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Abstract: This paper examines how to identify, formulate, and state a research problem especially in the social sciences and humanities. Specifically, it explains in simple terms what a research problem is, how it can be identified, formulated, and succinctly stated. The paper was prompted by the persistent challenges faced by higher degree students and their research supervisors in identifying, formulating, and stating their research problems. In the paper, the author defines what a research problem is, distinguishes it from other kinds of problem, and demonstrates - step by step - how a research problem can be identified, formulated, and acceptably stated. In addition, the paper also analyses - amongst others - the different formats of writing the statement of the research problem and proposes an easier and more suitable method of how to do so. Therefore, it is expected that the paper shall assist higher degree students and their research supervisors in easily identifying, formulating, and stating their research problems.

Keywords: Research problem, higher degree students, early career researchers

1.0 Introduction

The importance of the research problem in any research endeavour does not need to be over-emphasised. This is because: first, the research problem is the very reason behind every research activity (Patidar, 2013). Therefore, without it, there may not be any justifiable research. Second, the research problem provides for how a study can be conducted and its results reported (Kebritch, 2019). This means that the research problem, in fact, determines how a particular study is conducted. Third, the research problem defines the parameters of a given study (Shuttleworth,
2008). This implies that in a given study, the research problem defines what should be studied or not. In a nutshell, the research problem is the very heart of every research process. Therefore, the way it is identified, formulated, and stated may determine the success or failure of a particular research. But in spite of its enormous importance, the identification, formulation, and stating of an acceptable research problem still remain a daunting task – even to the most accomplished researcher. The challenge, however, is dire amongst higher degree students and early career researchers who are yet to master the art of conducting scientific research; thus, the genesis of writing this paper.

In the paper, the author explains - in a simple language - what a research problem is, how it is different from other sorts of problem; and how it can be appropriately identified, formulated, and succinctly stated in the social sciences and humanities. Besides, the paper also analyses the different formats of writing the statement of the research problem, and proposes an easier and more suitable method of how to do so. The paper has been inspired by the persistent challenges faced by higher degree students and their research supervisors in identifying, formulating, and stating their research problems. The author therefore trusts that this paper shall guide higher degree students and their research supervisors in the course of planning and executing their research projects.

The paper is organized in terms of responses to ten core questions, namely: (1) what is a research problem? (2) How is a research problem different from other problems? (3) What are the sources of research problems? (4) What are the different types of research problems? (5) How are research problems identified and formulated? (6) What are the features of a good research problem? (7) How is the statement of the research problem written? (8) Which is the easier and more suitable format for writing the statement of the research problem? (9) What are the relationships between the key concepts around the research problem? (10) What skills does a researcher require for identifying, formulating and stating an acceptable problem statement? In the subsequent section of the paper, answers to these core questions have been provided - one by one.

2.0 Core Questions

2.1 What is a research problem?

Different scholars conceptualize the term research problem differently. This partly accounts for the difference in the manner in which the research problem is formulated and stated.
According to Jackson (2018) and Patidar (2013), the research problem is the issue(s) that the researcher intends to investigate. It is therefore the foundational purpose of one’s study and something upon which one’s entire research activity is based. In fact, scholars who conceptualize the research problem as the purpose for which one engages in research often state their research problems in terms of purpose statement. Regrettably, several other scholars often disagree with this approach of looking at the research problem. Those who disagree with this approach contend that when a researcher looks at the research problem as the reason behind his/her study, then he/she might end up stating the purpose of the study instead of the research problem.

But there are, however, a few other scholars who indirectly support the idea of looking at the research problem as what defines the purpose of a particular research. One such a scholar is Jaikumar. According to Jaikumar (2013), a research problem is “a question that a researcher wants to answer or a problem that a researcher wants to solve” (para 1). This means that the research problem is the reason why a researcher would wish to engage in a particular study. For such scholars, they would prefer to state their research problem in terms of questions. Yet, in practice, a research question is also different from a research problem. In fact, a research question(s) is formulated in line with a given research problem in order to refine what a given study will be all about. Therefore, it is technically wrong to look at a research problem as a research question.

