A Qualitative Thematic Analysis of Faculty Engagement and Non-Engagement in Research

Manuelito D.V. Bengo

Associate Professor I

Rubie R. Herrera

Associate Professor II

Cynthia P. San Diego

Associate Professor I

Ronan S. Santos

Assistant Professor III

Far Eastern University, Manila, Philippines
Email: mvbengo@yahoo.com

Abstract. *Teacher perceptions on the conditions facilitating research engagement and non-engagement were explored among faculty members of a private non-sectarian university in Manila. Teacher respondents in the college level (N=36) were asked to respond to a brief open-ended questionnaire and interview from which the qualitative research data were gathered. Qualitative analysis of data was conducted by identifying emergent thematic categories. The faculty perceived that conditions facilitating research engagement include: administrative support, time element, money matter, recognition, individual attributes, career advancement, team collaboration, topic, scope, and teacher responsibility. The outcomes on this paper shed some light on the idea that teachers are more likely to value research if they are given enough administrative support, time, money and recognition in the context of their own situation. If only teachers are provided with such and be encouraged to be more responsive to research, it is possible that the culture of research will be strengthened within and even outside the school community. As a result of these findings, the study recommends the following provisions: (a) improved research benefits and incentives, (b) faculty development program in the form of research trainings and seminars , (c) encouragement that starts in the departmental level, (d) clear research rules and guidelines set by the management, (e) professional research group affiliation, (f) university research institutes or centers.*

Key words: educational research, research, research engagement, teachers, thematic analysis

1. Introduction

The importance of research today is indubitably immeasurable. Research is vital to our everyday decision making for it is designed to solve particular problems. It has taken an enormous deal of discussion worldwide and become a crucial action in various fields especially in education. It is useful to teachers and valuable to school administrators and policy makers. In education, research is completed to improve and develop teaching. Without research we are losing a worthy source that could be beneficial for the development of teachers and students since the end products of conducting research are remarkable. In Everton, Galton and Pell's (2002) study, they found out that research at least caused teachers to re-examine their existing practice and even caused them to change it. Educators produce research to verify the effectiveness of teaching and learning ideas and practices already in use, to discover new ideas and practices, to develop practices that simplify people's lives, and discover counterintuitive practices (Hittleman and Simon,2002). Correspondingly, Creswell (2005) also included that research adds to our knowledge, improves practice, informs policy debates and builds student research skills. It provides a means for educators to uncover new world of information. Perkins (1988) believes that research provides a foundation for both education and the welfare of the society, as outlined by the former president of Cornell University:

"The acquisition of knowledge is the mission of research, the transmission of knowledge is the mission of teaching and the application of knowledge is the mission of public service."

Despite the growing importance and function of research, the Philippines still lack a culture of research and science. Pertierra (2007) in his newspaper article discussed that practical reason for this is the acute lack of resources for research and publications in all local universities. In order to develop research culture in Philippine Higher Education Institutions, Salazar-Clemeña & Almonte-Acosta (2007) identified in their study that faculty perceived factors necessary for improving research productivity include time, strong belief in research endeavor, faculty involvement, positive group climate, working conditions and organizational communication, decentralized research policy, research funding, and clear institutional policy for research benefits and incentives. Thus, it is of importance to identify conditions that contribute to lack of research culture since the development of passion and dedication for research should start at the university level.

Conducting research can be an essential facet in teachers' professional lives and that there is a growing amount of teacher statement about the positive outcomes of research. According to Zeichner (2007), teachers engage in research because they see its relevance to their work and they seek to better understand or change their classroom practice. He also added that advocates are claiming that teacher research help teachers become more flexible and open to new ideas, narrows the gap between teachers' aspirations and realizations, and heightens the quality of student learning. Moreover, from the study done by Senese (2000), there are four aspects proven to be essential in establishing the initial interest and enthusiasm for teachers to conduct classroom research giving them the stamina to create a unique culture of teacher-researchers within the school. Professional bonds with other teachers, time, results in student performance and recognition are his identified factors allowing teachers the freedom to pursue their research. In Shkedi's (1998) study, he identified that course requirements and prerequisites in academic institutions; expanding professional knowledge; professional problems that arise; and requirements in the framework of the job are the motivating factors that turn teachers to research literature. More than those identified factors, Borg (2006) mentioned ten conditions for research engagement in his workshop in Spain. The following are: awareness, motivation, choice, knowledge and skills, mentoring, resources, expectations, recognition, community, and dissemination potential. Included also in his workshop are the reasons for doing research such as: for professional development, to find better ways of teaching, to solve problems in teaching, for enjoyment, and for employer expectations. A study from an unknown source highlighted a number of features which could motivate practitioners to become involved with research, including: direct relevance to their needs and interests, illustrations of activities which helped them relate the findings to their own work, help from an outside expert who could support and guide them in their use of research, research which built on what they knew already and on their own professional interests, and sufficient time to absorb and act on messages from the research.

