

INFORMATION SEEKING IN A BALKAN COUNTRY: A CASE STUDY OF COLLEGE  
STUDENTS SEEKING AND USE OF INFORMATION

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Using a case study approach this study investigated how college students in Vlore, Albania seek and use information resources for academic and personal needs and whether they follow a pattern similar to Brenda Dervin's sense-making, or Marcia Bates' berry-picking information seeking models. Influencing factors studied were economic factors, information communication technologies and information culture/policy. A literature review showed that no previous published research has studied information seeking behavior of college age students and faculty in Albania. Thirty-four college students and two full time faculty completed a survey and a smaller group were interviewed. The results of the study indicate that Google is the main source for seeking information for both academic and personal purposes. College students are not introduced or taught on how to evaluate information sources. The information communication technology needs improvement to support information needs. The library as a major information resource was not apparent to most students. College students utilize berry-picking as the information seeking model and faculty use sense-making, as a model of information seeking. This study adds to the knowledge of the information seeking behavior of college students in a developing country, the need for information literacy courses at the university level, and the identification of additional areas of research regarding information communication technologies, information policy, and literacy for developing countries.

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## CHAPTER 1

### INTRODUCTION

Information commons as a concept is rooted in the intersection of disciplines, but most of the work in library science has focused on the premise of information commons as a metaphor for the library. Even though studies on information commons are prevalent in the United States, there are few studies that examine information commons and information seeking in the context of a country in development. Yet, for many of these countries like Albania, faced with overcoming technological and information innovations deficits, the issues of information literacy, access, enclosure, control and rights to free information are central to their democratic development, and economic progress. For the purposes of the current study the term *information commons* is used as a metaphor for the library similarly as the term applies in the United States.

Albania is located in the southern part of the European continent and is a part of the western Balkan region. Since the fall of communism in 1990, the country has embraced the establishment of democratic systems and is striving for European Union (EU) membership. The country continues to undertake reforms in banking, higher education, and judiciary systems to meet requirements for EU membership. Understanding how college students seek and use information in Albania is useful in illuminating how information culture and information communication technologies (ICTs) are utilized in fulfilling both personal and academic needs, and it will also aid in identifying gaps which local university administrators and faculty can apply in order to reform their universities to meet EU requirements and ultimately achieve EU member status.

According to Wilson (1997), who has written extensively on information behavior, three elements need to be considered regarding information behavior: “the factors that give rise to an individual’s perception of need; the factors that affect the individual’s response to the perception of need; and the process or actions involved in that response” (p. 39). Utilizing Wilson’s third element on information behavior the current study focused on the process users follow to address an information gap in their knowledge seeking journey, either via Dervin’s sense-making model or Marcia Bates berry-picking model (Dervin, 2005; Bates, 1989).

### Statement of the Problem

Most research studies on user seeking behavior have focused primarily on technology access in developing countries, but there are no studies that explore how to bridge the digital divide from the perspective of the user’s information behavior. Additionally, there are no studies that explore how students in Albania select, obtain, and incorporate information resources for their information needs, nor is there an understanding of how students utilize information professionals, libraries, or digital libraries for information gathering and support.

### Purpose of the Study

The current exploratory case study investigated how university students seek and use information resources; it also explored issues affecting information seeking in a developing country, such as legislative policy, budgetary policy, and information literacy. Currently, no studies have focused on Albania or the Southeastern European region to

address how college students seek, find, and consume information to fulfill their daily needs. Based on preliminary meetings with students and faculty in Vlore, and their reliance on web resources, it became apparent Dervin's sense-making model might provide a framework to explore the information seeking behavior of college students. Dervin (2005) is one of the first information seeking scholars who focused research on a broad demographic of users: under served populations, various ethnic population, educated and uneducated. Four of her most important findings about information seeking behavior of ethnic minorities relate to the experiences of average people in the developing world: 1) Too often, top down information transmission rests on a host of faulty assumptions about target audiences; 2) The information environment is increasingly marked by decreasing trust in expert and institutional sources; 3) Lay people are increasingly wise about how information is tied to vested interests; and 4) Treating people as humans works best (Dervin 2005, pp.76,79). Sense-making depends on understanding four main elements: 1) the situation or context where information need occurs, 2) the gap or the missing information pieces to the information need, 3) the outcome and the bridge, and 4) the closing gap between situation and outcome.

Since the current research was conducted under the scope of a case study, certain issues that could influence information seeking behavior were explored to gain better understanding of the context in which information seeking occurs among college students in Albania. After conducting preliminary conversations with students and faculty the following contextual issues were selected to address:

- Economic factors/funding

- Information communication technology access/ digital divide
- Information literacy

While these contextual issues aren't the primary focus of the current study, they aided in data interpretation for the current case.

### Definitions of Important Terms

- Balkans- geographic location of Europe's southern peninsula. The countries comprising the region are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia, Montenegro, Romania, Serbia, Slovenia and portions of Turkey and Greece.

- College student - For the purposes of the current study the term *college student* refers to students attending a public university in Albania, equivalent to undergraduate student in the United States

- Developing country - The United Nations (UN) classifies all countries of the world in one of three broad categories: developed economies, economies in transition, and developing economies. This definition only applies to basic economic country conditions (United Nations, 2018). No international consensus exists for a single definition of the term *developing country*. For purpose of the current study *developing country* is used to describe a country seeking to become more advanced economically and socially

- Digital divide - The gap between demographics who have access to Information Communication Technology (ICT) and those who don't.

- Economic factor - For the current study, refers to the student's economic

standing to attend university, access technology and procure information resources. It also refers to the government support in funding and investment in higher education and libraries

- Funding - Government investment in higher education and libraries
- Information commons - An information system, such as a physical library or online community that exists to produce, conserve, and preserve information for current and future generations (Bollier, 2004)
- Information culture - A culture where the value and utility of information is recognized, where information delivery systems are promoted, and information centers are funded by the government
- Information literacy - The current study used the ACRL definition of information literacy as a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (ALA, 2007)
- Information communication technology (ICT) - Technology tools and resources used for the purpose of communication, creation, dissemination, storage and management of information. They are technologies that provide access to information such as computers, the internet, wireless networks, cellphones, and also email, social networking, blogs, chatting, texting, video conferencing, and online classrooms
- Information seeking - The behavior people use to search and find information
- Information use - For the current case study describes the students’ behavior in connecting with an information source(s) and its utilization in building their personal knowledge to use for their academic or personal needs

- Policy - A plan by the government to influence investment and or funding of
- higher education institutions and libraries

### Research Questions

The questions guiding the current research study sought to explore the information seeking behavior of students in an academic institution.

1. How do college students generally conduct information seeking as it relates to their academic activity?
2. How do college students generally conduct information seeking as it relates to their personal needs?
3. How do college students use information resources for academic activity?
4. How do college students use information resources for personal needs?
5. Do the factors country economy, information communication technologies, and information culture impact the information seeking behavior of students?
6. Does the college students' behavior apply to an information seeking model (Bates' berry-picking and Dervin's sense-making)?

### Assumptions

The following assumptions from the principal researcher are part of the case study:

- Students seek out information beyond what is provided by the curriculum
- The berry-picking and sense-making models can explain information behavior in a developing country
- The survey responses provide truthful answers from the participants.

## Limitations

The following limitations impacted the overall investigation and conclusions of the current study:

- The current study is a single case study, generalizations cannot be made beyond the population studied. Most of the data gathering was conducted over a two-week stay in Vlore in the summer of 2014. The remainder of follow-up informal interviews were conducted via Skype the following spring to see if anything had changed since the initial survey was administered on site in June 2014
- Data is descriptive and applies only to this case. Follow-up to the survey as limited to a single follow-up with fewer participants. Further comparative research in the Balkans was necessary to provide generalized findings for the developing world as research group
- Access to student population was limited to those students who were completing an open-ended research assignment. The current study served as a *snapshot* of current information seeking behavior in Vlore, Albania

## Significance of the Study

There is an acute need for access to information, and the teaching of information literacy through depoliticized public institutions, such as libraries and nonprofit institutions in Albania. Implementing and fostering information programs that target information access, and the bridging of the digital divide close the gap to instability in this region, because they directly promote citizen education, and provide spaces where literacy and ethnic diversity is fostered and celebrated. According to the national library

director, Domi (2015), “as a country with no democratic past and no experience as an information-based society, providing open access to all citizens has become one of the most important priorities in everyday library work” (p. 648).

Even though the library tradition in Albania is not new, the current model of librarianship in the country is new. University libraries were first established in 1957, and currently there are 45 public libraries, 24 academic libraries, and 35 special libraries. Similar to other post-communist countries, libraries and the education system continue to confront underfunding, manpower desertion due to better occupations, inadequate acquisitions, and outdated technology and equipment (Genieva, 1996; Haska, 2013). The most recent European Union, Horizon 2020 study, published in 2018, noted Albania ranks last in the number of scientific academic publications from all Southwestern European countries. In 2017, Albania published 1.7 scientific articles per 10,000 residents, followed by Bosnia & Hercegovina, Macedonia, Montenegro and Serbia (Matusiak & Kleibrink, 2018).

While both libraries and universities remain resource poor, technology access continues to rise. According to World Bank (2018) data, 63.25% of the Albanian population uses the Internet, but less than a quarter of the entire country population has a fixed broadband subscription. Cellular mobile subscriptions are the most prevalent at 3.37 million people as of 2016. This study of information resources may provide guidance to educators and librarians in Albania regarding the resources college students are using in accessing information.

A major public university in Vlore with 10 full-time faculty, first opened in 1994 focusing on three main degree granting fields: commerce, marine engineering and



nursing. In the last two decades the university has increased its staff and degree offerings to 17 fields of study, with an enrollment of 10,000 students. At present there are five research centers: technical science, economics, public health, albanology, and human sciences. This site was selected for the current study due to the broader relevance to other similar higher education institutions in the country and region. The city is the third largest in Albania and the student population reflects college age population country-wide. The university faculty participate in research projects and regional academic conferences at home and abroad.

### Summary

In contrast with developed nations where resources are well managed, citizenry is more educated, and countries enjoy both political and economic stability; developing countries and societies are marred by instability, mismanagement of resources, and corruption. Access to information resources and information professionals is crucial in bridging the digital divide and in building open and democratic societies.

After careful examination of the research literature, a case study approach was used to discover the information seeking behavior of students and faculty in Vlore, Albania. The Bates and Dervin models of information behavior provided the framework for the current study. After conducting the literature review it was apparent that research in information seeking behavior of various information using populations was lacking. The current study may contribute to the existing body of scholarship on information behavior as it pertains to developing countries, while also providing faculty and

information professionals in Albania a practical guide in ameliorating access and bridging the information seeking divide.

## CHAPTER 2

### LITERATURE REVIEW

#### Introduction

Chapter 2 provides an overview of the literature as it relates to information seeking behavior of college students and information literacy. Theoretical models, as they relate to information seeking among college students are discussed.

