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Research Communication: Enhancing Academic Capital or Influencing Educational Policy in the Ethiopian Higher Education Context?

T. A. ENYEW
Addis Ababa University, Ethiopia

H. Z. WOLDEMARIAM
Namibia University of Science and Technology, Windhoek, Namibia

Abstract

A prerequisite for evidence-based educational policy formation is the timely provision of scientifically solid and up-to-date information to policymakers. The extent to which such research is translated into policy action, however, is dependent on the success of communication strategies between researchers and policymakers. This study examined the communication strategies of researchers who interacted with education policy makers in Ethiopia. Data were collected from a sample of randomly selected 160 academic staff from seven public universities and 65 policy experts from the planning and policy department, Ministry of Education. A total of 12 interviews were made with policy makers and policy implementers so as to augment the opened ended questionnaire responses. Considering their roles in policy formulations and implementations, their accessibility and time only top academic leaders were interviewed using a structured interview checklist. Data were analysed using descriptive statistics and inferential statistics. Results showed that inviting government representatives to attend research conferences, sending copies of research publications to government offices and disseminating via electronic media were the most frequently used forms of communication whereas preparing policy briefs, conducting policy seminars, coaching policy experts, and press briefings were the least exploited communication efforts. Statistical analysis of research dissemination efforts revealed that there was no significant difference between male and female ($T(158) = 0.753$, $p > 0.05$). By contrast, applying Tukey HSD test to academic rank, the level of education and length of work suggested that the mean difference was significant for respondents whose academic ranks were between assistant professors and lecturers ($F(3,156) = 7.596$, $p<.05$), whose qualification levels were between PhD and MA/MSc (($F(2,157) = 5.496$, $p<.05$) , whose length of work in HEIs were between 6-10 and 11-15 years ($F(4,155) = 7.913$, $p<.05$). However, age was an insignificant moderator variable. From the study, it was learned that effective dissemination of research results to policymakers was an essential element of any research program; not only as a means of translating research results into policy action, but also research outputs without appropriate communication or active dissemination efforts was a wastage in so far as policy relevant ideas were generated and tax payers money spent. Consequently, research dissemination should be a planned process, goal and audience oriented and accompanied by various active dissemination channels (face to face interaction, printed materials, internet, mass media) using communication tactics (such as scientific conference presentation, work-

shops, seminars for policymakers, coaching or consultation, policy briefs, tool kits, e-newsletters, Web sites, newsletters, press release, best practice guides, leaflets, brochures, posters , interactive CD or DVD etc.) leading to awareness, understanding and action for an education issue identified as important such as quality and equity of education.

Keywords: educational research, research communication, educational policy, policy influence and academic capital

1.1. Background

Knowledge translation theories recognize that research evidence is one of several factors that may influence education policy and practice by gradual sedimentation of ideasrather than by a single translational event, including political imperatives, resistance to change, and the media (Ogilvie et al., 2009). The use of evidence is conceptualized as a three-stage process: identifying evidence (including decisions about what types of evidence to include); interpreting evidence (the quality and generalizability of the evidence); and applying evidence (how evidence is weighted, prioritized, and transformed to justify decisions) (Dobrow et al., 2006). As policy objectives shift from effectiveness (will it work?) to appropriateness (should we do it?) and implementation (how do we do it here?), the nature of the evidence shifts from largely experimental to largely non-experimental, requiring different skills and abilities to interpret and use (Dobrow et al., 2006). The degree of engagement between researchers and policy makers or practitioners also depends on the strength of the evidence, the potential impact of the evidence on policy, and what is practical and feasible in a particular context (Graham and Tetroe, 2009). But the greatest wisdom or discovery in the world will go unheeded if research evidences unheard by key stakeholders. For research to matter, it must be heard - and understood- by people in a position to bring about change in the real social world. To achieve this, the conceptualization forwarded by Bennet and Jassani (2011, p.12) is very helpful:

> Knowledge is like fine wine. The researcher brews it, the scientific paper bottles it, the peer review tastes it, the journal sticks a label on it, and archive systems store it carefully in a cellar. Impressive! Just one small problem: wine is only useful when somebody drinks it. Wine in a bottle does not quench thirst. Knowledge Translation opens the bottle, pours the wine into a glass, and serves it. The researcher might reasonably leave that part of the work to a broker, but must surely never leave it to pure chance.

It follows that researchers must ensure that knowledge goes beyond production and publication so that the way to make it heard, understood, and acted on or knowledge production must be followed by effective knowledge translation (KT) which is the exchange, synthesis and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for improved education development. Furthermore, Knowledge to Action (KTA) requires adapting knowledge to the local context, considering potential barriers, determining appropriate actions or interventions, monitoring and evaluating those actions and sustaining those changes (Graham and Tetroe, 2009).

Hence, to make research outputs part of policy agenda, it should not be hidden in academic journals or shelved; rather clear communication and active dissemination

of evidence to all relevant audiences in easy-to-understand formats are critical to increase awareness, consideration, adoption, and use of evidence (Louis and van Velzen, 1988 cited in Louis and Jones, 2001).In other words, the intent of dissemination in education should not simply mean to disperse information but to do so in ways that promote its use to improve and change educational systems and practices. And it is with such consequence that research results may be utilized mainly as conceptual or enlightenment (some change in awareness, thinking, or understanding by a policymaker without putting the information to a direct, documented use); symbolic/legitimatize (the use of research as a substitute for a decision, to support a decision that has already been made, as political ammunition to discredit a disliked policy, or to confirm existing notions); instrumental/engineering (a specific decision or action that can be directly linked to research input, which would not have occurred without that input) (Pelz, 1978) leading to tangible impacts (changes in policy, organization, resourcing or delivery) or intangible impact (changes in understanding, attitudes and behavior of individuals and organizations) (Weiss, 1979; Estabrooks , 1999).

On the other hand, findings from a series of dissemination studies indicate that there were many operational problems with dissemination including: (1) poorly identified target groups; (2) poor content and form of information; (3) a reliance on one-way communication; (4) a limited structure for between-group sharing; (5) weak incentives for use among practitioners; (6) insufficient evaluation of the quality of information; and (7) limited local development and training (Smink, 1985) and hence underutilization of research evidence. To manage these, dissemination planning which involves not only looking at where and when the information should be disseminated but what should be communicated and how it should be presented so as to maximize the relevance of research findings, usefulness and accessibility to policy makers (CARE, 2009) has to set from the very beginning, or according to Havelock (1969), the knowledge transfer process should give attention to : (1) who says (2) what to (3) whom by (4) what channel to (5) what effect for (6) what purpose seems underlined. But, dissemination is a complex process whose success depends simultaneously on several dimensions like the dissemination agent's characteristics (e.g., its credibility), the disseminated product (e.g., relevance of research results for users), the final user's characteristics (e.g., personal motivation to use research results), the communication channels used (e.g., collaboration networks), the communication format (e.g., presentations, reports, etc.), as well as the resources allowed for these activities (e.g. time, human and financial resources) (Huberman and Thurler 1991; Kirst 2000). Moreover, dissemination as a communication process should also consider: the nature of research evidence, the communicator or disseminator skill and influencing power, messages (format and content), channels (e.g., Internet or written word), tactics (e.g., policy briefs, webinars, podcasts), organizational contexts (of the receiver), receivers (the target audience), external influences (e.g., politics, budgets, timing); and outcomes (utilization goals) (Macoubrie& Harrison, 2013). Failing to take these dimensions into account is often cited as one of the reasons why research results are under-utilized by policy departments and practitioners in education (Boostrom et al., 1993; Hemsley-Brown, 2004; Wikeley, 1998; Willmott, 1994) in Becheikh et al (n.d).

