The '8Fs' Concept for Simplifying the Complications of Ph.D. Journey in India

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ABSTRACT

Purpose: *To develop a concept for simplifying the complications of the Ph.D. journey of research scholars in India.*

Design/Methodology/Approach: *Postmodernism research philosophical paradigm; Inductive research approach; Observation data collection method; Longitudinal data collection time frame.*

Findings/Result: *It is evident that the key drivers that play an important and decisive role in simplifying the complications of the Ph.D. journey of research scholars in India are i) the level of focus on 'Fact' and 'Factors'; ii) level of interest in the 'Fact' and 'Factors'; iii) level of autonomy provided to choose the 'Fact' and 'Factors'.*

Originality/Value: *The '8Fs' concept is unique as no such concepts are being developed in India to date. We determinedly believe that a holistic adoption of the '8Fs' concept by every stakeholder of the research education system would help increase the Ph.D. success rate in India.*

Paper Type: *Conceptual Theory*

Keywords: Research Methodology, Research Design, PhD, Ph.D., Coursework, Doctoral Research, PhD Attrition, PhD Success Rate, '8Fs' Concept, Postmodernism.

1. BACKGROUND :

The University Grants Commission (UGC) was established on December 28, 1953, and by an Act of Parliament in 1956, it was made a statutory organization of the Government of India. Its purpose is to coordinate, establish, and uphold standards for teaching, examination, and research in higher education in India. UGC has published detailed regulations concerning the Ph.D. program and all the educational institutions offering the Ph.D. program are required to adhere to these regulations. A majority of Ph.D. scholars think that these regulations are only for educational institutions and are to be understood and followed by institutes. However, for certain aspects of the regulations, UGC has also given the freedom for educational institutions to frame their regulations. This first step in the Ph.D. journey is understanding the Ph.D. regulations of the institute where they have enrolled as a full-time or part-time Ph.D. scholar. The key components of Ph.D. regulations are listed below.

- Eligibility and admission criteria
- Duration and structure of the program
- Coursework
- Research Supervisor / Guide
- Research Advisory Committee
- Evaluation and assessment methods
- Code of Conduct and Ethics

Of all the above components, Ph.D. scholars must focus and have clarity about the overall program structure and the coursework. As mentioned earlier the coursework structure is different for different institutes. Simply put, the Ph.D. program has the following 4 stages.

Stage 1: Coursework

Stage 2: Research work

Stage 3: Writing the research work
Stage 4: Publishing research work through articles/thesis
Stage 5: Defending the research findings

However, the reality is, a majority of stakeholders in the research education system have a lower level of clarity about these stages. This lower level of clarity is making the Ph.D. journey of scholars furthermore complicated in India. We believe that a Ph.D. program is one of the easiest degree programs in the world with the highest level of autonomy bestowed on to research scholars. But this reality is knowingly or unknowingly suppressed by a majority of stakeholders in the research education system in India. In other words, this *suppressed reality* has resulted in making the Ph.D. program and journey look highly complicated for the research scholars in India.

2. OBJECTIVES :

Ph.D. is a doctoral-level research degree program. A majority of Ph.D. scholars have a predisposition in their minds that the Ph.D. program is the most difficult program to complete. But somehow owing to too many complications being sown by the research education system in India, the Ph.D. scholars fail to realize that the Ph.D. program is one of the easiest academic programs in the world. We say so because there are no classes; no class timings; no teachers; no classmates; no examinations; no marks cards; no syllabus; no textbooks. Even if there are a few of these they are limited to the first year of the Ph.D. program (Coursework). Simply put, Ph.D. is answering just 'One Question'. Surprisingly the question is framed/formulated by the Ph.D. scholar. The time given to answer this one question formulate/framed by the Ph.D. scholar is 3-6 years. It is an open-book examination, with no standard answers, and no one can question the answer as long as the Ph.D. scholars can defend it. Nevertheless, only 50% of scholars admitted to Ph.D. in India completed, that too in ten years period. Such a low level of success rate despite the Ph.D. program being one of the easiest degree programs intrigues us to carry out this research study with the following objectives.

