# Paradigmatic nature and theoretical framework in educational research
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**Abstract**
This paper addresses the role of the theoretical framework in conducting research and writing up a research report, especially in the context of postgraduate programmes. Research students are expected, as part of their academic training, to conduct data-based research and report their findings according to a set of established academic criteria. To do so, the research design, data collection and analysis need to be informed by a theoretical concept or framework that the researcher adopts. The paper presents a short theoretical discussion of the theoretical framework and provides an example of how this concept is used in the design of a study. Two practical activities are provided at the end of the paper for novice researchers to practise locating and developing their own theoretical framework.

## A paradigm and theoretical framework

In some research studies the distinction between the paradigmatic nature of the study and its theoretical framework is not obvious and difficult to make. This is often the result of the researcher's adoption of a research paradigm or an epistemological position to function as a conceptual basis for the study. A research paradigm or approach is a wide world view that includes major assumptions about the nature of knowledge, known as epistemology, the nature or reality and social reality, known as ontology, and assumptions about research methodology (Crotty, 1998). By establishing one's paradigm a researcher is expressing his/her position vis-à-vis the researched phenomenon. It is this position that allows the researcher to confirm or reject a hypothesis, explore and understand a social or educational phenomenon or question and challenge an educational practice in order to change it. Each of these three fundamental and established research positions is informed by a wider view on how knowledge is acquired and the nature of reality and truth (for more in-depth analysis of research paradigms see Crotty, 1998 and Pring, 2000).

In the case of the above mentioned first position the researcher can be said to have a positivist or a scientific agenda, and as a general rule the purpose of the study is to draw conclusions and results that can be extrapolated and generalised into a wider population. To do so, the researcher needs to abide by the research criteria set by the scientific community where issues of validity and reliability are of major concern. An experimental or correlational design is often associated with the methodology of such a positivist agenda. It is important to distinguish between methodology and methods in this context. While methodology refers to the overall research strategy reflecting a theory of acquiring knowledge, a method refers to the particular technique or instrument employed in the process of data collection. The use of a particular research method should not be interpreted as an indicator of an epistemological position or a research agenda. It is what the researcher's approach to the study and what she wants to do with the data that reflect the paradigmatic nature of her work.

In the case of the second position the researcher wants to explore and understand a particular social phenomenon such as a language learning process in a primary classroom or a particular teaching approach. The interpretive approach is appropriate for such an agenda as it allows the researcher to ask open-ended questions, observe and live with the participants in their natural social context. Ethnography and case studies are major methodologies associated with this research approach. The data and the findings are not used for generalisations but for deep

understanding of learning processes. However, readers of research can draw similarities between a study and their own social and educational contexts.

In the third position the researcher's agenda is to critique, challenge, change a particular situation, expose problems and limitations of an educational policy or a pedagogy. Another aim might be to "problematise" a particular method or policy (Pennycook, 2001). The critical approach to research is appropriate for such an agenda and action research and critical ethnography are established methodologies that can help researchers deal with issues of voice, marginalisation, exclusion and so on.

**The role of the theoretical/conceptual framework in the thesis**
Similar to the concept of research paradigm and its related concepts and philosophies, a theoretical framework is the intellectual structure, which guides your study and informs your view of the data. You can look at your theoretical framework as a specially- designed set of lenses that you use in order to see the world in a particular way. If you wear conservative lenses your views and interactions with the world will be different from those of someone wearing liberal lenses. In educational research, your theoretical framework reflects where you stand intellectually vis-à-vis your research questions and the way you are going to look at the data. The constructs you are investigating in your research questions need to be defined and a located in the related literature so that the researcher's views and understanding of the concept/s being researched are established, explained and justified. For example, in a study investigating teachers' views and implementation of a new language curriculum the researcher needs to provide her/his views of what curriculum is. A common academic way of doing so is to review the main models of curriculum and to present some of the established definitions in the literature while referring to some relevant research studies. The researcher needs to be clear about which particular theoretical model or definition of curriculum he/she has adopted for the study. A process model of curriculum or a combination of process and critical view of curriculum can serve as the theoretical framework for the researcher. A justification for the adoption of one's theoretical framework is necessary. This can be based on the strength of the theoretical model adopted for the study and how appropriate it is for the professional context of the researcher. A theoretical framework can be made up of a combination of a number of elements belonging to a more than one theoretical model. According to Holliday (2002), the conceptual framework is an essential part of the written report. For him, it:

> states that the researcher's ideological position results from her agreement or disagreement with current discussion and issues...[and] because of this position her own ideology is defined, directs her research methodology and thus has a certain type of impact on the research setting and the people involved, in terms of all aspects of how she sees, interacts and treats it (p. 53).