But again, there are also scholars whose views about the research problem differ with that of Patidar (2013) as well as Jaikumar (2013). One of these scholars is Bryman. According to Bryman (2007), the term research problem refers to:

an area of concern, a condition to be improved upon, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practice that points to the need for meaningful understanding and deliberate investigation. (p.5).

This is probably the most widely accepted definition of the research problem. The definition reveals that a research problem is a multi-faceted concept with diverse aspects. First, Bryman (2007) indicates that a research problem is “an area of concern” (p.5) such as ‘access to higher education by a particular group of people’ or “a condition to be improved upon” (p.5) such as ‘raising access to higher education for a particular group of people’. In both cases, the research problem itself can be looked at as ‘low access to higher education by a given group of people’.

But, it is the research question(s) that will bring about the difference in what would be researched about this particular research problem.
Second, Bryman (2007) also points out that a research problem is “a difficulty to be eliminated” (p.5). For example, a researcher may wish to investigate ‘barriers to access higher education for a particular group of people’ or ‘reasons why there are fewer women participating in higher education leadership’. Such a kind of study would be aimed at understanding the difficulties faced or the factors that may be hindering the achievement of the desirable condition.

Third, Bryman (2007) indicates that a research problem is also “a troubling question that exist in scholarly literature, in theory or in practice that cannot be answered without meaningful investigation” (p.5). For example, according to Herzberg’s two-factor theory of motivation, pay is a hygiene rather than a motivating factor for employees. However, having witnessed workers in University X agitating for better pay and sometimes going on industrial action demanding for pay raise, a researcher may be prompted to conduct a study in order to determine the effect of pay on the motivation of employees in that institution. In this case, the research problem can be the lack of knowledge about whether pay is a motivating factor (or not) for employees in this particular context.

Overall, Bryman looks at a research problem, more or less, as anything that bothers a researcher and which Onen (2016) observed “requires investigation in order to obtain a better understanding of the problem and propose solutions” (p.31). This conceptualization of the research problem is not any different with that of Makerere University (2011) where the research problem is looked at as a challenge posed, or an anomaly detected in the practical or theoretical world that requires a solution.

On the other hand, Bwisa (2008) and a host of other scholars also looked at the concept of research problem from a different perspective. In fact, Bwisa defined the term research problem as “an incongruence; a discrepancy between what is and what ought to be. It may also be described as a gap in knowledge that needs to be filled” (p.1). In that regard, a research problem is the existing negative state of affairs, but not the absence of a solution to that undesirable state (Makerere University, 2011). This means that a research problem can, for example, be looked at in terms of ‘while the average national enrolment in higher education in Country X is say 25%, the enrolment rate for a certain group of people from Region Y in the same Country is only 5 or 10 %’. This implies that Region Y is facing the problem of low enrolment of students in higher education. In addition, Bwisa (2008) also defined the term research problem in terms of “a gap in knowledge that needs to be filled” (p.1). In such a scenario, a researcher can state his/her research problem for
example as ‘there is little knowledge of what leadership traits faculty deans must have that result in higher research productivity of academic staff in University X’.

Similarly, Bwisa (2008) also looked at the research problem in terms of little research or limited research carried out in a particular area or field of knowledge. In that case, a researcher can state his/her research problem as ‘there is little research that has been conducted - for example – on the best practices for lecturers of on-line degree programs in University X’. Unfortunately, some scholars also disagree with this approach to looking at the research problem in terms of ‘lack of research in a particular issue or field’. They argue that if an activity or issue has ‘no problem’, then there is no reason to study it merely because it has not yet been studied by other researchers. To such scholars, the lack of research in a given field does not warrant the need for an investigation because there may, after all, be no problem to research in that particular area or field of knowledge.

On the other hand, a research problem is not necessarily a negative state of affairs. This is because a researcher can also become concern with why something is good amidst poor or unfavourable conditions. Therefore, this ‘exceptionally good case’ can become a research problem. For example, if a researcher decides to investigate the experiences of the few women participating in higher education leadership in order to draw lessons on how they have succeeded to rise and hold high leaderships positions in University X such as faculty deans, deputy vice-chancellors, and chancellors, then the research problem in this case is not the negative state of affairs but the positive experiences of these few women leaders. In this case, the researcher will be engaged in what is commonly referred to as appreciative inquiry. According to Bushe (cited in Kessler, 2013),

Appreciative Inquiry (AI) is a method for studying and changing social systems (groups, organizations, communities) that advocates collective inquiry into the best of what is in order to imagine what could be, followed by collective design of a desired future state that is compelling and thus, does not require the use of incentives, coercion or persuasion for planned change to occur.

