

Mini Project Report

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By

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CERTIFICATE

This is to certify that the dissertation entitled “Project Report” submitted by **Chintha Pavani** bearing Id.No.**R170025**, in partial fulfillment of the requirements for the award of Bachelor of Technology in Computer Science is a bonafide work carried out by her under my supervision and guidance. The dissertation has not been submitted previously in part or in full to this or any other University or Institution for the award of any degree or diploma.

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INDEX

S.NO	TASK	PAGE NUMBER
1	Technologies and Databases used in LinkedIn	5-7
2	Summary of Career Development and Counseling : An Introduction	8-

TASK-1

TECHNOLOGIES AND DATABASES USED BY LINKEDIN

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LinkedIn :

The Mission of linked in is simple ,connect the world's professional's to make them more productive and successfull . The main aim of the site is to allow registered members to establish and document networks of people they know and trust professionally. It was established by Reid Hoffman partnered with a team made up of people from two of his former projects.

Technologies Used in LinkedIn:

There are different technologies used in linked in and they are:

- *Front-end : Javascript*
- *Back-end : Java, Node.js*

- ***Javascript :***

JavaScript is the programming language of the web and it is easy to learn. it is a programming language that is one of the core technologies of the World Wide Web , alongside HTML and CSS. Over 97% of websites use JavaScript on the client side for webpage behaviour, Often incorporating third-party libraries.

- ***Java :***

Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible. Java is often used for building large

applications and also it is also easy to use, write, compile, debug, and learn then alternating programming language. With more than 9 million developers world wide, Java enables us to efficiently develop, deploy and use exciting applications and services.

- ***Node.js :***

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a Web Browser. Node.js uses an event-driven, non-blocking I/O model that that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Databases used in LinkedIn :

There are different databases used in linkedin. They are:

- *Oracle*
- *Hadoop*
- *MySQL*
- *Lucene*

- ***Oracle :***

Oracle Database is a multi-model database management system produced and marketed by Oracle Coeporation. It is a databse commonly used for running online transaction processing, data warehousing and mixed database workloads. Oracle Database 12c introduces a new multinant architecture that makes it easy to consolidate many databases quickly and manage them as a cloud service. Oracle Database 12c also includes in-memory data processing capabilities delivering breakthrough analytical performance.

- ***Hadoop :***

Apache Hadoop is an open source framework that is used to efficiently store and process large datasets ranging in size from gigabytes to petabytes of data. Instead of using one large computer to store and process the data, Hadoop allows clustering multiple computers to analyze massive datasets in parallel more quickly. Rather than rely on hardware to deliver high-availability, the library itself is designed to detect and handle failures at the application layer, so delivering a highly-available service on top of a cluster of computers, each of which may be prone to failures.

- ***MySQL :***

MySQL is an open-source relational database management system. Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. Whether you are a fast growing web property, technology ISV or large enterprise, MySQL can cost-effectively help you deliver high performance, scalable database applications.

- ***Lucene:***

Lucene is a Java-based indexing and search technology, as well as spellchecking, hit highlighting and advanced analysis/tokenization capabilities.

Task-2

Chapter 5

Career Development and Counseling : A Social Cognitive framework

Summary :-

Career - “A career can be defined as an occupation undertaken for a significant period of a person’s life and with opportunities and for a progress.” Choosing the career among numerous options depends on the person’s interests, opportunities around and also the environment we are living. This way of choosing career, development in career and also the factors affecting thoughts while developing career were all studied and are presented as theories. Developing one's career isn't that easy, people have to go through many phases like encompassing preparation for work, work entry, adjustment to work and many more.

- Among all the theories *SOCIAL COGNITIVE CAREER THEORY (SCCT)* is a well-studied approach for understanding educational and occupational behaviour. This theory also brought all the common factors identified by earlier career theorists like **Super, Holland, Krumboltz and Lofquist and Dawis** and also gives a centralised framework on how people
 - develop vocational interests
 - make occupational choices
 - achieving various levels of career success and stability
 - experience satisfaction or well being in the work environment and
 - manage more and less predictable work/life events.

- The models like **Trait-factor** which is later known as P-E fit assume that most of the people's career is based on the personal attributes like **interests, abilities, values, and personality dispositions**. Among SCCT and P-E fit some features point the same while some contrast.

Basic Cognitive-Person Elements of SCCT:-

We can find the primary foundation of the SCCT in the Bandura's general social cognitive theory, which tells about the complex ways of how people think, how people's behaviour can be and the mutual influence on one another.

- according to Bandura's theory, SCCT assumes that one person can be affected by the environmental factors around them, and they can either strengthen themselves or weaken or even override their personality." The SCCT also partly enables the exercise of agency in career development, self-efficacy beliefs, outcome expectations and personal goals by highlighting the interplay among three cognitive-person variables.

- **Self-efficacy** is conceived as a dynamic set of self-beliefs that are linked to particular performance domains and activities. These self-efficacy beliefs refer to "people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances".

- The most common thing we can observe in a person while developing the career is "change". Work and the thoughts may change according to the work or future experience and these changes are acquired or modified via four primary informational sources, they are :-

- *personal performance*

- *vicarious learning*

- *Social persuasion*

- *physiological and affective states.*

- **Self-efficacy** and the **outcome expectations** collectively help to determine the number of aspects of the human behaviour. The outcome expectations are always a step to check whether we can do this or not or have a plan of what would it be if we do this and stopping something when we already know we cannot do something. Outcome expectations and the self-esteem can collectively help us to choose the path of our career. These outcome expectations depend on many factors that they observe in society or some learning experiences and the self-efficacy can affect the outcome expectations as the people usually expect to receive positive outcomes when performing the task at something they feel competent.