In the Ethiopian context, as elsewhere, research as one core mission of a university system is well recognized and stipulated legally since 1960s following the establishment of Addis Ababa University. The existing Education and Training Policy of 1994 also demands appropriate nexus between education, training, development and research: "Research of practical societal impacts will be given priority and the necessary steps will also be taken to facilitate the coordinated efforts of those entire con-

cerned' (MOE 1994, Article 3.6.8).

Academia in universities are expected to undertake relevant research to support development endeavors of the nation (supplying policy inputs), as research evidence can impact policy at several points in the development process, from the outset when an issue or problem is identified for policy attention, to the development of the most appropriate response, to subsequent evaluation of its effectiveness or to inform debate, to stimulate better or different research, or to guide or support recommendations (Ogilvie et al., 2009) and communicate or disseminate to key stakeholders using appropriate and active dissemination channels and tactics with the goal of utilization.

1.2. Statement of the Problem

In the Ethiopian higher education system, since the introduction of higher education in early 1950s, the need for conducting educational research has inspired, at least, either for academic purposes such as academic dialogue, or for publication and promotion (Degarge, 2000). It was, however, with the establishment of educational research centre in 1968 (now Institute of Educational Research, Addis Ababa University), institutionalized studies of educational problems started (Seyoum, 1996).Consequently, in the last four decades or more, several studies have been conducted concerning education policy issues and dozens of education problems in the areas of access, equity, quality, relevance, structure, financing, efficiency, parent/community involvement, leadership and management, education reform, policy borrowing, predictive validity of entrance exams, curriculum, teacher preparation, student achievement, preschool, assessment, teaching methods etc have been documented by the government, researchers, development partners and experts (e.g. MOE, 1972; 1989,1994, 1996, 1997,1999, USAID, 1993, Habtamu, 1994, 1999; Tekeste, 1990, 1996; Teshome, 1979, UNDP,1998, Amare et al., 1998; Haileselassie,1999) cited in (Habtamu,2000). This may be an outcome of the existing Education and Training Policy (MOE, 1994) as it enlightens the status of policy implementation and its practical outcomes despite evidences whether such research outputs are effectively communicated to stakeholders and reconsidered or not are rare.

However, although the Ethiopian government recognizes the important role that research can play in educational policy development including allocating research fund, it is common to witness educational researchers and educational policy makers blaming each other formally or informally. For instance, it is common to hear that policy-makers in social service sectors criticizing researchers as out of touch, impractical and irrelevant and social researchers from their own side criticizing policy makers in the media, articles and conferences, class room or in the tea room for ignoring, under-utilizing or misrepresenting research findings when formulating or implementing policy or sub policy activities. This may suggest, the existence of fundamental differences between researchers and policy makers and that these differences impede a process that would otherwise see academic research inform and influence policy directly and more abundantly (Raadschelders, 2011) resulting from poor two way communication.

To this effect, the researchers recognize that there exists research-policy interaction gap in Ethiopian education sector and hence this gap is an issue for study, demands attention, can be investigated and undertaken within the stipulated timeframe and sound results can be deduced, and finally the researchers believe that undertaking study on research policy linkage might help to extend the frontiers of existing knowledge in the area under investigation in developing countries like Ethiopia.

This descriptive survey, therefore, assessed research communication channels and tactics of research outputs to influence educational policy making community in the Ethiopian higher education context.

1.3. Research objectives

Generally, this research was designed to investigate research communication in the Ethiopian higher education context. It was conducted to evaluate whether research enhanced academic capital or influenced educational policy in the Ethiopian higher education context. Specifically, the research aimed to:

- assess research communication channels that educational researchers employ to communicate policy relevant issues
- explain the major research communication barriers often faced by educational researchers
- evaluate research communication strategies which policy makers use to access policy relevant research on education issues

2. Literature Review

2.2. Understanding Research Knowledge, Communication and Utilization

Research, evidence, and knowledge are sometimes used interchangeably, yet the relationships between them are complex, contested, and fluid (Davies, & Nutley, 2008). Research is often seen as one form of evidence, and evidence as one source of knowledge (Nutley *et al*, 2007, p23). Research is an active process that produces findings (which may be ideas, methods, technologies, formulas, theories, laws, principles, etc). Research is a process (explicit, systematic, and open to scrutiny), the outputs of which are research findings (Davies, & Nutley, 2008) but research findings do not speak for themselves - they must be collated, summarized, and synthesized, and then presented in ways that make them acceptable and informative. When these findings are used in support of an argument or position, they are being treated as evidence.

Evidence may be viewed as a consequence of judging the merit of the findings, especially empirical results (Culyer& Lomas, 2006). Evidence can be used in different ways either to refute or corroborate the issue at hand (Upshur et al, 2001). In contrast, in social service delivery the concept of evidence has been interpreted in relation to notions of proof and rationality.

A unifying theme in all definitions of evidence is that, however, evidence is construed or read, it needs to be independently observed and verified (Davies et al. 2000). Evidence is generally used as an objective form that is independent of subjective experience. Knowledge is the broadest of the three terms which allows for empirical, theoretical and experiential ways of knowing (Brechin and Siddell, 2000). Knowledge (and therefore knowledge production) includes research-based knowledge but also encompasses other ways of knowing (experiential and tacit, as well as local and situational awareness). Experiential knowing may be affective, cognitive or behavioural, giving recourse to feelings and intuition which are entirely subjective.

Davenport and Prusak (1998) view knowledge as an evolving mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. They also say that in order for knowledge to have value, it must include the human addition of con-

text, experience and interpretation.

Nonaka (1994) expands this view by stating that knowledge is about meaning in the sense that it is context specific. But this is against the idea that knowledge can be applied universally. Various knowledge taxonomies exist (personal, shared and public; practical and theoretical; hard and soft; internal and external; foreground and background) but the most commonly cited are tacit and explicit knowledge dimension (Alavi and Leidner, 2001). As Nonaka et al (2000) defined, tacit knowledge represents knowledge based on the experience of individuals, expressed in human actions in the form of evaluation, attitudes, points of view, commitments and motivation. Tacit knowledge consists of cognitive and technical components where the former are mental models used by the knower that cannot be expressed directly by data or knowledge representations and also known as unstructured knowledge while the latter are concrete concepts that can be expressed readily and also known as unstructured knowledge. Explicit knowledge, in contrast, is codifiable knowledge inherent in non-human storehouses including organizational manuals, documents and databases. Explicit knowledge can be expressed directly by knowledge representations and consists of technical components. Broadly, knowledge has been categorized into two types: propositional or codified and non-propositional or personal (Eraut, 2000). Propositional knowledge is formal, explicit, derived from research and scholarship and concerned with generalizability.

Non-propositional knowledge is informal, implicit and derived primarily through practice. It forms part of professional craft knowledge (the tacit knowledge of professionals) and personal knowledge linked to the life experience and cognitive resources that a person brings to the situation to enable them to think and perform (Higgs &Titchen, 2000, Eraut, 2000). Unlike research-based knowledge, professional craft knowledge is not usually concerned with transferability beyond the case or particular setting.

However, this non-propositional knowledge has the potential to become propositional knowledge once it has been articulated by individual practitioners, then debated, contested and verified through wider communities of practice in the critical social science tradition of theory generation (Titchen&Ersser, 2001). In order to practice evidence-based, practitioners need to draw on and integrate multiple sources of propositional and non-propositional knowledge informed by a variety of evidence bases that have been critically and publicly scrutinized. Overall, knowledge can be generated from different types of evidences such as research evidence (Upshur et al, 2001), practical or professional practice or experience (Eraut, 2000), local context (Stetler, 2003) and clients and careers etc.

