A STUDY OF SELF-PERCEPTION REGARDING RESEARCH SKILL DEVELOPMENT IN UG STUDENTS LEARNING UNDER NEP 2020

(A Comparative Assessment of Perception regarding Research Skill Development through Field Projects [FP] vis-a-vis Community Engagement Programs [CEP])

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Abstract :

NEP 2020 emphasizes on experiential learning frameworks in higher education to nurture research skills in undergraduate students. Present study is carried out to evaluate and compare the self-assessed research skill development of UG students who are learning under the First batch of NEP 2020 in UG course and have participated in two distinct pedagogies: the Field Project (FP) and the Community Engagement Program (CEP). For this evaluation, students' perception about themselves regarding development of six core research competencies were measured. The six core research competencies were - Conducting Interviews, Literature Review, Communication/Public Speaking, Data Collection, Data Analysis, and Project Writing. Utilizing a five-point evaluation scale, the comparative analysis indicates that while Field Projects generate broader baseline proficiency with the highest score in the category of "Good", Community Engagement Programs act as a catalyst for top-tier mastery in the category of "Very Good" with double score in CEP (4) compare to FP (2), particularly in project writing and fieldwork communications. In sum, it is concluded that a teaching methodology that blends both the pedagogies can provide a comprehensive approach to scaffolding students' research capabilities.

Key words : FP, CEP, Perception, UG students, research competencies

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Introduction :

Under NEP 2020, at the level of Higher Education, integrating practical experience with academic instruction is made essential for developing research competencies. It is often pointed out that traditional classroom learning often struggles to equip students with the hands-on capabilities required for empirical research (Twedell, 2020). These include skills such as data collection, qualitative interviewing, data analysis and real-world data synthesis.

To bridge this gap, NEP 2020 has made it mandatory for the universities to implement experiential learning models such as Field Projects (FP) and Community Engagement Programs (CEP).

Field Projects are techniques for collecting data directly in the environments and communities to be studied, where real-life behaviors, interactions, and decisions naturally occur. (Kuenzi, 2026) While, 'Community engagement' is a strategic process with the specific purpose of working with identified groups of people, whether they are connected by geographic location, special interest, or affiliation, to identify and address issues affecting their well-being. (DAESE, 2026) This paper evaluates student perceptions regarding how effectively each model develops key research skills, in them providing comparative insights for curriculum design.

Literature Review :

Experiential learning theory posits that knowledge is generated through the transformation of experience into conceptual understanding and applied skill (Kolb & Kolb, 2011). Educational literature highlights several key dimensions of student research development through experiential learning:

- **Field-Based Learning :** Research shows that field-based learning enhances the degree of relatedness students feel with their classmates and instructors, they have a greater degree of intrinsic motivation in the course, and these experiences facilitate learning in ways that may not be replicated in the traditional classroom. (Fedesco, 2020)
- **Community-Based Participatory Research :** Community engagement pedagogies foster soft skills, deep qualitative inquiry, public speaking, and reflective project synthesis by placing learners in dynamic social contexts all these promote positive growth. (Collins et al., 2018)
- **Skill Acquisition Trajectories :** Scholars have showed on the basis of comparative studies that traditional academic field projects excel at establishing consistent, broad-based competency, whereas service-learning or community-engaged research yields higher student self-efficacy in complex, communicative skills (Choi et al., 2023).

Research Gap :

On the basis of review of literature, it is found that while existing literature extensively documents the individual benefits of Field Projects and Community Engagement Programs in higher education, limited empirical research directly compares how these two distinct experiential models differ in fostering specific academic research competencies within the same student cohort. Specifically, existing studies lack a comparative evaluation between FP and CEP regarding perception of students about acquiring research skill beginning from baseline competence to advanced skill mastery across specific sub-skills such as interviewing, literature review, and project documentation. This study addresses this gap

by analysing comparative performance metrics between FP and CEP across defined research relate sub-skills.

