**Exploring Semantic and Symbolic Perspectives of State of the Art Teacher Education Research**

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Researchers across the globe represent a community of academics who generate new knowledge through research. The elevation of research to the ‘state of the art’ symbolises a level of quality attained by only select few within a research community. This elevation process presents a problem for teacher education research communities when the elevation process also involves the relegation of alternative forms of research to a lower status. The significance of this problem assumes global proportions when teacher education researchers form transnational and interdisciplinary collaborations, which bring together researchers from different research backgrounds. The purpose of this paper is to remind the reader of the potential benefits of looking within and beyond the descriptors of state of the art research when addressing research problems in teacher education. The theoretical framework draws on concepts from the sociology of groups (Bourdieu, 1977; 1985; 1986; Bourdieu and Wacquant 1992) to highlight how symbolic and economic capital may contribute to the class-ification of a methodology within a teacher education research community. Included in this discussion is an examination of the term of state of the art and how the use of the term can reduce the craft of research to the non-critical application of a method. The paper begins with the construction of a theoretical framework to link the concept of state of the art (Haase, 2010) with the sociology of groups (Bourdieu, 1977, 1985, Bourdieu, 1986, Bourdieu and Wacquant 1992). I then distinguish between state-of-the-art and state of the art research using cases representative of developing (UNESCO ,2005a, UNESCO ,2005b), developed (Zeichner, 2005) and collaborative (O’Meara and Spittle, 2010) research communities. In the final section I discuss some implications of state-of-the-art and state of the art approaches within the context of teacher education research communities before providing a working definition of state of the art to stimulate discussion at this World Assembly.

**State of the Art, Communities, Symbolic Capital, and Symbolic Violence**

While references to state of the art have appeared alongside research for more than 25 years (see for example , Stevens , 1985; Thrun, Faloutsos, Mitchell and Wasserman, 1998; UNESCO ,2010) the semantics of state of the art remains unclear. If we accept the term state of the art may be more accurately represented as state-of-the-art in certain situations (Haase, 2010), we can also consider state-of-the-art as a catchphrase to promote a particular message within a community (Gamson, Croteau, Hoynes, and Sasson, 1992). In this form of usage, community members may begin to view state-of-the-art as a technique, which in this instance results in the reduction of an art form to a technique (Haase, 2010). Since state-of-the-art is an English catchphrase there is global audience for this type of message (Grismore, 2007) among global research communities formed around a common interest in a particular topic. This interest in a topic provides the why’ of a research community (Higher Education Research Institute, 1996). Issues of differentiation and distribution define the ‘how’ of the community’s, which includes a type of societal structure for a group of people (Bourdieu, 1985). Differentiation of community members can occur through a variety of attributes including reputation within the community (Bourdieu, 1986). The reputation of a community member in this context represents the symbolic capital afforded to the member by the community (Bourdieu, 1985). Members of this community can also distribute economic capital to these respected community members in the form of funding (see Bourdieu and Wacquant 1992). The collective impact of differentiation via symbolic capital and distribution via economic capital can include the creation of community classes distinguished in part by the status and resources afforded to the various members (Bourdieu, 1977).

Elite community members may have the opportunity and the resources to promote positive change within the community; however this may not always be the case. There are times when the contribution of elite members may result in a negative impact on members from other classes within the community. These contributions range from *idios logos* , where an individual tries to impose a personal point of view on members of the community, to *official nomination* where the point of view of a delegated or elevated agent of an institution holds the monopoly on common sense and consensus (Bourdieu, 1985). In the latter situation, the combination of position and legitimation creates the conditions for legitimized symbolic violence, where ‘respected’ agents for the institution promote a particular message within the community (Wacquant, 2007). The violence in this instance relates to the use of a message that imposes meaning and status on other members within the community (Bourdieu, 1985). These impositions may involve competitions between community members who fight over their ‘distinctive’ (Weininger, 2002) value and place within the community (Bourdieu and Wacquant 1992). The winners of these competitions may be described as those who dominate the dominated (Bourdieu, 1977). The power of this form of domination is strongest when the dominated community members are neither aware of the competition nor the influence of the dominant members (Bourdieu, 1985). Examples of this type of tacit domination involve respected typically individuals whose thoughts and/or actions are beyond question among the community (Weininger, 2002). Community members who are afforded this position have an increased capacity to devalue the contributions of other community members (Bourdieu, 1985). The allocations of financial resources to these individuals can increase their capacity to elevate the importance of their own work over the work of others (Bourdieu 1990). While some may consider these structures and processes necessary components of a community (see for example Giddens, 1984) we still need to examine these processes (Nealon and Giroux, 2003) to better understand the contribution of symbolic and economic capital on the thoughts and actions of community members (Flori-Ruane, 2002). This global meeting of leading teacher educators provides an excellent forum to use the following cases to discuss the ‘class-ifications’ and consequences of state-of-the-art and state of the art teacher education research within local and global teacher education communities.