Communication technologies and their relevance in higher education especially as they relate to technology, access, and the impact of the digital divide and information culture existing in developing countries are also discussed.

#### Information Seeking

Information seeking is a process that people encounter daily, whether they are aware of it or not. Sometimes completing simple tasks, such as getting directions or going to the bank could pose challenges if the person is encountering communication blocks, or gaps. Information seeking behavior is dependent on our knowledge of technology and systems, and in the developing world, similarly to the developed world issues of access and become even more emphasized when there is a difference in knowledge of technology and use of it. The current study sought to place information seeking theory in context to differences on specific information behavior, describe models that aid the information seeking process, and discuss two areas of relevant information behavior research which impact young adults/college students/digital natives (born with access to technology), digital immigrants (not born or with access to technology).

## Information Seeking and Human Behavior

A significant portion of research that is part of Information Science, focuses on user studies. According to Wilson (2006), “user studies begin with an information user, who has an information need, and in order to meet that need the user engages in some kind of information seeking behavior whether that includes utilizing information systems, or information sources successfully or not. While the user is engaging in information seeking behavior there is potential for information exchange, information use and information transfer to occur” (p. 659). For Wilson (2006), information seeking behavior can be researched from both the purview of applied research, focusing on system design or from a practical approach seeking to understand why a user “behaves as he does” (p. 662). Another important assessment of information behavior theory from Wilson (2006), is the idea that information scientists should remove “information needs” from their academic vocabulary and replace the terms with “information seeking towards the satisfaction of needs” (p. 664).

What is the role and impact of information seeking in human problem solving? Information seeking, both as a term and behavior is common place enough that it is of no concern until time pressure makes it so. Anytime a person engages in making any important decision they go on *seeking* mode: talking to others, searching the web, reading the news, etc., in order to satisfy that need or fill the information gap. Case (2008) states, as such, information seeking is a “conscious effort to acquire information in response to a need or gap in your knowledge” (p. 5). Information seeking as a term did not gain prominence until the 1970s when research in information science shifted from a systems approach to placing emphasis on people. “The emphasis shifted away

from the structured 'information system' and toward the person as a finder, creator, and user of information" (Case, 2008, p. 6). Seen in this context, information behavior covers a large span: from looking for specific information, to browsing and stumbling upon information, to sharing and using information. According to Marchionini (1998) information seeking is a "process which humans purposefully engage, in order to change their state of knowledge" (p. 5). Another definition from Wilson (1999), defines information behavior as "the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking and information use" (p. 49). According to Wilson (2006) people across cultures and status daily engage in some activity that required them to engage in some sort of information seeking behavior. Information science seeks to place human information seeking in context to human physiological needs, affective needs, and cognitive needs (p. 663).

### Information Seeking Behavior and College Students

In order to understand the information seeking behavior of students it is important to understand the context in which they seek information. As college students, they seek information to complete their course requirements with the ultimate goal of college graduation. They also seek out information for personal use to fulfill various daily tasks.

According to Spink and Ozmutlu (2002), "college students multitask when they conduct research. They seek out information on more than one topic over an extended period and use a variety of sources. An important finding of this study was also the idea that college students coordinate information seeking with peers prior to seeking out information sources to complete research papers" (p. 651). Quarton (2003) argues that

college undergraduates are largely unaware of information sources available from their university library. According to her research, college students rely on publicly accessible internet sites to complete their information needs (Quarton, 2003).

A significant body of literature confirms that when college students seek out and use online resources they prefer using Internet websites over library databases and they prefer convenience over quality when seeking out information resources. (Bell, 2004; Griffiths & Brophy, 2005; Williams 2006). Williams (2006) noted that 80% of students started their academic research by using Google™ compared to 6% who used the library. College students participating in the study assumed that search engines were just as reliable as library databases for completing their research projects.

Dubicki (2010) studied the research behavior patterns of college students enrolled in business courses. College students surveyed in the study noted they experience significant difficulty in selecting articles for their research assignments. Additionally, “students started their research process using Google and selecting the first two results displayed and when the results did not match their research interests they quickly moved on to another research topic” (Dubicki, 2010, p. 370).

#### Information Literacy College Students

As recently as 2010, in a two-part series of articles, Dervin (2010) continues to utilize sense-making in a new context that can be adapted to the experiences of college students, be they digital immigrants and natives in the developing world. According to Dervin (2010), because we are without any “dialogic means for humbling human observations and hearing possible convergences and divergences, we are reduced to

an avalanche of disconnected assertions of fact” (p. 996). The result of this gap in transmission of fact or information is that people have decreased trust on expert information and knowledge.

Another important finding from Kuhlthau’s (2003) work rests on understanding the impact of the library for the public in the 21st century and its relevance for digital natives. According to Kuhlthau (2003) the network between students, parents, teachers and librarians needs to be revisited. She identifies several sets of skills needed by students to succeed in the information age among them:

- Learn in dynamic situations where information is constantly changing
- Manage information overload where determining what is enough information is as important as locating and selecting relevant information
- Find meaning in numerous and diverse messages that do not fit together neatly in a predigested, prepared text
- Construct a personal understanding from incompatible and inconsistent information (p. 3)

Information literacy and knowledge of technology are two factors that impact digital natives in their information seeking behavior significantly. For digital immigrants in the developing world, mobile phone accessibility continues to grow and impact their accessibility to information. According to James (2009) mobile phones are increasingly acting as a social amenity, a tool to be shared and a focus of social activity as well as a tool for communications (p. 53). This holds true even for rural developing areas, where accessibility to a computer is lacking even more. James (2007) points to examples in South Africa, Bangladesh and India, where rural communities are sharing phones and purchasing solely SIM cards, or pool their resources to afford mobile technology. In another case in West Bengal rural postmen act as intermediaries, and provide mobile

service to villagers on their doorstep (p. 54). James (2009) cautions against overstating the digital divide in the developing world. According to James (2004) policies must be developed to discover cost effective solutions and successfully replicate them in other parts of the world.

Swiggum's (2008) study, *Hyperworlds: The Merging of Generation M Information and Communication Technologies, Online Safety and Medial Literacy*, examines the impact of technology on the millennial and digital native generation. According to Swiggum (2008) millennials are digital natives, who are valued and sheltered by culture. Ninety six percent of them are online while, 94% use the Web for school research. And yet, millennials have trouble distinguishing authoritative sources of information because they seek and equate the importance of information informally, through conversational means, whether their parents or peers. Another important finding of this study, also revealed that millennials are unaware of the implications of technology use. As such the author suggests, that libraries, parents and teachers aid millennials in understanding the uses and perils of information insecurity (Swiggum, 2008).

Volčič and Erjavec (2008) utilized in-depth interviews with students, teachers and policy makers, and a political economy analysis to evaluate computer literacy in Slovenia. They argue that "the promise of technology in Eastern Europe after the fall of communism remains tightly connected to the idea that, progress through information technology will aid in the democratization process and ultimately result in these countries integration with the European Union and the West" (p. 327). Information literacy, rather than computer literacy, is a key finding from this research. According to Volčič and Erjavec (2008) educators, information scientists, and technologists must



interact with one another so that future government policy and programs focus on developing communications which are essential in a participatory democracy (p. 341). An information competent citizen should be able to find, discover and utilize basic information on state laws, government, economy, and recognize where information access points are in the community.

Dhillon's (2007) study *Online Information Seeking and Higher Education Students*, focused on third year leisure and tourism students from the College of Food Tourism and Creative Studies in the UK and their ability to conduct research via online databases. According to the study, the majority of the students used two databases, Emerald and Mintel, which were popular among the lecturing staff. Although students were given a preference for learning about online databases from lecturers, students will seek help from the person in their direct vicinity when encountering difficulties. Another finding of the study concluded that students were more likely to seek help from their peers first, rather than a lecturer or a librarian.

Diana Oblinger (2003), authored a study on understanding students in the modern university campus. The focus of this study was to understand how well college and university faculty, administrators, and staff recognized generational differences and how often they take the differences into account when designing programs or courses. The study revealed that digital natives exhibit distinct learning styles. "Their learning preferences tend toward teamwork, experiential activities, structure, and the use of technology. Their strengths include multitasking, goal orientation, positive attitudes, and a collaborative style" (Oblinger, 2003, p. 38) According to Oblinger (2003), digital natives exhibit an information-age mindset where:

- Computers aren't technology, but an assumed part of life
- The internet is better than TV
- Reality is no longer real. Content may or may not be accurate
- Doing is more important than knowing. Knowledge is no longer perceived to be the ultimate goal, particularly in light of the fact that the half-life of information is so short. Results and actions are considered more important than the accumulation of facts
- Learning more closely resembles Nintendo than logic
- Multitasking is a way of life
- Typing is preferred to hand-writing
- Staying connected is essential
- There is zero tolerance for delays
- Consumer and creator are blurring. In a file-sharing, cut-and-paste world, the distinctions between creator, owner and consumer of information are fading (p. 40-42)

Another study done in partnership between OCLC's Lynn Silipigni Connaway and Marie Radford at Rutgers University employed Brenda Dervin's models of sense-making to understand the behavior of digital natives and digital immigrants. The study studied chat transcripts and interviews in order to understand the habits and needs of both library users and non-users. One of their main findings discovered that digital natives turn to Google and human resources when they conducted ready reference searches. Whereas, digital immigrants indicated they turned to colleagues and personal libraries (Connaway, Radford, Dickey, Williams, & Confer, 2008). Since the focus of the study centered around virtual reference services and their use by digital natives and digital immigrants, the authors revealed that current trends of usage suggested that both sets of users performed frequent library sources and services, but

with different outcomes in mind. Therefore, libraries need to create “different areas for different user needs” (Connaway et al., 2008, p. 131).

### Information Seeking Theoretical Models

Case (2006) published a study which identified and categorized information seekers by occupation, role, and demographics. According to his findings the occupations that engage in information seeking behavior cover professional fields: “scientists, engineers, scholars, managers, journalists, health care professionals, and attorneys” (pp. 295-300). Apart from occupation, roles and demographics play an important factor in information seeking behavior. Studies that focus on the general public, patients, students, as well as children and youth, homeless, immigrant, the poor and, the elderly have proliferated in the last three decades. Cates (2006) states, “One of the most prominent paradigms through which to study information seeking is Dervin’s sense-making theory and Bates’ berry-picking model” (p. 314). There are four researchers whose work on information seeking and information needs continues to provide the foundation of research on information seeking behavior of millennials/digital natives and digital immigrants: Robert Taylor, Carol Kuhlthau, Brenda Dervin and Marcia Bates.

Taylor’s (1991) work on how people’s information needs arise dates back to 1962. The context of his work dealt predominantly with exploring how and why people go to the reference desks in libraries to ask questions. As such he developed a model that traced how people sought information based on a level of need. According to Taylor (1991), a person begins to seek information consciously or unconsciously

through a visceral need. Then in the next level the person reaches a mental description which Taylor defines as conscious need. At the next level the person could be able to construct a formalized statement of the need, which Taylor defines as a formalized need, and then in the fourth level the question is recast in anticipation of what the files can deliver.