Research Methodology :

This study is based on an empirical research conducted on the students who are studying in Shrimati Binzani Mahila Mahavidyalaya, Mahal, Nagpur under the first batch of NEP 2020 after its implementation by Rashtrasant Tukadoji Maharaj Nagpur University (RTMNU), Nagpur.

a. **Sample Composition :** The research is conducted on 14 girl students of sem. V enrolled under RTMNU's UG Course with Political Science as a Major Subject and have completed Field Project in Sem. III and Community Engagement Program in Sem. IV. The topic of their Field Project was 'Awareness about Technological and Legal provisions related to Cyber Crime and Security - a Pilot Study' and the topic for Community Engagement Project was 'Creation of Awareness among the members of Self-Help Groups about Women related policies of Central Government'.
b. **Research Design :** A structured questionnaire was designed and responses were collected to evaluate self-perceptions of students across six defined research competencies. The target competencies are as follows**:**

Target Competencies :

The target competencies shortlisted for the analysis were -

1. Conducting Interviews (*साक्षात्कार लेना*)
2. Literature Review (*साहित्य का अध्ययन करना*)
3. Communication / Public Speaking (*सम्प्रेषण/ लोगों के सामने बोलना*)
4. Data / Information Collection (*जानकारी एकत्रित करना*)
5. Data Analysis (*जानकारी का विश्लेषण करना*)
6. Project Writing (*प्रकल्प लिखना*)

c. **Measurement Scale :** The collected responses were measured across a five-point ordinal scale: *Can't Say* [कह नहीं सकती], *Not at all* [बिल्कुल भी नहीं], *A little* [थोड़ा], *Good* [अच्छा], and *Very Good* [बहुत अच्छा].
d. **Data Collection & Analysis :** Response distributions were visualized using comparative bar charts and aggregated into a skill-wise matrix to compare general proficiency ("Good") against advanced mastery ("Very Good") with respect to research skill development through FP vis-à-vis CEP.

Data Analysis :

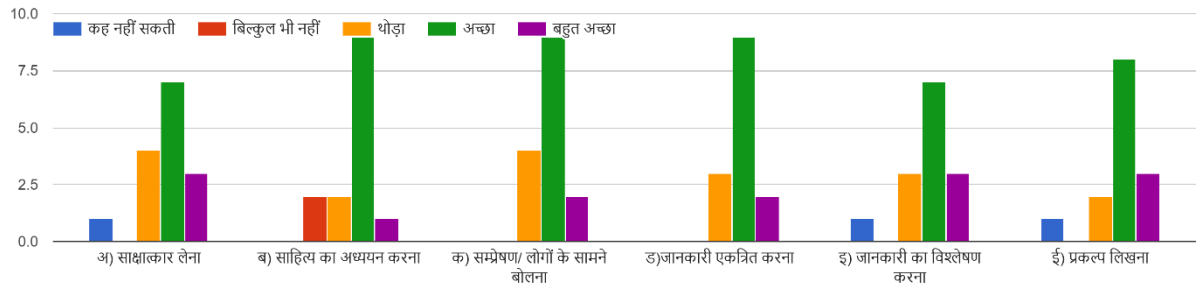
The students were asked to opine about the extent, to which, in their opinion, the

research skills like a) Conducting Interviews, b) Review of literature, c) Communication / Public Speaking d) Data / Information Collection e) Data Analysis f) Project Writing were developed as result of undertaking both the Field Project and Community Engagement Program on five rating levels. Ratings range across five assessment categories: **Can't Say [कह नहीं सकती]**, **Not at all [बिल्कुल भी नहीं]**, **A little [थोड़ा]**, **Good [अच्छा]**, and **Very Good [बहुत अच्छा]**.

A. Perception regarding Research Skill Development through Field Project :

The bar graph given below (Fig. 1) assesses participants' self-evaluations of six research skills developed through the **Field Project**. Ratings ranging across five assessment categories are represented through the bars of different colours- **Can't Say** (Blue), **Not at all** (Red), **A little** (Orange), **Good** (Green), and **Very Good** (Purple).

Fig. 1 - Perception about Research Skill Development through Field Project



Observations :

अ) साक्षात्कार लेना (Conducting Interviews) :

- **Good / Very Good :** 7 respondents chose "Good" and 3 rated "Very Good".
- **A little / Undecided :** 4 respondents rate "A little" and 1 chose "Can't Say".

ब) साहित्य का अध्ययन करना (Literature Review / Studying Literature):

- **Good / Very Good :** 9 respondents chose "Good" and 1 rated "Very Good".
- **A little / Low :** 2 respondents rated "A little" and 2 selected "Not at all".

क) सम्प्रेषण/ लोगों के सामने बोलना (Communication / Public Speaking):

- **Good / Very Good :** 9 respondents rated "Good" and 2 chose "Very Good".
- **A little :** 4 respondents selected "A little".

ड) जानकारी एकत्रित करना (Data / Information Collection):

- **Good / Very Good :** 9 respondents chose "Good" and 2 selected "Very Good".