*State-of- the-Art Research in Developing Countries?*

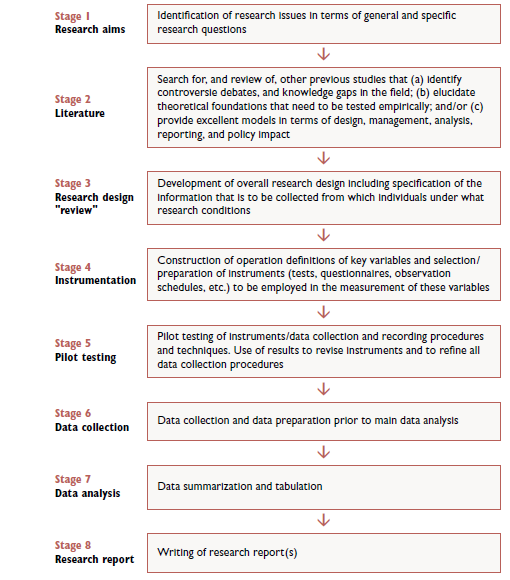
*UNESCO - the International Institute for Educational Planning (IIEP)*

The following case provides an example state-of-the-art research in Education found in UNESCO training modules for current and potential employees of Ministries of Education within Africa. These modules represent UNESCO’s response to the need for Africa to have a critical mass of researchers and research teams who were capable of providing evidence based solutions to the challenges facing this developing continent (UNESCO,1995). Within Africa, the International Institute for Educational Planning (IIEP) plays a major role in meeting this need through their research capacity development activities. These activities include specialized courses in the areas of educational planning and management offered annually by the IIEP. These courses are offered in two streams: Specialization Stream 1 -Educational Planning and Analysis (UNESCO,2005a) and Specialization Stream 2 Educational Planning and Management (UNESCO,2005b). Within Stream 1 participants are required to take a subject titled ‘Quantitative methods for monitoring and evaluating the quality of education’. This course presents “quantitative/empirical” approaches as strategies for measuring educational outcomes and identifying generalisable relationships between these outcomes and school based factors. Participants in these courses learn how to:

1. design technical studies to inform policy development to promote quality of education.
2. develop valid measures (tests and questionnaires) of schools and educational outcomes.
3. use of scientific sampling procedures to estimate important population characteristics
4. manage, analyse, and report data for policy purposes.

(UNESCO, 2005a)

The module support material provides the information to support the achievement of these goals. These modules are prepared by IIEP staff and consultants for use in workshops attended by National Research Coordinators responsible for the educational policy research programme conducted by the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) (UNESCO, 2005a).The first module in this series title Educational research: some basic concepts and terminology introduces the National Research Coordinators to the field of research. The module support materials limit the scope of research questions to one of three categories descriptive, correlational or causal. Course participants learn how to answer their research questions through the use of one or more of the following methodologies: historical, descriptive, research and development, correlation, causal, experimental, case study, and ethnography. The following eight step process promotes the use of empirical testing in the literature review section, variables and quantitative tools in the instrumentation section, as well as the use of summarization and tabulation in the analysis section.



*Figure 1:* Stages in the research process. This chart outlines to the reader the ‘key’ steps in the research process. The chart was sourced from UNESCO, (2005a). *Educational research: some basic concepts and terminology*.