This means that in appreciative inquiry, the researcher is driven to study something because of its favourable situation or condition. In which case, some scholars would prefer to refer to the statement of the problem in such a kind of study as the statement of opportunity. This is because such an investigation would be focused on understanding what is working well so that it may be maintained.
In summary, different scholars have different conceptualizations of the research problem. This may impact on the way they formulate and state research problems. Higher degree students and their research supervisors need to be aware of these divergent conceptualizations of the research problem if they are to be in position to ably formulate and write their problem statements.

2.2 *How is a research problem different from other problems?*

Ordinarily, the word problem conjures some kind of negative feelings in more or less everyone. This is because the term problem is generally used to refer to a matter or situation regarded as unwelcome or harmful and needing to be dealt with and overcome. This, to a large extent, is also true with the research problem. However, for a problem to qualify as a research problem, the researcher needs to answer YES to at least three core questions as illustrated in Figure 1.

![Figure 1: A flow diagram for identifying and verifying a research problem](image)

Source: Oso & Onen (2009)

Figure 1 shows the questions to which the researcher needs to answer YES if he/she is to verify whether a research problem exists (or not) in a particular context. First, ‘is there a perceived inconsistency or discrepancy between “what is” (the actual) and “what should be” (the ideal)?’ If the answer to this question is NO, then there is no research problem because things are just as they should be, and for that matter, the inquiry ends there. But if the answer is YES, then there is a problem, but it may not necessarily be a research problem.
Second, ‘is there a question about why there is a discrepancy?’ If there is no question about the discrepancy, then there is no research problem because the discrepancy has been, or can be explained from the available facts and data, without research. But if the answer is YES, then the discrepancy is not understood, and it cannot be explained from the already available data. In that regard, a problem exists, though it may not necessarily be a research problem.

Finally, ‘are there possible and reasonable solutions or answers to the discrepancy?’ Again, if the answer is NO, then the problem cannot be investigated through research since it is not possible to obtain reasonable answers to the research questions or generate research hypotheses. But if the answer is YES, then there is a research problem, and the search for these possible answers will form the basis for an investigation.

2.3 What are the sources of a research problem?

One major difficulty that higher degree students and early career researchers face is where to obtain research problems. Indeed, many students spend a lot of time struggling to locate their research problems. Yet, in reality, research problems exist all around us: in our families, classrooms, places of work, and everywhere in the general environment. Nonetheless, Patidar (2013) identified the common sources of research problems as:

1. Personal experiences: A research problem can emerge out of one’s experiences and personal observation of certain relationships for which no satisfactory explanation exists. These may include routine ways of doing things which may be based simply on tradition or authority without any scientific justification. For example, why are there few females enrolled on Science, Technology, Engineering and Mathematics (STEM) degree programs in University X? Or why are teachers (or lecturers) in University X not effectively using ICTs for teaching and learning? These issues can constitute research problems that someone can investigate.

2. Existing Theories: Theories are general principles whose applicability to specific problems or situations is not known unless empirically tested. It is therefore only through research that one may determine whether the generalisations embodied in a theory can be translated into specific recommendations for practice. For example, it may be an established theory that students learn better through self-discovery than through the lecture method of teaching. But for a teacher to know for certain whether his/her students will learn better
through self-discovery rather than lecture method, he/she has to try out the methods with the students. Therefore the teacher’s research problem in this case would be to determine which of the two teaching methods is more effective than the other in teaching his/her students; thus, the beginning of an investigation.

3. Formal Needs Assessment: Careful assessment of needs may reveal problems that may require research to solve. For example, a needs assessment in University X may identify lack of ICT facilities as a need. Therefore, a study may be conducted to determine the effect of ICT facilities - say on the learning achievement of students in Computer Engineering program in University X. Sometimes a need assessment may reveal an activity or program that is working well in an organization. Nonetheless, the need to understand how and probably why this particular activity or program is working well, can constitute a research problem; and therefore, it can prompt the need for an investigation.