- **A little :** 3 respondents selected "A little".

इ) जानकारी का विश्लेषण करना (Data Analysis) :

- **Good / Very Good :** 7 respondents selected "Good" and 3 rated "Very Good".
- **A little / Undecided :** 3 participants chose "A little" and 1 rated "Can't Say".

ई) प्रकल्प लिखना (Project Writing) :

- **Good / Very Good:** 8 respondents chose "Good" and 3 rated "Very Good".
- **A little / Undecided:** 2 participants selected "A little" and 1 rated "Can't Say".

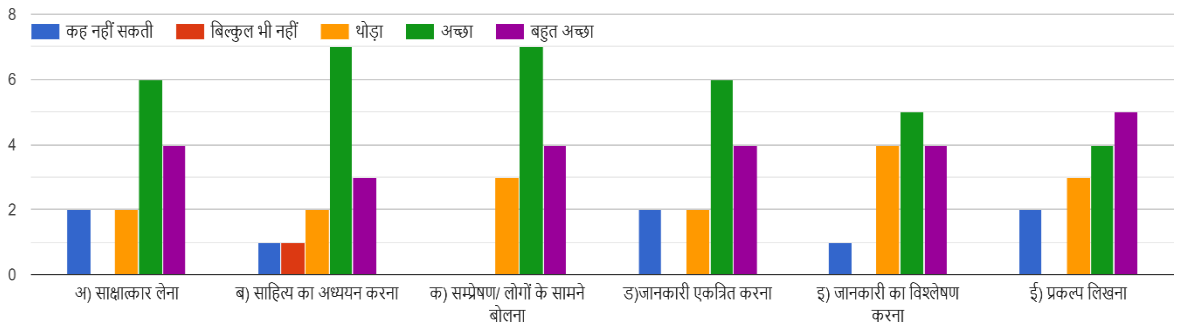
Key Findings :

- **Predominantly Positive Perception :** It is found that a vast majority of participants reported strong skill acquisition, with the "Good" rating (Green) dominating every single category.
- **Highest Performing Skills :** It is note that Literature Review (ब), Communication (क), and Data Collection (ड) secured the highest number of "Good" responses (9 each).
- **Minimal Negative Feedback :** Negative ("Not at all") ratings were reported only in 1 category i.e. Literature Review (2 respondents), while neutral ("Can't Say") responses remained minimal (1 respondent each across Conducting Interviews, Data Analysis, and Project Writing)

B. Perception regarding Research Skill Development through Community Engagement Program :

The bar graph given below (Fig. 2) evaluates the self-assessed development of six research skills among respondents who had successfully completed the Community Engagement Program (CEP). The evaluation is based on five rating levels: **Can't Say** (Blue), **Not at all** (Red), **A little** (Orange), **Good** (Green), and **Very Good** (Purple) -

Fig. 2 - Perception about Research Skill Development through CommunityEngagement Program



Observations :

Following are the major observations :

अ) साक्षात्कार लेना (Conducting Interviews) :

- **Good / Very Good :** 6 respondents chose "Good" and 4 rated it as "Very Good".
- **A little / Undecided :** 2 respondents selected "A little" and 2 rated "Can't Say".

ब) साहित्य का अध्ययन करना (Literature Review / Studying Literature) :

- **Good / Very Good :** 7 respondents chose "Good" and 3 reported "Very Good".
- **Others :** 2 selected "A little," 1 chose "Not at all," and 1 noted "Can't Say".

क) सम्प्रेषण/ लोगों के सामने बोलना (Communication / Public Speaking) :

- **Good / Very Good :** 7 participants selected it as "Good" and 4 as "Very Good".
- **A little :** 3 participants chose the option "A little".
- **Zero non-positive ratings :** It is noted that no respondents chose "Not at all" or "Can't Say".

ड) जानकारी एकत्रित करना (Data / Information Collection) :

- **Good / Very Good :** 6 respondents selected "Good" and 4 indicated "Very Good".
- **A little / Undecided :** 2 respondents chose "A little" and 2 selected "Can't Say".

इ) जानकारी का विश्लेषण करना (Data Analysis) :

- **Good / Very Good:** 5 respondents selected "Good" and 4 reported "Very Good".
- **A little / Undecided:** 4 participants chose "A little" and 1 reported "Can't Say".

ई) प्रकल्प लिखना (Project Writing) :

- **Good / Very Good :** 4 respondents seleced it as "Good" and 5 as "Very Good" (highest "Very Good" rating across all skills).
- **A little / Undecided :** 3 participants chose "A little" and 2 rated "Can't Say".

