

# Fostering action research understanding for budding research audience: A conceptual review

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#### Abstract

This paper grew out of our reflections on the scarcity of knowledge on action research for emerging scholars, academics and researchers. The steady increase in the utility value of action research has recorded indelible foot prints in a multitude of fields inclusive of psychology, sociology, agriculture, politics and education. This expose endeavours to construct the central features of action research methodology through tracking it from its conceptualisation, genesis, philosophical foundations, modes and models. The study was built from experiences of the researchers in their work with pre-service teachers, university students in pursuit of various postgraduate degree programmes and collaborative works with colleagues. The extensive review of literature through internet search and use of library sources was also pivotal in constructing this body of understanding of action research for emerging readers and researchers.

Keywords: Action research, budding research audience, educational context, conceptual review, emancipatory approach

#### Introduction

Literature offers various definitions of action research. Action research is a systematic change process consisting of planning, taking action, observing, and evaluating the results of action (Bruce, 2009; Mohamed, 2008; Bobrakov, 2014)<sup>[7, 40, 6]</sup>. According to Erro-Garces (2020)<sup>[15]</sup>, action research aims to contribute both to the practical concerns of people in an immediate a problematic situation and to further the goals of social science simultaneously. It is a reflective process of progressive problem solving led by individuals working with others in teams or as a "community of practice" to improve the way they address issues and solve problems (Waterman, Tillen, Dickson & de Koning, 2001).

Herr and Anderson (2005) <sup>[22]</sup> sees action research as a self-reflecting and problem solving strategy which assists researchers to understand and solve problems in social settings. It is concerned with learning in and through action and reflection, and is conducted in a variety of contexts (McNiff, 2013) <sup>[36]</sup>. The information that is gained about the situation to be improved is based on evaluative practice that alters between action and critical reflection (O'Leary, 2004). Inherent in these observations is that people acquire knowledge as they engage and review their actions in the research process. The context of the activities varies as it can be done in a number of fields including industry, health, business and education.

Action research is a deliberate, solution-oriented investigation that is group or personally owned and conducted (Reason & Bradbury, 2001). In education, action research is viewed as the process that seeks to understand and solve problems related to teaching and learning in schools and classrooms (Lim, 2007)<sup>[31]</sup>. It intends to improve the quality of actions and instructions (Johnson, 2005)<sup>[25]</sup>. Teachers have to act and talk persuasively about the power and influence of action research (Middlewood, Parker & Piper-Gale, 2011)<sup>[39]</sup>.

Kulcu (2014) defines action research as pre-planned and constituted systematic inquiries based on co-operation for the purpose of increasing the quality of life by means of critical reflection and interrogation. The approach provides a plan and tools to gather information to institute positive change (Situmorang *et al*, 2023)<sup>[53]</sup>.

It is regarded as a fruitful methodology that is used by academicians and teachers to obtain systematic and scholarly data, and to develop recent applications in various areas of education. Action research is also used to understand the instructional process and to develop it (AcarSeseni & Mutlu, 2014)<sup>[1]</sup>.

Action research is a set of practices that respond to people's desire to act creatively in the face of practical and often pressing issues in their lives in the community and organizations (Reason & Bradbury, 2008)<sup>[50]</sup>. It is a group of activities that seek to inform and influence practice. Reason and Bradbury (2008)<sup>[50]</sup> aptly presents action research as "a democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory world view".

According to Erro-Garces (2020) <sup>[15]</sup>, action research is an important tool that allows educational leaders to reflect upon their practices, programs and procedures. Teachers are able to think about their classroom activities and instruction in order to improve them for quality student outcomes. Action research is a planned procedure that serves to guide classroom practitioners in their quest to deal with concerns of everyday experiences for the purpose of changing them (Ferrance, 2000) <sup>[16]</sup>.

