

Assessing the Process of Self-directed Learning: A Guide for Faculty to Assess the MBBS Students

Gurjeet Singh^{1&2}, Raksha¹

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ABSTRACT

Background: Self-Directed Learning (SDL) is a key component of Competency-Based Medical Education (CBME) that empowers MBBS learners to become active, reflective, and lifelong learners. An approach for SDL is scheduled activities where a result is measured (assignments, presentations, or projects); however, scant attention is concerning beleaguering assessment of the SDL process. This difference can obstruct the development of significant thinking, self-awareness and internal motivation.

Methods: This article discusses the need for process-oriented assessment in undergraduate medical education and presents a framework comprising five core SDL dimensions: self-awareness, goal setting, resourcefulness, strategy use, and reflection. The dimensions referred to are explained by real-life clinical scenarios from the MBBS course. Various assessment tools are memorized as tools that can capture meaningfully the learning process, including learning contracts, portfolios, rubrics, and mentor/mentee feedback.

Results: Discussion shows how process-focused assessment can provide deep insight into learner development beyond traditional result measures. Faculty roles in the form of faculty, general challenges in SDL implementation, and best practices that integrate evaluation with both educational and clinical competencies are wide.

Conclusion: Integrating process-based evaluation in SDL activities enables medical teachers to cultivate learners who are not only knowledgeable, but also reflective, resourceful and interrupted. From such a point of view, medical students are better prepared to meet the developed demands of modern medical and continuous professional development.

KEYWORDS: Assessment of Process, Medical education, MBBS students, Self directed learning.

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INTRODUCTION

Medical education in the 21st century is undergoing a transformative shift from passive absorption of facts to active, personalized, and competency-driven learning. This transformation is most clearly reflected in the Competency-Based Medical Education (CBME) framework adopted in India since 2019 under the aegis of the National Medical Commission (NMC). Central to this reform is the promotion of Self-Directed Learning (SDL) as a lifelong professional skill essential for every MBBS graduate. In a time when medical knowledge is doubling every few years and clinical practice is increasingly complex and interdisciplinary, the ability to identify one's own learning needs, seek knowledge proactively, and reflect on learning outcomes is more valuable than ever.

SDL is not merely a technique; it is a mindset. According to Malcolm Knowles, a pioneer of adult learning theory, SDL is defined as "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes".¹ In the context of MBBS education, this means a student moves beyond classroom lectures to explore real

¹Institute of Health Professions Education, Sri Balaji Vidyapeeth (Deemed to be University), Pondicherry, India.

²Department of Microbiology, Abhishek I Mishra Memorial Medical College and Research, Durg, Chhattisgarh, India

Corresponding Author: Gurjeet Singh

Email: gurjeetsingh360@gmail.com

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patient cases, critically appraise medical literature, interact with interdisciplinary teams, and continually reflect on their progress.

Recognizing the importance of SDL, the NMC has included SDL hours in every phase of the MBBS program. Usually, SDL is introduced early in subjects like Anatomy, Physiology, and Biochemistry and reinforced in clinical subjects like Pharmacology, Microbiology, and Medicine. For example, students may be assigned SDL sessions on antibiotic resistance, ECG interpretation, or public health policies. Many institutions, however, treat SDL as time-bound assignments while paying little to no attention to the way a student approaches the learning process. As a result, the product of learning, e.g., a written report or presentation, is graded,

while the process involving curiosity, planning, resource selection, engagement, and self-assessment remains ungraded and unmonitored.

Unfortunately, this may throw the entire ethos of SDL out of alignment. While it sounds wonderful in theory, the hurried student who just regurgitates PowerPoint from the lecture notes can as well get the same score as his more studied counterpart who sought clinical exposure, studied contemporary guidelines, and took critiques from his mentors.^{2,3} The latter has actually demonstrated a greater form of self-direction and professional engagement. Making assessment into the SDL process lays down the differences and guides students and educators in learning how to more effectively adapt their learning. Above all, the assessment of the SDL process feeds several major educational objectives:

1. It promotes reflective practice, which is at the heart of professional development.
2. It nurtures autonomy and responsibility to equip students for lifelong learning outside MBBS. It allows for individualized feedback tailored to each student's journey.

For this reason, SDL assessment must be carried out in a structured, well-thought-out manner. This article discusses how medical institutions may assess the process of SDL in MBBS students, with evidence-based frameworks, workable tools, and actual clinical examples. By doing so, educators can ensure that SDL becomes a genuinely transformative component of undergraduate medical training one that not only improves academic performance but also builds the habits of mind necessary for ethical, competent, and adaptable medical practice.^{4,5}

1. WHY SHOULD WE ASSESS THE PROCESS OF SDL FOR MBBS STUDENTS?

Assessing SDL helps identify whether students are:

- Taking ownership of their learning
- Thinking critically and applying knowledge
- Reflecting on their strengths and gaps
- Using appropriate resources

Example: In a microbiology module on tuberculosis, Student A reads the textbook chapter and memorizes facts. Student B identifies a patient in the ward with drug-resistant TB, discusses management with the clinician, searches WHO guidelines, and writes a short summary. Both students may pass the exam, but only Student B demonstrates robust SDL behavior.

Thus, assessing how students learn is just as important as what they learn.³

Self-Directed Learning (SDL) is not just an educational activity; it is a professional imperative in the practice of modern medicine. The National Medical Commission (NMC) has formally recognized this by embedding SDL into the

Competency-Based Medical Education (CBME) framework. Each phase of the MBBS curriculum includes structured SDL hours, with the expectation that students will gradually evolve from guided learning toward becoming independent, reflective, and adaptive learners. However, this objective cannot be met unless the process by which students engage in SDL is systematically observed, guided, and assessed.

