A Project Report

on

STUDENT AND FACULTY INTERACTION OUTSIDE THE CLASSROOM

Submitted in partial fulfillment of the requirement for the award of the degree of

Bachelor of Technology in Computer Science and Engineering

Under The Supervision of
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SCHOOL OF COMPUTING SCIENCE AND ENGINEERING
GALGOTIAS UNIVERSITY, GREATER NOIDA

CANDIDATE'S DECLARATION

We hereby certify that the work which is being presented in the project, entitled **"Student And Faculty Interaction Outside The Classroom"** in partial fulfillment of the requirements for the award of the B.Tech SCSE submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the August 2021 - December 2021, under the supervision of Mr. S. P. Ramesh (Assistant Professor), Department of Computer Science and Engineering, Galgotias University, Greater Noida.

The matter presented in the project has not been submitted by us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Mr. S. P. Ramesh

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CERTIFICATE

The Final Project Viva-Voce examination of **Devansh Pundir/ 19SCSE1010049 and Anamay Agrawal/ 19SCSE1180018** has been held on _____ and their work is recommended for the award of B.Tech School of Computer Science and Engineering.

Signature of Examiner(s) **Signature of Supervisor(s)**

Signature of Project Coordinator **Signature of Dean**

Date:

Place: Greater Noida

ABSTRACT

Student and Faculty Interaction outside the Classroom is a web application developed in java. This application enables both professors and users to interact with each other at any time and anywhere. This application makes any time-accurate communication between professors and users. Admin will add all the details of professors and departments. Professors can view all the details of the queries sent by users and can upload materials related to the queries. Users can ask queries and view answers and materials. Faculty-student interaction is an important component of the undergraduate experience. Our year-long qualitative study explored the complex nature of faculty-student interaction outside the classroom. Our resulting topology identifies five types of interaction: disengagement, incidental contact, functional interaction, personal interaction, and mentoring. This typology provides researchers with a new lens through which they can examine faculty-student interaction and suggests that even non-academic interactions between students and professors can be meaningful to students. Finally, the typology will allow faculty, staff, and administrators to improve current practices and develop initiatives that build bridges between faculty and students outside the classroom.

CONTENTS

1. Introduction 1

1.1 Methodology 2

1.2 Introduction

1.3 Formulation of Problem 4

1.3.1 Tool and Technology Used 5

2. Literature Survey/Project Design 15

3. Functionality/Working of Project 16

4. Results and Discussion 18

5. Conclusion and Future Scope 20

5.1 Conclusion

5.2 Future Scope

6. Reference 23

7. Publication/Copyright/Product

FACULTY-STUDENT INTERACTION OUTSIDE OF CLASS - INTRODUCTION

Faculty-student interaction is an important component of the undergraduate experience. Our year-long qualitative study explored the complex nature of faculty-student interaction outside the classroom. Our resulting topology identifies five types of interaction: disengagement, incidental contact, functional interaction, personal interaction, and mentoring. This typology provides researchers with a new lens through which they can examine faculty-student interaction and suggests that even non-academic interactions between students and professors can be meaningful to students. Finally, the typology will allow faculty, staff, and administrators the value of faculty-student interaction to be undermined by two factors.

First, no value can be extracted from such interactions if they don't take place. The National Survey of Student Engagement indicates that faculty-student interaction occurs less frequently than all but one of the five benchmarks for effective educational practice (2006).

These relatively low levels of interaction exist in all types of institutions, but are lowest at doctoral universities with very high levels of research activity.

Second, the quantity of faculty student interaction accounts only for one part of the equation; without understanding the quality of those interactions it is impossible to account for the related student outcomes.

In other words, while educators know that faculty-student interaction outside of the classroom is associated with positive outcomes, there is little understanding of the process by which such interactions take place.

Researchers are generally unsure why and how students and faculty engage with each other outside of the classroom. However, such an understanding is critical; without it, efforts to develop structures and cultures that foster these educationally productive interactions will be limited in both their efficiency and effectiveness.

To successfully promote faculty-student interaction outside of the classroom, educators must understand how students make sense of their interactions with faculty members.