Your theoretical framework should not be confused with your research framework or paradigm. Both are intellectually and philosophically related, but while the first one is purely theoretical in nature, the second is both theoretical and practical. Your theoretical framework will provide your position vis-à-vis the issue being studied and your stand on the literature. It will also inform your data analysis process. If, for example, you adopt a social constructionist approach to learning a foreign language in a classroom setting you will need to show in the data analysis stage how learning is affected by a number of social factors and how meaning is socially constructed.

A number of researchers often stop at the explanation of their methodologies and the epistemological positions that inform the choice of a particular approach to research design. While ethnography can be considered as an established methodology that can involve a number of qualitative research methods, its use does not constitute a theoretical framework when used to study how primary school children handle writing and reading tasks. Here the researcher needs to elaborate on her definition of writing and reading and which approach to these two constructs she has adopted for the study. In this case, ethnography can be considered an appropriate methodology informed by the wider interpretive approach to research, and a process model to the learning of writing can be adopted as theoretical framework.

**The following are four examples of different theoretical models that can be used in the stud of classroom interaction:**

**Example A**: An ethnographic classroom discourse study can be informed by social interaction as a theoretical framework. In this case the researcher will look at teacher-student and student-student interaction from the perspectives of social interaction looking into the ways the participants establish routines, rules and etiquettes of participation through the process of negotiation.

**Example B**: If the researcher selects a socio-cultural theory as a theoretical framework for her study then she would be looking beyond the immediate context of the classroom for explanations of patterns of interaction. The cultural context/s will be very important in making sense of the data.

In both cases the research design can be qualitative.
In both cases the researcher needs to justify the selection of the theoretical framework and to explain its main tenets.

**Example C**: If the researcher selects a critical view of language interaction as a theoretical framework then the participation will be seen in terms of power structures and ideology. The study will also most likely look at change in discourse and critical language awareness. Fairclough (1995) provides a model of critical discourse analysis.

**Example D**: If the researcher selects a prescriptive view of classroom discourse using observation systems like those developed by Sinclair and Coulthard or Flanders it is most likely that the theoretical framework is an input output model of language. Discourse studies have moved beyond this model but there are still researchers quantifying turns and measuring their length.

**Two further Examples of theoretical framework**

**Example 1:**
**Title of study**: English as medium of instruction in Qatar by Troudi, Rich, Manaserah and Postlethwaite (2009).