Research Communication

Ideally, results of research are used to improve policy and practice. For this to happen, communication must occur between those who carry out research and those who might use the results for some practical or policy-related purpose (Puchner, 2003). Diffusion is contrasted with dissemination to mean a passive process by which an innovation may spread or communicate organically through certain channels over time among the members of a social system (Lomas and Haynes, 1988; Dearing and Kreuter, 2010; Rogers, 2003). Dissemination is 'the transfer of knowledge within and across settings, with expectation that the knowledge will be ' used' conceptually (as learning, enlightenment, or as acquisition of new perspectives or attitudes) or instrumentally (in form

of modified or new practices)' (Hutchinson& Huberman, 1993, p.2). That is, while dissemination in the past has been linked to raising awareness and transmission of information, the current focus is on action defined as: 'purposive goal-oriented communication of information or knowledge that is specific and potentially useable from one social system to another' (Louis and van Velzen, 1988). Therefore, it is about dispersal of information in ways which promote use and help to drive educational change in organizations, systems and individuals. In other words, dissemination is a process requiring a careful match among (a) the creation of products or knowledge, and the context of that creation, (b) the target audiences, and (c) the content, media, formats, and language used in getting the outcomes into the hands (and minds) of those target audiences (Mace-Matluck,1986; NCDDR,2001). The goal of all dissemination should be utilization rather than distribution of products or paper.

Communication is the conveyance of information about certain subjects to others to create shared knowledge (Macoubrie and Harrison, 2013). Depending on the research purpose, communication objectives can include: increasing the understanding of a topic, increasing use, influencing behavior or decision-making, triggering discussions, getting feedback, and exchanging information (European Commission, 2010). A communication strategy defines the context of dissemination, whilst the dissemination strategy is just one component within it. Dissemination as a communication process thus involves: the innovation itself and key characteristics, the communicator or disseminator, messages (format and content), channels (e.g., Internet or written word), tactics (e.g., policy briefs, webinars, podcasts), organizational contexts (of the receiver), receivers (the target audience), external influences (e.g., politics, budgets, timing) and outcomes (utilization goals) (Macoubrie and Harrison, 2013).

The effective dissemination of research results to policymakers is an essential element of any research programme, not only as a means of translating research results into policy action, but also to provide 'pay-back' for the investment in social research (Stephenson and Hennink, 2002).That is, a process of communication is needed, in enough quantity and with enough intensity to make a difference. Dissemination should also be an intentional, planned process. Of all the frameworks available, Wilson et al (2010) definition of dissemination most represents this perspective, defining dissemination as a planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wide policy and service audiences in ways that will facilitate research uptake in decision-making processes and practice.

Thus, it can be assumed dissemination planning should give attention to communication models which includes: message intent (clear objectives for dissemination are needed); message content and qualities (or what messages should talk about, and in what way, messages should be aimed at achieving specific objectives); messages travel via the channels of distribution (or the general medium of communication, such as print materials, the Internet, radio, etc) (Shoemaker, Tankard & Lasorsa, 2004).

On the other hand, according to NCCMT (2010), knowledge producers while designing dissemination should consider the following key elements: goals (determine and document the goals of dissemination effort for the proposed project), objectives (associate each goal with one or more objectives that clarifies what to accomplish), users (describe the scope and characteristics of the "potential users" designed to reach), content (identify, at least, the basic elements of the projected content to each of the potential user groups identified), source (s) (identify the primary source or sources that each potential user group is already tied into), medium (describe the medium or media through which the content of r message can best be best delivered to potential

users and describe the capabilities and resources that will be required), success (describe how you will know if your dissemination activities have been successful), access (describe how you will promote access to your information and how you will archive information that may be requested at a later date), availability (identify strategies for promoting awareness of the availability of your research-based information and the availability of alternate available formats) and barriers (identify potential barriers that may interfere with the targeted users' access or utilization of information and develop actions to reduce these barriers).

Another feature of effective communication is setting clear purposes. According to Harmsworth and Turpin (2000), the purposes of dissemination are either for awareness, understanding or action. Dissemination planning is another ingredient as it is important to fix training events, such as scientific conferences, workshops, academic courses, training for scientists and / or policy makers meetings, computer-based discussion lists, open days, visits and products such as reports, articles in peer-reviewed journal, videos tapes, newsletters, press release, websites, research summary sheets, best practice guides, leaflets, brochures, and posters (NCCMT, 2010).Westbrook and Boethel (2006) also recommended that to be effective, dissemination systems should (1) orient toward the needs of the user, incorporating the types and levels of information needed into the forms and language preferred by the user, 2) use varied dissemination methods, including written information, electronic media, and person to-person contact, 3) include both proactive and reactive dissemination channels, 4) recognize and provide for the "natural flow" of the four levels of dissemination that have been identified as leading to utilization: spread, exchange, choice, and implementation, 5) draw upon existing resources, relationships, and networks to the maximum extent possible while building new resources as needed by users, 6) include effective quality control mechanisms to assure that information to be included in the system is accurate, relevant, and representative,7) include sufficient information so that the user can determine the basic principles underlying specific practices and the settings in which these practices may be used most productively and 8) establish linkages to resources that may be needed to implement the information - usually referred to as technical assistance.

Research Dissemination Channels and Tactics

An effective research dissemination planning process might select from the wide range of dissemination tools that are available and identify one or more that are "tailored" to promote achievement of research dissemination goals with each specific group within target audience. A channel, in models or theories of communication, refers to the general medium or transmission method of communication (Shoemaker, Tankard & Lasorsa, 2004). In other words, transmission methods or the channels make a difference. *A tactic* (Bryson, 2004) is how a research communication channel or medium is used in a given situation. For example, conferences or journal articles are communication tactics that might be used to reach researchers, primarily. The results of knowledge distillation activities might be tactics such as summaries, print or web systematic reviews and/or executive summaries (Dobbins, et al., 2007).

Table 1: Channels and Tactics of Research Communication

Channels	**Communication tactics**
Face to face	Conference presentation, workshops, seminars for policymakers, training or train the trainer, two-way dialogue or debate, group or team process to resolve concerns and issues, testimony to authorities, respond to questions, coalition of credible sponsors, technical assistance, knowledge broker, linking agent, legislative staff interaction, embedded researcher, interactive CD or DVD training, phone information service , phone conferencing , coaching or phone consultation, etc
Printed materials	Formal guidelines, manuals, practice guides, **policy brief*** , tool kits, tip sheets, **executive summaries***, case studies
Web internet	Computer-mediated group discussion and/or decision making, E -learning, courses, or online training, **E-newsletter***, Listserv, Webinars, informal email messaging (e.g., short summaries of Cochrane Reviews), Web clearinghouse, Blog, Community of Practice
Mass media	Attention-getting activities to generate press, media campaign
Audio/visual media	Interactive CD or DVD training, phone information service, phone conferencing, Coaching or phone consultation
An asterisk (*) designates items that audience research finds are audience preferences; these are primarily policymaker and administrator studies	

Source: Macoubrie & Harrison (2013)

2.4. The Theoretical Foundation of the Study

Although evidence from research is only one of the many factors considered in policy development, there is an increasing recognition of its potential value. Because, evidence from research can enhance policy development by identifying new issues for the policy agenda, informing decisions about policy content and direction, evaluating the impact of policy, providing general principles, concepts and problem identification, suggesting alternative scenario arguments; turning out concrete problems to concrete solutions, or forecasting how a situation is likely to develop (Weiss, 1979; Hanney et al., 2003) So, impactful, influential, informative research or research for policy input has to be disseminated or communicated. The extent to which such research is translated into policy action, however, is dependent on the success of communicating research outputs between researchers and policymakers via appropriate channels and tactics.

Communication theory is the theory of how humans share, encode, and decode what they know, what they need, and what they expect from each other (Berger and Calabrese, 1975) and well informed and guided by three interrelated theories: dissemination planning, social judgmental and network analysis.

