' beliefs about AR in L2 education, this study attempts to answer the following research questions:

1. Are L2 teachers' beliefs about AR affected by their age?
2. What might be the reasons for the possible existence of such an effect?

## Literature Review

### *Action Research in Second Language Education*

Although definitions of AR vary, there are some typical features associated with it, which are summarized by Burns (1999, p. 30) as follows:

1. AR is contextual, small-scale, and localized – it identifies and investigates problems within a specific situation.
2. It is evaluative and reflective as it aims to bring about change and improvement in practice.

3. It is participatory as it provides for collaborative investigation by teams of colleagues, practitioners, and researchers.
4. Changes in practice are based on the collection of information or data which provides the impetus for change.

Wallace (1998) also sums up the differences between AR and other more traditional types of research. He states that AR “is very focused on individual or small-group professional practice and is not so concerned with making general statements. It is therefore more ‘user-friendly’ in that it may make little or no use of statistical techniques” (p. 18). Unlike ordinary research, which may investigate theoretical issues and topics considered important by scholars in the field, AR typically focuses on questions that emerge from a teacher’s immediate classroom situation (Crookes, 1993); unlike participatory AR, which emphasizes learner participation in identifying the topic to be researched, AR is often teacher defined and directed (Auerbach, 1994).

More recent approaches to AR in L2 have emphasized its contribution to an individual teacher’s professional self-development rather than its potential to initiate large-scale reform (Campbell & Tovar, 2006; Chou, 2011; Poon, 2008). In addition, AR has been oriented toward various purposes of teacher education in the field of second language teaching such as the following: it can help L2 teachers,

- Recognize the importance of learning how to seek answers to their questions (Teddick & Walker, 1995),
- Address and find solutions to problems in a specific teaching or learning situation (Hadley, 2003), develop personal theories about L2 learning (Crookes, 1997),
- Provide a vehicle for reducing gaps between academic research findings and practical classroom applications (Sayer, 2005), and
- Acquaint teachers with research skills and enhance their knowledge of conducting research (Crookes & Chandler, 2001).

Thus, since the issue of teacher development has become central to the field of L2 teacher education (Edge, 2005; Richards & Farrell, 2005), AR has gained its reputation as a reliable tool to this end.

### ***Teachers’ Beliefs about Action Research***

The relationship between teachers’ beliefs and AR has been an issue of interest in L2 education in the last two decades. Rainey’s (2000) study was one of the first attempts that reported the findings of an international investigation about the opinions of English-as-a-foreign-language (EFL) teachers from ten different countries concerning AR. She found that

the beliefs of teachers who knew about AR were more under the primary type of AR, i.e., AR for professional self-development, as they believed that AR could tackle an issue in their classrooms or enhance their teaching practices. Atay (2006) developed a collaborative AR model to help pre- and in-service EFL teachers use research in their classroom contexts. The results showed that changes in beliefs about AR were of considerable importance to those teachers. In another study, Atay (2008) conducted a training program with EFL teachers in Turkey. The data showed that teachers generally considered AR useful and mentioned that the AR process positively affected their beliefs.

In the context of Iran, Mehrani (2017) considered the advantages and disadvantages of AR by considering the Iranian EFL teachers' perspectives. Despite some challenges in conducting AR such as time limitations, lack of specialized knowledge of AR, administrative restrictions, and lack of collaboration, teachers in his study believed that AR has the potential to broaden their understanding of language education, provide them with a framework for reflecting on their practice, empower them to play more important roles in educational systems, and heighten their awareness of students' needs. In another study from Iran, Dehghan and Sahragard (2015) found that most Iranian teachers believe that AR is a kind of professional activity that should be carried out by expert researchers and not by typical teachers. Rahmani Doqaruni et al. (2017) also examined Iranian EFL teachers' beliefs about AR. Their findings showed that most of the teachers considered AR the same as observation, could distinguish between AR and conventional research, preferred collaborative AR, and, interestingly, did not view AR as a tool for professional development.