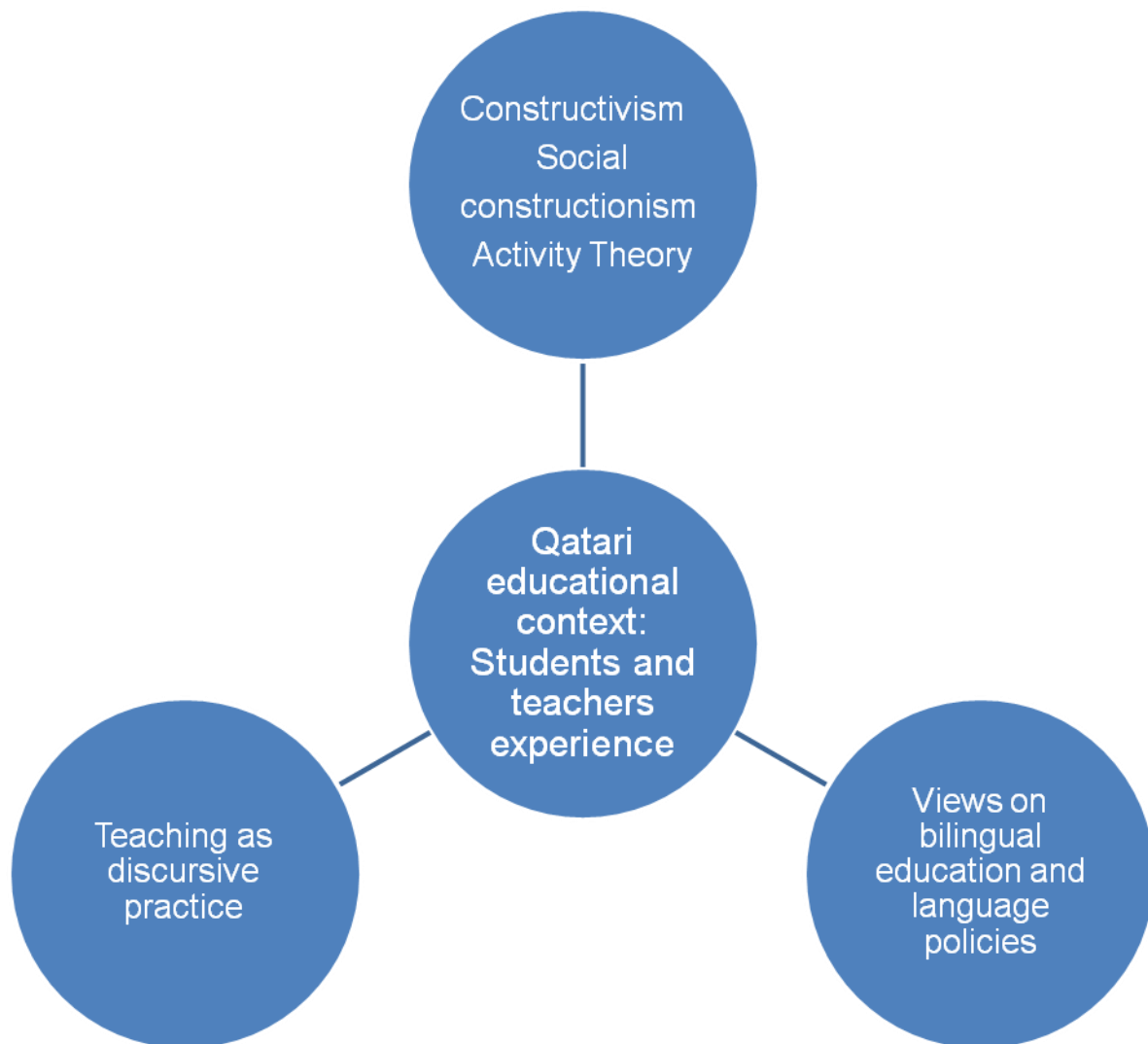The research questions that this study will address are as follows:

- How is English as a medium of instruction being implemented in the Qatari independent school system?
- What is the impact of implementing this approach on teaching and learning?
- What strategies have teachers and learners developed to accommodate English as a medium of instruction in Qatari independent schools?
- How can teachers be helped to embrace a research culture as part of their teaching and professional development to further enhance English as a medium of instruction pedagogy and learning?

**Theoretical Framework**

This research project will be informed by a combination of a constructivist and a social constructionist theoretical framework. The constructivist element will allow us to look at the nature of social reality and learning from the individual's perspective. Meaning-making activity in this framework is explained in terms of what the individual mind does and the unique experience of each of us (Burr, 2003; Crotty, 1998). Constructivists view people "as constructive agents and view the phenomenon of interest (meaning or knowledge) as built instead of passively received by people whose ways of knowing, seeing understanding, and valuing influence what is known seen, understood and valued" (Spivey, 1997, p.3). Social constructionism on the other hand, is the view that learning and meaning making are a social endeavour. Culture plays a major role in shaping our social realities and learning experiences, and the collective generation and transmission of meaning is at the focus of the researcher within this framework. Social constructionists see human experience as culturally and historically mediated through social practices that are constantly changing (Parker, 1998). In looking at the role that language, English in the context of this project, plays in the identity formation of the research participants, we will adopt a social constructionist view of language. Here, language is more than a system of signs. It has the potential to vary and even create conflict. In Burr's words language "reflects individuals and groups and how society is organised. Through language a person who shares the same culture can provide a framework of meaning in which concepts and categories can be acquired, developed, produced and reproduced" (Burr in Harun, 2006, p. 53). The project is also underpinned by views of teaching as discursively constructed practice (Britzman, 1991; Danielewicz, 2001).