According to Taylor (1991) this is a compromised need because a compromise is reached. Case (2008) states that “between how the requester originally envisions the query and how the query must be restated to match the language used by the source” (p.72). Taylor’s work in the context of millennial research and digital natives offers insights in understanding the nature of human questioning, especially young adults.

Kuhlthau’s (1994) research on reduction of uncertainty also is central to the theoretical foundation of studies about college and high school students. Like Taylor, Kuhlthau’s work also focuses on the stages of information seeking process of adults and young adults. Kuhlthau developed a six-stage model called the information search process (ISP) which takes a holistic approach of the process of information seeking. According to Kuhlthau (1994), “the ISP model from a user’s experience in seeking information can be broken down to a series of thoughts, feelings and actions which she terms cognitive, affective, and physical” (p. 57). As such, for Kuhlthau, uncertainty is a cognitive and affective state that users experience early on in the information seeking process and decreases as the information need becomes formalized. An essential component of Kuhlthau’s work is the role of emotion in information seeking behavior. The ISP process spans over six recognizable behaviors: initiation, selection, exploration, formulation, collection, and presentation. According to Kuhlthau (1991), it is

at the exploration stage that a person seeking information will experience confusion, uncertainty and doubt, and may abandon the task altogether (pp. 366-367).

Dervin's (2005) work revolves around the concept of sense-making both as a model and theory which seeks to bridge the gap in information seeking behavior. The importance of Dervin's sense-making model cannot be understated. Dervin is one of the first information seeking scholars that has focused her research on a broad demographic of users: under served populations, various ethnic population, educated and uneducated. Four of her most important findings about information seeking behavior of ethnic minorities, relate to the experiences of average people in the developing world:

1. Too often, top down information transmission rests on a host of faulty assumptions about target audiences
2. The information environment is increasingly marked by decreasing trust in expert and institutional sources
3. Lay people are increasingly wise about how information is tied to vested interests
4. Treating people as human works best (pp. 76, 79).

According to Dervin (1992), sense-making tends to emphasize the feelings rather than cognitions "in situations where humans reached out for something they called information" (p. 68). Dervin (1992) notes that the search for information begins with asking questions that try to make sense of a given situation; therefore, communication plays an essential role in the process of bridging the gap or filling the information need. Dervin's sense-making model depends on understanding four main elements: "1) the situation or context where information need occurs, 2) the gap or the missing information pieces to the information need, 3) the outcome and the bridge, and 4) the

closing gap between situation and outcome” (Wilson 1999, p. 253). The premise of Dervin’s model is that “information is not static, but rather malleable, designable, and flexible like clay to be molded according to situational needs” (Savolainen, 2006, p. 1118). Dervin (2010) states, sense-making mandates that “research, practice, and design be driven first by attention to movement, time, space, energy, barriers, gaps, bridges and outcomes.... Instead of conceptualizing information as relevant only to cognitive and so-called rational frameworks; sense-making conceptualizes all aspects of human being - cognitive, spiritual, physical and emotional, as informative” (pp.999,1000).

Bates (1989) similar to Gary Marchionini’s research, focused on creating a model that would impact the user experience online and ease the process of search. According to Bates (1989) the proliferation of research databases and user interfaces would necessitate the creation of search interfaces that would facilitate searching for users and feel natural to them. Her *berry-picking model* is based on several key findings about human behavior online:

- Typical search queries are not static
- Searchers commonly gather information in bits and pieces instead of in one grand best retrieved set
- Searchers use a wide variety of search techniques which extend beyond those commonly associated with bibliographic databases
- Searchers use a wide variety of sources other than bibliographic databases (Bates, 1989)

Bates’ model continues to remain relevant, especially when studying information seeking behavior of digital immigrants and natives. Young adults or digital natives are more comfortable accessing information through Wikipedia®, rather than a bibliographic

database. According to Bates (2002), the reason people use the principle of least effort when seeking out information is because “so much needed information has come automatically from the social milieu of most people throughout the history of humanity” (p. 12).

### Information Communication Technologies (ICTs)

Nongovernmental organizations (NGOs) continue to play a key role in information delivery systems in Eastern Europe. According to Bach and Stark (2002), in the post socialist decade, the region has seen a shift in accessibility and utilization of online information communication technologies. “The role of NGO’s in these countries is crucial, as they serve the role of social entrepreneur” (p. 5). The focus of Bach and Stark’s (2002) study was to examine the role of the Center for Advanced Media, Prague, an NGO organization whose initial goal was to provide internet access and training to Eastern and Central Europe. Bach and Stark’s (2002) revealed that over time the “mission of this NGO changed from *information broker* to a *knowledge facilitator*. Their centers provide access to Internet and new technologies, independently of state run initiatives. The cost of going online for many Eastern European countries remains relatively high. As a result, fewer users have Internet access at home, and many overcome the barriers by using *tele-cottages*, public libraries, or Internet cafes” (p. 10).

Mobile phone accessibility continues to grow in the developing world. According to James (2007) “mobile phones are increasingly acting as a social amenity, a tool to be shared and a focus of social activity as well as a tool for communications” (p. 53). This

holds true even for rural developing areas, where accessibility to a computer is even more lacking.

Another important aspect that impacts the developing world is the lack of capital investment in telecom infrastructure and services. Roseman (2003) argues that “local governments in developing countries should provide favorable conditions for the development of internet and expand on policies that emphasize their role as market takers not makes” (p. 38). Given the fragile political and government structures in these countries, according to Roseman (2003) they should not engage in policy making that regulates flows of the Internet. The author points to examples from Korea, Canada, and Australia as successful government regulatory bodies of the internet policy. According to Roseman (2003), developing nations should promote policies that market access liberalization, craft pro-competitive regulation to protect against anti-competitive behavior, and “ensure that the incentives to invest in Internet infrastructure and services are not destroyed” (p. 42).

According to Vartanova (2002), modern information and telecommunications sectors throughout Eastern and Southeastern Europe remains uneven. Russia and Central Europe are better positioned to overcome the digital divide based on their infrastructure and intellectual potential of researchers and designers. In contrast, Southeastern Europe suffers from low living standards, and underdeveloped infrastructure, especially in rural areas. A partnership between state, private enterprise, and academic community is necessary in crafting viable information and communication technology policy.

In Trinidad and Tobago, there is a partnership between government initiatives



and private sector involvement in bridging the divide. deGannes (2006) states “In 1991 the government introduced several pieces of legislation on information and communication technology which have translated in the creation of a National Institute of Higher Education Research Science and Technology, the founding of the College of Science, Technology and Applied Arts, the establishment of the Ministry of Science, Technology and Tertiary Education, and the establishment of the Technology and Information Park, which provides infrastructure for firms involved in information and communications technology” (p. 79). In terms of private sector involvement, the banking industry has improved its technology ability by providing automated teller machine (ATM) services, creating bank websites, and providing electronic banking services that are accessible from home computers or kiosks located in branches. The case of Trinidad and Tobago provides a blue print for successful partnerships between government entities and private business in closing the technology divide in the developing world.

Volčič and Erjavec (2008) aims at providing viable policy recommendations regarding computer literacy in Slovenia and Southeastern Europe. The authors utilized in-depth interviews with students, teachers and policy makers, and a political economy analysis to evaluate computer literacy in Slovenia. They argue that the promise of technology in Eastern Europe after the fall of communism remains tightly connected to the idea that progress through information technology will aid in the democratization process, and ultimately result in these countries integration with the European Union and the West (p. 327).

Another important point in the article refers to the positive support of the computer literacy project from the Slovene government. Volčič and Erjavec (2008) argue that

the Slovene Ministry of Education and the Slovene government supports information technology related projects, because they align with a central mission of the government: “skilled workers will lead the country toward the technologically developed Western world” (p. 329). Information literacy, rather than computer literacy, is a key finding from this research.

According to Volčič and Erjavec (2008), “educators, information scientists, and technologists must interact with one another so that future government policy and programs focus on developing informed and active citizens with abilities to analyze, critically evaluate, and produce communications, which are essential in a participatory democracy” (p. 341). An information competent citizen should be able to find, discover, and utilize basic information on state laws, government, economy, and recognize where information access points are in his/her community.

Wresch (2003) measures the usage gap in the developing world by focusing on internet access rates by country. The theoretical framework of the study was based on the ethical theories proposed by Nobel laureate Amartya Sen. A very important question of this study regards how and where to find information for developing nations. Wresch (2003) concedes that “by hearing nothing from large portions of the planet, it is easy to ignore or misjudge the plight of these communities” (p. 258). The study also reveals the lack of relevant internet resources in three information classes: medical, cultural, and information about daily lives of people in the developing world. Medical information, although proliferated on the Web in a multitude of languages, lacks in domain specific expertise. In terms of cultural information, the pace of digitization of cultural resources is

significantly slower than their counterparts in the west. Another key question raised by this study concerns the degree of access, and though by sheer comparisons of websites by country, the digital divide is visible. Does this mean that there is a shortage in the capabilities of people in the developing world? According to Wresch (2003), one of the main challenges in terms of visibility of resources is that in many developing nations the primary providers of information about their lives and culture whether print or digital, are not natives.

### Digital Divide

While technology has enabled progress, Warschauer (2003) argues that it is too simplistic to frame the debate solely on digital's divide premise of have and have nots. According to Warschauer (2003), "the differences in access and technology between the developing and developed world are based on differing degrees of access, and shaped by a complex mesh of social, political, economic, and cultural factors" (pp. 7-8). Thus, having computers and connectivity is only the beginning, without the infrastructure, the skills, and understanding to utilize technology leads to failure. According to Warschauer (2003), the success of Internet cafes, kiosks, or similar enterprises in the developing world is dependent on them first being socially embedded and then integrated in the community.

James (2007) developed the theoretical framework surrounding debates over the digital divide, and argues, the term digital divide is highly fragmented in academic literature. He recognizes four distinct approaches to research on this topic: "1) generation of information technology which focuses on the distinctive nature of IT and

its role in rich-poor technological relationships, 2) diffusion of information technology which focuses on the characteristics of digital divide, how it is measured, what future course it will take, 3) impact of the digital divide which focuses on growth and poverty on the excluded and on the rich nations, and 4) policy toward the digital divide which provides a synthesis of the previous approaches” (p. 285). According to James (2007), digital divide will not be bridged solely by the free play of market forces. Multinational entities will continue to play an important role in bridging the gap, but economists and legislators in developing nations must engage in policy making that is both sustainable and viable for the long term. Pointing to examples of China and India in relation to software outsourcing, government policies that intervene in computer education literacy, infrastructure, and access are not only essential but a must.

While many studies focus on quantifying the digital gap between developing and developed nations, James (2004) seeks to understand how usage is perceived in the developing world. The focus of his work is India, where there exists a gap based on Internet usage and welfare. James (2004) argues that “among the poorer, rural segments of the Indian population, usage is only rarely the way in which the benefits of the Internet are actually derived (p.172).