(i) Identifying the factors affecting the success rate of the Ph.D. program.
(ii) Developing a model for simplifying the Ph.D. journey of research scholars in India.

3. FACTORS AFFECTING THE SUCCESS RATE OF PH.D. PROGRAM :

The doctoral-level research which is the single requirement of the Ph.D. program is cognitively demanding and intends to create researchers who can create new knowledge or interpret existing knowledge about reality by using different perspectives and philosophical paradigms. Knowledge sharing requires autonomy, quality time, a stress-free brain for deep thinking, and the freedom to look for more meaningful findings. This is the single most important reason for making doctoral-level research flexible wherein the scientific world gives autonomy to researchers to formulate their question and answer it within 3-6 years. Nevertheless, only 50% of scholars admitted to Ph.D. in India completed, that too in ten years period. Various research studies have identified factors affecting the Ph.D. success rate across the world listed below [1-45].

- Scholar-supervisor/guide relationship
- Mentorship
- Dissertation process
- Role of department
- Role of peer qualities
- Transformational learning experience
- Level of curiosity and interest in reviewing the existing literature
- Planning and time management skills
- Level of creative thinking and writing skills
- Amount of freedom in the research project
- Level of a supportive environment for Ph.D. Scholars' well-being
- Higher-education practices
- Supervisors' research capabilities and gender
- Expectations set by the research environment
- Ph.D. Scholars' expectations
- Support network

- Level of Ph.D. Scholars' socialization with the research community
- Ph.D. Scholars' navigation system.

In addition to these factors available in the existing literature, another important aspect of such a low success rate is attributed to various complications that are sown by the research education system in India. A few factors for such complications are listed below (Figure 1).

Fig. 1: Research Methods Help Guide, FIU Libraries [46].

- Undue focus on research output such as publications and intellectual properties *over* the quality of the research itself.
- Diversion from basic research to applied research or research on trending topics.
- Pressure on Ph.D. scholars to take up research areas that are important for the institutes, publishers, research supervisors/guides, and industries *over* the genuine area of Ph.D. scholars' interest.
- The undue focus is being diverted to mathematics and statistics *over* skills such as creative thinking, critical thinking, reasoning, and multi-disciplinary (**figure 1**).
- Reluctance to choose different research philosophical paradigms *over* commonly followed paradigms by every discipline.
- Domination of indexing agencies in deciding the quality of a research output *over* overall quality, reliability, validity, generalizability, and applicability of research output.
- Preference is given to the institute's reputation and ranking *over* the research environment provided to the Ph.D. scholars.
- Different terminologies for various components of doctoral-level research are given by different disciplines creating undue confusion.
- Data collection methods which just play the role of data collection that is one of the steps of the doctoral-level research process being portrayed as the research methodology/design (**figure 1**).

4. THE '8FS' CONCEPT FOR SIMPLIFYING THE COMPLICATIONS OF PH.D. JOURNEY IN INDIA :

Just imagine Ph.D. scholars are entering a Maze game alike a Ph.D. journey as shown in **figure 2**. If they do not attempt to understand the regulations, stages, and key milestones of the Ph.D. journey it is obvious that they are headed to complicating their Ph.D. journey or just walking through the Ph.D. program without any visibility of successful exit. If they want to simplify their Ph.D. journey, it is recommended that they first take a Bird's eye view of the Ph.D. program. Refer to **figure 3** which illustrates the earlier Mage game picture but by taking a Bird's eye view one can see through multiple paths that are directed toward the right exit point of the game/journey. This is what Ph.D. scholars are required to do at the beginning of their Ph.D. journey. Beyond the regulations, stages, and key milestones of the Ph.D. journey, we have realized that the Bird's eye view of a Ph.D. journey is simply

understanding the essence of doing doctoral-level research.