### Historical overview of action research

The origins of action research have not been convincingly accounted for within a single narrative (Charles & Ward, 2007) <sup>[10]</sup>. It has evolved over time (Reason, 2006; Dick, 2004) [48, 14], with accounts of its emergence diverse (Punch, 2009) [45]. It is thought of as having originated with Kurt Lewin (Maksimovic, 2010; Somekh & Zeichner, 2009)<sup>[55]</sup>. He was born in Germany in 1890 and migrated to the USA where he received citizenship and continued to live, becoming a social and experimental psychologist in the 1940s (Foglia, 2008)<sup>[17]</sup>. Lewin is recognized as the founder of action research (Zuber-Skerritt, 2012)<sup>[62]</sup>. He was initially associated with the Centre for Group Dynamics at the Massachusetts Institute of Technology in Boston, but soon went to establish his own National Training Laboratories. As a social psychologist, Lewin was interested in group decision-making and minority group equality (Sandretto, 2007) <sup>[52]</sup> and his work is considered fundamental to the origins of action research (Burns, 2004). In dealing with social problems, he focused on participative group processes for dealing with conflict and change in organizations and the society. The underpinning belief in his practice was that in order to understand and change certain social practices, social scientists have to include practitioners from the real social work in all phases of the process (Somekh & Lewin, 2005) [54]

Literature shows that action research is derived from the scientific method, which can be traced back to the Science in Education movement of the 19th century (Masters, 2000)<sup>[34]</sup>. The approach was used by a number of people who worked to bring changes in society well before Lewin. Moreno, is one physician who used action research in a community development initiative with prostitutes in Vienna in 1913. Pereira-Diniz (2002)<sup>[44]</sup> however, contends that participatory action research emerged in the 1970s and was concerned with equity and self-reliance in low income communities.

Kurt Lewin is thought to have constructed the current theory of action research in the mid-1940s (Ferrance, 2000; Carr, 2006; Maksimovic, 2010)<sup>[16]</sup>. The term being first used in his

1946 paper entitled "Action Research and Minority Problems". Action research was seen as research that used the principles of social science to effect social action (Carr, 2006). This methodology was based on experiential learning or learning by doing, which was specific to a given situation. Action research was described as proceeding in a spiral of steps, each of which was composed of a cycle of planning, action and fact finding about the results of that action (Maksimovic, 2010; Coghlan & Brannich, 2014)<sup>[11]</sup>. In order to understand and change some social situations, researchers need to engage members that are affected by the issue requiring intervention. Action research is not conducted on humans, but with men, and that practitioners have an active role in the research practice (Maksimovic, 2010).

# Philosophical foundations of action research in education

The life of action research draws much from the historical and philosophical weight of some movements. Of note is the Group Dynamics movement in social psychology and human relations training. This movement was used in the 19<sup>th</sup> century to address social problems through qualitative social ways of investigation. It worked to address social, political and cultural issues especially emanating from the Second World War. Kurt Lewin became influential at the time and used action research as a form of experimental research based upon the affected groups. Social problems were seen as the focus of social science research (Tobin & Kincheloe, 2006) <sup>[56]</sup>. His theory viewed action research as a process of addressing concerns in a cyclic sequence (Coghlan & Brannich, 2014) <sup>[11]</sup>.

In the 1950s and early sixties action research was used in the study of industry, and generated avid following in the United States of America at the Massachusetts Institute of Technology (Boston) and at the Tavistock Institute of Human relations in London (Somekh & Zeichner, 2009)<sup>[55]</sup>. Eric Trist, a social psychologist and influenced by Lewin, was based at the Tavistock Institute and attended to issues of both civil repatriation of German prisoners of war and large scale multi-organisational problems. The basic principle was to improve social formations and the lives of ordinary people by involving participants in the process (Somekh & Zeichner, 2009)<sup>[55]</sup>. This supports the understanding that decisions are best put into action by those who help make them.