4. Literature Sources: Every research that has been concluded and reported contains recommendations for future research, and research problem could result from such recommendations. Students can obtain research problems by just consulting the recommendation sections of reported studies in specific areas of interest.

However, a researcher may also wish to replicate a study that has been concluded on a particular research problem. This may be acceptable for various reasons. First, it may be accepted in order to check the findings of a milestone study. Occasionally, studies are reported that either produces new and surprising results or whose results conflict with previous research and other reported findings, or whose findings challenge a generally accepted theory. Such a study may be replicated to help confirm or disprove the validity of the new findings.

Second, duplication of a study may be allowed to check the trends or change over time in a given area of research. Many research results are dependent, in part, on time. It may be necessary to find out if the results are still applicable sometime after the study was last concluded.

Third, duplication of a study may be granted in order to check the generalizability of study findings. In such a case, the researcher may want to know if the same study can produce similar results in other populations or situations.

Finally, the same research problem may be studied in order to allow for correcting a faulty methodology that could have been used in the past. In this case, a researcher may replicate a study if he/she is not satisfied with the methods or instruments that were used in the original study.
2.4 What are the different types of research problem?

Research problems can be classified into different types based on several criteria. Generally, types of research problem can be classified on the basis of the kind of research question(s) that a researcher intends to answer in his/her investigation. In that case, there can be descriptive, relative, comparative, predictive, exploratory, and causal types of research problems (Patidar, 2013). In that case, descriptive research problems are those problems that answer the “what is like” kind of questions and where the researcher finds out about a situation, condition or occurrence of a phenomenon and describes it. Such problems are often investigated through the use of surveys, observation, and interviews. For example, a researcher may want to seek answer to the question ‘what is the proportion of individual teaching activities of teachers of research methods at University X?’ This kind of problem is descriptive in nature.

Second, a research problem can be relative or correlational in nature. These are problems that deal with relationships between variables (or issues). For example, ‘is there a relationship between gender and the performance of male and female students in research methods?’

Third, there are also causal research problems. These are problems that find out about the cause which led a certain consequence or about causal relationships. For example, a researcher may wish to establish whether excessive drinking of alcohol causes memory loss among his/her students.

Fourth, there are also comparative research problems. These are research problems that help us to compare things or situations. These examples show us that different research topics allow us to form research problems of different types.

2.5 How is a research problem identified and formulated?

Several scholars have different views about how the research problem can be identified and formulated. However, they all agree that every research project begins with the identification of the research problem, not topic, nor research questions. Besides, they also agree that the way the research problem is identified depends on the source of the problem - say one’s professional or general life experience. As a result, it is commonly agreed that to conceive a research problem, it is advisable to identify a broad area of research. This is commonly referred to as the research area.
Once the research area has been identified; for example, human resource management practices or productivity of academic staff in higher education or universal primary education, et cetera, then the researcher needs to widely and critically review literature in this area in order to identify gaps that the earlier scholars have not yet addressed. Besides, the researcher should be able to identify the undesirable or abnormal happenings in practice in that area of knowledge that are not yet well explained by current literature. For example, a researcher may detect that the academic staff of University X are not as productive as expected in terms of teaching, research and community engagement – the core functions of academic staff. In this case, the researcher can identify the problem as ‘low productivity of academic staff in University X’. But to formulate this into a research problem, the researcher needs to formulate questions about this problem where seeking for answers to this question (s) will form the basis of his/her investigation.

According to Akhidime (2017), “research questions set out the framework and the specific terms of inquiry needed to address the research problem” (p.638). Therefore, research questions help to refine the study problem. For instance, if the researcher notices that there are low productivity of academic staff in University X, he/she may ask whether it is the leadership styles of unit heads such as faculty deans that are responsible for it or whether the low productivity of the academic staff is underpinned by Abraham Maslow’s theory of needs or what implications the low productivity of the academic staff may have on the University’s reputation or international ranking? In this scenario, it is the searching for the answers to these questions that creates the need for research. These questions can be asked about different aspects of the problem concept or variable.

In quantitative research, the problem variable is called the dependent variable and the other issues (or variables) being asked about whether they explain the problem (or not) are called the independent or explanatory variables. In qualitative research meanwhile, the problem variable is regarded as the key concept. But there are still other issues or variables that the researcher can bring into play in a single study. These may be the intervening (or mediating), moderating or extraneous variables depending on the type of research the researcher is undertaking.