### *Teachers' Age*

Teachers' age has been of considerable importance to researchers in the teacher education field as it has been proposed that teachers are likely to face different needs and go through different experiences at different times in their careers (Lavigne, 2014). To get insight into teachers' experiences as they move through different developmental stages during their careers, different frameworks have been developed which are roughly based on teachers' ages. Two well-known frameworks of this type are Huberman's (1995) teacher life cycle stages and Steffy and Wolfe's (2001) teacher career life cycle. According to Huberman (1995), teachers go through different phases called novice, mid-career, and late-career. The novice phase (one to three years) is characterized by the novice teachers' struggle for survival in the new context. Then, the mid-career phase (four to six years) is characterized by stabilization, experimentation, and taking stock. The late-career phase encompasses serenity and disengagement, as teachers either find job satisfaction and become content or do not find job satisfaction and become disengaged.

Steffy and Wolfe (2001) also suggested a six-phase career life cycle continuum. According to their framework, teachers move from an initial novice phase which includes their first teaching experiences as pre-service students to an apprenticeship phase characterized by planning and delivering instruction to students. The following professional and expert phases are characterized by enhancing self-confidence as teachers and achieving high professional standards, respectively. Teachers then pass through the distinguished phase of their careers as they begin to influence education at city, state, and even national levels. The last phase is called the emeritus phase and is marked by a lifelong achievement in the profession.

Many studies have investigated teachers' ages regarding these stages with interesting findings. For example, collecting data from 1143 English teachers, Day et al. (2006) found that teachers develop commitment and efficacy in their first years of the teaching profession. However, teachers are challenged by balancing work and life in the central years of their careers. Moreover, some teachers begin to show detachment signs and lose their motivation during this phase. In addition, it was revealed that the final years of the teaching profession result in a significant difference in the motivation of primary and secondary school teachers, with the former retaining it and the latter losing it.

Considering the three different work stages in the teachers' career, Borman and Dowling's (2008) meta-analysis study showed that the number of teachers who drop out at the beginning of their career is high, decreases during their mid-career, and increases again as teachers reach their retirement. Farrell (2014) reported the findings of a case study that involved reflections of three mid-career ESL college teachers in Canada. The teacher reflection group was asked to analyze and reflect on their work, inside and outside the classroom. It was found that the three mid-career teachers had negative attitudes toward school administration but had positive feelings toward their interactions with other teachers. They also pointed out that being around students was the most satisfying and rewarding part of their professional career. The findings further revealed that "two of the main factors that contributed to the three teachers reaching a [mid]career plateau of sorts were a recognition of the front-loaded nature of teaching and a lack of advancement, and longevity" (Farrell, 2014, p. 513).

As reviewing the literature shows, teachers' age is important in teacher education studies as it affects teachers' beliefs at different times in their careers. Despite such an important consideration, the effect of teachers' age on their beliefs about AR has not been investigated in previous literature. Thus, the present study aims to fill the gap by studying whether teachers' beliefs about AR are influenced by their age.

## Methodology

The present study is quantitative, and the data are gathered through a survey. The following sections provide more information about the questionnaire and data-gathering process.

## ***Instrument***

The present study used the Inventory on Teachers' Beliefs about Action Research (ITBAR), which has recently been developed and validated to find out L2 teachers' beliefs about AR (for details on its development and validation see Rahmani Doqaruni et al., 2021). The ITBAR consists of 21 items, categorized under five main factors (see the Appendix). The first factor is named *Teacher Empowerment* because its six items refer to issues related to equipping teachers. The second factor is named *Practical Issues* because this 4-item factor measures teachers' beliefs about the effect of AR on their classroom practice. The third factor is named *Professional Development* as its three items reflect teachers' views about how they could develop their profession. The fourth factor is named *Institutional Culture*; its four items deal with the institutions' roles in encouraging teachers to do AR. The fifth factor is called *Research Engagement* because its four items consider teachers' views about research.

## ***Participants and Data Collection Procedure***

The target sample of the present study consisted of practicing EFL teachers at different private ELT institutes in Mashhad, northeastern Iran. The ITBAR was only distributed to teachers who stated that they knew about AR and were already familiar with this concept. Before administering the survey, the purpose and nature of the study were briefly explained, and all participants received information about the voluntary nature of the study with anonymity assured. The participants were encouraged to ask questions about the items of the ITBAR in case they did not understand their meaning or needed further explanation. The average time for completing the questionnaire was 15 minutes.

The original number of participants in the present study was 157 teachers. However, 120 randomly selected instruments were used for data analysis by considering the appointed age groups (see next section). In terms of gender, 73 of the respondents were female (61%) and 47 were male (39%). All the participants had academic education and their main major was teaching English as a foreign language (93%). Concerning the participants' ELT qualification, 103 had Bachelor's (86%), 11 had Master's (9%), and 6 had professional ELT certificates (5%).