A similar preference for quantitative methods is promoted in the second module titled ‘From educational policy issues to specific research questions and the basic elements of research design’ (UNESCO, 2005b). As with module one the majority of resource materials refer to quantitative practices, however, in module the author includes a ‘note’ on qualitative research. The author presents the work of Burgess (1985) to highlight the similarities between quantitative and qualitative research. He then goes on to explain how in the “qualitative approach, with its emphasis on ‘context’ and ‘meaning’, the researcher collects the data without a preconceived framework for analysis” (UNESCO, 2005b, 64). While the author does acknowledge some limitations of quantitative research, the final sentences in this section suggests this approach the preferred approach of the Ministry of Education and the author i.e. UNESCO.

*The quantitative method allows for standardised data-collection across subjects and samples, and more ready generalisation, but the choice of what to observe and measure can be a source of bias. Something important may be overlooked, or the kind of data collected may not be appropriate to important sub-groups within the population. However, it is likely that this approach will be most commonly used by researchers working in Ministries of Education and providing information for policy makers, and it is assumed in what follows* (UNESCO, 2005b, 62-63).

Currently there are over 50 Ministries of Education in Africa where this ‘standardised data collection approach ‘maybe the ‘most commonly used by researchers’.

*State of the Art Research in Developed Countries?*

*Centre for Education (USA) - Scientific Research in Education*

The next case represents state of the art educational research in a developing country. The National Research Council (United States of America) promotes a set of guiding principles for scientific inquiry in education to guide rather than provide an algorithm for scientific inquiry (CFE, 2002). Based on their use of guiding principles, I include the CFE case as an example of state of the art educational research rather than state-of-the-art. The creation of a definition for state of the art educational research in 2002 responded to the perceived need for a healthy community of diverse researchers guided by a set of fundamental principles. The following principles represent a set of interdependent processes, tools, and practices to assist researchers improve scientific understanding in education:

* Pose significant questions that can be investigated empirically.
* Link research to relevant theory.
* Use methods that permit direct investigation of the question.
* Provide a coherent and explicit chain of reasoning.
* Replicate and generalize across studies.
* Disclose research to encourage professional scrutiny and critique.

(CFE, 2002, 52):

In relation to methods, there is no elevation of a particular approach. The wording attached to the principle suggests the value of the methods lies within its “appropriateness and effectiveness in addressing a particular research question” (CFE, 2002, 3). The authors advise to use multiple methods to produce a diverse data set to strengthen the claims of the researcher. They promote the integration of multiple disciplinary methodologies and diverse methods to stimulate scientific progress (CFE, 2002, 65). They also encourage the extended inquiry, with a range of questions and diverse methods to address the needs at varying stages of the research program (CFE, 2002, 65).

*State of the Art Research in Collaborations involving Developed and Countries?*

*Internationalisation through Research (O’Meara and Spittle, 2011)*

The final case represents state of the art educational research involving researchers from developed and developing countries collaborating on a book writing project for the International Council on Education for Teaching (ICET). As with the CFE case this approach represents state of the art educational research as the ‘internationalisation through research rubric’ identifies principles of ‘internationalisation through research’ without providing a prescriptive methodology or method. The internationalisation through research example extends on the work of the CFE through its emphasis on a form of internationalisation with research activities that promote developmental outcomes for the researcher. The internationalisation through research framework (O’Meara and Spittle, 2011) provides a set of guidelines to achieve this and other outcomes during research collaborations between academics from developing and developed countries. The use of the rubric provides opportunities for users of the rubric to monitor and regulate their thinking as they conduct and complete activities (Goodrich, 1997). The articulation of expectations to the researchers creates the potential to promote and develop new skills (Andrade, 2000). The internationalisation through research framework contains four attributes (identified from a collection of UNESCO documents, see O’Meara and Spittle, 2011) of internationalisation, i.e., research, collaboration, impact, and sustainability[[1]](#footnote-1). The following table presents each attribute and includes a selection of statements to distinguish between different levels of quality for each attribute.