Akhidime (2017) opined that once a researcher formulates his/her research question, then his/her research problem will become clearer. For example, if the researcher notices that the academic staff of University X have low research productivity and if the researcher hypothesizes that it is the leadership styles of faculty deans that are responsible for this scenario, then the
researcher for example would ask: ‘Is there a relationship between the leadership styles of faculty deans and the productivity of the academic staff in University X?’ This research question will indicate the research problem which the researcher intends to investigate. If for example the researcher asks a question like ‘Is the research productivity of academic staff in University X underpinned by the equity theory of motivation? In this case, the research problem may become the ‘lack of knowledge about whether the low productivity of staff of University X is explained by the equity theory of motivation’.

2.6 What are the features of a good research problem?

Different scholars have different views about what constitutes a good research problem. However, for higher degree students, Akhidime (2017) and several other scholars opine that a good research problem must possess certain peculiar characteristics. First, they observe that a good research problem must be clearly and succinctly stated. If the problem is not well-articulated, it would not attract the attention that it requires and most probably, it will not be appropriately studied.

Second, a good research problem must be significant in nature; that is, it must be on an issue or activity of great importance to society, policy-makers as well as scholars. Such a problem can attract not only funding, but significant attention as well.

Third, a good research problem should be grounded in theory. For as Karl Marx (1819-83) once said any “Practice without Theory is blind, Theory without practice is sterile.” (para. 1). For that matter, a researcher should identify a research problem that is rooted in theory either from the beginning or at the end of the study.

Fourth, a good research problem should be feasible and amenable to research. This implies that the problem should be manageable (or do-able); that is, not too wide or too huge that it can be done with the available time and resources. Besides, the researcher should determine whether the data for the study are available and can be accessed.

Fifth, a good research problem should generate significant questions that need to be answered. If a research problem does not stimulate questions, then the explanation of what could be causing the problem may already be known or not important to be known. In which case, there would be no need for an investigation.
Sixth, a good research problem needs to be novel in nature; that is, it should be on something new, original or fresh. If it is to be a problem that has already been researched, then it must be sufficiently justified or else the study will not draw the interest and the attention that the researcher expects.

Seventh, a good research problem needs to have a base in literature. If a researcher is going to engage in researching on an issue that is not adequately written about, then first, the researcher will face difficulties in justifying the research. Second, it will be difficult for the researcher to engage in deep discussion at the end of the study when the researcher is not able to cross-reference his/her study findings with the works of other scholars.

Eight, a good research problem should be in one’s field of study. This is particularly critical for higher degree students who are usually required to carry out their studies in their area or field of specialization. Therefore, when searching for research problems, the student should ensure that his/her field of research falls within his/her area of expertise or field of study.

Ninth, a good research problem should be within the means of the researcher to competently conduct it; that is, the researcher must have the knowledge and skills which can enable him/her accomplish the task of investigating the problem. This implies that if the research problem turns out be complex and rather difficult for the researcher to competently do it, then it would also turn out to be a ‘poor or bad’ research problem.

Finally, a good research problem should have the potential for influencing future research and other researchers in a given field. This would mean that the scholar is researching on a significant issue in that field of knowledge. Therefore, when choosing a research problem, the researcher must prior determine if the research is likely “to influence future research and other researchers by whether or not the findings will make a contribution to the body of knowledge, the explanation of the data and make a difference for others” (PhD Essay, 2019, para 4).