The SCCT distinguishes the **Choice-content Goals** and the **Personal Goals**. The personal goal is a goal where the people have complete clarity on how to prepare, how to continue and what to do and where as this choice content goal is about people, who get affected by the environment or according to the genetics or interests while they are doing something. This Social Cognitive theory states that a person with strong self-efficacy and positive outcome expectations are likely to strengthen themselves and can succeed.

SCCT'S models of interest , Choice , Performance , Satisfaction and Self-Management :-

- SCCT have distinct yet overlapping models that are mainly focusing on :-
 - the development of interests
 - the making of choices
 - the influence on and results of performance
 - the experience of satisfaction, or well being
 - the processes involved in career self-management.
- The SCCT originally introduced 3 models around 25 years ago. They are
 - interest
 - choice
 - performance.

These three were recently joined by the educational/work satisfaction and ***Career Self-management(CSM)*** models.

Interest Model :-

The interest in an activity is likely to blossom and endure when people view themselves as competent at particular activity. This interest on one activity raises according to the environment they are living in, positives and negatives they are listening, circumstances they are understanding, and the parents who are encouraging. Young people are generally encouraged by their parents or teachers and according to SCCT interest model , self-efficacy and outcome expectations regarding particular activity will help to mold career interests. And not only interest but also the disinterest can develop when they continuously receive negative comments as the people start doubting their self-efficacy and the negative outcome expectations.

Having interest in one activity will help to encourage in many ways and with belief in self-efficacy one can start working hard with passion, but according to SCCT one's interest at particular can also undergo when they didn't get the expected result even when they are continuously working on particular task. The interest and the abilities result in the outcome , the SCCT also claims that the interest can also increase by one's objective ability like test scores , trophies , awards etc.. and this also says that one's self-efficacy and outcome expectations alone cannot operate in shaping interests but also there are many forged and functions in the context of other aspects of persons and their environments that can play important role in career development such as gender, race/ethnicity , genetic endowment , physical health or disability status and socioeconomic conditions.

Choice Model :-

The choosing of career and the development in career is not a single or static event but a large set of dynamic processes. Where at initial stages people may choose one path according to their interest, self efficacy, outcome expectations and skills but later in stages of experiencing it people may change according to the environment when new paths open up, or raise of barriers or setbacks or shift of interest. People do not choose the career unilaterally but also the environment chooses. The initial choice making is of three components. They are:-

- The expression of a primary choice to enter a particular goal*
- taking actions designed to implement one's goal*
- subsequent performance experiences that form the feedback loop.*

The SCCT assumes that, just as the saying "*birds of a feather flock together*" people choose their choice under supportive conditions, enable them to perform preferred activities and also to work in similar work personalities. But all people don't get the same support from family because of economic problems or some other problems. And after choosing one path with the self-efficacy and expected outcome the people may change their opinion after having a hard experience and may also change the career path. Interest alone cannot decide the career but also the choice and the experience in it. This career path also derives from certain "affordances". The SCCT divided these affordances into two parts based on what they occur within the choice process. The first type include more *distal*, *Background influences* and the second type involves *proximal environmental influences*.

The SCCT says that certain conditions can directly affect people's choice goals or actions based on the significant decisions of others in the family and people may also face the financial support for posing particular job, availability of the job in their preferred field, socio-structural barriers such as discrimination and some by indirectly by boosting or deflating self-efficacy and outcome expectations. Sometimes the educational or occupational choices are not linked to the people's interests, Economic, Cultural and other conditions sometimes neutralize the role of personal interests in work selection. People always do not work according to their choices but sometimes by the job availability and the financial needs made them to do the available work even though they are never interested in that. For this we can use the example of coal workers, who work to fill their family needs and sometimes they even think why they are doing it and question themselves are they actually good at that.

Performance Model :-

This performance model states how the person reacts when they encounter obstacles while pursuing the career of their choice. SCCT's choice and performance models overlap in their focus on persistence. SCCT posits a feedback on consistent with general social cognitive theory between performance attainments and subsequent behaviour that "markers of success or failure become part of one's performance history or learning experiences". The people can confirm or reverse the self-efficacy and outcome expectations with one's capacity.

The learning experiences and outcomes are generally derived from the performances and are related to the features of the environment, like educational quality, the nature of available role models, gender role socialization, peer and parental support and also community and the family norms. The people who doubt their capabilities be less likely to use their skills effectively when compared to the people who believe themselves fully. This doesn't mean that people with high self-efficacy can always succeed or as a good thing, the one with either the negative or positive will face obstacles and encounter many difficulties, believing completely also gives problems when they didn't get the expected outcome which result in problems.

Satisfaction Model :-

Satisfaction is important for one's life to be happy in what they do. This satisfaction can be felt when there is a progress in work day by day and this also possesses strong self-efficacy at required tasks and also at achieving personal goals. Satisfaction affects the person at either work or education. Certain personality traits have found to be reliably linked to job satisfaction.

Career Self-management model :

The SCCT theory tells how people choose their path according to their interests and the choices whereas the Career self-management model was developed to predict how people usually make decisions and negotiate planned and unplanned events and challenges irrespective of the occupations they enter. The Career self-management model focuses on behavioral, cognitive, and affective aspects of the work adjustment process and this posits that adaptive behaviours people engage in to help achieve desirable career outcomes are guided by the self-efficacy beliefs, outcome expectations and goals.

The job search would be easy if they have a desired path they want to work in and have a goal on what to do and it is different without particular plan on what to do and actions like attending job fairs, will lead to favorable outcomes but sometimes cannot be sure as the outcome can depend on the number of factors beyond individual's control, such as the number of job openings available, the qualifications of other applicants who applied or sometimes also the discriminatory hiring process.