Even though people in poorer countries may not have Internet access at home, they are able to make use of Internet sources of information. The author reinforces this point by showcasing the example of the Kothmale Internet Project in Sri Lanka, where, for two hours daily broadcasters take the Internet to the community by surfing the Web and answering listener inquiries. In doing so, they turn useful information into meaningful information. In this context the radio functions as part search engine, part

librarian, part journalist and translator.

The point not to be missed is that regardless of access, people in the developing world are engaging with technology and they are able through intermediaries i.e., Internet kiosks, and information centers to utilize the Internet. James (2009) calls for reorientation of focus away from Internet users to informal gainers of this technology. By understanding the full extent of usage and access, we can begin to address policy developments which spur initiatives that have widespread reach to all population groups.

According to Rice (2003), there are many factors that contribute to conditions necessary in a country to facilitate technology transfer, application and diffusion. According to Rice (2003), “there are four barriers that impede technology transfer to the developing world: economic, organizational, institutional, and human resources related” (p. 86). Selwyn (2004) covers the theoretical debates concerning the digital divide since 1980. It is especially important because it provides concise definitions of important terms: Information Communication Technology (ICT), access, and digital divide. Selwyn (2004) provides a hierarchical model to address the states of digital divide in any research study.

According to this model Stage 1-Formal /theoretical *access* to ICTs and content addresses formal provisions of ICTs in home, community, and work setting that is available to individuals in theory. Stage 2-Effective *access* to ICTs and content addresses the provisions of ICTs in home, community, and work settings that the individual feels able to access. Stage 3-Engagement with ICTs and content addresses use where the user exercises a degree of control and choice over technology and

content. Lastly, Stage 4-Outcomes, immediate short, medium and long-term consequences of ICT use as they relate to: production activity, political activity, social activity, consumption activity, and savings activity. The importance of Selwyn's approach rests in its expansiveness; it does not solely look at digital divide in terms of technology alone, rather, it seeks to address issues that affect social, economic, cultural, and political lives of people in the developing world.

### Information Culture

Prevalent in any country is the concept of information culture. For many Balkan countries where economies and political systems have been transitioning from centralized systems to open democratic systems, understanding the country's information culture is key to understanding how information is sought and used by any population group. Olive (2008) states, "The literature considering information culture focuses on individuals' interaction with information seeking, retrieval and use" (p. 364).

In many post-communist countries information has never been available to everyone under the same conditions. During communist rule, society was divided into two main groups *the elites* and *the masses*. While the libraries provided free service, access to stacks by individuals was closed and censorship was applied to literature selection. In this context librarians were accountable to the state rather than the public (deSmaele, 2015).

Since the fall of communism librarians in former communist countries have transitioned from custodians of information to facilitators of information. In this new role they promote open access to information and open research collaboration among

college students and scholars. Libraries and librarians in these countries have relinquished their role as agents of the state and adopted service to the public as unbiased information centers, where college students, faculty members, and staff access accurate and timely information (Domi, 2015).

### Summary

Chapter 2 provided an overview of the literature as it relates to information seeking behavior of college students and information literacy. Information seeking theoretical models as they relate to information seeking among college students were also discussed. Finally, information communication technologies and their relevance in higher education, especially as they relate to access at home and the impact of the digital divide and information culture existing in developing countries were explained.

## CHAPTER 3

### METHODOLOGY

#### Introduction

Chapter 3 provides an overview of the methods used to gather data for the current study, the data gathering venue, the participating population in the study, and the data collection process. Surveys, interviews, formal studies on the Albanian higher education system and libraries, organizational charts, European Union studies and government reports focusing on Albania, World Bank Data charts, and Wolfram Alpha statistical charts were utilized in understanding the political, economic, and higher education realities for Albanian college students.

In 2008 I traveled to Tirana, Albania, working for two weeks at the Tirana International School on a library automation and needs assessment project for the school at the invitation of the school director. While interviewing school teachers and library associates in Tirana, it became apparent that information access and delivery systems were not prevalent in the Albanian secondary school system. Observations and findings of that two-week experience resulted in an article entitled *Policy Challenges for Administrators and Teacher Librarians in International Schools*, published in the proceedings of *International Association of School Libraries, 38th Annual Conference, Padua, Italy, 2009*.

The experience in Tirana led me to think critically about information access and information seeking outside the realm of private international schools but public institutions in Albania. I focused my interest on the city of Vlore, because it is the third



largest city in the country and could offer a template for future studies in the country and region.

A case study approach within a grounded theory of framework was used to investigate how college students seek and find information in Vlore. This approach offers “an interpretive portrayal of the studied world, not an exact picture of it” because grounded theory itself is open ended and relies on emergent processes, and the researcher’s emerging construction of concepts shape both process and product. (Charmaz, 2006, pp.10, 178).

For the purposes of the current study I partially subscribe to Charmaz’ (2006) stance of the theoretical approach to grounded theory:

- The research process is fluid, interactive and open-ended
- The research problem informs initial methodological choices for data collection
- Researchers are part of what they study, not separate from it

The data collection method was primarily qualitative. Questions were asked of instructors and students related to information seeking behavior, influencing factors, demographics, contextual issues such as technology access, economic status, and education policy. Questions primarily centered on understanding how college students seek information. Data was collected during the summer. Two instructors were contacted at Ismail Qemali University and approval, via their signature on a consent form was received. Human subject forms were submitted to the University of North Texas (UNT) Institutional Review Board (IRB) and approval was granted to carry out the research study proposed (see Appendix A).

## Research Venue

The research was conducted in the city of Vlore, Albania. There was one primary research site: volunteering students enrolled in Economics 170 and 270 courses. I received approval from two volunteering faculty members, who included a research project as an assignment in their course to facilitate surveys and informal interviews with them and their students. Four of the students who completed the survey also volunteered for an informal follow up interview via Skype to gain deeper understanding of the survey responses.

## Population of the Study

The primary subjects of the current study were students attending a university in Vlore, Albania. Students were enrolled in two courses, Economics 170 and Economics 270, for a bachelor of economics degree. In both courses students completed a course project which required them to seek out information resources beyond course material. All participation in the survey was conducted on a voluntary basis. In Economics 170 only 16 college students completed the survey and 18 students did not participate. In Economics 270 24 students completed the survey and six students did not participate. Participation in the survey did not offer any monetary reward nor did it effect the final grade in the course for any of the survey participants. More focus was placed on the students' responses to their information seeking behavior and general search activities (see Appendix B and C).

Even though the primary purpose of the current study was to discover information seeking behavior of college students, two faculty members volunteered,

filling out the survey instrument to further enhance the data findings. Faculty members provided immense insight on student preparation and research quality. They also provided background information on information seeking behavior of students, country wide university research policies, and funding policies. Based on preliminary conversations with university faculty it became apparent how central their role was in aiding their students in the information seeking process.

### Data Collection

A grounded theory framework within a case study approach was used to investigate how instructors select information resources to support their teaching, and how students select information resources to support their learning. This approach allowed for multiple sources to be used as part of data gathering: documentation, observations, surveys, interviews and secondary publication sources, in order to learn how people make sense of their situations (Charmaz, 2006).

### Documentation

The types of documents collected throughout the course of this study included:

- Formal studies on Albanian higher education system and libraries organizational charts
- European Union studies and government reports focused on Albania and the Balkan region
- Newspaper articles and reports in the Albanian mass media
- World Bank Data charts and reports on Albania
- Wolfram Alpha statistical charts

Documents were used throughout the data collection process to aid in comparing evidence from other sources i.e., interviews and surveys, while providing contextual insight about culture, political and economic systems, and realities in place in Albania.

## Surveys

Surveys are useful tools in the data gathering process, but they are not immune to bias, both in the development of the survey and its findings. This study uses the Leedy (1997) definition of survey “to look or see over or beyond the casual glance or the superficial observation” (p. 190).

The survey instrument utilized for the current study were open ended questions which ensured the participants could freely share their opinion beyond the confines of the question if they chose to do so. All survey questions were keyed to the main research questions and sub-questions using a question matrix. The surveys were administered by instructors in the designated classroom. All three areas: information-seeking behavior, influencing factors, and contextual issues were incorporated in all the surveys. In order to avoid identification no personal identifying data was collected i.e., last name, address, etc.

Prior to filling out the survey, a consent request to participate in the study was provided to each participant. No personal information was collected from the consent form. The only item required was the participants' signature. Once the form was signed each participant was permitted to fill out the survey form.

All the surveys were pilot tested prior to their administration. Instructions on how to complete the forms were provided to both students and faculty. The student survey

form was tested with two Albanian students attending the University of North Texas, and the faculty form was tested with a former Albanian college instructor residing in Denton, Texas. Feedback gathered from pilot tests of the survey instrument was incorporated into the final version of the surveys administered on site.

Each of the surveys was handed out to students and faculty to complete on their own. Once surveys were completed, they were delivered to me in a closed envelope. Student's participation in the completion of the form was entirely voluntary and it was clarified that participation or non-participation would have no effect, positive or negative on the students' standing in the course.

## Interviews

Interviews being defined as a directed conversation allowed for in-depth exploration of a particular topic or subject. They are a useful tool in qualitative research because they offer insight that might be missed by a survey response. During the interview process the researcher can observe responses from the participant and open new lines of questioning beyond pre-set questions (Charmaz, 2006). The interview process allowed for open-ended type questioning which provides insight and reflection on the part of the participant to interpret their experiences.

All interview questions were keyed to the main research questions and sub-questions using a question matrix. Interview instruments were pilot tested prior to administration with two Albanian teachers, and two Albanian international students currently residing in Denton, TX. Feedback from them was incorporated into the final version of the survey instruments

Interview questions ranged from information seeking behavior and influencing factors to the information seeking process. Once the participants signed their consent form, the interview took place. At the conclusion of the interview the researchers captured the main points to the participant to ensure credibility of data gathered (Charmaz, 2006).

Both participating faculty were aware of the scope of the interviews from electronic communications and Skype meetings. The two faculty members and I reached an agreement for their interview for the next onsite visit via Skype; each interview lasted approximately 60 minutes.

Consent forms were sent via email to both faculty members prior to my arrival in Vlore. Once the signed forms were received, interview dates were negotiated with instructors on site. Interview questions were sent to the instructors before the scheduled interview. Interviews were tape recorded and transcribed to ensure accuracy. Upon conclusion of each interview I summarized the major points made by participants. Finally, a transcript of the interview was sent to each participant to review and edit for accuracy.

Student interviews were negotiated onsite between me and volunteering students. A consent form was required and signed by the participating students. Interviews were taped, recorded, and each student was sent a transcript to edit and provide additional feedback for accuracy.