## ***Age Categorization***

As this study is about teachers' beliefs about AR across different career stages, a comparison of three successive age groups of the teachers was made based on Van der Heijden's (2006) division of career stages, namely starters (20–34 years), middle-aged (35–49 years), and seniors (50+). The reason for choosing this framework over other existing ones

is that it makes categorization easier and results in groupings that are easier to understand and discuss.

## Results

Table 1 shows the mean scores of three age groups. According to the results, teachers in the starter group (20–34 years) had the highest mean scores for their beliefs about AR (M=183.10, SD=17.762). Middle-aged teachers (35–49 years) were second in this respect (M=178.33, SD=23.540), and the last group was senior teachers (M=175.50, SD=21.868).

**Table 1.** *Descriptive Statistics*

N		Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
20-34	40	183.10	17.762	2.808	177.42	188.78	146	216
35-49	40	178.33	23.540	3.722	170.80	185.85	109	216
50+	40	175.50	21.868	3.458	168.51	182.49	138	213
Total	120	178.98	21.252	1.940	175.13	182.82	109	216

A one-way ANOVA test was run to test whether the difference among the groups was significant. As Table 2 shows, there was a statistically significant difference in teachers’ beliefs about AR for their age,  $F(2, 117) = 3.941, p=.021$ .

**Table 2.** *One-way ANOVA*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3541.550	2	1770.775	3.941	.021
Within Groups	52564.375	117	449.268		
Total	56105.925	119			

As Table 3 shows, the LSD (least significant difference) post hoc test indicates that the mean difference between the starter group and senior teachers is statistically significant. The  $p$  value for the LSD post hoc test is .03.



**Table 3.** *LSD Post Hoc Test*

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
20-34	35-49	-5.653	3.565	.216	-15.35	4.21
	50+	-10.425	3.565	.034	-19.41	-.56
35-49	20-34	5.653	3.565	.216	-4.21	15.35
	50+	-3.176	3.565	.421	-12.87	5.39
50+	20-34	10.425	3.565	.034	.56	19.41
	35-49	3.176	3.565	.421	-5.39	12.87

## Discussion

According to the data, younger teachers had the highest mean scores for their beliefs about AR in comparison to their middle-aged and senior colleagues. Moreover, the follow-up post hoc test showed that the significant difference among the groups lies between starters and seniors. Thus, the findings underscore the notion that teachers can experience age effects in the demanding teaching profession. This might be attributed to the different perspectives among the teacher groups toward professional development. In other words, beginning teachers consider professional development as an intrinsic motivator to increase their self-efficacy and, at the same time, as an extrinsic tool to build their careers (Guglielmi et al., 2016). However, as older teachers approach their retirement, professional development loses its attractiveness. In this way, AR, as a reliable tool for professional development (Atay, 2006, 2008; Chou, 2011), seems to have more positive effects on young teachers' beliefs.

Meanwhile, the role of pre-service teacher programs should be acknowledged. The introduction and practice of AR are increasingly becoming an indispensable component of initial teacher education programs worldwide (Dassa & Nichols, 2020; Phillips & Carr, 2010; Volk, 2009). This is because AR helps teachers reflect on their teaching practices and evaluate their beliefs, which are essential professional development ingredients (Schon, 1983). In this way, AR enables beginning teachers to adopt more reflective and analytical approaches in dealing with educational challenges, especially when they have difficulty in dealing with the gaps between theory and practice (Clarke & Fournillier, 2012; Crawford-Garrett et al., 2015).

In addition, it has been suggested that AR helps pre-service teachers to acknowledge a more reflective approach to teaching (Kosnik & Beck, 2000), guides their practice in the future (Cochran-Smith & Lytle, 2009), equips them to solve their daily challenges and issues

(Hatch et al., 2007), and helps them to become inquiry-oriented in their teaching (Aras, 2020; Moran, 2007). As Mitchell et al. (2009) point out, “research becomes a tool beginning teachers can use to continuously inform and improve practice, engage ongoing expertise development and not something student teachers read about in college and promptly forget when entering the world of teaching” (p. 349). The increasing adoption of AR in pre-service teacher education means that younger teachers are more aware of AR as a pedagogical tool for professional development. Ginns et al. (2001) suggested that pre-service teacher programs are relevant in developing and shaping student teachers’ understandings of AR. In their own words, “requiring students to engage in action research, in particular, in the final year of pre-service programs, could play an important role in developing their awareness and understanding of, and immersion in, the culture of action research” (Ginns et al., 2001, p. 114). Consequently, this awareness has resulted in more profound effects on their beliefs about AR contrasting their older colleagues in the present study.