Dissemination Planning

Traditional diffusion (just let it happen) is passive, unplanned, uncontrolled dissemination; primarily horizontal or mediated by peers (e.g. publishing in peer reviewed journals, presenting research results to peers at academic conferences); potential user needs to seek out the information while dissemination (make it happen) is an active process to communicate results to potential users by targeting, tailoring and packaging the message for a particular target audience; strategies include: linkage and exchange events to share relevant research syntheses; developing a user driven dissemination strategy; media engagement; using a knowledge broker; developing researcher/ knowledge user networks (Lomas,1993; Lawrence,2006). Dissemination planning which involves not only looking at where and when the information should be disseminated but what should be communicated and how it should be presented is vital as these steps will maximize relevance, usefulness and accessibility of findings.

Social Judgment Theory (SJT)

Social judgment theory suggests that knowing a person's attitudes on subjects (new research ideas or policy issues) can provide you with clues about how to approach a persuasive effort (Sherif&Hovland, 1961). Social judgment theory proposes that people make evaluations (judgments) about the content of messages based on their anchors, or stance, on a particular topic messages (Ibid). In addition to an individual's anchor, each person's attitudes can be placed into three categories. First, there is the latitude of acceptance, which includes all those ideas that a person finds acceptable. Second, there is the latitude of rejection, which includes all those ideas that a person finds unacceptable. Finally, there is the latitude of non-commitment, which includes ideas for which you have no opinion - you neither accept nor reject these ideas. What the social judgment theory implies that while disseminating research outputs to policy makers, policy makers are not from vacuums, rather policy makers have theoretical and practical knowledge's, consider multidimensional data sources, import feasible strategy ideas or best practices around the world etc. so that timing, usefulness, economic and political feasibility of research findings should be weighed.

Social Network Theory

Network analysis (social network theory) is the study of how the social structure of relationships around a person, group, or organization affects beliefs or behaviors (Barnes 1954).That is, creating formal or informal interpersonal communication structures or networks between individuals or interorganizations is vital for the production of knowledge by researchers and consumption of produced knowledge by policy makers. The relationships may comprise the feelings people have for each other, the exchange of information, or more tangible exchanges (Mouge& Contractor, 2003).

In general, the above theories imply that while undertaking policy relevant research projects, characterized by availability, accuracy, credibility, generalizability, relevance, practical usefulness, there has to be dissemination planning so that research

dissemination should be a planned process, goal and audience oriented, two way, informed by high- quality context specific evidence, messages should be clear, simple, action-oriented and tailored for each audience and should be accompanied by various dissemination channels (face to face interaction, printed materials, internet, mass media) and communication tactics (such as scientific conference presentation, workshops, seminars for policymakers, technical assistance, coaching or consultation, policy brief, tool kits, executive summaries, E-newsletter, Web sites, newsletters, press release, best practice guides, leaflets, brochures, posters, interactive CD or DVD etc) . In other words; research outputs without appropriate communication or dissemination is wastage in so far as policy relevant ideas are generated. Consequently, research dissemination should be a planned process, goal and audience oriented and should be accompanied by various dissemination channels and communication tactics leading to awareness, understanding and action.

3. Methods and Procedures

Research Design

As the nature of research communication in a developing country is complex, dynamic and multidimensional, involving a large number of actors and factors, the study purpose was framed to investigate communication of research out puts to influence sub policy making activities of the Ethiopian government. Consequently, a descriptive survey method was chosen to gain a general understanding of the world of dissemination and utilization in education sub policy making activities. Descriptive research aims to interpret what is and how what is. Cohen, Manion and Morrison (2007) argued that "many educational research methods are descriptive…seeking to describe and interpret what is" (p.169). A descriptive research study focuses on conditions and relationships that prevail. It seeks to point out views, and attitudes that are held. It tries to find out processes that are going on. This study was based on a process design view of descriptive survey because surveys are appropriate for measuring people's perceptions, opinions, knowledge, attitudes, behavioural intentions, behavior and thoughts of a representative sample of individuals at a given point in time and place using primarily closed-ended questions (Kalaian,2011).

Sampling

The target populations of the study were the academic community working in universities in the areas of teacher preparation (science, language, educational psychology, pedagogy, curriculum, special need, early childhood education) and education leadership and management with the rank of professor, associate professor, assistant professor, junior academics undergoing their PhD study and government officers working in the policy and planning department. These categories represent the full breadth of academics who contribute to policy through their engagement with research. Across the country, during the study period, there were 30 public universities with teacher education programs (long term and short term training). These institutions vary in staff composition, program diversity (undergraduate and post graduate), institutional history and year of establishment, institutional publications (journals, proceedings), track record of organizing institutional, national and international conferences, and regional location. Drawing on these variables, seven universities (23.3%) were selected randomly out of 30. Our goal was to ensure that our sample was representative of all of these variables.

From this block sample, academics with the rank of lecturers including those who were pursuing their PhD studies were selected randomly. As only five universities from our sample offer doctoral programmes, that entire segment of our sample came from these universities. In contrast, all academics with the rank of assistant professor and above from the seven universities were included in the study as their numbers were relatively small (54). In the administration of our questionnaire, we applied the *sample size for*The Pennsylvania State University, 2017).

$$S = \frac{X^2NP\,(1-P)}{d^2\,(N-1) + X^2P\,(1-P)}$$

Where:

S = Required Sample size
X = Z value (e.g. 1.96 for 95% confidence level)
N = Population Size
P = Population proportion (expressed as decimal) (assumed to be 0.5 (50%)
d = Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error

Participants from the sample institutions were selected using proportionate allocation between the size of the sample and the size of the population (= 200/365 = 0.55). A simple random sampling was then applied to each university (See Table 2). Following these procedures, 200 academic participants and 78 education experts were selected. High ranking academics such as Deans, who were representing Bahir Dar, Dilla, Hawassa, JigJiga and Mekelle were consulted parallel to the workshop vacation held in the Ministry of Education from September 14-20,2015 and interviewed using simple random sampling. *A total of 12 interviews were made with policy makers and policy implementers so as to augment the opened ended questionnaire responses. Considering their roles in policy formulations and implementations, their accessibility and time only top academic leaders were interviewed using a structured interview checklist.*

Within the policy making community, we targeted government office middle level leaders (ministerial advisors and general directors), directors and senior civil servants, who work in the ministry of education (under the directorate of gender, special need education, curriculum development, adult education, early childhood education, school improvement, teacher development and school leadership, academic and research affairs) and its branch offices (education strategy centre, quality and relevance agency, national learning assessment and examination agency). These participants were essentially selected on the basis of their willingness to participate. However, we were satisfied that our sample was representative because all employment levels were represented within the sample group.

Twelve in-depth interviews were carried out for the study. The number was representative as the potential group was fairly small in size. We ensured that every organization was represented. As such, high ranking management staff of the three universities studied, and high ranking management staff in all the relevant government offices were represented. Having said this, we ensured that those interviewed represented the different strands of high ranking management. For example, we interviewed Vice Chancellors as representatives of academic leadership in universities, as well as Registrars, who represent managerial leadership. In the government offices, we includ-

ed Directors, who lead operations, as well as Ministers, who represent political leadership. Based on this, we were confident that we can capture views that might be nuanced on the basis of the roles played by our participants. There were a total of fifteen potential participants in the group. Having succeeded in interviewing twelve of them, we felt confident that the return rate of 75% is adequate and will enable us to collect the required data. In addition, as we progressed with our interviews, we got to a situation of data saturation, as the responses fell into a similar pattern in respect of the various issues focused on during the interviews.