### Data Analysis Process

Once all the data was gathered it was sorted, diagramed, and integrated to

create a first draft of preliminary findings. Multiple sources of evidence were used during this study i.e., documents, interviews, and surveys. Each was organized by main categories: human elements, non-human elements, political economic aspects, sociocultural aspects and technology aspects. All documents, survey responses, interview transcripts and notes were stored together in Dropbox™ to make it easier to organize, make notes, and to share with others.

All data collected was analyzed for patterns and emerging themes. Each interview transcript and survey response was read by me, and further analyzed by interrelating it to the list of emerging themes. Every survey response which contained an open-ended response and interview transcript was entered into a database using the open source Text Analysis Markup System (TAMS) software. All the survey responses were coded around major emerging themes to determine new or distinctive themes.

### Summary

The current study assumed that college students and faculty seek information beyond class curriculum and berry-picking and sense-making models can explain information seeking behavior of college students in the developing world. There were no risks to the participants from the research. A consent form was solicited from each participant prior to filling out the survey instrument, and confirmation of participation performed in informal interviews on site and via Skype. In addition to gathering data via survey and interviews, additional information was gathered from formal studies on Albanian higher education system, libraries, and organizational charts, European Union studies and government reports focused on Albania, World Bank Data charts, and

Wolfram Alpha statistical charts. All gathered data was utilized in understanding the political, economic, and higher education realities for Albanian college students and their information seeking behavior.



## CHAPTER 4

### RESEARCH FINDINGS

#### Introduction

The current study explored how college students in a developing country seek and use information for academic activities and personal needs in an academic institution. Also, it was explored whether the Bates' and Dervins' information seeking models applied to the population studied.

Chapter 4 is organized around the following research questions:

1. How do college students generally conduct information seeking as it relates to their academic activity?
2. How do college students generally conduct information seeking as it relates to their personal needs?
3. How do college students use information resources for academic activity?
4. How do college students use information resources for personal needs?
5. Do the factors country economy, information communication technologies and information culture impact the information seeking behavior of students?
6. Does the college students' behavior apply to an information seeking model (Bates' berry-picking and Dervin's sense-making)?

Findings include an interpretation of the responses received from participants through onsite interviews and surveys and online Skype interviews. The responses are organized along five major themes: 1) information seeking, 2) information use, 3) information communication technology (ICT), 4) economic factors, and 5) information culture/policy.

Thirty-four students responded to the open-ended survey and four face-to-face informal interviews were conducted. Follow-up communication was conducted via Skype with four students who were interviewed again via Skype in May 2018. All were

full-time college students ranging in age from 19 to 28 years of age. The majority of survey respondents were female. The gender breakdown was 22 females and 12 males. The highest degree completed by the students was a high school education. Two faculty responded to the open-ended survey and I conducted two informal interviews with faculty in 2018 via Skype. The two faculty members were 26 and 28 years of age. The highest level of education completed by faculty was a master's degree. Table 1 provides the demographic breakdown of participants by gender.

Table 1

*Student Demographics*

	Economics 170	Percentage	Economics 270	Percentage
Male	5	30	7	41
Female	12	70	10	59
Total Participants	17	49	17	74
Nonparticipants	18	51	6	26

The following sections discuss findings as they relate to each research question.

Information Seeking/Academic Activity

*Research Question 1. How do college students generally conduct information seeking as it relates to their academic activity?*

Students who took the survey were asked in an open-ended question to identify the types of resources they use to complete research projects in their courses. Table 2 presents the results of resources students use to complete formal research. Thirty-four students responded to this question.

Table 2

*Information Communication Technology Used by Students for Academic Activity*

Source	Student Count /34	Percentage
The Internet	34	100
Wikipedia	34	100
Google	32	94
YouTube™	28	82
Facebook©	26	76
Print Books	5	15
Newspapers	4	12

Sample Narrative Responses from Students for Academic Activity

I search by going to [G]oogle, then I go to the University of Vlora web address and click [www.univlora.edu.al](http://www.univlora.edu.al) or another example I needed to search about 'blood killings in Albania' if you enter that term you get all kinds of responses back from Google.

I search on Google, enter the relevant term, scroll through the pages and I select only resources relevant to the research subject. It is very easy to get distracted, for example, I was searching on information about business planning and then my friend on Facebook sent me a YouTube link. I watched the video, and then returned to my original research and started searching again.

I usually start searching on Google and once I select the resources I need, I make sure to save them on my USB drive.

When I search for a school project, I start on Google, type the search term, and open the Wikipedia page to learn more about that person or term. Then I Skype my friends or chat with them on Facebook to see what they have used as resources and sometimes I use their finds or follow the links on the Wikipedia page to find out more information.

I was looking for state and county tax information, but the information on Google was too much. After searching one page of results, I gave up and asked my friends to share what they found and send me some of the links. Two daily activities for me on the Internet are to check Facebook and YouTube. For school work assignments I always check with my friends first to see if they have any links they recommend then I open Google and search for the course

project topic. I then select 2-3 resources needed to complete the project. Wikipedia is one of my resources I use.

When I search for my school projects, I always start with my bookmark pages first, they include links the faculty have provided and Wikipedia. Then, I search Google to see if there is additional information I can include. If I am searching for fun or personal information, I always start with google.

I search google for school assignments, but I also use chat or text to get a hold of my friends and ask questions.

### Information Seeking/Personal Needs

*Research Question 2: How do college students generally conduct informationseeking as it relates to their personal needs?*

Students who took the survey were asked in an open-ended question to identify the types of resources they use for their personal needs; 34 students responded, as shown in Table 3

Table 3

#### *Information Resources Used by Students for Personal Needs*

Source	Student Count/34	Percentage
Facebook	34	100
The Internet	34	100
Google	32	94
YouTube	28	82
Wikipedia	26	76
Print Books	5	15
Print Newspapers	4	12

#### Sample Narrative Responses from Students for Personal Needs

I look for legal information, magazine publications, email use, watch videos, music, Skype, etc.

I start my search in Google then from there enter search terms that interest me, or go directly to YouTube, Hotmail™, Gmail©, etc.

Start in Google.

I use internet for everything: news, weather, video, music, movie downloads, Skype etc. I always start my search in Google.

It depends on the information. I start by Google first. But if I am looking for entertainment, start in YouTube then Facebook.

I look for medical information, I usually open Firefox®, enter search terms and click on the results.

I usually use Google, Google Translate if I need to translate anything, but for school work usually Google, for fun YouTube.

I search Google for school assignments, but I also use chat or text to get a hold of my friends and ask questions.

In addition, when students were asked to identify in an open-ended question the subject areas of their research for course assignments and daily activities, students listed a variety of research topics and subjects as shown in Table 4. Thirty-four students responded to the question.

Table 4

*Research Topics/ Subjects Selected by Students*

Subject/Research Topic	Student Count /34	Percentage
Entertainment i.e., music, video	34	100
Health	31	91
Technology	14	41
History: Albanology	12	35
Literature	12	35
Economics/ Business/ Banking	10	29
Engineering	7	20
Legal Information	5	15

## Sample Narrative Responses of Research Topics/ Subjects Selected by Students

I search topics on technology.

I search on Albanian history, and literature.

I search computer engineering topics, usually in Google first.

I usually go to Google to search different types of information mainly on business administration, international corporations, or banking.

## Use of Information Resources for Academic Activity

*Research Question 3. How do college students use information resources for academic activity?*

Students were also asked to identify in an open-ended question, human information resources they use as trusted sources. Findings are shown in Table 5. All thirty-four students responded to this question.

Table 5

### *Go-To-Human Information Sources for Students*

Source	Student Count /34	Percentage
Peers/Friends	34	100
Self	34	100
Faculty	12	35
University Librarian	7	20
Public Librarian	5	15

Four students were interviewed on site and again on Skype in 2018. Students were asked if an information literacy course was available. All students noted that they were not aware of any such course being available. When pressed on describing where they do learn to do research, students noted that it was primarily via their friends,

information center worker or on their own. According to interviewed students, course syllabi often state to provide information sources beyond course material and links provided by the course faculty are the primary point of beginning their research projects. Students are not taught how to evaluate information and determine scholarly vs. non-scholarly information.

When students were asked in 2018 if anything had changed regarding information literacy since the creation of the onsite library they now could point to the library catalog and conduct a basic and advanced search. The lack of online full text resources remains an issue. Students still go to Google to seek out information. When asked if they were familiar with Google Scholar as a search option, all four students responded “No.”

I monitored the university website, and discovered these findings. On the main university website there is now a prominent link to the library which provides access to the catalog, library history, library mission statement, information on hours of operation and location, policy and membership links, and most importantly there is a direct link addressing why students should visit the library. Currently the library is undertaking an initiative to provide online electronic resources to students, faculty, and staff. According to COBISS OPAC data from 2013-2017 interlibrary loan between the public universities in Albania remains zero.

In addition to student interviews, I met with two faculty members. One of the areas discussed in interviews covered how faculty discovered information they utilized in building course curriculum. Both faculty noted they first relied on the senior faculty members to obtain relevant information resources, second, they sought out information

on their own, and third, they sought out an information professional i.e. librarian. Both mentioned that collaboration between faculty members in their department is central to their curriculum building.

When the two faculty were asked in interviews about their role in aiding students in the research process their responses ranged from direct involvement to pointing out local resources to students i.e., the librarian, and computer center. The two faculty members also emphasized their availability to students beyond office hours, by holding open meetings where students could consult with them about course related assignments. When the two faculty who were interviewed were asked to describe how specifically they directed students to information sources and services; the responses varied from pointing to course bibliographies contained in weekly course modules to providing librarian contact information in the syllabus. However, they did not view their primary role as brokers of information resources and services for their students. They emphasized it was the student's responsibility to become familiar with university resources to aid in their information discovery process.

#### Use of Information Resources/ Personal Needs

*Research Question 4. How do college students use information resources for personal needs?*

Students were also asked in an open-ended question to identify the types of resources they used for their everyday needs. Table 6 presents the results of resources students use to complete daily activities. Thirty-four students responded to this question.

Of the 34 students surveyed, 14 had Internet access at home and they owned a



personal laptop computer. All the students had cellular phones, and everyone accessed Internet at school, Internet cafes, coffee shops, or coffee bars. All students remarked that access to *fast internet* is a problem. Often the networks in chat cafes, coffee shops and bars would slow down due to high usage.

Table 6

*Information Communication Technologies Used by Students for Personal Needs*

Source	Student Count /34	Percentage
Google, Google Chrome™, Firefox, Google Translate™	34	100
Facebook	34	100
Messenger/ Text Chat	30	88
Skype	30	88
Gmail, Hotmail, Yahoo Mail	30	88
YouTube	30	88
Online TV Channels	28	82
Online Newspapers	24	70
Popular Magazines	12	35

Like any 19 year old, I usually start with Facebook and monitor my feed. I chat with my friends about life, homework assignments and then I go to Google to actually complete research assignments, but as I start looking for that type of information, if I see links that interest me, I follow those links and return to my assignments later.

I use Google and Wikipedia to complete any assignments for my course work, but also to satisfy my curiosity.