Key Findings :

- **Overall Positive Impact :** It is found that across all six research skills, a majority of participants responded with positive ratings ("Good" or "Very Good").
- **Highest Perceived Growth :** It is noted that Communication / Public Speaking (क) and Literature Review (ब) received the highest number of "Good" ratings (7 each). Project Writing (ई) saw the highest number of "Very Good" ratings (5).
- **Minimal Resistance/Dissatisfaction :** "Not at all" ratings were virtually non-existent, appearing only once across the entire dataset which is under the category of Literature

Review.

Compartive Analysis :

The Comparative Analysis of Research Skill Development through Field Project (FP) vs. Community Engagement Program (CEP) based on self-perception of students is presented in the table 1 below -

Table 1 - Skill-Wise Comparison Matrix

Research Skill	Field Project (FP) Ratings	Community Engagement Program (CEP) Ratings	Comparative Insight
Conducting Interviews	Good: 7 Very Good: 3 A Little: 4 Can't Say: 1	Good: 6 Very Good: 4 A Little: 2 Can't Say: 2	With respect to this Skill, FP generated slightly higher overall positive feedback to the category of 'Good'. However, the skill of conducting interviews is better acquired through undergoing CEP compare to FP as 4 students have rated 'very good' compared to 3 in the column of FP
Literature Review	Good: 9 Very Good: 1 A Little: 2 Not at all: 2	Good: 7 Very Good: 3 A Little: 2 Not at all: 1 Can't Say: 1	The Skill of Literature Review is better equipped by more number of students who underwent FP as 9 selected 'Good'. However, higher number of students in the column of CEP felt that they acquired top level mastery on this skill with 3 rating 'very good' against 1 in the column of FP
Communication / Public Speaking	Good: 9 Very Good: 2	Good: 7 Very Good: 4	Both programs showed strong results with zero negative ratings, though CEP led in "Very Good" outcomes (4 vs.

Research Skill	Field Project (FP) Ratings	Community Engagement Program (CEP) Ratings	Comparative Insight
	A Little: 4	A Little: 3	2).
Data / Information Collection	Good: 9 Very Good: 2 A Little: 3	Good: 6 Very Good: 4 A Little: 2 Can't Say: 2	Higher number of students believe that FP provides more better opportunity for acquiring 'Data collection' skills (with 9 vs 6 responses to 'Good' rating) On the other hand, CEP ensures the high chances of acquiring mastery on this skill. (with 4 vs. 2 responses to 'Very Good')
Data Analysis	Good: 7 Very Good: 3 A Little: 3 Can't Say: 1	Good: 5 Very Good: 4 A Little: 4 Can't Say: 1	FP recorded higher general positivity (10 total positive vs. 9), though CEP saw higher "Very Good" responses (4 vs. 3).
Project Writing	Good: 8 Very Good: 3 A Little: 2 Can't Say: 1	Good: 4 Very Good: 5 A Little: 3 Can't Say: 2	FP excelled in broader skill acquisition (11 positive vs. 9), but CEP yielded the highest peak achievement in the rating of "Very Good" across all the skills (5 responses).

Key Analytical Findings :

- **Dominant Competency Level :** The Field Project (FP) has driven responses that lean heavily toward solid proficiency, securing higher counts in the "Good" category across every evaluated skill (peaking at 9).
- **Excellence Distribution :** The Table 1 given above shows that the Community Engagement Program (CEP) consistently outperformed FP in driving top-tier achievement ("Very Good") across nearly all core research skills—most notably in

Project Writing (5) and Data Collection (4).

- **Minimal Dissatisfaction :** It is interesting to note that, both initiatives recorded near-zero negative sentiment ("Not at all"), indicating high overall participant satisfaction and developmental utility across both programs.

Conclusion :

On the basis of the above analysis, it is contended that both experiential learning models effectively foster research capability, but they deliver distinct learning trajectories. The Field Project (FP) serves as a broad, reliable framework for establishing consistent, baseline proficiency ("Good") across technical research tasks assigned to the participants. Conversely, the Community Engagement Program (CEP) acts as a high-impact driver for advanced proficiency ("Very Good"), particularly excel in the skills of project writing, communication, and field-based data interactions. In sum, it is concluded that a combined curriculum leveraging FP for core technical grounding and CEP for advanced, practical application would maximize student skill outcome across all metrics.

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