Despite the importance of research and although teachers wish to conduct research, they are faced with tons of concerns. Not least among these are lack of time, lack of expertise or skills in research, lack of support especially from within their own institution, and threats to their self-image as a teacher (Allwright, 1993; Burton and Mickan, 1993; Nunan, 1993). Many teachers even avoid it because they are not patient enough to put extra effort in it. There are other various reasons for not doing research based from the same workshop done by Borg (2006), aside from lack of time, the following are mentioned- not part of teaching job, not interested in research, colleagues do not do research, employer discouragement, and lack of knowledge on research methods. Hiep (2006) stated that multiple factors, such as researchers' dissatisfaction with current evaluation regulations, as well as conventions and formats in reporting research results, lack of time, lack of materials and opportunities to disseminate results, and contextually inappropriate training tend to discourage teachers' aspirations to do research.

Research is one of the major functions of the higher education system in the Philippines together with instruction and community extension services (Carson-Arenas, 2001). It is an academic function that differentiates higher education from basic education. However, among the 34% of the faculty who are graduate degree holders (CHED 1997, as cited in Salazar- Clemeña and Almonte-Acosta, 2007), few have done research beyond their master's theses or doctoral dissertations. It is imperative that the academic community collaboratively address this concern. This study analyzed the findings of an open-ended questionnaire in which the researchers embarked on the idea of determining reasons and evaluating different ways of teachers' engagement/ non engagement in research towards a deeper understanding and recognition of it. The information gathered from this study is valuable and can be of use for the school community as a means of moving towards meaningful change. Universities need to work with teachers to dispel the belief that research is disconnected from practice and to encourage teachers to be opened to the benefits of it (Levine, Smith and Carr, 2009). According to Carson-Arenas (2001), research is the reflection of a true academician. Through this, teachers will have the opportunity to adopt a perspective that would strengthen the research culture in the university.

Because faculty members are expected to be the primary producers of research in a university (Salazar- Clemeña

and Almonte-Acosta, 2006), it would be useful to collect data relevant to the identification of the possible conditions why faculty members engage or not engage in research. Hopefully, based on the result, it would provide the university with possible recommendations based on the result on how to encourage their faculty to do research.

2. Method

Qualitative method was employed in this endeavour. Burns and Grove (1993) asserted that qualitative approaches to research are based on a world view which is holistic and that there is no single reality; reality is based upon perceptions that are different for each person. It involves perceptually putting pieces together to make wholes and from this process, meaning is produced. Furthermore, the design of this study is exploratory and interpretive, placing primary emphasis on the teachers' views of their own and others' experiences in doing research. Erickson (1986), pointed that this structure calls for a participant- observational approach to data collection, which includes being reflective in noticing and describing events in the field setting, and in attempting to identify the significance of actions in the events from the various points of view.

Owing to the qualitative nature of the study, the results were site and time specific. The study was conducted from April to May of summer of the academic year 2009-2010 in ione of the university in Manila.

During the course of this study, a total of 36 faculty members from different institutes were asked to take part in this investigation.

Since the study was qualitative in nature, a concise open-ended survey questionnaire was developed by the researchers. The instrument allowed the participants to answer the two succeeding questions: 1) What conditions do you feel facilitate teachers' efforts to do research? and 2) What conditions do you feel hinder teachers' efforts to do research? The questionnaire was then distributed to 36 faculty members of Far Eastern University. They were allowed to provide multiple responses with no limit on the length of any responses.

Thematic analysis was the chosen method in analyzing teachers' responses regarding their perceptions of teachers' engagement and non-engagement in research. The goal of this analytical method is to identify, describe, analyze, and report themes within the data. It was chosen because it is a flexible technique that can be used to analyze data obtained under a number of qualitative methodology and because it is relatively easy and quick for new qualitative researchers to learn (Braun and Clarke, 2006).