Therefore, this study investigates the full range of types and meanings of students' interactions with faculty members outside of the classroom. Our research was guided by the following questions:

(a) What is the nature of faculty-student interaction outside of the classroom, and

(b) What conditions foster and inhibit these interactions?

The resulting analysis yields a typology of faculty-student interaction outside the classroom that provides a framework through which educators can pursue future research and improve institutional practice, improve current practices and develop initiatives that build bridges between faculty and students outside the classroom.

METHODOLOGY

With few exceptions, nearly every recent study of faculty-student interaction has used quantitative analyses to study what is a highly personal, complex set of experiences for both faculty and students.

Several studies have been delivered to thousands of students each year, exploring faculty-student interaction as one of its “five clusters or benchmarks of effective educational practices”.

Most recent studies investigate the nature of faculty student interaction outside of the classroom by asking students a handful of questions and offer valuable insights into the experiences of undergraduate students, to keep within the constraints of both time and space they are required to use simple proxies to estimate complex constructs.

Breaking from this quantitative tradition, our use of a multi-method qualitative design freed us from the constraints of previous studies' narrow definition of faculty-student interaction and allowed us to garner a more complete understanding of the nature of such interactions.

Previous studies of faculty-student interaction have generally focused on relatively concrete outcomes by measuring the frequency of generic student experiences; our study explored the range and meaning of students' individual, highly contextualized experiences.

FORMULATION OF THE PROBLEM

1. In the existing system there is no proper communication between professors and users.

2. All the details of users and their queries are maintained in records which takes a lot of time to verify and send them a response.

3. There are a lot of chances of misplacement of data and sometimes missing.

4. No proper information is maintained.

5. Analyzing a query and sending them responses takes a lot of time and a lot of effort.

TOOLS AND TECHNOLOGY USED

STAGE 1: PLANNING AND REQUIREMENT ANALYSIS

1. Requirement analysis is the most important and fundamental stage in development.

2. This information is then used to plan the basic project approach and to conduct product feasibility study in the economical, operational and technical areas.

3. Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage.

4. The outcome of the technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks.

5. It is related to the various ways used to gain knowledge about the project domain and requirements.

6. The various sources of domain knowledge include customers, business manuals, the existing software of the same type, standards and other stakeholders of the project.

STAGE 2: DEFINING REQUIREMENTS

1. Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts.

2. This is done through an Requirement Specification document which consists of all the product requirements to be designed and developed during the project life cycle.

3. This activity is used to produce formal software requirement models.

4. All the requirements including the functional as well as the non-functional requirements and the constraints are specified by these models in totality. During specification, more knowledge about the problem may be required which can again trigger the elicitation process.

5. The models used at this stage include ER diagrams, data flow diagrams(DFDs), function decomposition diagrams(FDDs), data dictionaries, etc.

The requirements defined for this project includes -

1. **User experience (UX)**
   User experience (UX) focuses on having a deep understanding of users, what they need, what they value, their abilities, and also their limitations.

2. **User interface (UI)**

   The user interface (UI) is the point at which human users interact with a computer, website or application.

   The goal of effective UI is to make the user's experience easy and intuitive, requiring minimum effort on the user's part to receive the maximum desired outcome.

3. Visual design

4. **Coding languages** including HTML and CSS

5. **Frontend web programing languages** and skills such as JavaScript, Ajax and web animation techniques