Fig. 2: Mage game without a Bird's eye view (Source: Alamy)

Fig. 3: Mage game with a Bird's eye view (Source: Design Swan)

Despite admission to the Ph.D. program through an entrance test, the Ph.D. scholars will not be able to start the Research work which is the most important part of the program unless they have completed the coursework and met the minimum requirements. We have noticed that a majority of Ph.D. scholars in India think the coursework is a force fit. But note that the key objective of coursework (Stage 1) is to train and prepare the newly admitted Ph.D. scholars to do the research work (Stage 2) for which they will be awarded a Ph.D. degree. However, because of this predisposition and reluctance to not take the coursework seriously, which is dominantly oriented toward imparting knowledge about the research methodology, the Ph.D. scholars in India fail to complete their research work stage comfortably.

Fig. 4: '8Fs' concept for simplifying the complications of Ph.D. Journey in India

One thing Ph.D. scholars must always remind themselves of throughout their Ph.D. journey is the fact that they will be awarded a Ph.D. degree for doing doctoral-level research. Doing doctoral-level research and generating research outputs such as research articles and a thesis determines the probability of success in getting a Ph.D. degree. It is thus inevitable and imperative that Ph.D. scholars understand doctoral-level research in depth before even starting any of the steps in their Ph.D. journey. This belief motivated us to develop a concept that prioritizes improving the knowledge about doctoral-level research among Ph.D. scholars in India. We determinedly believe that if a Ph.D. scholar can understand every component of doctoral-level research in the early stages of their Ph.D. journey the probability of a better success rate is higher.

The doctoral-level research is all about deeply understanding a 'Fact' in any given area. Ph.D. scholars must be aware that if they want to simplify their Ph.D. journey, they must just divert all their attention, focus, efforts, intelligence, and curiosity toward the 'Fact' they are interested in (genuine and they are passionate about it) in understanding deeply. The inverse pyramid shown in **figure 4** represents our '8Fs' concept for simplifying the complications of the Ph.D. journey in India with higher weightage being allocated to 'Fact'. In addition to shedding light on all the eight components, a closer look at each of them reveals how the '8Fs' concept functions as a whole.

4.1. Fact (F1):

The first component (input) of the '8Fs' concept is 'Fact' which is the truth about events as opposed to interpretation. In research, the 'Fact' is also known using different terminologies such as 'Phenomenon', 'Reality', 'Truth', 'Effect', 'Dependent Variable', 'Outcome Variable', 'Endogenous Variable', and more. Ph.D. scholars' primary focus needs to be on choosing a 'Fact' of their genuine interest and understanding the characteristics of the 'Fact' they are planning to investigate further such as whether the 'Fact' is,

- Identified (human lifespan) or Unidentified (there are many)?
- Observable (rain) or Unobservable (god)?
- Directly Measurable (blood pressure) or Directly Unmeasurable (thinking)?
- Universal (human lifespan) or Local (average human lifespan)?

4.2. Factors (F2):

The second component (input) of the '8Fs' concept is the 'Factors'. Once Ph.D. scholars start focusing on the 'Fact' of their choice. They will automatically be routed into knowing all the 'Factors' that are related to or causing their 'Fact' of the research. In research, the 'Factors' is also known using different terminologies such as 'Cause', 'Independent Variable', 'Input Variable', 'Exogenous Variable', and more. Ph.D. scholars' focus needs to be on first understanding the characteristics of the 'Factors'. They are recommended to first understand all the 'Factors' that are related to the 'Fact' of their choice and that are already identified in previous research. This must be one of the prime objectives of the literature review (preliminary). Upon listing all the identified 'Factors' they need to evaluate and understand all the characteristics of 'Factors' and choose one or more of them based on their interest. A few characteristics of 'Factors' are,

- Identified (genes) or unidentified (there are many)?
- Observable (weight) or Unobservable (stress)?
- Directly Measurable (blood sugar) or Directly Unmeasurable (stress level)?
- Universal (smoking) or Local (food)?
- Formative (virus) or Indicative (fever) or Confirmatory (infection)?