Thematic analysis allows for a rich description of the data set related to a detailed description of a particular theme within the data (Braun and Clarke, 2006). Thus, the researchers were careful not to form a priori hypotheses or expectations with respect to teachers' conditions facilitating engagement and non-engagement in research. The thematic analysis undertaken in this study involved the methodology of reduction. With reduction, the qualitative data sharpens sorts, focuses, discards, and organizes data in such a way that final conclusions can be drawn and verified while retaining the context in which these data occurred (Onwuegbuzie and Teddlie, 2003).

The analysis was validated through agreement among the researchers prior to determining the thematic categories for the responses to each of the research questions.

3. Results and Discussion

The themes that emerged from the data revealed the perceived conditions facilitating research engagement and non-engagement among the teacher-respondent is presented in order of how often a response was given.

Theme 1: Administrative support

The teachers made a consensus that the support from the administration in various means was the topmost condition facilitating their engagement in research. The support needed from the administration came in terms of research budget, material resources and equipment, research facilities, and provision of research workshops and trainings for teachers. Administrative support also referred to the clear specification of rules and policies on research set by the management. In addition, encouragement and moral support from the administrative level when made available are seen to be vital to success in research.

The following are direct statements of the participants indicating that when administrative support in various means is provided, it can facilitate teacher engagement in research.

"Administrative support in terms of research facilities and resources."

"Financial support from the administration"
"Complete library facility (updated journals, thesis, dissertations and
other reading materials)"
"Clear department or office to conduct research"
"Motivation and inspiration of administrators"
"Encouragement and support from the administration"
"Awareness of the benefits of doing research"
"Supportive supervisor"

On the other hand, the following statements illustrate lack of administrative support being the foremost factor that hindered teachers to engage in research.

"No support and clean program from the higher-ups"
"Unsupportive or suspicious supervisor"
"Rules on research by the management are confusing"
"Lack of motivation from the department"
" No words of encouragement or support coming from the superior"
" The management does not stick or keep their promises regarding
the privileges and benefits that the researcher will receive."
" Transport allowance/service to conduct research in other venues
 must be provided."

Theme 2: Time Element

When planning a research study, Creswell (2005) mentioned that investigators should anticipate the time required for data collection and data analysis. Regardless of the approach used, one can gauge the amount of time for data collection by examining similar studies, contacting the authors or asking researchers who are more experienced. It was established from the respondents that the ability to do research depends largely on the availability of time. They pointed out that they be given research in lieu of their workloads, be provided lesser teaching assignments, and be assigned good schedules. One most common reason that teachers gave when asked is that, they do not do research because they have no time, due to the demands of being a teacher, responsibility at home, their children and others. When research is included in the daily activities of teaching professionals, the occupation takes on new meaning (Burnaford, 1996). Teachers when interviewed sounded that this is a matter of priority:

"Research takes time. The problem is when you are given full teaching load,
time is limited and yet you are required for quality output."
"Most often I am in school the whole day; I can no longer find time to include
research in my scheduled activities. Reading related literature alone consumes time."
"Provision of time for research work"
"A research requires ample time which should not be conflict with a given teaching load."
"Lack of time to do research, most of the time devoted to teaching"
"Time schedule- lesser free time, loaded in work."
" Having 24-units load will surely be devoted to full time teaching."

Theme 3: Money matter

The teachers also talked about money matters and revealed that money increases their willingness or motivation to conduct research especially when additional income or high compensation will be given to them. In addition, teacher respondents also perceived doing research as a substitute for the actual teaching load especially when there is a scarcity of subject offerings. The research load will compensate for their lack number of units.

"Well paid for work"
" Right pay"
"High compensation"

"Monetary purposes"
Some teachers do not like to engage in research because of:
"Low pay"
"Partial payment"
"Need for higher income"
"Unjust compensation"
"Inadequate compensation"
 "Research should be given to those teachers that lack academic teaching loads."
"Substitute to loads"
"Lack of loads (teaching)"
"To compensate deficiency in teaching load"

Theme 4: Recognition

Teachers expressed the thought that they would take advantage of research when their effort is given due recognition. The outcome of the teacher endeavor will be satisfying when the research work is presented in a forum or convention as well as when   included in a publication or citation. Similarly, teacher enthusiasm in research is increased when the institution grant them awards.