These above mentioned theoretical elements can be brought together in the theoretical framework provided by Activity Theory which prompts a widely-based investigation (Engeström, Miettinen et al. 1999). One issue is what the 'subject' (the teachers and learners) bring to the activity in terms of their personal and institutional histories. Another is the 'object' of the activity – the purpose of that activity and how this is (perhaps differently) understood by the people involved. Then there are the 'rules' which govern the activity (which might include the formal requirements of policy makers but also the routine rules of the schools involved). Activity Theory recognises that 'subjects' have 'tools' available to them to enable them to carry out the activity. In relation to teaching, these might include concrete tools such as the resources available but also tools such as lesson plans, theories of learning, or specific tactics for bilingual immersion. All this activity takes place within a 'community' which has general expectations and culturally defined goals which will influence the activity. It is also governed by expectations about the division of labour – who is expected to do what to keep the activity on track. These aspects do not impinge separately on the activity but inter-relate (so that a teacher's or student's life history may affect the things that s/he brings to the task as a tool, which may then affect the way s/he sees the object of the task etc).

The literature on content language education and medium of instruction policies will also play a part in the conceptualisation of the study. The impact of globalisation on education and language policies is obvious in contexts where English has become a key player in the attempt to remain competitive in the international economy (Tollefson & Tsui, 2004). To study such a complex phenomenon, a multimodal theoretical framework is necessary.



**Note**: The above model is a combination of concepts and positions about the nature of leaning, nature of teaching and language policy. These three elements are at the heart of the research agenda and make up the constructs of the research questions.

**Example of Methodology**
As well as using mixed methods, this research also uses mixed methodologies combining survey and case study of the Qatar approach to bilingual immersion education with an element of action research designed to enable teachers to develop the approach further and

establish the effectiveness of their developments. The overall research design is of a case study with an element of action research.

This research project is exploratory in nature using a mixed method approach to data collection and analysis (Tashakkori & Teddie, 1998; Tashakkori, 2003). The study does not seek to make predictions or generalizations but to understand how individuals in a given social and educational context interact to make meaning and to draw conclusions and make suggestions about pedagogy and language learning. It is therefore appropriate to use a set of research methods or multiple methods that will help us collect rich and informative data. Silverman (2001) argues that multiple methods help the researcher achieve a fuller picture of the phenomenon being investigated. They also help in validating data and triangulating it. Prior to data collection the researcher will try to establish rapport with the participants and become familiar with the settings and contexts of the study. Informal meetings and chats will be held with the participants to minimize any adverse effects the presence of the researchers can make on them.

While the overall nature of the research is exploratory with a mixed-method design it has an element of cooperative teacher research which follows an element of Action Research methodology (Kincheloe, 2003 & Burnaford, Fisher & Hobson, 2001). It is envisaged that a case study of one school complex will help the research team gain good understanding of the independent school system in Qatar. A number of teachers from the primary and secondary sectors representing one school complex will be invited to join the project as research participants (referred to hereafter as Research Collaborators).. They will be asked to contribute to the data collection strategy in its various stages. Working in several groups the teachers will also be invited to look at the gathered data as a step towards identifying educational strategies to improve the bilingual immersion experience in Qatari independent schools. This step is an element within the cycle of collaborative action research which "strengthens the opportunities for the results of research on practice to be fed back into educational system in a substantial and a critical way" (Burns, 1999, p.12).