I use the Internet only for research assignments because it's a waste of time. I start in Google, type my search term and everything I need is there.

I search Google to do my research assignment and then I go to YouTube to see if there are any applications or video of other people completing the same work.

Factors: Information Communication Technologies, Economic Factors,  
Information Culture

*Research Question 5. Do the factors country economy, information communication technologies, and information literacy impact the information seeking behavior of students?*

Information Communication Technologies (ICTs)

Through the interviews with students I found that ICT needs to be implemented on the university campus and college students must have access to multiple channels of technology i.e., access to Internet, email, online learning, digital classrooms, as well as engage with technology in their learning. ICT requirement is mandatory by the ministry of education in Albania for all lower and upper level education institutions, in order to maintain accreditation status for the university and also to fulfill country requirements for member status in the European Union.

Albania is currently developing and aligning its education policies and practices with the European agenda, specifically the European Union's benchmarks for 2020 and SDGA-Education 2030. A recent The United Nations Educational, Scientific and Cultural Organization (UNESCO) report notes the Government of Albania, along with education stakeholders is now facing the challenge of further institutionalizing some of the early achievements and reforms in the education sector. "In particular, according to the 2014-2020 National Strategy for Development and Integration (NSDI) and the 2014-2020 Pre-University Education Development Strategy (PUEDS), educational reforms, including curriculum modernization, promotion of European principles, social inclusion, expanding ICT in education, standards for teachers, and improving student achievement are among Albania's top priorities" (UNESCO, 2017, pp. 6-7). Table 7 shows the 2030 education goals.

Table 7

*UNESCO SDGA4 - Education 2030 Goals*

Ministries <sup>3</sup>	No.	SDG4-Education 2030
MoSWY	4.1	By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
MES	4.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
MES MoSWY	4.3	By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
MoSWY	4.4	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
MES	4.5	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
MES	4.6	By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
MES	4.7	By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
MES	4.a	Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
MES	4.b	By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
MES	4.c	By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

An important finding during onsite visits and interviews with college students was the utilization of online information and communication technologies. Students noted many computers in the computer lab were outdated and the Internet on campus and

home was slow. Internet cafes filled in the gap of accessing online material to support their daily activities. The mission of the university is to advance knowledge and expand degree offerings in law, computer science, and vocational degrees. To this end, the university is pursuing international exchanges with several universities in the Balkan region and Western European universities. Several projects such as Interreg, Erasmus and Horizon 2020 are in development in accordance with aid from the European Union.

According to student interviews the university is also undertaking a “Smart University” initiative to enhance online services reduce bureaucratic red tape, and aid in student satisfaction with university services and resources. During interviews both students and faculty addressed the importance of a robust technology infrastructure to support learning and research. When students were asked to describe technology needs, they pointed to the lack of computer labs; non-functioning existing computers, and lack of funding to support learning and research. Table 8 shows ownership of devices used to access information by students and faculty.

Table 8

*Information Technology Device Owned by Students and Faculty*

Owned Device	Student	Percentage	Faculty	Percentage
Cellular phone	34/34	100	2/2	100
Notebook/personal computer	17/34	50	2/2	100
Tablet/ iPad™	10/34	29	1/2	50

Since this research of the current study was initially undertaken the university has taken steps to enhance and ameliorate its online presence. According to student interviews, the university website now contains accessible information to university administration, its governing structure, department information, research centers, and

library information. In interviews with students, although the online presence is welcome, to discover general university information they note course specific curriculum is not posted online. When students were asked to describe how they use current library resources, no one addressed that they utilize the library catalog to look for information. The library is still viewed primarily as a brick and mortar institution largely containing a print collection.

### Economic Factors

All surveyed and interviewed students noted the country's economic reality is a major factor for affording higher education, accessing online tools and resources to aid in their learning process, and securing affordable jobs upon graduation. All interviewed students noted the high cost of rent, Internet access, and cellular plan affordability as factors impacting their overall learning and performance in school. Below are a few responses from interviewed students regarding Economic factors:

Some months I have to choose to pay my cell phone bill or Internet bill. I choose to pay my cell plan because at least I can access internet from there or go to a coffee bar and access Internet.

I don't know what kind of a job I will get when I graduate. I have to go abroad for a master degree, because I don't think I can find a job here.

I am grateful my brother lives in Germany and he sends me money. I would never have been able to afford a computer if he did not buy it for me.

I wanted to go to a different university at the capital in Tirana, but that was not possible, my parents could not afford to pay the rent for me there. At least here, I can stay with my parents until I graduate.

Albania remains a developing economy and one of the poorest European countries. According to a European Commission report published in 2018, Albania is

moderately prepared in developing a functioning market economy. The public debt to GDP ratio and the current account deficit have been reduced and although economic growth has increased unemployment remains high. The World Bank data affirms the EU 2018 findings. (European Commission [EU], 2018; World Bank, 2018). This report also found “the quality of education needs to be raised at all levels, not at the least to better equip people with skills that the labor market needs. Foreign trade remains below potential and concentrated by sector. Albania’s capacity for research, development and innovation remains low” (EU, 2018, p. 7).

Economic realities and pressures were noted by all college students interviewed. Students pointed to high cost of tuition and living expenses as primary barriers for continuing full-time study. For the students, the primary reason of going to Google for class material is because Google is free, and they don’t have to print items, rather save them to their USB drive. The majority of the students don’t print course material, due to cost. Rather, they copy content, share items with each other online and take photographs of selected pages in textbooks.

Through interviews, it was discovered the economic conditions of the country directly impact funding for libraries and their ability to acquire information resources and serve their user base. A study evaluating academic libraries in Albania in 2013 discovered that even through international partnerships, academic libraries have acquired some technology resources i.e., computers and electronic collections, and they remain partially automated and lack proper funding which impedes their ability to adequately serve their users (Haska, 2013). All students interviewed reported similar concerns about their library resources. They recognize that the library could play an

important role in their academic research, but they are unable to do so because more often than not, library resources are outdated and they don't address their research needs. One student, who had been able to spend a year abroad at a university in Italy, was the only one who mentioned it would be great to implement services like *Ask a librarian* service or recognize that a librarian could aid in their information seeking process.

Lack of funding also impacts human information resources on a university campus. It is important to note that prior to 2009 no Albanian university offered graduate training in librarianship. As such, many information professionals currently working in libraries, have had to play catch up to learning how to serve populations who demand they interact with contemporary technologies (Domi, 2015).

The faculty noted funding issues for resources are a direct result of an economy in transition. They also teach in neighboring countries in order to supplement their income. Textbook selection for classes and online resources faculty use in their curriculum is always weighted against cost.

#### Information Culture/Policy

Through student interviews it became apparent that college students did not have the experience of utilizing the library as an information source. According to the students, they did not consider the library or the librarian as a broker of information in their lives. Students noted they knew the public library exists in their town, but no one had actually searched a library catalog or tried to browse the shelf to look for information. No one thought to go to the library to access the Internet. One student

noted “her sister used the library when she was on maternity leave because she heard from a friend they had free books on child rearing.”

The student interview responses make sense in the context of information culture in Albania and the country’s transition from authoritarian communist dictatorship to pluralist democratic society. One of the main changes in Albanian culture and society was the fall of the communist system in 1989. Between years 1939-1989 Albania was governed by one party rule, the communist party, and similarly to other countries in the Eastern Block, libraries as institutions were tasked in the participation and education of the *new man*. To that end, libraries became obedient executors of orders from the ruling party (Wolosz, 1996). They were mistrusted by the public, who viewed them as tools in the hands of an oppressive regime. For many of the interviewed students in this study, parents nor educators would not have stressed the importance of the library or librarians in their academic or private information seeking needs when they were young adults.

Since 1989, the country has undergone a transition to democratic rule of law and many public institutions had to reverse operations from a centralized system to an open and democratic system. Freedom of information has been in place since 2000 when parliament passed the first law regarding libraries (Domi, 2015). As a result, libraries have become more open, their stacks no longer restricted, and their resources no longer barred from use. The challenge of the past 20 for librarians continues to remain, reaching out to the public and educating them on their new role as facilitators to open access to information. All libraries in the country have presently implemented new policies that remove barriers and increase information access. The majority of surveyed and interviewed students identified the library as a place where they could access print



resources. No student mentioned searching online resources in the library to conduct research, either for academic or private needs.

Two students during a Skype interview in 2018 noted that the library website now links to an article that explains the role of the library in meeting their information needs. The document is titled: *Why should students and staff come to the library?* According to the students, other accompanying information on the library website now covers: library history, its mission statement, general information, library policies and membership, library funding, and a direct link to their online catalog. The library has undertaken several initiatives to engage with students and new technologies. In 2013 they were part of the Electronic Resources for Albania (ERA) which allowed few faculty and staff to access online information resources. With the cooperation of academic deans in the university now, the library publishes and makes available online a list of required textbooks and course materials for each department, including price.

While all libraries in Albania have been trying to make themselves available and open to the public, innovations in technology have made it possible for individuals to take ownership of their information discovery, bypassing the library altogether. Every student surveyed as part of the current study owned a cell phone and was able to get online either at home or at an Internet café.

When I interviewed a few students again via Skype in 2018, they each noted that spending time on the Internet surfing, searching, and connecting with their friends, is part of their daily activity; understanding, evaluating resources, and determining scholarly vs non-scholarly information is a daunting task for all of them. One way of overcoming these difficulties, is relying on Google Translate as a feature to understand

text not in Albanian or rely on their friends' choice of resources to include in their school research papers and projects. None of the students interviewed brought up the library or library staff as reliable sources of information to aid them in the research process.

### Theoretical Models/ Bates and Dervin

*Research Question 6. Does the college students' behavior apply to an information seeking model (Bates' berry-picking and Dervin's sense-making)?*

Student data noted below is based on open-ended survey responses and interviews conducted with students. Results listed below are based on 34 student responses and personal interviews conducted with four students.

General demographic questions were posed to college students which focused on age, gender, level of education, and years of employment. No relationship was discovered between demographic data and information seeking model. In order to determine whether the information seeking behavior of students could be explained by the application of Bates' berry-picking model or Dervin's sense-making model students were presented with two search scenarios in their open-ended survey: one model was designed to represent Bates' berry-picking model and the other model was designed to represent Dervin's sense-making model. Out of the 34 students surveyed 24 picked berry-picking model, 6 picked sense-making model, and 4 students skipped the question, as reflected in Tables 9 and 10

In order to determine whether the information seeking behavior of faculty could be explained by the application of Bates' berry-picking model or Dervin's sense-making model, as shown in Table 11, the participating faculty were presented with two search scenarios.