 "Due credit and recognition"
"Recognition of the effort exerted"
"Presentation of papers (forum)"
"Opportunities for publication"
"Recognition such as citation, awards"
 "Personal glory"
"Monetary reward and recognition"
Theme 5: Career Advancement

 Even though career advancement appeared to be secondary only as compared to   administrative support, time and money, a number of teachers aspire to do research for the purpose of earning a degree, promotion, ranking and academic growth which includes improvement in their teaching practices. Many teachers want to conduct real research to enhance their own teaching performance and scholarship besides instrumental motives such as to earn a degree or satisfy institutional regulations (Hiep, 2006).This is opposite most international studies where career and professional advancement serve as the leading aspects for teacher research.

"For career advancement"
"Another reason is for doctoral degree and promotion"
"As a challenge for advancement, for promotion"

Theme 6: Individual attributes

Individual attributes appeared to have equal level of importance with career advancement. Individual attributes include the person's innate abilities (i.e. IQ, personality and age)   and personal environmental influences (Bilsel,2004).
Some teacher participants indicated that they will do research with the yearning to expand their knowledge. They are motivated and willing to do so for information discovery and intellectual growth. Additionally, teachers through research can show their expertise in it, improve research skills and contribute to the community they belong.   Therefore, it should be realized that research is done so that knowledge may be generated and that this knowledge may be shared so that it may generate even more info knowledge (Bernardo,A, as cited in Carson-Arenas,2001) .

 "Some teachers want to show their expertise in research."
" Contribution to bigger community"
" For interest to advance research knowledge"
"Personal willingness to improve research skills"

Among the personal basis serving as hindrance to teachers' research engagement include lack of motivation, lack of interest, lack of financial means, family conditions and problems, and belief that research is an additional workload.

" No financial means to finish the study"
"Family conditions"
"Lack of interest"
"Lack of motivation"
" Research was not given enough focus"
"Burden of writing"

Aside from lack of self- motivation, interest and financial resources, lack of skills was also perceived to be contributory to research engagement. Researchers must have acquired certain skills to effectively pursue a research study. These skills are gained through courses, training and prior research experiences. Without the necessary skills, one would only see research as burden or additional task to be accomplished.

" Lack of research knowledge and methodology"
"Know-how in doing research"
"Lack of confidence in doing research"

Age, envy, favoritism and intrigue also served among the individual attributes that hinder teachers to engage in research. Age had always been a foreseen factor contributing to differences and relationship in many studies. As expected, younger individuals are more aggressive in many activities including research. From the study of Everton's (2002) team, they specified that younger teachers are willing to engage both with and in research provided it can be demonstrated that it has a direct impact on their practice. On the other hand, envy, favoritism and intrigue are conditions believed to be detrimental to research engagement specifically when there are no clear institutional policies or rules presented for researcher selection. Unless comprehensible instructions were given by department heads or academic managers, no conflict among teachers will be created resulting to either issue mentioned. Thus, it can lead to a growing number of teachers accepting the challenge of research.

Aside from the mentioned factors, the succeeding items were the least observed conditions facilitating teachers' engagement in research given by the respondents. They include team collaboration, topic, scope, and teacher responsibility.

Theme 7: Team Collaboration

Teachers believed in the importance of collaboration as well as mentoring as means to support other teachers. The significance of having team members involving themselves in another teacher's research cannot be underestimated (Schmoker, 1996). It is rewarding to be part of a working team since it gives the opportunity to learn and grow with them. The other team member can become your source of learning, ideas and validation.

"Human dimension- Team collaborative research"
"Non-cooperation of other members"

Lack of research skills were among the individual attributes that impede engagement in research, it is for this reason that mentoring was seen to be of help in order for faculty to be productive in research. Mentoring supports professional growth and renewal, which in turn empowers faculty as individuals and colleagues (Boice 1992). Teachers are to engage in research when there is a mentor who will guide them along the development of the study. According to Luna,G. & Cullen D., teaching and research improve when junior faculty are paired with mentors, job satisfaction and organization socialization greater. Not only do protégées become empowered through the assistance of a mentor, but mentors themselves also feel renewed through the sharing of power and the advocacy of collegiality.
" Presence of research mentor particularly for beginners"

Theme 8: Topic

The researchers' desire to engage in any educational and scientific investigation always starts with a topic in mind that

interests him. Topic which could be in the form of the research problem serves as the focus of the researcher's query. With a clear topic at hand, one teacher believed that there's no reason not to pursue research.