6. **Backend web programing languages** such as C# or Java, PHP and Ruby

7. **Design software** like Photoshop and Illustrator and Sketch

8. Web servers and how they function

STAGE 3: DESIGNING THE PRODUCT ARCHITECTURE

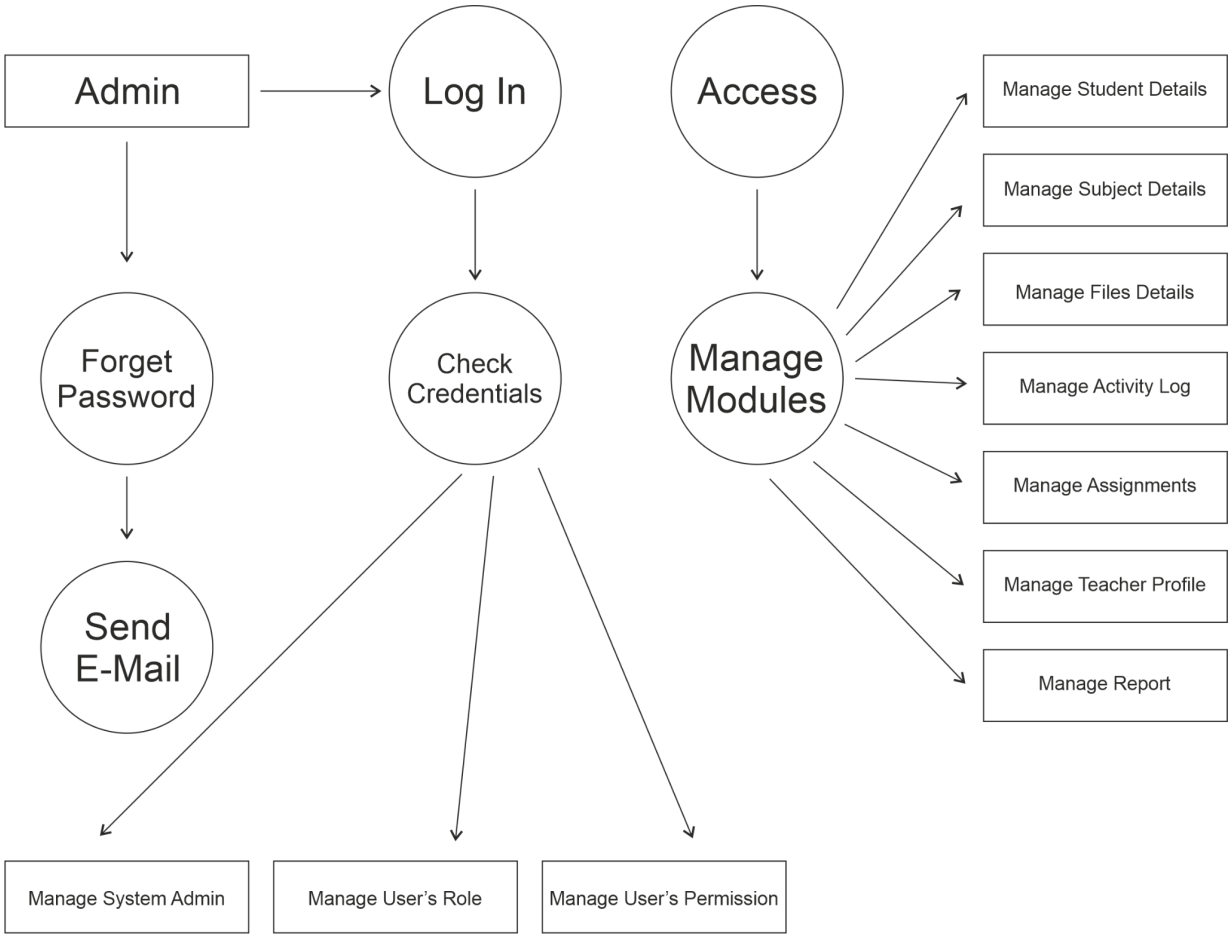
1. Based on the requirements specified, usually more than one design approach for the product architecture is proposed and documented in a Design Document Specification.

2. This Design Document Specification is reviewed by all the important stakeholders and based on various parameters as risk assessment, product robustness, design modularity, budget and time constraints, the best design approach is selected for the product.

3. A design approach clearly defines all the architectural modules of the product along with its communication and data flow representation with the external and third party modules (if any).

4. The internal design of all the modules of the proposed architecture should be clearly defined with the minutest of the details in Design Document Specification.

DFD DIAGRAM



ADMIN

1. Admin can get logged into the application by entering valid username and password.
2. Admin can add the details of the professor.
3. Admin can add details of the department and can view all the details of the department.
4. Admin can check credentials and manage user's role and user's permission.

SUBJECTS DETAILS/ DATA

1. Admin can get logged into the application by entering username and password.
2. Professor can view all the details of the queries added by users.
3. Professor can upload materials for respective subjects.