The Post-war Reconstructionist Curriculum Development Activity was also a major injector of influence in the development of action research. Corey introduced action research through his "teacher as researcher movement" in 1949. He was a leading voice in contrasting action research with traditional research (Somekh & Zeichner, 2009)<sup>[55]</sup>. The initiative aimed to encourage teachers to utilize the results of their research in order to achieve social reconstruction (Maksimovic, 2010). Action research works to improve practices including professional development, curriculum reform and school restructuring (Hendricks, 2009)<sup>[21]</sup>. It was seen as the process through which teachers solved problems specific to their own schools and classrooms. It also thrived as a strategy to design curricula and address complex educational problems. Action research was largely conducted by outside researchers with the co-operation of teachers and schools (Tobin & Kincheloe, 2006)<sup>[56]</sup>.

In the United States of America, action research flowered briefly in education in 1950s and then declined. This down turn was due to the criticism that it attracted from established researchers and the linkage between the language of critical theory and left-wing political activism (Tobin & Kincheloe, 2006)<sup>[56]</sup>. The idea of the teacher as researcher was further suppressed and replaced by the so-called large studies in which there was a clear division between researchers and practitioners (McNiff, 2002)<sup>[35]</sup>. This change marked the separation of theory and practice (Pereira-Diniz, 2002)<sup>[44]</sup>. Outside researchers were then prevented from studying problems in education.

Tobin and Kincheloe (2006) <sup>[56]</sup> further state that the revival of "teacher as researcher" movement was another philosophical strategy that gave added impetus to the growth of action research. This movement originated in the United Kingdom as a result of the Stenhouses' Humanities Project and Ford Teaching Project during the 1970s. These projects were concerned with curriculum developments, the former with strategies for teaching moral issues and the later with reform in the teaching of science using "discovery learning" methods (Somekh & Zeichner, 2009)<sup>[55]</sup>. Stenhouse viewed the curriculum as a set of processes and interactions rather than a specification of subject content. Teachers were considered to be best placed to judge their own practices, and as such interpretations of their own work was preferred to that of external researchers (Charles & Ward, 2007)<sup>[10]</sup>. Research is effective when it contains a measure of personal experience (O'Connor, Greene & Anderson, 2016)<sup>[43]</sup>. This would allow teachers to strengthen their judgment, boost professional autonomy and status, enhance classroom practice and improve themselves personally (Maksimovic, 2010). Research and curriculum development was treated as incomplete without the involvement of teachers playing a central part in the research process.

Action research is considered as an approach that should not succumb to the status core but work to challenge and change it. Martin (2001)<sup>[33]</sup> states that action research must improve the lived practice of people by uncovering new and unexpected possibilities. The staging of the targeted change is done through collaborative reflection and dialogue among concerned parties (Martin, 2001)<sup>[33]</sup>. This co-operation between the members of the community and project administrators must exist in a context where administrators would need to see themselves primarily as research students (Winter, 2001)<sup>[59]</sup>. This disposition, with its related power basis is essential in engaging action research in teaching and learning.

In its next phase of development, action research became radical (Tobin & Kincheloe, 2006) <sup>[56]</sup>. The rebellious formulations of action research such as those rooted in the work of Paulo Freire, in Brazil, had been actively pursued by many people (Baum, MacDougall & Smith, 2006) <sup>[3]</sup>. This new brand sought to move away from the traditional focus of action research in professional development and curriculum improvement in institutions. In the 1980s in Australia, Kemmis led a group of academics who were interested in critical theory and action research at Deakin University. This marked the beginning of radical scholarship, rooted in critical theory. The democratic tenets were brought into the action research practice to challenge oppression and sustain social justice (Somekh & Zeichner, 2009) <sup>[55]</sup>.

The emergence of this form of action research animated challenges that existed in power, politics and control bases inherent in the older models of action research, which were generally viewed as aligned to the status quo. Critical action research serves as a radical route to locate students' voices in action research (Tobin & Kincheloe, 2006; Bell & Aldridge, 2014) <sup>[56, 4]</sup>. The collaborative stance of action research demanded free and open communication that is not restricted by concerns of power and status. It was believed that social problems could best be addressed through collective struggle and change (Hunter, Emerald & Martin, 2013) <sup>[24]</sup>.