Theme 9: Scope

Determining the extent of the study also serve as a minimal factor for a teacher to engage in research. By doing so, teacher researcher could be able to assess the possibility of finishing the study within a set period of time.

Theme 10: Teacher Responsibility

Not all educators have an understanding and appreciation of research. However, engaging in research is believed to be a teacher responsibility. According to Todd (2010), conducting research should not be seen as something extra that teachers can do which goes beyond their usual teaching responsibilities. Instead, doing research should be seen as an integral part of our responsibilities as professionals dedicated to developing our teaching and ourselves. Zeichner & Noffke (2001) pointed out that practitioner research is directly linked to an outlook on the profession of the teacher. They claim that practitioner research is not only a means to facilitate teachers' professional development; it is also a means to enable teachers to contribute to the knowledge base of teaching There's a need for teachers to know what is happening in the classroom and why students are behaving in ways they do.

"Personally, I feel that as faculty, it is the responsibility of the teachers
to develop, evaluate and improve the body of knowledge."

It was also evident that there were a number of conditions that hinder teachers to exert effort in research. The most contributory of these also include lack of administrative support, time, money, individual attributes, and recognition. Thus, it confirmed and validated the responses given by the participants as conditions facilitating teachers' engagement in research. Team collaboration and topic were also perceived to be conditions which minimally hinder teachers to do research.

4. Concluding Remarks

This study has provided some information on teachers' views on their engagement in research. The outcomes on this paper revealed that the institution is generally not seen to be supportive of teachers' research engagement. In addition, since research demands time, the faculty mostly felt that time is not available within their present conditions. Money and recognition on one hand, served as the teachers' motivational factors in pursuing research endeavor.   Career advancement, individual attributes, team collaboration, topic, scope, and teacher responsibility were conceived to be contributory conditional factors in doing research.

A better understanding of teachers' research engagement would seem to be fundamental to the development of institutional policy on research. The revitalization of it among faculty members should be initiated by the administration as the administrative support was the foremost contributory condition. Similar with the study done by Bilsel (2004), it is deemed important that the administration should   improve incentives and benefits for research   that could serve as motivational factors for doing research. The research benefits and incentives may include reduction of teaching load, increase funding allotted to research projects, and provision of publication reward. Efforts must be made in order to enhance the appreciation and understanding of the faculty on the importance of research especially in their profession. Appreciation of research be made possible by means of offering necessary research training as part of the faculty development program. Encouragement to do research should start with the department chairs since they have direct contact with faculty members This will enable them to employ their leadership in promoting research. Clear rules and guidelines on research should also be set among teacher researchers. Faculty encouragement on professional research group participation should also be considered important.

In addition, on-campus research institutes or centers could be established to provide a conducive set-up for academic research (Racelis, as cited in Carson-Arenas, 2001). In case where on-campus research center is already present, support of its programs among faculty and administrators should be evident. It could be of   help to the faculty to view research as an integral part of the teaching profession.

Finally, the findings of this study emphasized certain areas for continuing the investigation of teachers' research engagement. Since qualitative method is employed, a follow-up study could also be done using quantitative inquiry.

References

Allwright, D. (1993). Integrating 'research' and 'pedagogy': appropriate criteria and practical possibilities. In Edge, J. and Richards, K. (eds.) Teachers Develop Teachers Research: Papers on Classroom Research and Teacher Development. Oxford: Heinemann. pp. 125-135.

Bilsel,A. (2004). Creating Research Culture at Eastern Mediterranean University. Retrieved from: research.emu.edu.tr/.. ./Creating%20a%20Research%20Culture.ppt

Boice, R. (1992). "Lessons Learned about Mentoring." In *Developing New and Junior Faculty* edited by M. D. Sorcinelli and A. E. Austin. San Francisco: Jossey-Bass. pp. 51-62.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology* 3:77-101.

Borg, S. (2006). 'Great idea but just no time': Teachers' views of research and its role in their professional lives. Retrieved from: www.ihes.com/bcn/tt/workshops/borg_mar06.pps

Burnafold, G., Fischer,J. & Hobson, D. (1996). Teachers doing research: Practical possibilities. NJ: Lawrence Earlbaum associates.