This fits with one of the aims of the project which is to help build research capacity at the primary and secondary school levels. Teachers' involvement in this project through a collaborative and participatory approach to research which is seen as a social process (Kemmis & Wilkinson, 1998; Troudi, 2008) will offer them an opportunity to transpose informal thinking into systematic and collective problem-solving which is itself subject to rigorous investigation and evaluation. The work will build on insights into teacher action research established by one of the researchers during an eight-year collaborative partnership with a school in UK (Haggarty & Postlethwaite, 2003

**Example 2:**
**This example is taken from a paper by Davison and Leung (2009)**

In a paper that appeared in TESOL Quarterly in English language teacher-based assessment the authors state their theoretical framework immediately after the instruction. The following section is on (p. 395):

"There is no widely accepted common definition of *teacher-based assessment* in the English language teaching field, with many terms used interchangeably to refer to the same practice and procedures, including terms such *as alternative assessment, classroom* and /or *school-*

*based assessment, formative assessment,* and more recently *assessment for learning.* Such terms highlight different aspects of the assessment process, but all tend to be used to signify a more teacher-mediated , context-based, classroom-embedded assessment practice, explicitly or implicitly defined in opposition to traditional externally set and assessed large scale formal examinations used primarily for selection and/or accountability purposes. Thus, for the purposes of this article we take TBA to mean much more than just *who* is doing the assessing; TBA also has implications for the *what, where, how* and most importantly, the *why* of assessment" . **[here the authors clearly state their own definition/ framework]**
The authors continue to state their own definition proposing the following:

"TBS has a number of important characteristics which distinguish it from other forms of assessment:
- It involves the teacher from the beginning to the end: from planning the assessment programme, through to identifying and /or developing appropriate assessment tasks right through to making the assessment judgements.
- It allows for the collection of a number of samples of students work over a period of time, using a variety of different tasks and activities.
- It can be adapted and modified by the teacher to match the teaching and learning goals of the particular class and students being assessed
- It is carried out in ordinary classrooms, not in a specialist assessment centre or examination hall
- It is conducted by the students' own teacher, not a stranger "(Davison and Leing, 2009, p. 295).

There are of course many other example sin the literature where the authors clearly state their theoretical framework. Sometimes the theoretical framework is presented as alternative to an established one. In this case the researcher needs to justify his/ critique of currently use frameworks and how his/her model is the appropriate one to continue to knowledge and advance research. For an example in the area on computer use in education, see the chapter by Kuuti, 1996.

**Where to locate the theoretical framework in your thesis?**
A common template for Masters and doctoral theses includes the following stages:

- Introduction
- Context of the study
- Literature Review/theoretical framework
- Methodology
- Data presentations and discussion
- Conclusion and implications

The theoretical framework can be located in the literature review section. There is more than one way of presenting the conceptualization of a study. Some researchers start with a elaboration and justification of their theoretical framework and then proceed to review other models and definitions in the established literature. Other choose to first review the literature, critique while referring to their own study and conclude with their own theoretical framework. There is ample literature and guidelines for postgraduate students on this issue and on how to structure and organise their theses (for an example, see Wellington et al 2005).

**From theory to Practice**
The following two activities will help you put the above theoretical issue into practice.
**Activity one:**

Think of your own research study:
1. State the main goals and research question of your study.
2. What research approach do you think is appropriate for your research goals?
3. Present your theoretical framework and justify it.

**Activity two:**

Look at a thesis or a research study in an established research journal in your field and consider the following questions:

1. Has the researcher stated his/her theoretical framework?
2. Is it clearly stated and justified?
3. Is it appropriate to the main goals and research questions of the study?
4. Are the data analysis and discussion appropriate to the theoretical framework?


## Conclusion


There are obviously ways and models of presenting a theoretical framework other than those presented in this paper. However, what needs to be stressed here is the pivotal role of one's theoretical definition/s and theoretical position in conducting a research study. What perhaps was not stressed above is that a thorough review of the literature is essential to the development of a solid and convincing theoretical framework. This is of course necessitates more than an accumulation and review of research studies and discussion papers. Researchers needs to develop critical views of the literature in order to be able to discuss its strengths and weaknesses and epically how appropriate it is to their own studies. This critical ability will also help in justifying their positions and strengthen their data analysis and discussion.


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