Action research has been resisted as soft research and courted a certain size of hostility from researchers who belong to the older camps and not familiar with its processes (McDonald, 2012). It is at times regarded as an excuse for shoddy research despite the fact that it is also regarded as difficult to do (Hunter, Emerald & Martin, 2013)<sup>[24]</sup>. The great potential to involve students in this type of research provides a way to obtain their perspectives on what is salient in terms of the school and other matters on which the development of knowledge leans (Tobin & Kincheloe, 2006; Hui & Grossman, 2006)<sup>[56]</sup>.

In the recent past, the political nature of action research has been realisable in the contexts where there have been change in political systems and the consequent need for curricula transformation. In such instances, action research is used in articulating and pushing for the realization of new visions. In Namibia, action research has been at the centre of educational reform since independence in 1990. The policy thrust has been on the building of a new teacher education system which encourages teachers to critically engage with learning as professionals (Somekh & Zeichner, 2009)<sup>[55]</sup>. The focus has been on empowering teachers and building a local knowledge base through democratic means (Pereira-Diniz, 2002)<sup>[44]</sup>. Action research was adopted as the strategy to educate teachers in the Basic Education Teacher Development (BETD) programme. Somekh and Zeichner (2009) [55] state that:

Throughout the BETD, students were taught (through action research) to be reflective 'so that they become independent agents able to respond to the vibrant and ever changing environments of their classrooms and society.

This observation mirrors the critical worth of action research for teachers as it encourages them to think about their own practice in a process of continuous improvement. Reflective practice also develops independent performance in teachers as they would be empowered to think about their actions, formulate activities and implement them for their own improvement (Bell & Aldridge, 2014)<sup>[4]</sup>. This builds an adaptive potential in teachers which is desired for cultivating creativity and innovation for better professional outcomes.

The teacher educational change in Namibia has been viewed as a form of locally managed strategy to give control over educational policy and practice to those at the grass roots (Somekh & Zeichner, 2009)<sup>[55]</sup>. The desire was to challenge the influence of the West in education. The development of local knowledge by teachers resonates as a form of political action that claims the right of interpretation in Namibian education by teachers.

The use of action research as a tool to empower teachers in a reforming education system was also been evidenced in South Africa. In 2002, Winkler conducted studies that focused on higher degree course intended to offer teachers from the former Bantu education system qualifications that matched their experience. The participant teachers were from poor locations with faint job security. Somekh and Zeichner (2009) <sup>[55]</sup> state that it was a noticed difficulty to decide

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whether educational theory would be of any value to them and how to teach it in a way that would not devalue their own practical knowledge. The study indicated the need to engage teachers in theoretical work that involved reflection and confrontation.

## Approaches to action research

Basically three approaches or modes of action research can be envisaged although authorities have devised varied categorizations to represent them. Newton and Burgess (2016) <sup>[41]</sup> discuss three modes of action research containing the technical, practical and emancipatory while Noffke and Somekh (2009) <sup>[55]</sup> have three dimensions which include the

# Features of approaches to Action research

professional, the deliberate and the political. Berg (2001)<sup>[5]</sup> condenses the basically similar categorisation by different sources into the technical/scientific/positivist mode, practical/mutual/deliberate mode and the emancipatory/critical science mode. These modes are categorised depending on the amount of influence and responsibility that practitioners have in contributing to decisions, content and methods to be used in the process (Zuljan & Volgrinc, 2010)<sup>[63]</sup>. In education, practitioners relate to education officials such as school principals and teachers. The features of action research are shown in Table 1.