Table 9

*Search Process: Berry-Picking Model*

Search Process	Student Response/ 30	Percentage
Search through a variety of materials, identify useful information throughout the search process, without limiting my search to a type or subject picking out information as I go along	24	80
Search through a variety of materials moving back and forth among types	26	33
Search through a variety of subjects moving back and forth among types	26	33
Pick out a variety of materials as I find them together or separately	24	80

Table 10

*Search Process: Sense-Making Model*

Search Process	Student Response/30	Percentage
Identify why I am looking for information, what type of information I am missing, what I am trying to accomplish and identify relevant information pieces that help me fill in the gap	6	20
Figure out what kind of information I need first	4	13
Determine what kind of information I am missing to complete my project	4	13
Identify and select relevant information pieces that help me fill in the gap	6	20

Table 11

*Search Process Faculty*

Type of Model	Search Process
Berry-picking	Search through a variety of materials, identify useful information throughout the search process without limiting my search to a type or subject, picking out information as I go along
Sense-making	Identify why I am looking for information, what type of information I am missing, what I am trying to accomplish, and identify relevant information pieces that help me fill in the gap

Utilizing screen-sharing capability via Skype each faculty member was presented with both scenarios and asked which one closely resembled the information seeking process. The faculty separately selected sense-making model. One faculty member mentioned that when looking for information, quickly the faculty member could identify what was needed then moved on to figure out to whom or where to go to locate the missing information piece.

When faculty were asked to describe how they know where to look for information both responded it was learned by either browsing the internet or asking peers. Neither one had received formal training on how to search. Rather, searching was learned via years of searching as students and faculty.

When asked about the type of sources consulted to build course curriculum, faculty pointed to various resources: peer's syllabi, university resources, the internet, personal collection of materials. Overwhelmingly faculty relied on their own ability to select relevant internet resources or proceedings from academic conferences in their field of research.

When faculty were asked to describe the type of material made available to their students the following resources were noted: textbooks, YouTube seminars, and printed books beyond course textbook material. No links to relevant websites were provided in the faculty course materials because as noted, the website links were often not reliable from semester to semester.

## Summary

This chapter provided a summary of the research findings as they relate to the

six research questions. Results included an interpretation of the responses received from participants through onsite interviews and surveys and online Skype interviews. The responses also covered several influencing factors: information communication technologies, economic factors, and information culture/policy. The information seeking behavior of the participants was discussed as it relates to Bates' berry-picking model or Dervin's sense-making model.

## CHAPTER 5

### RESULTS AND SUMMARY

#### Introduction

Results of the study, recommendations for future research, and a summary are presented in Chapter 5. The focus of the current study was to explore how college students in a developing country seek and use information for academic activities and personal needs. Also, it explored how the factors of country economy, information communication technologies, and information literacy impact the information seeking behavior of the students. Two information seeking models, Bates' berry-picking and Dervin's sense-making were applied to the information seeking of the student's population studied. In addition, two faculty participated in the study and the results are discussed below. It is important to mention that the results are not generalizable due to sample size being only two college students in two level courses and two faculty members.

#### Discussion

The following sections discuss the results as they relate to each research question. The results from the participants, two college students are presented first, followed by the results of the two faculty with the exception of faculty seeking information and use for personal needs. In the faculty surveys and interviews, only academic activities were addressed.

## Information Seeking/ Academic Activity Results

*Research Question 1. How do college students generally conduct information seeking as it relates to their academic activity?*

College students rely primarily on the resources the faculty provide them to complete coursework. Google is the main source for searching information for both academic and personal purposes. Even though all the students begin their search activity via Google, no one mentioned Google Scholar as an option for doing academic research, or online scholarly databases, and very few of them consulted the library or librarian for scholarly research. Google, Wikipedia, YouTube, and Facebook were relied on as primary information seeking platforms to conduct academic research. Faculty begin their search in Google as well, and rely on peers and themselves to seek scholarly academic resources.

## Information Seeking/ Personal Needs Results

*Research Question 2. How do college students generally conduct information seeking as it relates to their personal needs?*

Students seek information for a variety of information needs such as personal entertainment, health, business/banking, legal information, technology, literature, and history. Students begin research using Google, from there go to sites liked, such as YouTube and Facebook. There was virtually no difference between how students seek information for personal needs versus academic needs.

## Use of Information Resources for Academic Activity Results

*Research Question 3. How do college students use information resources for academic activity?*

To complete research projects, the students utilized the links provided by the course faculty as the primary point of beginning research projects and then follow up with peer network/friends, or performed research utilizing the Internet. The students were not instructed how to evaluate information sources, and are not taught how to evaluate information nor how to determine scholarly vs. non-scholarly information. Google Translate is an important information resource that students utilize when non-Albanian information documents are found; however, although Google Translate was utilized, no student had prior training on how to evaluate the translated document to determine relevancy, accuracy or reputable authority of the translated document.

Faculty are more knowledgeable when seeking internet sources for academic research. They also begin their research in Google but they know to seek academic journal, conference proceedings and utilize internet pages of recognized peers in their field both in Albania and internationally.

#### Use of Information Resources Personal/ Needs Results

*Research Question 4. How do college students use information resources for personal needs?*

College students rely on a variety of electronic resources and platforms for personal use ranging from entertainment to health, legal, and business information. The most used resources are Google and Google Translate, Facebook, online TV channels, online newspapers and YouTube are heavily used resources by college students. Similarly, to their use of academic resources, college students don't have an understanding of choosing authoritative information sources or telling the difference between reputable and non-reputable information resources, especially as it relates to



health and legal personal research.

Factors: Economic Factors, Information Communication Technologies, Information Culture Results

*Research Question 5. Do the factors country economy, information communication technologies and information culture impact the information seeking behavior of students?*

According to World Bank data, the overall economic conditions in the country have an effect on the type of resources both human and material the university is able to make available to its students to support their research needs. There are current university wide initiatives to develop a “smart university” and develop electronic access to library resources. Low rates of government funding directly impact the university’s ability to meet their mission and deliver services to their students to increase their research output and ameliorate their learning environment. It can only be assumed that this has an impact in the information seeking on the college students and the faculty.

College students own a cellular phone, but there remains a gap between students who do own computers/notebooks and tablets and those that do not own any device beyond the cell phone. The university resources do not meet technology needs for students. According to students, internet speed was slow, computers in the library and university labs are outdated and they rely primarily on internet cafes and phones for their print, email, chat, information seeking needs. Again, from the findings of this study, it could be said that the ICT is not one that supports strongly the information seeking activities of college students whether for academic or personal needs.

Faculty own computers/notebooks and tablets. Based on the findings of the study faculty, like their students, don’t consider information communication technologies

supportive to their teaching endeavors or curriculum building. They also don't rely on the library as a major information resource. The ICT needs improvement to support information needs of faculty. As per World Bank data, low rates of government funding directly impact the university's ability to support faculty research and development as indicated by the faculty.

None of the students noted they make use of library resources i.e., online catalog, to aid their information seeking needs. College students use the university email portal, but they rely on their USB devices, and Google drive to save their documents and share work with peers. Students are aware the university now has an official website where general academic information can be found regarding schedules, acceptance requirements, and final exam schedules.

Faculty recognize the role the university library could play for academic information needs. Similar to the students, the faculty do not make use of the library resources to aid in the information seeking process.

Transitioning from a closed society to an open society remains challenging for Albanians and institutions of higher education. Traditional information delivery institutions are not meeting information needs for the users, although the library has been in existence at the university since its founding in 1994; it was not until 2016 that scholarly electronic sources became available to students. The library catalog became searchable online in 2013 but information on library resources was not available on the online university pages until 2013. For many of the students initially interviewed the idea of an electronic library was not a familiar concept; the library was viewed as a physical building, a quiet place to study, a place to check out print resources, and a space to

hold meetings and symposiums. Very few students noted the librarian as a broker of reputable information, and the library staff are not consulted for academic information needs. Students nor the faculty were fully aware of the information culture of the university nor the university library.

#### Theoretical Models/ Bates and Dervin Results

*Research Question 6. Does the college students' behavior apply to an information seeking model (Bates' berry-picking and Dervin's sense-making)?*

Bates and Dervin's information seeking models apply to college students. The students changed their search inquiries constantly, and utilized a variety of sources, not sequentially, and they gathered information in bits and pieces along the way. Bates' berry-picking models best described their information seeking process.

Faculty members who had a greater domain level knowledge were more directed and focused in search inquiries. Research was started by understanding the information need, assessing the information gap and determining a search path for discovering relevant content. Dervin's model best described the chosen information seeking process.

There was an element of surprise for me to see the differences in use of information models between the students and the faculty. Even though both models have been primarily used to describe information seeking among American target populations, the underlying assumption that Dervin's model would best apply to Albanian college students, because Dervin's model relied on minority and underserved populations was not supported by the results. Bates' *berry-picking* model more closely described the process by which college students in Albania seek and use information.

## Summary of the Results

Google is the main source for searching information for both academic and personal needs by college students. College students rely primarily on Google, the peer network, and themselves when they conduct research whether for academic activity or personal needs. The initial starting point for academic activity research are the resources provided by the faculty. There is a lack of understanding how to evaluate information resources and differentiate between scholarly vs. non-scholarly resources. The students are not introduced and exposed to methods of evaluating information resources. The ICT needs improvement to support information needs of college students.

The library and information professionals are not recognized by college students as facilitators in the information seeking process. Technology advances have made it easier for students to bypass the library altogether and seek information directly online via Internet cafes or personal device such as cell phones. Faculty also don't view the library and information professional as central to their information seeking process.

Berry-picking is the dominant information seeking model college students use to seek information. Sense-making is the dominant information seeking model faculty use to seek information.

Finally, the current study contributes a greater understanding on information seeking and use of information by college students in Vlore, Albania. Faculty can also gain greater understanding of how students seek and find information sources. Also, it creates an awareness of the need to educate students on how to find authoritative

information and how to evaluate information resources both per academic use and personal needs.

### Recommendations and Future Research

The current study provides the start of many future studies for understanding how college students seek and use information in a developing country and the Balkan region. Future studies should incorporate a larger sample size of students and faculty to gain more in-depth understanding of the information seeking behavior.

Further studies in this field are needed to address how university administrators, policy makers, and government initiatives impact information seeking process among college students and faculty. Additional work is needed to evaluate how current university initiatives, including the implementation of the *smart university* are impacting student preparedness and performance, and faculty research output. Also, further research is needed to better understand the impact of information literacy integration in course curriculum and its impact on student performance.

The challenge for library professionals is to increase their visibility among college students by implementing embedded librarianship, and implementing ask a librarian services that rely on recognized information communication technologies by students. They should also offer to partner with faculty in teaching courses at the university level that instruct students on how to seek, find, and evaluate information and information sources. Finally, more studies are needed to see if there could be a hybrid model between berry-picking and sense-making model that can explain the information seeking behavior of students and faculty in Albanian universities.

APPENDIX A  
SAMPLE CONSENT FORM

## Universiteti i North Texas Bordi i Rishikimit Institucional

### Njoftim per Dhenie te Lire Te Lejes Tuaj

Para se të pranoni të merrni pjesë në këtë studim kërkimor, është e rëndësishme që ju të lexoni dhe kuptoni shpjegimin e mëposhtëm të qëllimit, përfitimeve dhe rreziqeve të studimit dhe se si do të kryhet.