2.7 How is the statement of the research problem written?

Over the years, different scholars have proposed different formats for writing the problem statement or what others refer to as the statement of the problem. For scholars like Jackson (2018) and Patidar (2013) who look at the research problem as the very reason behind every study, they propose that a problem statement should essentially be just one sentence with a few other sentences or paragraphs for mere elaboration. To such scholars, a problem statement can be stated in an
interrogative or declarative format. For example, a researcher can state the problem of his/her study as ‘to establish the relationship between the leadership styles of faculty deans and the research productivity of academic staff in University X’ (a declarative statement). This same problem statement can also be stated in a question form as: ‘Is there a relationship between the leadership styles of faculty deans and the research productivity of academic staff in University X?’ (an interrogative statement). But Jackson (2018) opined that a good problem statement should not only specify what the researcher intends to accomplish but also include other features such as the: (1) study methodology, e.g., “In this interpretive study…”; (2) the methods to be used to collect data, e.g., “I will interview … and analyze their journals” (3) study participants, e.g., “4 Latina middle-school girls”, (4) place where the study will take occur, e.g. “who attend an urban public high school in a large western city” (5) what is being studied, e.g., “in order to determine how they use journal writing to help them negotiate the joys and difficulties of adolescence.” However, other scholars do not agree with this approach to stating the research problem. They argue that when a research problem is stated in this manner, then it will not be any different with the purpose of the study. Nonetheless, in some social science fields, problem statements are simply stated that way.

For scholars who conceptualize the research problem ‘as a gap between what is and what should be’, a research problem is considered to be that ‘gap’ which exists between the ideal (or expected) and the actual (or prevailing) situations. In that case, Bwisa (2008) proposed a 5-step approach or format to writing the statement of the problem as follows:

**Step1:** Describe the ideal (expected) situation. This can be a statement of fact that is hardly challengeable.

**Step 2:** Describe the actual situation. This is a description of what is prevailing in the context of the study. The researcher must ensure that the actual situation differs with the ideal situation described in Step 1 in order to have the problem.

**Step 3:** Describe the magnitude of the prevailing situation (or problem) showing for example how endemic and widespread the problem is in the research context.

**Step 4:** Show the negative implications of the existing scenario if nothing is done to ameliorate the situation or the positive implications of the current situation if it is dealt away with. A researcher may as well decide to describe both implications depending on his/her writing style.

**Step 5:** Propose what needs to be done in the current study. It is this statement which is generally referred to as the problem statement for it signifies what the researcher intends to address as far as
the study is concern. Okafor (2016) gives an example of a statement of the problem written in accordance to the 5-step format:

**Topic:** Motivational System and Employees’ Productivity in Public Universities in Nigeria.

*(Statement of the Problem)*

In order to accomplish their missions, public universities in Nigeria need motivated workforces. Motivational system in this regard include good salary packages for all cadre of staff, allowances paid as at when due, a well-structured and implemented promotion system and a conducive working environment *(Step 1).* However, there are frequent and severe disciplinary actions, absenteeism as well as various forms of unrest in public universities in Nigeria which affect the accomplishment of the set missions *(Apeh, 2000).* Studies reveal that both non-management and management staffs are not adequately motivated *(Usman, 2001)* *(Statement 2 & 3).* Without effective motivational packages and procedures, the said vices are likely to continue and retard the achievement of the universities’ missions *(Statement 4).* Thus, there is a need to examine the public universities’ motivation systems and procedures, which is the aim of the proposed research *(Step 5).* *(p.21)*

According to Monash University *(2007)*, meanwhile, writing a good problem statement should start with describing the stable context. In this case, the researcher should describe unchanging facts about the topic or problem. For examples . . . “For many years, people have debated about ________” or “_______ has been controversial because…” or “_______ has dominated discussions of…” *(Step 2)*, the researcher should state common but incorrect or incomplete assumptions about the problem scenario. For examples, “Many people think______” or “At first glance, it may seem like ________”. *(Step 3)*, the researcher needs to describe something that reveals the status quo assumptions to be incomplete or inaccurate; for examples, “This initial perception fails to take into account ________” or “This theory cannot explain ________” or “People have failed to notice, however, ________.” *(Step 4)*, the researcher should show the readers why they should care: what bad things will happen if people continue to believe the status quo or what good things will happen once they stop believing it? For examples, “If we continue to believe ______, we'll never understand the larger question of ________.” or “Unless we change ______, we will continue to have trouble with ________.” or “Once we
understand ______, we will begin to see the answer to the problem ______.” Or “By rethinking our approach to ______, we can fix ______”. Finally, the writer should then provide his or her resolution by stating what needs to be done in the present scenario. In short, the researcher should provide a better theory or explanation to replace the status quo.