	<b>Technical Action Research</b>	Practical/Interactive Action Research		Emancipatory Action Research
•	The goal of the researcher is to test a particular intervention	<ul> <li>The aim is to transform a situation through practice</li> </ul>	•	It is aimed at expanding both theory and practice
•	It focuses on a pre-specified theoretical framework	• The researcher and practitioner identify a potential problem	•	It is concerned with practice which comes from theory
•	The relationship between the researcher and practitioner is facilitative	• The working relationship is mutual	•	Promotes a critical consciousness
•	The researcher identifies a problem and possible intervention	The researcher and practitioner dialogue to define the problem	•	Lends itself in political and practical leadership action for change
•	The practitioner facilitates the implementation of intervention	<ul> <li>Both are involved in the implementation of an intervention</li> </ul>		Emancipatory praxis from both the practitioner and researcher

# The technical approach

The technical approach to problem solving emerged from the early proponents of action research, including the likes of Lewin (1944) and Corey (1953). The main focus of this approach is to make a better product that is effective and efficient (Hall & Keys, 2005)<sup>[20]</sup>. This is done through the use of known techniques in a pre-specified theoretical framework (Turago, 2010)<sup>[57]</sup>. It is the technical skills of the researcher that drives the project. The interaction between the researcher and the researched is primarily technical and facilitatory (Berg, 2001)<sup>[5]</sup>. The researcher identifies the problem and a specific intervention, and then solicits the collaboration of the practitioner to facilitate in the implementation of that intervention (Turago, 2010)<sup>[57]</sup>. The practitioner may be an external expert with the skill of executing standards that are set in a given area of practice. The technical communication flows essentially from the practitioner to the group. The researcher tends to assume the role of a facilitator. This approach emphases the skill of action research which is derived from the experience and qualifications of managing the process (Turago, 2010)<sup>[57]</sup>. Noffke and Somekh (2009) [55] observe that the focus of attention is on the teacher who may need to work in collaboration with a more skilled individual in order to enhance skill mastery and the performance of students.

The technical action research is product directed but encourages personal participation by practitioners in the process of improvement and change. According to Kosnik and Beck (2006) <sup>[28]</sup>, technical action research develops in participating practitioners the characteristic of the artisan, who learns not just to implement set programmes but to creatively apply the learned knowledge. This perspective yields predictive knowledge. In higher education, partaking in action research activities is expected to improve the professional delivery of lecturers as well as the success of teachers (Hui & Grossman, 2006).

# The practical approach

This approach is collaborative, interpretive and personal in nature. The researcher and the practitioners actively participate in problem identification. This involves finding causes to challenging situations and developing possible interventions (Turago, 2010)<sup>[57]</sup>. Action research starts from what concerns people in practice and proceeds to establishing lasting changes to the undesirable state of affairs (Masters, 2006). A mutual framework of understanding has to be reached with participants who are usually involved as coworkers in the process. The major idea in this perspective is to research with or for rather than on people. The researcher stands with or a long with the researched. To Hall and Keys (2005) <sup>[20]</sup>, practical action research seeks to improve professional practice through the application of informed judgement of teachers. Its main objective is to allow participants to gain an understanding of their practice and to eventually develop solutions to pressing issues (Reason, 2000) [47].

Practical action research is a flexible approach compared to the positivist paradigm (Masters, 2000; Berg, 2001)<sup>[34, 5]</sup>. The frequent use of the term "interpretive" indicates this flexibility and the consequent accommodation of interactive and phenomenological perspectives (Foglia, 2008)<sup>[17]</sup>. The changes derived from practical action research tend to have a lasting character in related contexts, but specific interventions may be short lived as more participants involved in the project leave the system (Hall & Keys, 2005)<sup>[20]</sup>.

The practical action research approach embodies three types of knowing. These are the *techne*, *episteme* and *phronesis*. The techne refers to *knowing how* and is the source of skilful action. This knowledge results in the making of action and is product related. Episteme is the source of scientific action or knowing what. Practitioners in this case do not separate thinking from doing in the conduct of their work (Pereira-Diniz, 2002)<sup>[44]</sup>. On the other hand, phronesis or practical wisdom is knowing why and is the source of moral action which is often called practical judgement (Carr & Kemmis, 2004; Cooke & Carr, 2014)<sup>[8]</sup>. This practical judgement is grounded in experience and self-reflection (Noffke & Somekh, 2009) [55]. It also fosters the development of professionalism through the adoption of moral decisions for the good of the client (Pereira-Diniz, 2002)<sup>[44]</sup>. Phronesis is basically product centred as it results in doing action or praxis. The nature of the interaction of stakeholders in the research process is subjective, personal and constantly being formed and influenced by the situation. Practical action research appears as a favourable approach that institutions seek to pursue and involves administering interventions to issues of concern with the active collaboration of stakeholders.