Table 1

*Internationalisation through research attributes*

|  |  |
| --- | --- |
| **Research[[2]](#footnote-2)** |  |
| * designing a project for using the existing knowledge of the collaborating researchers in new or creative ways | |
| * designing a project and obtaining institutional ethical approval for creating new knowledge in new or creative ways | |
| * designing a project that reflects the expertise, knowledge and an awareness of the socio-cultural dimensions relevant to the participating researchers, as well as obtaining institutional ethical approval for creating new knowledge | |
| * designing a project that reflects the expertise, knowledge and an awareness of the academic and the socio-cultural dimensions relevant to the participating researchers, obtaining institutional ethical approval for creating new knowledge, and publishes findings that are cited by others. | |

|  |  |
| --- | --- |
| **Collaboration** |  |
| * individualism: one author writes a chapter that reflects individual goals and research interests | |
| * bonding capital: a homogenous group of collaborating authors (developed and developing, East-West/ North South ) write a chapter that reflects their collective goals and research approaches in preference to the goals of the community of co-authors | |
| * bridging capital: a heterogeneous of collaborating authors (developed and developing, East-West/ North South )write a chapter that reflects their collective goals and research approaches as well as goals of the community of co-authors. | |
| * linking capital: a heterogeneous of collaborating authors (developed and developing, East-West/ North South ) write a chapter that reflects the collective goals and research approaches, the community of co-authors and external funding bodies. | |
| **Impact** |  |
| * would be unlikely to be cited and/or is unlikely to attract support from relevant internal grants | |
| * may be cited within existing networks and/or is likely to attract support from relevant internal funding bodies | |
| * is likely to be cited within the country of the author and/or is likely to attract support from relevant regional and state level funding bodies | |
| * is likely to be cited outside the country of the author and/or is likely to attract support from relevant national and international funding bodies | |
| **Sustainability** |  |
| * maintaining and developing existing research networks | |
| * maintaining and developing the existing research networks and creating new standards of research practice among this network | |
| * maintaining and developing existing research networks, creating new standards of research practice among this network, and establishing local institutional processes for re-use in future collaborations with researchers | |
| * maintaining and developing existing research networks, creating new standards of research practice among this network, establishing local institutional processes that can be re-used in future collaborations with researchers, and integrating this research within an established research program at a university | |

The creation of levels of performance is an important step to improved performance via the identification of the relationship between levels of quality and the various attributes of the activity.

(Arter and McTighe, 2001; Huba and Freed, 2000). Table Two contains the internationalisation classification levels with positive descriptors of attainment at each of the levels to assist the researcher identify and measure their performance in internationalisation through research.

Table 2

*Internationalisation through research levels*

|  |
| --- |
| **Internationalisation Level 1 (Individual Process- Personal Focus)** |
| * designing a project for using the existing knowledge of in new or creative ways |
| * individualism: one author writes a chapter that reflects individual goals and research interests |
| * research unlikely to be cited and/or is unlikely to attract support from relevant internal grants |
| * maintaining and developing the ICET research networks |

|  |
| --- |
| **Internationalisation Level 2 (Collaborative Process- Homogenous Focus)** |
| Internationalisation activities involving: |
| * designing a project and obtaining institutional ethical approval for creating new knowledge in new or creative ways |
| * bonding capital: a homogenous group of collaborating authors (developed and developing, East-West/ North South ) write a chapter that reflects their collective goals and research approaches in preference to the goals of the community of co-authors |
| * research that may be cited within existing networks and/or is likely to attract support from relevant internal funding bodies |
| * maintaining and developing the existing research networks and creating new standards of research practice among this network |
| **Internationalisation Level 3 (Collaborative Process- Heterogeneous Focus)** |
| * designing a project that reflects the expertise, knowledge and an awareness of the socio-cultural dimensions relevant to the participating researchers, as well as obtaining institutional ethical approval for creating new knowledge |
| * bridging capital: a heterogeneous of collaborating authors (developed and developing, East-West/ North South ) write a chapter that reflects their collective goals and research approaches as well as goals of the community of co-authors. |
| * is likely to be cited within the country of the author and/or is likely to attract support from relevant regional and state level funding bodies |
| * maintaining and developing existing research networks, creating new standards of research practice among this network, and establishing local institutional processes for re-use in future collaborations with researchers |
| **Internationalisation Level 4 (Collaborative Process- Strategic Focus)** |
| * designing a project that reflects the expertise, knowledge and an awareness of the academic and the socio-cultural dimensions relevant to the participating researchers, obtaining institutional ethical approval for creating new knowledge, and publishes findings that are cited by others. |
| * linking capital: a heterogeneous of collaborating authors (developed and developing, East-West/ North South ) write a chapter that reflects the collective goals and research approaches, the community of co-authors and external funding bodies. |
| * research is likely to be cited within the country of the author and/or is likely to attract support from relevant regional and state level funding bodies |
| * maintaining and developing the ICET research networks, creating new standards of research practice among this network, establishing local institutional approaches that can be re-used in future collaborations with ICET researchers, and integrating this research within an established research program at your university |