USER

1. Users need to fill all the registration details to get login details.
2. Users can get logged into the application by entering a unique username and password.

STAGE 4: BUILDING OR DEVELOPING THE PRODUCT

1. In this stage the actual development starts and the product is built.

2. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.

3. Developers must follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc.

4. The programming language is chosen with respect to the type of software being developed.

The programming language chosen for this project are as follows -

1. HTML5.

1. HTML5 is a programming language whose acronym stands for Hyper Text Markup Language.

2. It is a system that allows the modification of the appearance of web pages, as well as making adjustments to their appearance. It also used to structure and present content for the web.

2. CSS3.

1. Cascading Style Sheets Level 3 (CSS3) is the iteration of the CSS standard used in the styling and formatting of Web pages.

2. CSS3 incorporates the CSS2 standard with some changes and improvements.

3. A key change is the division of standard into separate modules, which makes it easier to learn and understand.

3. SASS.

1. SASS (which stands for 'Syntactically awesome style sheets) is an extension of CSS that enables you to use things like variables, nested rules, inline imports and more.

2. It also helps to keep things organised and allows you to create style sheets faster.

4. PHP.

1. PHP (Hypertext Preprocessor) is known as a general-purpose scripting language that can be used to develop dynamic and interactive websites.

2. It was among the first server-side languages that could be embedded into HTML, making it easier to add functionality to web pages without needing to call external files for data.

5. JQUERY.

1. jQuery is a framework built with JavaScript. It helps web developers to add extra functionalities to their websites.

2. It is the most popular JavaScript library used to traverse and manipulate the HTML DOM tree.

3. Also, it simplifies event handling, CSS animation, and Ajax.

STAGE 5: TESTING THE PRODUCT

1. This stage is usually a subset of all the stages, the testing activities are mostly involved in all the stages of development.

2. This stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the Requirement Specification.

STAGE 5: DEPLOYMENT

1. Once the product is tested and ready to be deployed it is released formally in the appropriate market.

2. Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment.

3. After the product is released in the market, its maintenance is done for the existing customer base.y stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined.

4. Analyzing, documenting, tracking, prioritizing and agreeing on the requirement and controlling the communication to relevant users.

5. This stage takes care of the changing nature of requirements.

6. It should be ensured that the web is modifiable as possible so as to incorporate changes in requirements specified by the end users at later stages too.

7. Being able to modify the web development as per requirements in a systematic and controlled manner is an extremely important part of the process.

OTHER REQUIREMENTS INCLUDE

FUNCTIONAL REQUIREMENTS

1. These are the requirements that the end user specifically demands as basic facilities that the system should offer.

2. All these functionalities need to be necessarily incorporated into the system as a part of the contract.

3. These are represented or stated in the form of input to be given to the system, the operation performed and the output expected.

4. They are basically the requirements stated by the user which one can see directly in the final product, unlike the non-functional requirements.

NON-FUNCTIONAL REQUIREMENTS

1. These are basically the quality constraints that the system must satisfy according to the project contract.

2. The priority or extent to which these factors are implemented varies from one project to another.

DOMAIN REQUIREMENTS

1. Domain requirements are the requirements which are characteristic of a particular category or domain of projects.

2. The basic functions that a system of a specific domain must necessarily exhibit come under this category.

3. For instance, in an academic software that maintains records of a school or college, the functionality of being able to access the list of faculty and list of students of each grade is a domain requirement.

4. These requirements are therefore identified from that domain model and are not user specific.

LITERATURE REVIEW

1. Recent literature has confirmed what the early studies of faculty-student interaction suggested. Specifically, there is clearly a link between positive student outcomes and the quality and quantity of out-of-classroom interactions between undergraduates and faculty members.

2. Unfortunately, the research on faculty-student interaction is limited in its scope. The vast majority of research addressing faculty-student interaction focuses on interactions that take place within the classroom.

3. Likely guided by early research suggesting that faculty-student interaction appeared to be most valuable when it related to academic, intellectual, or career matters.