### The emancipatory approach

The concern about politics in action research relates to matters of power relations, decision making and actions that are taken in various scales in the social world (Noffke & Somekh, 2009) <sup>[55]</sup>. This political approach involves reflection and action to emancipate participants from the dictates of tradition, precedence, habit, coercion as well as from self-deception (Somekh, 2006)<sup>[55]</sup>. It promotes a critical consciousness which exhibits itself in political as well as practical actions to promote change. Action research is emancipatory as it requires that practitioners take a close look at the structures and social arrangements that dominate sections of the population and change them for the better (Newton & Burgess, 2008). Researchers adopting this strategy aim to bring social problems of participants close to the theory that is used to explain and resolve them, and in the process raise peoples' collective conscience. The principal focus in this case is to stimulate a shift in the mind sets of people from the use of traditional methods which foster a perpetuation of the dominant paradigm.

Noffke and Somekh (2009) <sup>[55]</sup> point out that the conceptualization of the critical science perspective is founded in the critical theory of Habermas, a critical social theorist who presented a theoretical model for understanding emancipatory action research. A framework within which social critique may be developed was proposed. This allows the merging of theory and practice to be possible (Bech & Kosnik, 2006; Turago, 2010) <sup>[57]</sup>. The development of this action-oriented social process involve the theory, enlightenment and action (Carr & Kemmis, 2004) <sup>[8]</sup>. Enlightenment combines empirical research with reason. It is the phase in which ideas and beliefs from tradition are taken

as irrational and a hindrance to growth and change. The natural laws of science are used to understand the social world prior to action to serve the needs of people (Zalta, Nodelman, Allen & Anderson, 2015)<sup>[61]</sup>.

This approach is informed by theory which provides the impetus to carry out the practice. The reflection upon theory in the light of praxis or practical judgement, creates in people the knowledge that is personal. This knowledge can be acquired through reflection and is a source of power and control (de Vos, Strydon, Fouche & Delport, 2005). Critical intent is that natural element which motivates people to action and interaction in the activities of radical action research (Turago, 2010)<sup>[57]</sup>. In the second phase of enlightenment, theories are applied and tested in the process of reflection which is carried out within certain groups of participants. The group processes of reflection give rise to enlightenment in the form of authentic insights. The process must be allowed to occur through open communication among participants and the facilitator should not attempt to influence outcomes by attempting to thrust enlightenment on participants.

The strategic action resulting from enlightenment is a form of praxis. It is the action that is not influenced by conditions in the environment. This is the form of action research that is usually found in business organisations and in the work of non-governmental entities. In South Africa, it flourished during the struggle against apartheid (Robinson & Meerkotter, 2003). Generally, students are not particularly skilled in this action research strategy but it possesses essential features that assist in the understanding of action research theory.

#### The nature of action research

The defining feature that distinguishes action research from other research methodologies is its cyclic nature. It is a cyclical and continuous process (Rawlinson & Little, 2004). This reflects the fact that people usually work towards solutions to their social and organization problems in cyclical or iterative ways (Punch, 2009) <sup>[45]</sup>. The words cycle, spiral or helix are used to convey this tendency. One piece of research leading to a set of actions is not the end of the process, but rather the start of a cycle or spiral (Koshy, 2010). The research produces outcomes which lead to the taking of actions, but that in turn generates more questions for research, which in turn triggers further action, and so on. This stresses the idea that action research process is repetitive, cyclical and endless. The cycles of spirals involve problem identification, data collection, reflection, analysis, action and evaluation (Freebody, 2004).