Burns & Grove (1993). The Practice of Nursing Research: Conduct, Critique & Utilization. 2nd Edition

Burton, J. and Mickan, P. (1993). Teachers' classroom research: rhetoric and reality. In Edge, J. and Richards, K. (eds.) Teachers Develop Teachers Research: Papers on Classroom Research and Teacher Development. Oxford: Heinemann. pp. 113-121.

Carson-Arenas, A. (2001). Developing a Research Culture in Higher Education; Educator's Speak. Manila Bulletin. Manila Bulletin Publishing Corp. *HighBeam Research.* Retrieved from: http://www.highbeam.com

Creswell, J. (2005). Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research, 2nd ed. New Jersey: Pearson Education, Inc. pp. 3-7.

Erickson, F. (1986). Qualitative Methods in Research on Teaching. *Handbook of Research in Teaching, 3rd ed.* New York: Macmillan.

Everton, T., Galton,M. & Pell, T. (2002). Educational Research and the Teacher. *Research Papers in Education*, 17 (4),Taylor & Francis Ltd .pp. 373-401.

Hiep, P.H. (2006) . Researching the Research Culture in English Language Education in Vietnam.*Teaching English as a Second or Foreign Language.* Vol 10(2), pp. 1-20.

Hittleman, D., & Simon, A. (2002). Interpreting Educational Research: An Introduction for Consumers of Research, 3rd ed. New Jersey: Pearson Education, Inc.

Levine, J., Smith,J., & Carr,K. (2009). The Role of Action Research in empowering teachers to change their practice. *Journal of Ethnographic and Qualitative Research.* Vol 3, pp. 152-161.

Luna, G. & Cullen, D. Empowering the Faculty: Mentoring Redirected and Renewed.

Retrieved from: http://www.ntlf.com/html/lib/bib/95-3dig.htm

Nunan, D. (1993) Action research in language education. In Edge, J. and Richards, K. (eds.) Teachers Develop Teachers Research: Papers on Classroom Research and Teacher Development. Oxford: Heinemann. pp. 39-50.

Office of the Presidential Assistant for Education . Enhancing Research Culture in Philippine Higher Education Institutions. Retrieved from: http://www.opae.gov.ph/enhancing.html

Onwuegbuzie, A. J., & Teddlie, C. (2003). A framework for analyzing data in mixed methods research. In

A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* Thousand Oaks, CA: Sage. pp. 351-383.

Perkins, J. A. (2004). Stafford Little Lectures at Princeton. *New York Times*. Cited in *Simpson's Contemporary Quotations.* 1988. *Bartleby.com* <http://www.bartleby.com/63/96/2596.html>.

Pertierra, R. (2007) . Philippines' lack of a culture of research and science. *Philippine Daily Inquirer.* Retrieved from :http://opinion.inquirer.net/inquireropinion/letterstotheedito r/view/20070810- 81647/Philippines_ lack_of_a_culture_ of_ research_ and_ science

Salazar-Clemeña & Almonte-Acosta (2007). Developing Research Culture in Philippine Higher Education Institutions.Retrieved from: portal.unesco.org/education/en/.../ Rose_Marie_Clemena.pdf

Schmoker,M. (1996). Results: The key to continuous school improvement. Alexandria, VA: Association for Supervision and Curriculum Development.

Senese, J. C. (2000). W hat are the conditions that sustain teacher research? Prepared for Session 18.16 at the American Education Research Association meetingin New Orleans, April 24-28, 2000 Retrieved from: http://resources.educ. queensu.ca/ar/aera2000/senese.pdf

Shkedi, A. (1998). Teachers' attitudes towards research: a challenge for qualitative researchers. *Qualitative Studies in Education.* Vol.11 (4), pp.559-577.

Todd, R. (2010). Why Do Action Research? Retrieved from: http://www.philseflsupport.com/why_ar.htm

Zeichner (2007). Teacher Research Spurs Professional Development. Wisconsin Center for Education Research. Retrieved from: http://www.wcer.wisc.edu/news/coverstories/teaching_research_spurs_pro_dev.php

Zeichner, K.M., & Noffke, S.E. (2001) Practitioner research, in V. Richardson (Ed.) *Handbook of Research onTeaching*, pp. 298-330. Washington, DC: American Educational Research Association. ---- .What made teachers engage with research? Retrieved from: http://www.standards.dfes.gov.uk/research/themes/cpd/researchfindingspractice/teachersengage