While many studies emphasize the benefits of engaging student teachers with AR in initial teacher education programs (e.g., Burns, 2009; Lattimer, 2012; Phillips & Carr, 2010; Price & Valli, 2005; Ulvik, 2014), some others question the practicality of AR due to various limitations in real classroom contexts. For instance, many previous studies have found lack of time as a major obstacle to conducting research by teachers in the L2 classroom context (e.g., Allison & Carey, 2007; Atay, 2006; Barkhuizen, 2009; Borg, 2007, 2008, 2009; Burns et al., 2016). According to Rahmani Doqaruni et al. (2018),

Although time is more of a structural factor, which will not in and of itself guarantee that high standards of professional development will be fulfilled, reviewing the related literature shows that there has not been provision made for time within the workload of teachers to accommodate the necessary ingredients for conducting AR (p. 53).

Yet other factors which affect teachers’ beliefs negatively concerning doing AR include lack of specialized knowledge about AR (e.g., Barkhuizen, 2009; Mehrani, 2014; Rahmani Doqaruni et al., 2019), lack of support by colleagues (e.g., Burns & Rochsantiningasih, 2006; Rahmani Doqaruni et al., 2019) and educational institutions (e.g., Mehrani, 2017), and priority of teaching over doing research (e.g., Allison & Carey, 2007; Barkhuizen, 2009; Rahmani Doqaruni et al., 2019). As senior teachers are more familiar with these problems and limitations due to longer stay in the profession, they have raised negative beliefs and attitudes toward AR. This insight corresponds to the results of the present study.

### *Implications*

Concerning the findings, collaborative AR projects between beginning and senior teachers might lead to more fruitful and positive results. It is believed that AR not only encourages teachers to reflect on their practice and helps them connect theory and practice,

but also has the power to “link pre-service and in-service teaching” (Kitchen & Stevens, 2008, p. 8). In this way, the enthusiasm and knowledge of beginning teachers about AR and the familiarity of older teachers with the challenges of conducting AR in classroom contexts can be allied so that AR can benefit both groups of teachers. In other words, student teachers need to know that teaching can be a better experience in collaboration with experienced colleagues, and success is largely determined by collaborating with expert teachers (Mitchell et al., 2009). Instead of doing AR in isolation in their classrooms, collaborative AR provides opportunities for teachers to “open [a] communicative space” (Kemmis & McTaggart, 2005, p. 578) as it encourages them to talk about their classroom experiences.

In this way, the previous research has found positive results between pre- and in-service teacher AR collaboration not only in L2 education but in the general field of teacher education. For example, Atay (2006) used a collaborative AR model to make L2 pre-service teachers familiar with research in real classroom contexts and to help in-service teachers make a relationship between research and teaching. The results showed that both groups benefited from conducting the collaborative AR as it provided them with a framework to systematically observe, evaluate, and reflect on their teaching practices in the classroom. More interestingly, the results also revealed that collaborative AR projects caused teachers to change their beliefs about AR.

Rock and Levin's (2002) study showed that collaborative AR projects help pre-service teachers better understand the curriculum, themselves, and their students, teaching, and roles. The authors also showed that pre- and in-service teachers in their study “expressed that the collaborative action research process revealed to them the importance of focused inquiry, reflection, analysis, collaboration, and thoughtful actions for their professional development as teachers” (p. 19). Yet, another study by Levin and Rock (2003) revealed that both pre-service and experienced in-service teachers, paired in collaborative AR projects, gained appreciation for and a greater understanding of collaboration as they worked together. Both the pre-service and in-service teachers pointed out that their engagement in collaborative action research provided them with “more opportunities to work together, due to the projects they designed; Reasons to understand their partner's pedagogical beliefs; Occasions to learn to communicate more effectively; [and] Time for building relationships before the student teaching semester” (Levin & Rock, 2003, p. 144).