On the other hand, the scholars who look at the research problem as “an area of concern or a condition that needs to be improved upon…” (p.5), believe that to write an acceptable statement of the problem, a researcher needs to adopt a 4-step approach where the researcher:

**Step 1**: Describes the general problem or condition that needs to be studied.

**Step 2**: Describes the specific problem for the current research with the use of evidence drawn from published sources, personal experiences or government records.

**Step 3**: Using introductory words that describe the study methodology, the researcher proceeds to state what is to be done in this particular study.

**Step 4**: While describing what is to be done in Step 3, the researcher points out the study population as well as the geographical area which his/her study will cover. For instance, Bwisa (2008) provided the statement of the problem below as an example of the 4-step format:

Brain drain in Kenya is increasing (GENERAL PROBLEM). Every year about 50 professionals migrate abroad due to unsatisfactory working conditions (SPECIFIC PROBLEM WITH NUMBERS and supported with a citation). This brain drain is different from previous shortages, because it involves not only fresh graduates but also seasoned professionals (quote). This crisis in the professionals’ industry requires innovative solutions. One innovative solution may be a less structured leadership style, such as steward leadership (quote). This qualitative case study (DESCRIPTION OF STUDY TYPE) will explore perceptions of professionals in Kenya (POPULATION BEING STUDIED) about steward leadership as a strategy to alleviate or reduce factors contributing to the brain drain among professionals in the lake basin region (GEOGRAPHICAL LOCATION OF STUDY). The data to be gathered in this study may provide leaders with information relating to how they may address or mitigate factors contributing to the current brain drain.

There are also other scholars who look at the research problems as the lack of knowledge about some activity or situation. For such scholars, they can apply the 5-step or 4-step approaches to writing the statement of the problem. However, after describing the ideal and actual situations
or the general and specific problems, then the researcher proceeds to declare - for example - that ‘the problem in this study is that there is little research about ….’

2.8 Which is the easier and more suitable method of writing the statement of the research problem?

No doubt, different scholars have different approaches and formats to write the statement of the problem. In fact, their formats are often shaped by their understanding of what the research problem is and what its statement should entail. Although it is unhelpful to judge which of the approaches or format is better than the other, there is need to borrow a leave from the different approaches in order to come up with an easier and more acceptable statement of the research problem. In this paper, a more integrated format of stating the research problem is proposed. In this format, the researcher needs to:

Step 1: Describe the ideal or actual situation in the research context if there were no problem.

Step 2: Describe the actual situation that is prevailing in the research context.

Step 3: Problematize the situation indicating how ‘bad’ or ‘good’ the situation that concerns or bothers you.

Step 4: Point out what would happen if nothing is done to change the present situation or show what desirable things might happen if the current situation is improved upon.

Step 5: State what needs to be achieved in this study. This is what is commonly referred to as the problem statement. This statement can be stated in an interrogative or a declarative manner. But while crafting this statement, the researcher needs to include all what Jackson (2018) proposed to be included in a good problem statement such as the: (1) study methodology, (2) the methods to be used to collect data, (3) study participants, (4) place where the study will occur, and (5) what is exactly being studied.

Step 6: State how the data that will be obtained from the study shall be used to benefit stakeholders such as policy-makers.

In this case, a good statement of the problem would have most of the recommended features of the other formats.

2.9 What are the relations between research problem, questions, topic (and title)?

When discussing about how the research problem can be formulated and stated, one finds several concepts that are closely related and sometimes interchangeably used, yet wrongly. Some
of these concepts include: the research question, the research topic (or title), and research objectives. According to Akhidime (2017),

There is a nexus between research problem, research topic and research title. While research topic is the area of study or subject matter of interest on which the problem rests or is derived from, research title provides the operational expression of the research problem in a manner suggestive of the scope, required methodology in terms of the research design, required data, data collection and method of analysis for investigating or solving the research problem. (p.636)

Akhidime (2017) was, however, silent on the issues of how the research problem is related to the research question and hypothesis.

According to Bryman (2007), the concept research question is used to refer to the question around which one’s research is centred, while a research hypothesis is a specific, clear, and testable proposition or predictive statement about the possible outcome of a scientific research. Most times, these two: questions and hypotheses are alternately used. However, it depends on the way the researcher has formulated his/her study objectives. Okafor (2016) is in agreement with Bryman over how the research questions and hypotheses are linked to the research problem. In fact, Okafor observed that:

…the research question, research objectives and hypotheses derive their meanings from the research problem. They must all be linked in a consistent manner, otherwise the research will lack direction and the whole essence of conducting the research would be defeated (p.17).