Academic community			Sub policy making community		
University	Study population	Sample size (200/365 = 0.55)	Government office	study population	Sample size (78/102 =.76)
Addis Ababa	136	75	Head office (MOE)	82	63
Bahir Dar	75	41	ESC	13	10
Hara Maya	34	19	NEAEA	7	5
Dilla	30	17			-
Hawassa	34	18			-
Mekelle	36	20			-
JigJiga	20	11			-
Total	365	**200**		102	**78**

Table 2: Target population and participants of the study

Questionnaire return rate was 80.0% (160) for academic community and 83.3% (65) for education expertise. This return rate can be considered as quite good. In order to augment the open ended responses from the questionnaires, a total of 12 interviews were also conducted. Whenever in-depth interviews were conducted with the Deputy Ministers, Directors, Deans and high ranking officers to cross-check data, purposive sampling procedures were followed.

Instruments

This cross-sectional survey employed mainly self-administered questionnaire with the intention of assessing the perceptions, opinions and practices of the academic community on research communication strategies. For survey questionnaire development, initially, the items included in the survey questionnaire of the present study were largely based on the review of related literatures and adaptations of other works produced in the area of education, health, sociology and criminal justice in the Western World. The survey instrument was tested through multiple confirmatory means: theoretical guidance, an extensive literature review, peer reviews, expert opinions, pretesting and calculation of Cronbach's Alpha. The calculated Cronbach's Alpha for communication subscale was 0.82 which was above 0.70 indicating a high level of

internal consistency. And, hence, the researchers considered the instruments to be valid and reliable based on the blueprint for determining reliability and validity of an instrument as suggested by many scholars (e.g. Bowling 2002, Bryman & Cramer 2011, Pallant, 2005, Alonge, 2004, George & Mallery, 2003) who recommend a Cronbach's alpha = 0.70 or above is acceptable for social science research.

In-depth interviews were conducted with the Deputy Ministers, Directors, Deans and high ranking officers to cross-check data, purposive sampling procedures were followed.

4. Data Analysis, Results and Discussions

4.1. Demographic and Career Variables of Respondents

After checking fully and partially filled questionnaires from the academic community, codes were numbered and given from 001 to 160. However, only completely filled questionnaires were considered. Quantitative data analyses in the form of descriptive statistical analysis were employed that included a measure of central tendencies (e. g. frequency, mean and standard deviation) and inferential statistics (t-test and analysis of variance). Demographically, the data for this study were collected from seven universities: Addis Ababa, Bahir Dar, Mekelle, Dilla, Hawassa, Haramaya and JigJiga. The vast majority of the respondents were male (91.3%), between 36 and 45 years old (51.9%), obtained a PhD degree (34.4%) and PhD candidates (37.5%), worked for 6 to 10 years in higher education institutions (59.4%) and less than half of the respondents (43.8%) were assistant professors and above.

4.2. Research Communication Efforts in the Ethiopian University Systems

Using dissemination effort Likert scale aimed to assess accompany of scientific productions with different communication channels (print, electronic, in person), results showed the highest mean above the overall mean was for the item that asked invitation of government body to attend scientific conference (X=1.74 SD =.0746) while the overall mean and standard deviation for the research communication scale were 1.59 and 0.582. As indicated in Table 2, inviting government office representatives to attend research conferences (by a little more than half of respondents), sending copies of research publication outputs to government offices (about 43%) and disseminating via electronic media (about 37%) were the communication channels made by respondents whereas preparing policy briefs, informing findings accompanied by formal letters and press briefings were the least exploited communication channels (less than 25%) accomplished during 2010 to 2015.

Table 2: Dissemination efforts of respondent to influence policy making bodies

Communication strategies	Never	1-2 times	3-4 times	5-10 times	>10 times	Mean	SD
Concerned government body invited to attend research conferences, workshops	41.3	45	12.5	0.6	0.6	1.74	0.746
Copies of journals or proceedings submitted to directly concerned government body	56.3	36.3	5.6	1.3	0.6	1.54	0.717
Results disseminated via webpage, open days, e-mail, exhibitions	62.5	27.5	8.8	1.3	--	1.49	0.709
Concerned government body contacted personally and issues discussed well	65	29.4	5.6	-	-	1.41	0.597
Policy briefs produced and submitted to concerned government body	81.9	16.9	1.3	-	-	1.19	0.427
Letter written to concerned government body about research findings and policy implications	83.8	16.3	-	-	-	1.16	0.37
Briefings made using press release	84.4	13.1	1.3	1.3	-	1.19	0.508
Average	67.89	26.36	5.01	0.64	0.17	1.59	0.582

Following the research communication efforts scale, over all, 26.36%, 5.01%, 0.64% and 0.17% of the respondents believed that scientific works were disseminated 1-2 times, 3-4 times, 5-10 times and more than ten times respectively to appropriate audience while more than half of the respondents (67.89%) believed that dissemination efforts were almost negligible during the survey period (2010-2015).

Also, citing research dissemination experiences of HEIs, two Deans from Dilla and Bahir Dar University in a group interview described the situation as follows:

> … A *series of research conferences are being successfully conducted, on multi-thematic educational issues where practitioners, scholars, partners, researchers and government representatives get involved, and we believe methodological and theoretical perspectives are shared, academic discussions (learning) held. Also, selected papers are published in conference proceedings and copies are also disseminated to stakeholders. Of course, the*

adequacy of discussions, effectiveness of dissemination strategies, added values to policy makers yet to be assessed.

Another female faculty respondent from AAU, during wrap up of May International Research Conference held at BDU in May 2016 commented that:

In a series of educational research conferences (national or international), it is common to see senior government representatives (State Ministers or his/her advisors or representatives or general directors or sometimes the Minister) avail himself/herself up on official invitation by the conference organizing university, but the senior government representatives are not active throughout the discussion sessions to listen or share rather s/he will return office or home after making an official opening or key note speech…so there is a problem still to be tackled.

In an interview, a mid-level director who attended research conferences held in Ethiopia also shared what he observed in the past:

…in educational conferences, there is passive dissemination trend being practiced especially from education policy making perspectives…simply conducting one day or two days conference on a series of multi academic issues and making information public with the hope someone will find and use it (e.g., through a journal article) may not be appropriate channel and tactic instead dissemination should be active, involving a change agent deliberately engaged in actions to increase the spread of new information and speed the utilization of the output both from the university as a pushing agent and the ministry as policy/sub policy idea entrepreneur (a pulling agent)… (EE3, September 17, 2015)

This may mean further that the activities undertaken by researchers to push the knowledge out to the necessary groups in appropriate formats were inadequate. With regard to 'push efforts', an expert from the Ministry of Education commented that:

Traditionally, researchers disseminate findings via publications or conferences, both of which are important initiatives but tend to confine the research findings within the academic circles. Pushing this knowledge out to users requires re-packaging information and highlighting actionable, jargon-free messages especially in the form of policy briefs. To have an impact, research findings must be translated and adapted to specific contexts and situations and be communicated in user-friendly formats …… (EEI2 September 14, 2015)

Sharing the experience, with regard to dissemination efforts, in the open ended questionnaire item, a Director with education background noted that:

The quality of the science may not be the only thing that influences decision making; there is also a need for more harmonized and effective communication of research results across institutions using agreed language, tools and standards (code10).

From the analysis and interview protocols, with regard to dissemination efforts, results depict that, instead of tailoring research findings in to formats to potential consumers (policy makers), untargeted, ad hoc forms of communication such as publication in academic journals/ proceedings and conferences have been practiced. In other words, exercising such traditional approaches may mean the existing research activities are predominately for academic purposes. Indeed, the use of conferences and workshops as dissemination strategies has negligible impact on practices. No evidence is found on the effectiveness of such passive dissemination strategies as systematic review of Freemantle et al (2002) show.