**State-of-the-Art or State of the Art Teacher Education Research**

The purpose of this paper is to explore the benefits of looking within and beyond the descriptors of state-of-the-art research in the field of teacher education. The UNESCO example of state-of-the-art research highlights the potential of agencies like UNESCO to distribute symbolic and economic capital to selected authorities or authors (Livingstone and Postlethwaite in UNESCO 2005a,b) of official research training modules. The elevation of a researcher to state-of-the-art automatically relegates other forms of research to a lower status or class-ification within the research community of the target audience. The funding and disseminating of related course materials can result in limited exposure to ‘lesser valued’ forms of research. Within teacher education research the distribution of the various forms of capital is likely to contribute to a loss of symbolic capital for alternative types of teacher education research. In the case of research capacity building activities in teacher education omissions similar to those highlighted in the UNESCO case provides a useful example of the potential of invisible influences on members of a community. The non-critical acceptance of state-of-the-art teacher education research may also eliminate the need for the researcher to understand the epistemological or methodological assumptions of it’s use. In such instances, researchers who benefit from institutional –distributed capital may help extend the reach of state-of-the-art teacher education research methods beyond the boundaries of geographical and disciplinary research communities.

The inclusion of the cases from the CFE and O’Meara and Spittle (2011) provide a means to extend the discussion beyond state-of-the-art teacher education research to include an examination of ‘state of the art’ teacher education research. A key point of difference in both of the cases is the absence of preferred method or technique. State of the art teacher education research represents a ‘what works best approach’ to improve: the appropriateness and effectiveness of the methodologies; the production of a diverse data set to strengthen the claims of the researcher; and the stimulation of scientific progress (CFE, 2002). The absence of preferred method or technique also creates a need for the teacher education researcher to justify their choice. I believe researchers, who can provide a justification for their choice of method through logical links to methodology and epistemology, are more likely to represent state of the art teacher education researchers. I also assert the need to understand the implications of differing epistemologies and methodologies is even greater when researchers from developed and developing countries collaborate through research. In such situations guidelines, such as the internationalisation framework, create class-ifications of research based on the capacity of collaborators to identify, promote, regulate as well as improve the quality of both the research collaborations and internationalisation activities. Neither examples of state of art teacher research contain direct evidence of class-ifying specific research methods or individual researchers within a research community. The state of art approaches presented in this paper emphasise a form of pragmatism. These approaches reflect a level of awareness of methodology and methods that extends beyond technique. They also assume a degree of openness on the part of the researchers to accept and work with a diversity of methodological traditions in order to enhance the quality of the collaboration and research outcomes.

The elevation of state of the art above state-of-the-art in this paper implies a shift away from the unquestioned adoption of state-of-the-art techniques to the conscious crafting of inclusive research, involving complementary designs and leading to convincing outcomes (see for example Crotty, 1998) for both the teacher education researchers and the communities at the centre of their investigation.

Returning to the original challenge of identifying state of the art teacher education research, the following definition is a representation of my current thinking on state of the art teacher education research:

*Examples of state of the art teacher education research represent the active constructions of inter-culturally aware researchers who make purposeful selections from a diversity of epistemological, theoretical and methodological traditions to generate knowledge in a way that provides a developmental experience for the researchers, earns the respect of their community, and assists a specified audience better understand a significant problem in teacher education.*

I look forward to further enhancing my understanding through conversations and within and beyond the teacher education research communities attending this World Assembly in Glasgow.

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1. As an author promoting the use of levels of quality in this ICET framework I acknowledge the potential for this framework to contribute to a form of symbolic violence via a classification ranking of researchers within the ICET community. To minimise the likelihood of this occurrence, I also suggest we must continue to critique this work, as well as explore work of the other members of the internationalisation through research communities. [↑](#footnote-ref-1)
2. The socio-cultural dimensions of the research attribute promote consideration of the setting of the research and the perspectives of the researchers during the research design process in both local and transnational collaborations. [↑](#footnote-ref-2)