4. Nearly all of the literature regarding faculty-student interaction has focused primarily on a narrow range of behaviors.

5. Researchers have tailored their inquiries to interactions considered to be academic or intellectual.

6. Available research has generally overlooked the potentially important non academic interaction might have on students' perceived integration into the campus social and academic community.

WORKING OF THE PROJECT/ FUNCTIONALITY

ADMIN

5. Admin can get logged into the application by entering valid username and password.
6. Admin can add the details of the professor.
7. Admin can add details of the department and can view all the details of the department.

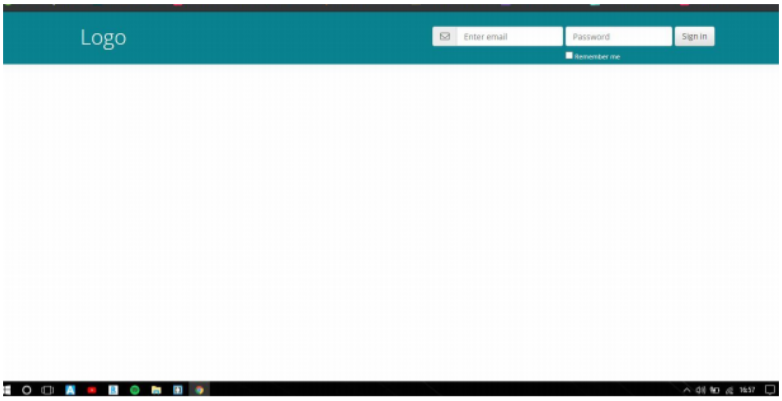
PROFESSOR

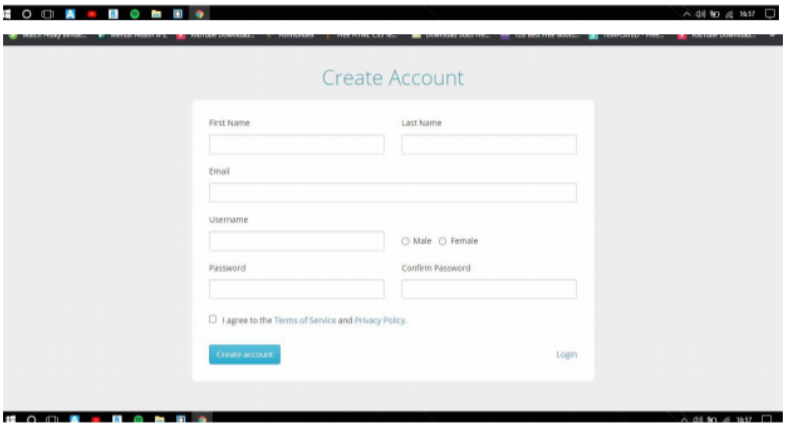
4. Professor can get logged into the application by entering username and password.
5. Professor can view all the details of the queries added by users.
6. Professor can upload materials.