**Titulli i Studimit:** Si Kërkojne Njerezit Informacionin ne Boten nen Zhvillim. Nje studim mbi sjelljen kerkimore te studenteve universitar ne Vlore, Shqiperi.

**Studenti Kerkimtar:** Artemida Kabashi, University of North Texas (UNT) Departamenti i Informacionit. **Kerkimtari Pergjegjes:** Maurice Wheeler.

**Qellimi i Studimit:** Ju kërkohet të merrni pjesë në një studim kërkimor që përfshin të mësuarit se si studentët e kolegjit kërkojnë burime informacioni.

**Procedurat e studimit:** Juve do tju kërkohej të plotesoni ose mbushni një anketim. Gjithë aktiviteti nuk do të marrë më shumë se 30 minuta nga koha juaj.

**Rreziqe te Parashikueshme:** *Pjesëmarrja juaj ne kete studim kerkimor nuk do te kete asnje rrezik.*

**Perfitimet per Pjesemarresit ose te Tjere:** *Ky studim nuk pritet te kete ndoje perfitim te drejtperdrejte tek pjesemarresit for shpresojme te mesojme me shume se si studentent shqiptare kerkojne dhe perdorin burimet informative qe te shpjegojme sesi procesi i kerkimit te informacionit mund te ndihmoje studentet universitare te ardhshem.*

**Kompesim per Pjesemarresit:** Asnje

**Procedures for Maintaining Confidentiality of Research Records:** Konfidencialiteti juaj do të mbrohet, kërkuesi nuk do të mbledhë dhe as nuk do të mbajë asnjë informacion të vetëidentifikuar, as nuk do të ndajë asnjë informacion personal me asnjë palë të tretë. Të dhënat e përgjithshme demografike dhe rezultatet e vërtetimit të grumbulluara do të kodohen dhe mbahen në dy vende të ndara. Konfidencialiteti i informacionit tuaj individual do të mbahet në çdo publikim ose prezantim lidhur me këtë studim.

**Pyetje me studimin kerkimor:** Nese keni pyetje, ju mund te kontaktoni *Artemida Kabashi* ne kete adrese [artemida.kabashi@unt.edu](mailto:artemida.kabashi@unt.edu); 1- 940-367-3357 ose *Maurice Wheeler* tek kjo adrese [maurice.wheeler@unt.edu](mailto:maurice.wheeler@unt.edu) ose *Enkelejda Shyle Petanaj* tek kjo adrese [enkelejda.petanaj@univlora.edu.al](mailto:enkelejda.petanaj@univlora.edu.al); Telefon: +355 33 222288

**Shqyrtimi per Mbrojtjen e Pjesemarrsesve:** Ky studim eshte shqyrtuar dhe miratuar nga UNT Institutional Review Board (IRB). The UNT IRB mund te kontaktohet at (940) 565-4643 me cdo pyetje ne lidhje me te drejtat e subjekteve kerkimore.

**Te drejtat e Pjesemarrsesit ne Kerkim:**

Pjesemarrja juaj ne anketë konfirmon se ju keni lexuar të gjitha më lart dhe se jeni dakord me të gjitha këto që vijojnë:

- Artemida Kabashi* ju ka shpjeguar studimin dhe ju keni pasur mundesi te kontaktoni ate me ndonje pyetje ne lidhje me studimin. Ju jeni informuar per perfitimet e mundshme the rreziqet potenciale te studimit.
- Ju e kuptoni se nuk eshte e nevojshme te merrni pjese ose vendimi tuaj per tu terhequr nuk do te perfshije asnje ndeshkim, apo perfitim. Staffi kerkimtar mund te ndali pjesemarrjen tuaj ne cdo kohe.
- Vendimi juaj per te marre pjese ose per tu terhequr nga studimi nuk do te kete efekt ne noten tuaj ose gjendjen tuaj ne kete klase.*
- Ju e kuptoni se pse po zhvillohet ky studim dhe se si do te kryhet.
- Ju i kuptoni te drejtat tuaja si pjesemarrres dhe jepni lejen vullnetarisht per te marre pjese ne kete studim.
- Ju e kuptoni qe mund te merrni nje kopje te kesaj forme per rekordet tuaja



## University of North Texas

### Informed Consent Notice

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

**Title of Study:** Information Seeking in the Developing World. A Case Study of Information Seeking Behavior of College Students in Vlore, Albania.

**Student Investigator:** Artemida Kabashi, University of North Texas (UNT) Department of Information. **Supervising Investigator:** Maurice Wheeler.

**Purpose of the Study:** You are being asked to participate in a research study which involves learning how college students seek information resources.

**Study Procedures:** You will be asked to complete a survey that will take about 30 minutes of your time.

**Foreseeable Risks:** *No foreseeable risks are involved in this study.*

**Benefits to the Subjects or Others:** *This study is not expected to be of any direct benefit to you, but we hope to learn more about how Albanian students seek information resources to explain how the process of discovery and use of information resources may benefit future student research at the university level.*

**Compensation for Participants:** None

**Procedures for Maintaining Confidentiality of Research Records:** Your confidentiality will be protected, the researcher will not collect nor maintain any self-identifying information nor share any personal information with any third party. General demographic data and survey results collected will be coded and maintained in two separate locations. The confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

**Questions about the Study:** If you have any questions about the study, you may contact *Artemida Kabashi* at ([artemida.kabashi@unt.edu](mailto:artemida.kabashi@unt.edu)), 1-940-367-3357 or *Maurice Wheeler* at [maurice.wheeler@UNT.edu](mailto:maurice.wheeler@UNT.edu) or *Enkelejda Shyle Petanaj* [enkelejda.petanaj@univlora.edu.al](mailto:enkelejda.petanaj@univlora.edu.al); Telefon: +355 33 222288

**Review for the Protection of Participants:** This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-4643 with any questions regarding the rights of research subjects.

**Research Participants' Rights:**

Your participation in the survey confirms that you have read all of the above and that you agree to all of the following:

- Artemida Kabashi* has explained the study to you and you have had an opportunity to contact him/her with any questions about the study. You have been informed of the possible benefits and the potential risks of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- Your decision whether to participate or to withdraw from the study will have no effect on your grade or standing in this course.*
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You understand you may print a copy of this form for your records.

APPENDIX B  
SAMPLE SURVEY QUESTIONNAIRE FORM STUDENT

**Background Information**

1. Do you have access to internet at home or school?
2. How long have you studied at this school?
3. What is your age?
4. What is your gender?
5. What is the highest degree completed?

**Information Seeking**

1. Where do you go to look for information to fulfill your daily needs?
2. What kinds of things do you seek information for on your daily activities?
3. Could you describe in more detail your process of seeking information for a couple of activities?
  - a. School projects
  - b. Entertainment
  - c. Health
4. While completing course assignments, what information resources did your school make available to you?
5. Where did you obtain your books, journal articles, web sites, to complete assignments and how often? 1=Frequently, 2=Sometimes, 3= Seldom, 4= Never
  - a. School
  - b. Public Library
  - c. The Internet
  - d. Friends
  - e. Other (Please explain)
6. While completing your course assignment I rely on the following individuals to answer questions about books, journal articles, web sites,  
1=Frequently, 2=Sometimes, 3= Seldom, 4= Never
  - a. Course teacher
  - b. Librarian
  - c. Friends
  - d. Other (Please explain)
7. Which of the following scenarios best describes how you seek out information resources for purposes of completing school assignments?

**Scenario A:** \_\_\_\_\_

When searching for information resources, textbooks, websites, articles, etc., to complete school assignments I usually know what I am looking for, who to contact and how to use information I find, one information resource at a time.

**Scenario B:** \_\_\_\_\_

When searching for information resources, textbooks, websites, articles to complete assignments I usually search through various materials according to need, rely on multiple human resources to narrow down my searches, and search multiple sources rather than one at a time.

**Information Access**

8. What is a positive outcome of information access in your city?
9. What do you consider the barriers of information access in your city?
10. From your experience, what would be the ideal information access/delivery system in the city?
11. Do you think in your city there is easy access to information resource centers?
12. What are some strategies you've used in fulfilling your information needs?

**Services and Resources of Information Access**

13. What resources are available by the city to discover information? Can you describe them?
14. What do you think about the role of libraries in the process information seeking?
15. Is there a library in your city/ school?
16. What services does your library provide to assist with your information needs?
17. Do you use a computer or cell phone to access information?
18. If you don't own a computer, what venues in your city do you utilize to get access?
19. My final question is what would be your top recommendation to strengthen information access and whether you have additional overall comments.

APPENDIX C  
SAMPLE SURVEY QUESTIONNAIRE FACULTY

**Faculty/survey/questionnaire**

**date** \_\_\_\_\_

**Background Information**

1. Age
2. Gender
3. Highest Degree completed
4. Years of experience as teacher
5. Years of experience at current institution
6. List areas of teaching expertise

**Information seeking**

7. When seeking out supplemental/additional resources do you:
  - a. Try to make sense of information sources
  - b. Search through a variety of materials and pick them as you go along
8. When seeking out course materials generally do you (Mark all that apply):
  - a. Use established curriculum sources
  - b. Consult librarians
  - c. Consult colleagues
  - d. Consult Internet
9. When seeking out course materials where do you obtain information sources (Mark all that apply):
  - a. Your institution
  - b. The internet
  - c. Public Library
  - d. University
  - e. Other
10. When using information resources in your classroom where do you obtain course content (Mark all that apply)?
  - a. Textbook
  - b. Printed books other than textbooks
  - c. Scholarly websites
  - d. Journals
  - e. Ebooks
  - f. Online databases
  - g. Electronic encyclopedias

11. Which of the following scenarios best describes how you seek out information resources for purposes of classrooms material?

**Scenario A:** \_\_\_\_\_

When searching for information resources, textbooks, websites, articles, etc., for course materials I usually know what I am looking for, who to contact and how to use information I find, one information resource at a time.

**Scenario B:** \_\_\_\_\_

When searching for information resources, textbooks, websites, articles to complete assignments I usually search through various materials according to need, rely on multiple human resources to narrow down my searches, and search multiple sources rather than one at a time.

12. When using information resources describe how important is ease of access when selecting the resource?
13. When using information resources describe how important it is for the source to be in an electronic format?
14. When teaching a course how important is the integration of information literacy?

**Information Access**

15. What do you consider to be successes of information access in your city?
16. What do you consider the barriers of information access in your city?
17. From your experience, what would be the ideal information access/delivery system in the city?
18. Do you think in your city there is easy access to information resource centers?
19. What are some strategies you've used in fulfilling your information needs?

**Services and Resources of Information access**

20. What resources are available by the city to aid in information access? Can you describe them?
21. What do you think about the role of libraries in the process information seeking?
22. Is there a library in your city/ school?
23. What services does your library provide to assist with your information needs?
24. Do you use a computer or cell phone to access information?
25. What would be your top recommendation to strengthen information access and whether you have additional overall comments



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