This means that the higher degree students should be careful and “avoid the common error of stating hypotheses, questions and objectives that stand in isolation of the research problem” (Okafor, p.17).

In practice, when formulating the research problem, the researcher should begin with the identification of the research area. After a thorough review of literature, the researcher can then ask the research question(s). This question would be used to refine further the research problem to be investigated. For example, if a researcher chooses his/her research area as the integration of ICTs in teaching and learning in University X. The researcher may identify the problem of ‘limited or ineffective use of ICT by the university teachers (or lecturers)’. To refine further this problem, the researcher needs to generate a research question. For example, a researcher may ask: ‘why are
teachers in University X not effectively utilizing ICTs for teaching and learning’. In another scenario, the same researcher could instead ask: ‘is the effective use of ICTs by teachers in University X underpinned by the theory of planned behavior’? Or, the researcher can as well ask: ‘what are the factors affecting the utilization of ICTs for teaching and learning by teachers (or lecturers) in University X’?

In the above scenarios, since the researcher asked three different questions, he/she may as well carry out three different studies. The main objective (or purpose) of the first study may be ‘to find out why the teachers in University X are not effectively utilizing ICTs for teaching and learning’. In the second scenario, the purpose of the study can be ‘to explore whether the limited use of ICTs by teachers in University X is underpinned by the theory of planned behavior’. And in the case of the third question, the purpose of the study can be ‘to establish the factors affecting the utilization of ICTs for teaching and learning by teachers (or lecturers) in University X’. Therefore, it is important for the researcher to appropriately identify his/her research area, research problem, then ask a significant question that will determine the study objectives and the rest of the other parts of the study.

2.10 What skills does a researcher require for formulating and writing an acceptable problem statement?

It is widely agreed that conceiving and stating the research problem is indeed challenging especially to higher degree students and early career researchers who are yet to master the different research techniques. However, if one can master certain skills at the early stage of his/her research career, it would become rather easier to do so.

The first set of skills that a researcher needs for conceiving and stating the research problem are conceptual skills. This is because the formulation of the research problem requires the researcher to conceptualize the issues at hand if he/she is acceptably formulate and state the research problem. For example, if the researcher realises that the academic staff in University X resign so often and new ones are recruited to replace them. Once the researcher believes that this resignations and abscondments disrupt the flow of teaching and learning, let alone spoil the reputation of the institution, then he/she must form the correct concept to describe this ‘problem’. In this particular example, the researcher can say that the University is experiencing problem of high staff turnover or high staff attrition. On the other hand, the researcher may say that the
university is facing the problem of low staff retention. However, if the researcher for example says that the University X is suffering from the problem of high labour mobility, this would be a wrong concept for describing the research problem; and in that case, the researcher would be talking of something else instead of the prevailing problem. Therefore, to formulate an acceptable research problem, the researcher requires conceptual skills so that he/she is able to appropriately refer a given problem.

Second, a researcher needs analytical skills in order to isolate and state a research problem. For example if the researcher identifies the problem of high staff attrition in an organisation, he/she should be able to analyze how endemic and widespread that given problem is before he/she can demonstrate the magnitude and significance of that problem.

Third, the researcher needs writing skills in order to be able to state the research problem. The writing skills would enable the researcher to succinctly state what will be included and excluded in the study. Lack of writing skills can fail a researcher from clearly stating the research problem.

Fourth, a researcher needs critical thinking skills. This is because to appropriately formulate research questions and derive acceptable sub-questions and research objectives, the researcher must carefully think through the issues that constitute the research problem. A researcher that lacks critical thinking skills may end up asking questions that may not be critical and significant; thus, weakening the justification of his/her research.

3.0 Conclusion

In conclusion, it is important to observe that the issues surrounding the research problem are multiple and complex to understand. These issues start right-away from the way the term research problem is conceptualised, to how it is conceived and stated. This implies that higher degree students and early researchers need to understand what the research problem is, how it can be appropriately conceived and succinctly stated or else, they may continue to face difficulties in formulating and stating their research problems.
References