The views of the respondents showed that lack of commitment from the government side to attend or stay in the conference sessions and ask or answer policy relevant questions has been a challenge. To comment openly, it appears that in the Ethiopian context researchers and policy makers live in two different world with different values, reward systems and languages. Meaning, research has a limited impact on policymaking; an idea we strongly share with the 'two communities' theory' (Caplan, 1979). These further shows that linkage and exchange efforts and meaningful partnerships or two way communication systems are not strong possibly due to the demand and supply mismatches, insufficient incentives, poor mutual understanding and communication, cultural mismatch problems or weak social networks and social capital.

In other words, communicating research findings to policy makers for policy or product development (e.g. input into official guidelines or protocols), sector benefits (e.g. impacts on specific sub policy issues) and wider societal benefits using print and electronic media and seminars (in person interactions) in a language that favours end users (policy makers) are inadequate or passively disseminated which may further hint out that the research engagement and outputs of educational researchers may be for academic purposes such as for publications (e.g. peer-reviewed journals), research capacity building (e.g. learning), institutional requirement (erg career development and institutional reputability) or any combination of theses. Gibbs and Locke (1989) insisted that research productivity was the most important criterion for making promotion and tenure decisions after surveying 59 chairs and committees in 93 universities. According to Gibbon, Ivancevich and Donnelly (1994) in Lertputtarak (2008), as result of research engagement, organizations typically provide two types of rewards for researchers. These are extrinsic rewards, for example salary increase and promotions, and intrinsic rewards that are associated with the actual process of work. Intrinsic rewards can be associated with an individual's personal satisfaction arising from completion of complex projects, for instance the achievement of a personal goal such as publishing a research paper, or developing feelings of increased autonomy and personal growth through successful completion of research work (Katz & Coleman 2001).

Researchers were categorized following their length of work in universities, their qualification and academic rank which showed that 1) as length of work in HEIs increases research dissemination effort to end users increases and then declines toward the end; 2)as the level of education and career progression increases from lecturers to assistant professors to associate professors and to professors, research dissemination efforts also increases but gender and age have no significance difference as shown spastically: gender ($T(158) = 0.753$, $p > 0,05$), age ($F(3,156) = 2.052$, $p>.05$), work length in universities($F(4,155) = 3.716$, $p<.05$), qualification ($F(2,157) = 5.496$, $p<.05$) and academic rank ($F(3,156) = 7.596$, $p<.05$).

These results are inconsistent with several study reports and favour male researchers (Tigist, 2010 and Kyaligonza, 2015) and attributed to gender differences associated with position, less collaboration network, women are less likely to have a full time homemaking spouse, more likely to have a prominent role in child rearing, variables like marriage, number of children, having a spouse who is an academician, care of elderly parents, and potential conflict between family and career responsibilities an systematic discrimination. The fact that research dissemination increases as the level of education and career promotion hierarchy increases can be explained by various job motivation theories. For instance, people have a pyramided hierarchy of needs that progress from the lowest, subsistence - level needs to the highest level of self-awareness and actualization (Maslow, 1954), faculty will engage in research to master tasks in detail, attain goals such as increasing reputability, career promotion, consult

policy making office and get recognition from national and international organizations (McClelland, 1985); faculties engage in research either to improve their skills, which will increase their capabilities (Wigfield, et al 2006) or to attain outcomes that a person wouldn't get from intrinsic motivation such as rewards, reputation, promotion and competition to win (Ryan and Deci, 2000).

4.3. Research Communication for Sub-policy Development: Review of Policy Documents

Case one: Education Sector Policy and Strategy on HIV and AIDS (July 2009)

In its policy and strategy rational, Education Sector Policy and Strategy on HIV and AIDS (July 2009) describes the situation arguing that:

> ...the devastating impact of HIV and AIDS on the quality of life of the people still continues, with particular severity in the education sector. Teachers are key partners for delivering HIV and AIDS prevention education as well as facilitating mitigation services to the learners. HIV/ AIDS affect teachers, non-teaching staff as well as learners. Teachers who are affected by HIV and AIDS are likely to take repeatedly much time off work. Those with sick families may also take time off to attend funerals or care for sick or dying relatives, and further absenteeism may result from the psychological effects of the epidemic. When a teacher falls ill, the class either be taken over by another teacher or left uncovered. The findings of the study on the impact of HIV and AIDS on the Education Sector in Ethiopia, (The FMOE, July 2003, AA, Ethiopia), indicated that between the years 1998 – 2002, the general picture of the prevalence of death among teachers in Ethiopian schools increased significantly. A decline in school enrolment is one of the most visible effects of the epidemic. Children may be withdrawn from schools to care for their parents or other family members, or be the victim of the HIV virus themselves. Many are unable to afford school fees and other expenses. This is a common problem especially among children who have lost their parents due to AIDS (pp. 3-4)

Although this document lacks bibliographical references to identify who (consultant, university faculties, experts) has conducted the survey in the education sector, it can be learned that the policy and strategy is based on research evidence conducted on the impact of HIV and AIDS on the Education Sector between the years 1998 – 2002. And more interestingly, the policy and strategic document also gives emphasis to research stating that (p.20): "Research on HIV and AIDS will be encouraged in order to address emerging challenges in the education sector and in the country at large. Universities and other institutions of higher learning will be encouraged to undertake basic, preventive and curative research or enter into local or international consortiums or partnerships for this purpose."

Case Two: Gender Mainstreaming Guideline for the Education and Training Sector (2014)

In its rational, the document above capitalizes that empowering women through education is a key strategy to improve health, nutrition and education. In turn empowering women empowers herself and her children and advances the overall development of society. Ethiopia has committed to the process of gender mainstreaming for some time

as a way to reach gender equality. Also, in its acknowledgement, the document suggests the procedures of the development of the guideline stating that (p.IV):

> *The document was developed collaboratively within the Ethiopian Ministry of Education Gender Directorate as a first draft and modified based on feedback from experts and representatives of stakeholder groups. The second draft was reviewed by federal and regional senior managers, representatives of Higher Learning Institutions (gender directorate) and the participants in the December 2011 Girls' Education Forum. Final production of the document was completed within the MOE Gender Directorate by the technical support of the national girls' education advisory committee (GEAC). This guideline has been prepared with the financial assistance of UNICEF.*

Reading the references of the guideline, one can learn that the guideline has considered many documents (UN-3; OECD-1; PACT Ethiopia-1), regional documents (FAWE-1) and Ethiopian government documents (MOE-3; MOA-1; MOWA-1). Also, from the series of steps to produce the guideline, it is learned that stakeholders involved heads of Gender Affair Departments of colleges and universities and such forum is believed to reflect and share developments in facilitating gender equality from theoretical, practical, research and legal perspectives. Specifically, consideration of the Ethiopian Examination Assessment results of 10 and 12 students (MOE, 2010) in the guideline preparation may support the argument that research evidence is used by government offices while developing sub policy materials.

Case Three: Higher Education Community Service and Engagement Framework (2015)

One of the researchers has been a staff of MOE as a senior expert for Higher Education Community Service and Engagement since November 2013. Up on completing employment process, he was asked to develop Higher Education Community Service and Engagement Framework. Initially, he had no idea about what, why and how community services were operated except his prior understanding that universities in Ethiopia have three functions: teaching, research and community engagement. An attempt was made to explore MOE library and found out some community development sources (books) written by Western authors. The review works included: Journal of Higher Education, a biannual publication with series volumes as in 2004 to vol.5 (2008) but none of the volume articles were dedicated to higher education community service operation or implementation. A concept note was developed reviewing internet sources and borrowing the experiences of other countries.