4.3. Facilitators (F3):

The third component (environment) of the '8Fs' concept is the 'Facilitators'. The first two components are 'Original' in nature whereas the 'Facilitators' is common for all Ph.D. scholars across disciplines. Ph.D. scholars must note that the 'Facilitators' are made available as and when they need them. They must not worry too much about these 'Facilitators' as they are not here to complicate the Ph.D. journey, they are here to simplify the Ph.D. journey. We have noticed that a majority of Ph.D. scholars in India focus on these 'Facilitators' *over* the 'Fact' and 'Factors'. Most of the time they are concerned/worried about these and that is one of the reasons for low success rates. We have listed a few 'Facilitators' below.

- Department/Institute/University/Organization
- Coursework
- Research methodology programs/courses
- Research Supervisor/Guide
- Mentor
- Existing work, existing knowledge, and literature
- Laboratories
- Statistical techniques
- Statistics software
- Webinars and Seminars
- Conferences and Workshops
- Publishers
- Indexing agencies

4.4. Findings (F4):

Once Ph.D. scholars have clarity on the 'Fact' and 'Factors' the next most important milestone in the Ph.D. journey is to identify a research gap and formulate a research question, collect data and search for meaningful findings in the data. In addition to giving utmost importance to the 'Fact' and 'Factors' of the '8Fs' concept, the Ph.D. scholars need to also give importance to the fourth component of the '8Fs' concept which is the 'Findings' (initial processing efficiency). Ph.D. scholars' job now is to find some relationship between the 'Fact' and 'Factors' with the help of 'Facilitators'. These 'Findings' about the relationship can be conceptual, theoretical, qualitative, or quantitative. In some disciplines like Literature research, it could be just a new explanation of the existing or claimed relationship between 'Fact' and 'Factors'. Creating or updating the knowledge about the direction and strength of

relationships between 'Fact' and 'Factors' qualifies to be an original contribution.

4.5. Final Verdict (F5):

The 'Final Verdict' (initial output) is the fifth component of the '8Fs' concept. After Ph.D. scholars have found out about the direction or strength (or both) of relationships between 'Fact' and 'Factors' they need to get the same tested based on the evidence, circumstances, and contexts, with the help of 'Facilitators' (especially statistical techniques). Interestingly, Ph.D. scholars are not required to be an expert in mathematics/statistics, there are many well-established software applications to do this job. However, one of the most important factors increasing the complications of the Ph.D. journey in India is fear of statistics among scholars. Based on the statistical test results Ph.D. scholars can now either accept or reject the relationship they have found between the 'Fact' and 'Factors'. Statistically testing the 'Findings' gives the Ph.D. scholars a 'Final Verdict' about the relationship between 'Fact' and 'Factors'.

4.6. Facing Experts (F6):

The sixth component of the '8Fs' concept is the 'Facing Experts' (environment). As part of the standard procedure of scholarly research, Ph.D. scholars need to now justify and defend their 'Findings' about the relationship between 'Fact' and 'Factors' in front of experts in the area of scholars' research who are also known as Reviewers or Examiners. These experts will either accept or reject the 'Findings' if such findings or claims are proven 'Beyond Reasonable Doubt'.

4.7. Focalize (F7):

Of course, upon facing the experts and defending/justifying 'Findings', Ph.D. scholars will be awarded a Ph.D. degree. However, as Ph.D. scholars are awarded a doctoral-level research degree, the moment Ph.D. scholars' findings or claims are accepted by the experts, Ph.D. scholars will now get the 'Licence' (Ph.D. Degree) to practice research throughout their research career. We strongly recommend Ph.D. scholars stick to the 'Fact' that they have chosen during their Ph.D. throughout their research career and continue doing lifelong research. Based on our research experience, it is not possible to understand everything about one 'Fact' in 3-6 years of a Ph.D. program. An in-depth and expert understanding of a 'Fact' and all the 'Factors' related to the 'Fact' requires Ph.D. scholars' entire research career. This is why we have included 'Focalize' as the seventh component (final processing efficiency) of the '8Fs' concept.