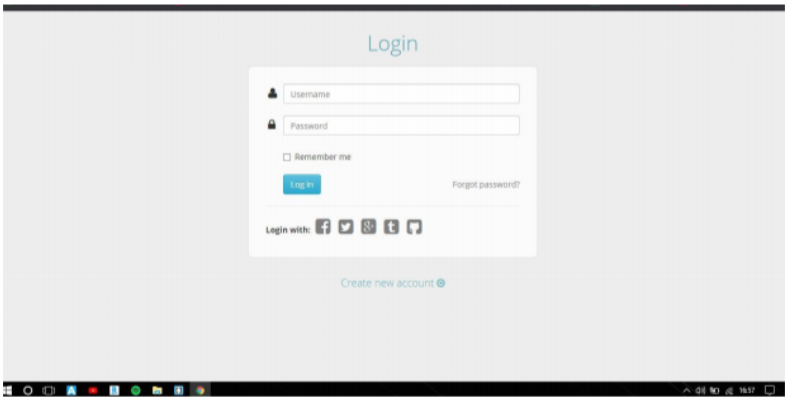
USER

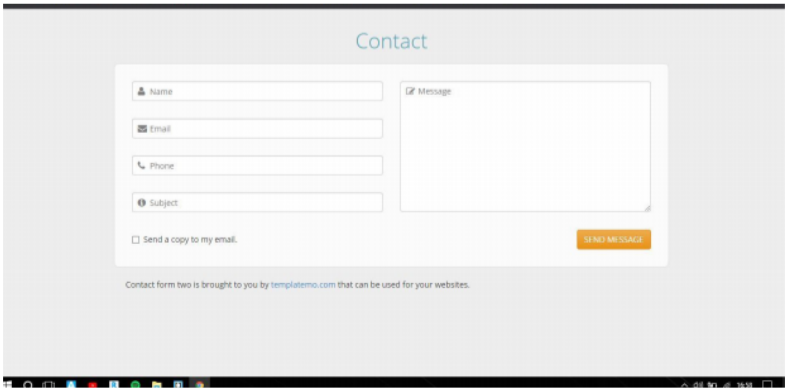
3. Users need to fill all the registration details to get login details.
4. Users can get logged into the application by entering a unique username and password.

RESULTS AND DISCUSSION









TARGET AND EXPECTED OUTPUTS OF THE PROJECT

1. The proposed system all the process is done automatically.

2. All the information is stored in the database which can be easily modified and deleted.

3. Users can ask queries and get the accurate response within no time and without any hard effort.

4. Professors can view all the details of the user's queries and can provide material related to the users query from anywhere and at any time.

5. This system maintains good and easy communication between professor and user.different combinations that can guarantee best possible reliability of our results.

FUTURE SCOPE

As suggested earlier, campus culture can facilitate or inhibit out-of-class faculty-student interactions. Thus, it is likely that the frequency and relative distribution of each type of interaction will vary in different institutional contexts. So too might the meaning of such interactions vary across the wide landscape of higher education institutions.

Replication of this study in other institutional environments may yield additional rich data that could lead to an even more comprehensive understanding of the complex interplay between institutions, faculty, and students.

Future research should also explore how differences between student and faculty racial, gender, and sexual identities may affect these interactions.

Another potential track for future research relates to the growing use of technologically enhanced communication on campus. Emerging evidence suggests the communication that takes place via

e-mail is qualitatively different from communication that occurs face-to-face. Students may use email as a way to initiate interactions with professors they might otherwise have been unwilling to do in person. It would be prudent for future research to consider how technologies like email affect the relative frequency of each interaction type and how the electronic medium either fosters or interferes with transitions from one type of interaction to another.

Finally, to improve future efforts to bolster faculty-student interaction outside of class, researchers must continue working to identify the personal and institutional factors that facilitate such interaction.

CONCLUSION

Contrary to the prevailing perspective in earlier research, our study suggests that virtually every type of interaction between faculty and students can have positive effects. While our findings confirm the value of functional interaction, they also indicate that incidental contacts, personal interactions, and mentoring can be meaningful to students.

The most fleeting interactions with faculty outside of class (i.e., incidental contact) can help students overcome the professional distance implicit in a classroom setting. Moreover, incidental contact, though often unintentional and superficial, can serve as a stepping stone to more substantial interactions later.

Personal interactions between professors and students, though perhaps not leading directly to better student performance or persistence, nonetheless help students feel important and valued as members of the institution.

Considering faculty members are often the most visible academic representatives of an institution, it seems likely that personal interactions with faculty outside of class contribute to students' intellectual congruence within the institution, a key factor in student persistence.

Perhaps, then, by embracing the notion that faculty-student interaction outside of class need not be formal or academic to hold value, institutions of higher learning can begin to tap the full potential of such interactions as an integral component of the undergraduate experience.

Finally, when mentoring relationships grow naturally out of functional and personal interactions both students and professors benefit from the symbiotic relationship.

REFERENCES

1. Alka S (November 2021) Learning Management System Handling Team
2. Praveen S M (November 2021) Web Developer
3. Mukesh Jha (September 2021) Project Reviewer
4. Mr. S.P. Ramesh (September 2021) Project Guide
5. What matters in college? Four critical years by Jossey-Bass.
6. Qualitative inquiry and research design: Choosing among five traditions.