The approach involves a spiral of steps with each step being made up of a circle of planning, action and evaluation of the results of the action (Lewin, 1948)<sup>[30]</sup>. The diagram below shows a representation of the action research process.

#### Action research process



Fig 1: The Action Research process (Adapted from Rerro-Garces (2020)<sup>[15]</sup>

Figure 1 above shows that action research is endless as learning is a cyclical process. The action researcher is always observing, analysing, designing, assessing, and adjusting (Rawlinson & Little, 2004). Practitioners employing action research are always involved in reflecting on their practice and instituting changes for improvement. McNiff, Lomax and Whitehead (2003) <sup>[37]</sup> support the concept, stating that "*Nothing is ever static. We are constantly changing ourselves and our contexts*".

The approach does follow a fairly sequential form. The first step of the initial cycle involves examining the idea (problem) carefully in the light of the means available. More factfinding about the situation is required. If this first period of planning is fruitful, an overall plan to reach an objective emerges and a decision in regard to the first step of action is made.

The next step on the development and implementation of action plans involves crafting interventions envisaged to address the situation at hand. The researcher and respondents collaborate in the task of identifying and prioritising actions to improve or modify the undesired state of affairs. Both the researcher and the people for whom the intervention is applied get involved in working to deliver a reorientation of their usually nagging circumstance. Data is collected after the intervention is served. The purpose of collecting data is to obtain evidence in regard to the goal for improvement (Rawlinson & Little, 2004). This allows an assessment of the effectiveness of the chosen technique in rectifying the problematic condition. The outcome of the executed action is then shared with other interested parties and stakeholders. Many forms of communicating the results are available including presentations to an audience, posters, written assignments and research reports.

While Kemmis and McTaggart (2000)<sup>[26]</sup> are affirmative that action research is composed of self-reflective cycles of planning, acting and observing. They also contend that these need not be viewed as a rigid sequence. The phases interlock, with each covered stage being rendered obsolete as a result of new found knowledge. This model is, however, criticized for placing insufficient emphasis on analysis at key points and for envisioning implementation as a straight forward process (Koshy, 2010).

Many action research models have evolved owing to the number of researchers interested in studying the various principles and aspects of the methodology. The result being to deepen and broaden social practice. Each model should be seen as providing insight into ways of dealing with social issues in diverse areas of human life. Koshy (2010) observes that action researchers should always adopt the models which best suit their purpose or adapt these for use. Calhoun developed an action research cycle which is not in the form of a "spiral," but still reflects a process that is built around a cyclical frame (Mertler, 2013). The model is conceived as shown in Table 2:

#### The action research cycle

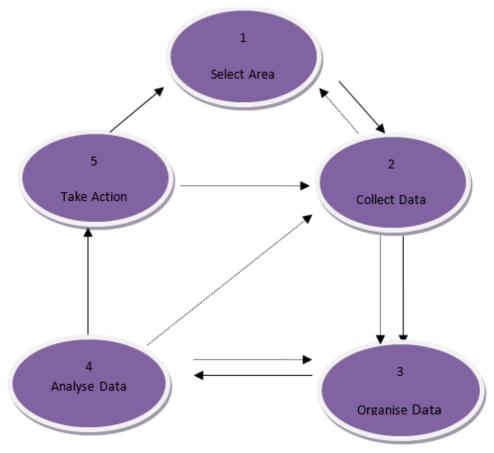


Fig 2: Action Research Cycle (Adapted from Mertler (2013)

The solid lines indicate the primary direction of the action research cycle following the numbered sequence. The dotted lines indicate the forward and backward motion of the process as refinement or clarification of information takes place (Mertler, 2013). The data collection stage, which ideally follows the selection of the issue, enables the sourced data to be checked against the selected area of interest. Once data is collected, it is organised. This stage leads to data analysis and interpretation, which also allows a revisit to both the data organisation and data collection stages. These are presumed to exert a significant influence on analysis. The last stage involving action has the potential to lead to the first stage where an area is selected or to the data collection stage which is critical in giving direction to the entire process for remedying the matter of concern.

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