4.8. Formulize (F8):

The last component (final output) of the '8Fs' concept is 'Formulize'. One needs to understand that the key goal of long-term research work is to build/develop an application model about a 'Fact'. Meaning, the real-time usage of the research output in the field. To reach this goal, it is inevitable and imperative for Ph.D. scholars to continue their research about the 'Fact' of their Ph.D. research question throughout their career; identifying as many 'Factors' as possible related to the 'Fact'; find the direction and strength of the relationship between 'Fact' and 'Factors'; express these 'Findings' in the form of a formula/equation; building/developing an application model with the help of the formula/equation. Anita Kurup in her book titled 'Trend Analysis of Ph.Ds. in India 1998-2007' argues that *'research in the 21st century will be dominated by real-life problems that transcend disciplinary boundaries compelling researchers to work together from seemingly unconnected disciplines'* [47]. Our idea of including 'Formulize' as the eighth component of the '8Fs' concept corroborates her argument.

5. CONCLUSION :

Ideally, Ph.D. scholars should *live by* the 'Fact' of their choice throughout their Ph.D. journey [48]. Keep deeply thinking about it, extensively read about what is already known about it, and identify what is yet to be known about it (the research gap). The Ph.D. scholars must remind themselves that the main focus during the Ph.D. journey is to accomplish one of the following as the research output which in other words is known as an original contribution.

- Identification of new 'Fact' or 'Factors'.
- Identification of new 'Factors'.
- Describing the existing 'Fact' in different ways using different research philosophical

paradigms or perspectives.

- Describing the existing 'Factors' in different ways using different research philosophical paradigms or perspectives.
- Finding scientific ways to measure the directly unmeasurable 'Fact'.
- Finding scientific ways to measure the directly unmeasurable 'Factors'.
- Demarcation of Universal and Local 'Fact'.
- Demarcation of Universal and Local 'Factors'.
- Categorization of 'Factors' into formative, indicative, and confirmatory.
- A decision framework about the 'Fact'.
- A conceptual model about the 'Fact'.
- A theoretical model about the 'Fact'.
- An equation for the estimation, forecast, or prediction of a 'Fact'.
- An application model about the 'Fact'.

Table 1: The system of '8Fs' concept

8Fs' Component	Acts as	Remarks
Fact	Input	Must be Based on the Interest and Choice of Ph.D. Scholar
Factors	Input	Must be Based on the Interest and Choice of Ph.D. Scholar
Facilitators	Environment	Common to All
Findings	Initial Processing Efficiency	Original Contribution (During Ph.D. Journey)
Final Verdict	Initial Output	Common to All
Face Experts	Environment	Common to All
Focalize	Final Processing Efficiency	Must be Based on the Interest and Choice of Researcher (Post-Ph.D.)
Formulize	Final Output	Original Contribution of Researcher (Post-Ph.D.)

Simplifying the Ph.D. journey and diverting their goal toward delivering an original contribution, is the sole reason for the '8Fs' concept to give the highest priority and focus to 'Fact' and 'Factors'. As long as the Ph.D. scholars can understand the importance of these two components, their research journey during Ph.D. and post-Ph.D. will be not complicated. However, we recommend this focus needs to be embedded into them by the entire research system of the institute. If one takes a look at the '8Fs' concept as a system (see **table 1**), it is evident that the key drivers that play an important and decisive role in simplifying the complications of the Ph.D. journey in India are i) the level of focus on 'Fact' and 'Factors'; ii) level of interest in the 'Fact' and 'Factors'; iii) level of autonomy provided to choose the 'Fact' and 'Factors'.

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