Yet another way to improve teachers' beliefs about AR can be institutional support by offering different kinds of incentives to teachers. However, previous research has found that one of the reasons that discourage teachers from doing research is how educational institutions treat them. For example, in Iran, Mehrani (2014) contends that teachers are not appreciated for doing research or even participating in conferences by their schools. Burns (1999) also points out that “institutional circumstances and conditions in many schools make it very difficult for teachers to carry out any form of classroom research” (pp. 45-46). This

highlights the need for institutional support in different teaching contexts worldwide because encouraging teachers to be research-engaged and have positive beliefs about AR without dealing with such important issues seems difficult, if not impossible. In this way, Borg and Sánchez (2015) believe, this realization that teacher research needs to be supported is important and represents a step forward from the rather simplistic belief that once teachers have been told about the benefits of teacher research, they will then without hesitation proceed to engage fully in it (p. 6).

## Conclusion

The results of the present study showed that teachers' beliefs about AR are related to their age. More specifically, the data showed that younger teachers are more likely to be driven toward the positive effects of AR on their beliefs in comparison to their senior colleagues. This might be attributed to the different perspectives that teachers may have about professional development and the role that current pre-service teacher programs play in familiarizing teachers with AR. In this way, it may be more efficient to focus on the professional development opportunities through teaching AR processes to both groups of teachers in pre-service and in-service teacher training programs in L2 education. It is also suggested that designing collaborative AR projects between beginning and senior teachers and providing institutional support by offering different incentives might improve teachers' beliefs about AR.

Furthermore, teachers' awareness of their beliefs should be integrated into the structure of L2 pre-service and in-service teacher training programs. These programs are responsible for providing opportunities for junior and senior teachers to examine their beliefs as they largely affect their practices. As Mehrpour and Moghaddam (2018) point out, "being made aware of their potential, teachers can improve their practices and align them to their own belief system to become effective teachers" (p. 41). Nevertheless, many L2 teachers are not aware of the importance of their beliefs in shaping their classroom practices (Farrell, 2008). Making teacher candidates and in-service teachers aware of their beliefs about AR may be beneficial for developing reflective practices as AR encourages reflection through intentional and rigorous examination of teacher practices in the L2 classroom context (Mann & Walsh, 2017; Sato & Chen, 2019).

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## Appendix: Inventory on Teachers' Beliefs about Action Research (ITBAR)

	Strongly Disagree	Moderately Disagree	Somewhat Disagree	Somewhat Agree	Moderately Agree	Strongly Agree
1. AR helps teachers to form a better understanding of the contextual constraints which leads to their emerging role as agents of change						
2. AR Encourages teachers to re-think about their teaching, their students, and the values of their work and thus change the status quo correspondingly						
3. AR helps teachers to become more aware of their autonomy in the educational system						
4. AR reinforces good teachers' qualities needed to teach such as being more open, more patient, and more flexible						
5. AR gives teachers a break in their routines to renew their energy and enthusiasm for teaching						
6. AR helps teachers to reflect on the aims and values implicit in their teaching and students' learning						
7. AR encourages reflection through the intentional and rigorous examination of teacher practices in the classroom						
8. AR is a useful tool for teachers to improve their classroom practice						
9. AR empowers teachers to develop a pedagogical theory and explore it in practice						
10. AR enables teachers to become more aware of their students' needs and thus be able to adapt their lessons correspondingly						

	Strongly Disagree	Moderately Disagree	Somewhat Disagree	Somewhat Agree	Moderately Agree	Strongly Agree
11. AR is facilitated if the time for doing AR is built into teachers' workloads in their institutions						
12. AR is facilitated if teachers have access to AR books and journals in their institutions						
13. AR is facilitated if management provides opportunities such as organizing workshops or giving teachers support to attend conferences						
14. AR is facilitated if the institution atmosphere makes teachers feel that doing AR is an important part of their job						
15. AR has positive effects on teachers' perspectives on research						
16. AR makes teachers feel motivated to read professional journals and publications						
17. AR acquaints teachers with the concept of research and enhances their knowledge of conducting research						
18. AR makes teachers feel motivated to disseminate their research through publishing articles or participating in conferences						
19. AR empowers teachers as the creators of knowledge and not just the holders of such knowledge						
20. AR has a profound impact on teachers' professional development						
21. AR helps teachers to be more thoughtful and purposeful about their teaching						