Case four: Ethiopian National Qualification Framework (ENQF)

The Ministry of Education established a taskforce in December 2007 supported by South Africa Qualifications Authority (SAQA) with the responsibility of overseeing the initial phases of the ENQF development. The Taskforce analysed the existing system of the education sector through series of consultations with key stakeholders identified the problems , produced draft concept document that can be addressed through the development and implementation of the qualifications framework; and submitted to the Ministry of Education in March 2008. Despite some delay, in 2011, the HESC has established a dedicated ENQF Unit and led the development of the ENQF with technical support from SAQA. The ENQF Team using the ENQF consultative document produced by the taskforce in 2008, prepared roadmap and strategy for

the development and implementation of the ENQF.

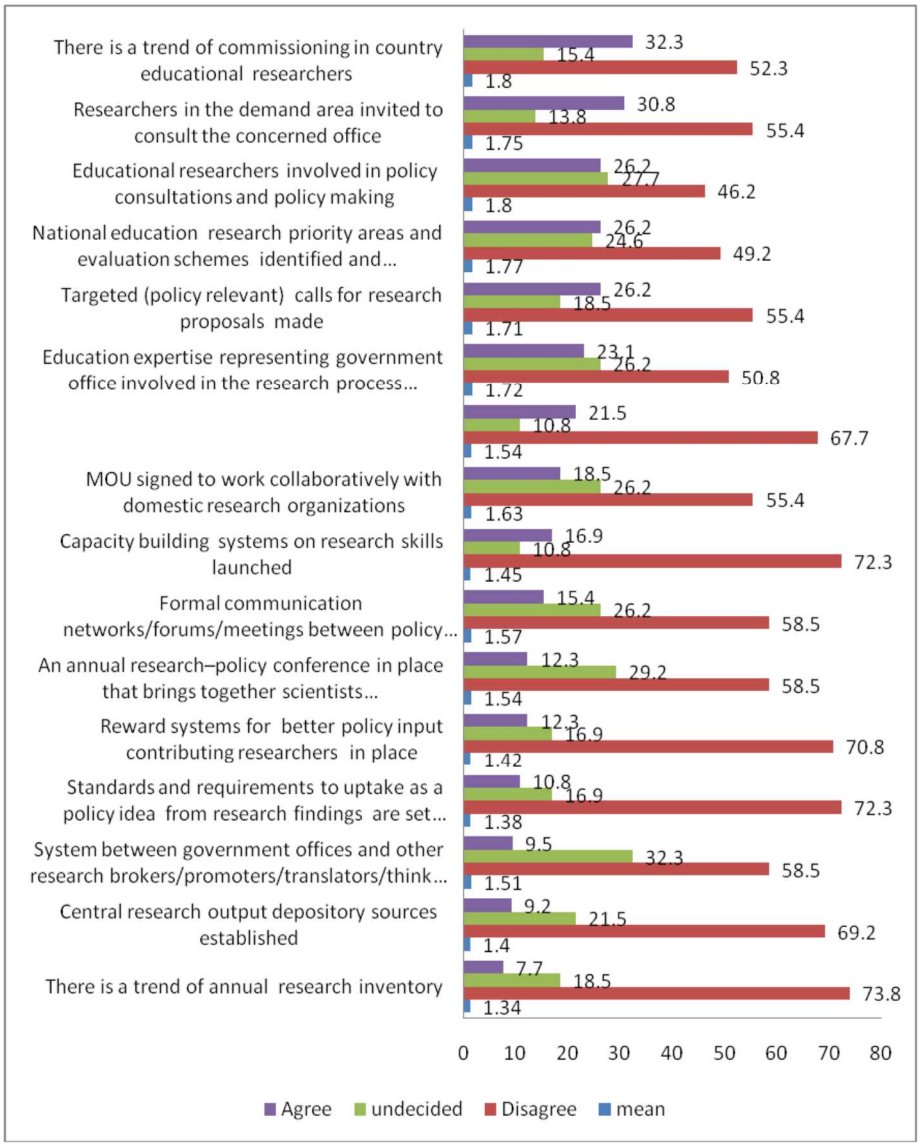
As the description demonstrates, case one and two attempt to illustrate place of research evidences based on document extraction while case three and four depicts voices of participants who actively participated in the sub policy development process. Also, there are many sub policy documents developed during the study period (listed page 170 & 171), not specifying the writer, or turnover of the individual who coordinated the preparation of the document, or absence of in text citation or not including sources in the reference section, or not filing minutes for the series of workshops, or any combinations of these are the limitation to include more case illustrations explicitly. On the other hand; government sources to produce some national documents favor secondary documents mostly from government sources what Lindblom (1980) called it muddling through or incremental approaches wherea series of steps in which policies are gradually modified (incrementalism) by involving stakeholders opinions and practices.

In a nutshell, from empirical, oral and document evidences, the integration of educational research evidences in to sub policy documents seem blurred. Similar arguments are forwarded in the literature. For instance; it is argued that there is no simple, direct line between knowledge production and utilization (Louis, 1996) and highlighted "the inadequacies of conceiving the relationship between research and practice as a linear relationship" and rather presented the relationships as a "multi-layered, unpredictable, interacting process of engagement" (DETYA, 2000, p.10 cited in Hemsley-Brown, 2004) between the researcher and the user even in developed countries. Regardless of how much research points to a certain reform, a government will be unable to make such a reform unless the timing is right and it is publicly visible and acceptable. This also explains why research can only have an indirect impact over extended periods of time (Black, 2001; Davies, 2004; Hamersley, 2005; Hood, 2003; Levin 2004; Young et al. 2002; Weiss 1979). Molas-Gallart*et al. also commented* that when compared with the physical, engineering and medical sciences, [social science research's] contribution is likely to be more indirect and more difficult to observe' (2000, p.1). With respect to policy-making, for example, Davies (2004) highlights seven factors other than evidence that cannot be overlooked: experience, expertise and judgment; resources; values; habit and tradition; lobbyists, pressure groups and consultants; and pragmatics and contingencies. This is backed up by studies in the US (Rich, 2005) and the UK (GSRU, 2007) which highlight the relatively low status of academic research amongst sources of evidence used by policy-makers.

4.4. Government Communication Effort to Access Policy Relevant Research

In attempting to identify the efforts of the government of Ethiopia to access policy relevant research, data was collected using 16 items using a 5- point scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree as presented in the figure below:

Fig 1. Governments communication effort to use policy relevant research



As is presented in the Fig 1 above, major government communication activities include: calling for consultations by the concerned government office (30.8%), targeting policy relevant calls for research proposals (26.2%), communication of national education research priorities (26.2%) and involving researchers in policy consultations and policy making (26.2%). These were major concerns of the government accessing policy relevant research as reported by less than a third of the respondents. However, the majority of the respondents (50% and above) were not satisfied with the possible research accessing strategies of the government of Ethiopia. Especially, the presence

of systems for commissioning of policy relevant research (67.7%), rewarding better policy input researchers (70.8%), annual research inventory (73.8%), setting and communicating standards and requirements for weighing research results for policy input (72.3%) and capacity building for research interpretation and use (72%) were the least emphasized activities as perceived by more than two third of the respondents of this survey.

With regard to government efforts, one of the participants of this survey commented that:

> There are constraints of resources and communication gaps. I think knowledge users have to value the use of educational research, build two way communication or collaborations to address the much needed information gap. There has to be pull efforts from government side, and policy idea entrepreneur department has to be well organized with appropriate personnel skills so as to access, assess, adapt, and apply research evidence. Also may be the variation in scope and level of decision-makers, the areas of research results need to be communicated according to the type of policy, decision, or program being influenced (DI4, held on September 15, 2015).

In Ethiopia, except stating "research of practical societal impact will be given priority and the necessary steps will also be taken to facilitate the coordinated efforts of all those concerned" (MOE, 1994, p.27) and "promote and enhance research focusing on knowledge and technology transfer consistent with the country's priority needs" (the higher education proclamation no 650/2009, article 4(2)), there is no a comprehensive national research policy and strategy guiding the vision, mission, priorities, terms and conditions etc. of research endeavour in local, national and global contexts.

This idea is also reflected in the open ended questionnaire as one of the participants noted his observation stating that (code 17):

> I think the university introduced 'thematic' research approach where 'quality education' is the theme for educational and behavioural science researchers. But do we have a national research policy and strategy guiding the purpose and the kind of research? What are the resources available to conduct relevant research? By whom?To whom? With what consequences ...?

Therefore, the inadequacy of government communication efforts in most indicators may be a consequence of research policy and strategy deficit since there was no research policy up to the end of 2015. And it is fair to say that the efforts of the government to access research outputs as one source of evidence for policy and sub policy development were not given due emphasis. So, it seemed that educational research was not well recognized in Ethiopian education context. And this may be explained further by either in terms of the policy and strategy of educational research, the tradition of evidence sources given priority, organizational culture, leadership, or research relevance and researchers pushing efforts (Kirst, 2000).

On the other hand, a middle level leader from the Ministry of Education also shared his observation expressing that:

> I believe there is lack of strong researcher-policy maker relationships developed through interpersonal interaction, common forums, networking or communication. As a government body, the annual research budgeting for each university may be inadequate. Also, a national think tank, the Education Strategy Center (ESC) has established with regulation no. 276/2012, tasked to consult the ministry by initiating appropriate policy and strategy proposals through research, and serving as a centre for information or data base. In this

case, the possibilities to work collaboratively with university researchers or using university staff as a consultant are very high (EEI1 held on September 21, 2015).

Mentioning the accomplishment since establishment, an expert from ESC shared his office experience, beginning the ESC's missions stating that:

> *ESC is mandated to enhance the quality and relevance of the country's education and training system by initiating appropriate policy and strategy proposals through research, and consulting the ministry, and serving as centre for data base. It has been working for the last two or three years but during this period, study organogram of the center, submitting to concern body and facilitating to its approval, organizing the center by resources, running project and donor assisted based activities (two international research conferences on qualification framework, role of higher education in development, ESDP V preparation, legal education reform, leadership capacity training for university leaders, studying status of university outreach, teacher development) are the main accomplishments (EEI7, October 21,2015).*

This verbal information suggested only the operationalization of donor assisted or commissioned research. In our experience, differences exist between research that was commissioned (government, donor) and non-commissioned research (regular research budget). For commissioned research, there was a direct channel of communication between the researcher and the end-user, who facilitated the dissemination of the final research outputs and even the commissioning agency was typically involved in the research process and had a vested interest in the research outputs and it was therefore more likely to be utilized in policy development. Additionally, commissioned research was often disseminated involving a range of in-country stakeholders or the donor agency initiated the distribution of the research outputs to a wider audience. And many policymakers, frequently, used research results that were those from commissioned research.

For non-commissioned research, the channels of dissemination to policymakers were less clear and more varied and its dissemination was limited to academic channels (e.g. papers in peer-reviewed journals or presentations at conferences). The direct dissemination of non-commissioned research to policy makers most commonly involved either the distribution of a research report to a range of policymakers or inviting key policymakers and other stakeholders to a dissemination workshop.

To the interview question: why does MOE annually allocate research budget but not show commitment to use research findings, one of the respondents expressed his opinion stating that:

> *Government may seek research findings when specific information needs arise. If the information is not available internally or through commissioned research outputs, policymakers explore a range of sources including other ministries and government departments, documents from international research organizations or national data sets. To a lesser extent, policymakers contact university departments and experienced researchers (EEI6, October 16, 2015)*

The views above seem to imply the roles of academic research was not well mainstreamed theoretically and practically rather inter-governmental data sources or government initiated survey results are considered. Research was conducted in the universities to develop ones' academic capital and image.

5. Conclusions and Recommendations

5.1. Conclusions

Much of the existing literature assumes that the research produced by university researchers have value and merit and should be consumed more heartily than it currently is by those who contribute directly to the decisions that govern society (e.g., Banks 2009, p. 16). In the contrary, proudly we can conclude that in this study context and periods as both the quantitative and qualitative data showed that researchers and government bodies recognized the contribution of educational research in supporting policy decisions, implementations and evaluations theoretically. But practically, it can conversely be generalised that information creation and communication channels (electronic, non-electronic and face to face meeting media) were growing fast. Both educational researchers and sub policy making bodies employed very limited and traditional (passive) communication strategies.

Study results revealed that research out puts were accompanied by traditional research communication approaches such as publications (academic journals and proceedings) and conference presentations (1 -2 days). Also, as the length of experience in HEIs, the level of education and academic rank increases and research dissemination efforts also increase. By contrast, it is also found that active dissemination strategies such as frequent face to face contacts between researchers and decision-makers, early and ongoing involvement of policy makers in the research process, building capacity of producers and users, preparing policy briefs and tool kits, using active, effective and multifaceted dissemination strategies such as seminars for policymakers, coaching or consultation, E-newsletter, Web sites, newsletters, press release, best practice guides, leaflets, brochures, posters , interactive CD or DVD etc. were the least employed approaches. Also, insufficient forums and networks availability, non-involvement of policy makers in the research process, ineffective communication by researchers, timing, and limited understanding by policy makers, politicians and bureaucrats to absorb research were the major perceived barriers by researchers to use research findings in government offices. Consequently, it can be concluded that researchers as alternative knowledge producers and education expertise as knowledge consumers were not searching each other. In Ethiopian context, interaction between theorists/ researchers and policy makers/practitioners occurred relatively infrequently. It can be argued from both sides. On government side, relying on other evidence sources, the organizational culture, capacity to process research, and nature of research outputs (quality, relevance, accessibility, timing, practicability, cost effectiveness, generalizability of findings and research for policy) can be cited as major challenges. On the academic community side, lack of clear research policy and strategy of the nation, mistrust, academic oriented or curiosity driven research preference, lack of strong professional association, limited resources allocation can be mentioned as contributing factors. On the other hand, push and pull efforts, linkage and exchange systems, communication and partnership gaps can be cited on both sides as major bottlenecks. Generally, the results suggested the existence of two separate communities (University Researchers and Policy Makers) living with huge communication rifts in the middle.

In conclusion, research outputs were not communicated effectively and adequately using diverse and active dissemination strategies rather traditional, passive

forms of communication channels such as publications in academic journals, proceedings and use of annual conferences were frequently in practice. That is, dissemination planning in the context of government office that involves not only looking at where and when the information should be communicated but what should be communicated and how it should be presented was not institutionalized. Also, it can be learned that the linkage and exchange efforts and meaningful partnerships were not strong for various reasons including the mismatch of demand and supply, insufficient incentives, poor mutual understanding and communication, weak social networks and social capital, academic oriented research (such as for publications in journals, research for self-learning, research for career development, research for self and institutional reputability).

Recommendations

In today's, high levels of uncertainty and complexity of issues considered locally and globally, knowledge coming from sound and reliable research sources is of a particular importance to social policy as policy relevant research would result in changes in knowledge and understanding , changes in attitudes and beliefs , changes in behaviour, citation in documents etc. Parallel to undertaking research, issues such as networking, dissemination planning, dissemination approaches (channels and tactics) and framing results ***should*** be given equal attention. In general, communication planning, framing research outputs to influence end users, accompanying policy oriented research outputs with policy briefs, establishing linkage agents or networks, conduct an annual science–policy conference, building partnerships, and maintain relationships are the major options solicited from the study.

Correspondence
T. A. Enyew, PhD
College of Education & Behavioural Studies
Centre for Comparative Education & Policy Studies
Addis Ababa University

H. Z. Woldemariam, PhD
Associate Professor/ Deputy Director
Department of Communication, FHS
Namibia University of Science and Technology
Windhoek, Namibia
Email: hwoldemariam@nust.na

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