1.1. Process vs. Product in SDL

Traditional assessment practices in Indian medical colleges tend to focus on the product of learning such as a completed assignment, case presentation, or short quiz. While these outputs are important, they fail to reveal whether the student:

- Took ownership of the topic,
- Planned their learning goals,
- Selected appropriate resources,
- Evaluated their understanding, or
- Reflected on the relevance of what they learned.

In contrast, assessing the process of SDL captures these essential dimensions of professional growth and offers a more holistic view of student competence.^{1,2}

Example: Two MBBS students are assigned an SDL topic on "Approach to a patient with anemia."

- Student A compiles slides from a textbook and delivers a good presentation.
- Student B, on the other hand, recalls a patient from her clinical rotation with megaloblastic anemia, reviews the case notes, consults the resident for differential diagnosis, explores recent WHO guidelines, watches a clinical video on bone marrow biopsy, and then presents her findings.

Both may present well, but only Student B truly embodies the SDL process engaging deeply, applying knowledge to clinical practice, and exercising autonomy. If only the final presentation is assessed, Student B's richer learning process goes unnoticed. (Table 1)

1.2. Key Reasons for Assessing the SDL Process in MBBS

The assessment of the self-directed learning (SDL) process in MBBS promotes lifelong learning traits by preparing students with skills and attitudes to spare time for independent learning in their professional life. This process gives them candid ownership of their education, which equates to better learning and being prepared more for the ever-changing demands of a medical professional.

The following reasons justify SDL assessment in MBBS:

1. Fosters Lifelong Learning Behaviors: SDL develops a mentality of continual learning, and this stands vital in the ever-changing world of medicine.

2. Personalized Learning Experience: It lets the student mold their learning around their aptitudes, weaknesses, and other exigencies to the subject.

Table 1: Core SDL Dimensions in MBBS

Dimension	What It Means	MBBS Example	How to Assess
Self-Awareness & Motivation	Recognizing the gaps in ones learning and taking initiative	Perhaps not being able to read an ECG and seeking help	Learning logs; entries of reflections on SDL; participation in feedback
Goal Setting and Planning	Preparation of learning objectives in SMART format	Planning to master "shock types" by the end of the week	Quality of learning contracts; SDL portfolios; amount of time spent on task
Resource Utilization	Identify right materials and people for help	Use UpToDate and WHO guidelines and the inputs of ward discussions to appreciate a useful TB SDL.	Resource lists; citation logs; comments from mentors
Strategy Implementation	Use the right methods for learning	Clinical cases and videos for grasping classification of pneumonia	Observation of learning sessions; peer evaluation; rubric-based scoring
Reflection and Evaluation	Deep analysis of the whole learning process and outcome	Reflecting why questions in case of anemia were difficult	Reflective journal; mentor interviews; self-evaluation forms

3. Practicing Readiness: SDL gives a student the basis on which he can think critically, make decisions, and solve problems within the parameters of clinical practice, independently.

4. Prepared for Professional Development: It will enable the health care professionals to direct their evolution, which means enhanced care for the patients.

Educators evaluate the SDL process to ensure that students have developed the wanted skill set and attitude to become efficient lifelong learners and independent practitioners. This proactive approach to learning is particularly vital in the medical field, where continuous learning is paramount according to some medical education journals.

1.3. Tools and Techniques to Assess Self-Directed Learning (SDL) for MBBS Students

Assessment of the very process of Self-Directed Learning in MBBS will require tools that judge more than final factual knowledge. Since SDL is about how students learn, plan, choose resources, engage, and reflect, the teaching methodologies should be formative, authentic, and learner-centered. The NMC also emphasizes formative assessment in SDL, wherein feedback has a central focus.

The key tools and techniques that enable SDL to be assessed include:

1.3.1. Reflective Portfolios

What It Is: A structured collection of a student's reflections, learning goals, evidence of learning (notes, diagrams, discussions of cases), feedback received, and self-assessments.

Purpose: To assess how a student plans, engages, and reflects on the learning over time.

MBBS Example: In an SDL in microbiology on tuberculosis, a student includes:

- Weekly learning goals
- Summary of the guidelines from WHO and ICMR
- A photo of ward case notes (anonymized)
- Reflection on what was learned and how it enhanced the understanding of MDR-TB

How to Assess: Using a rubric that rates goals clarity, depth of reflection, relevance of evidence, and integration of feedback.

Advantages:

- Encourages lifelong learning
- Enhances metacognition
- Can monitor a student's learning path through the MBBS program

1.3.2. Learning Contracts

What It Is: A mutually agreed document between student and faculty outlining:

- What the student will learn
- Why it matters
- How they will learn it
- Resources they will use
- Timeline and assessment criteria

Purpose: To promote planning, ownership, and accountability in SDL.

MBBS Example: A student interested in "Clinical Approach to Hepatomegaly" signs a contract with a mentor stating they will:

- Read 2 chapters from Harrison's
- Watch 2 patient interviews
- Conduct a mini-clinical case presentation
- Reflect in their logbook

Table 2: MBBS Example (Rubric Criteria)

Criteria	Exemplary (3)	Competent (2)	Needs Improvement (1)
Goal setting	Specific and SMART	General but clear	Vague or missing
Resource use	Multiple, high-quality	Some variety	Limited or irrelevant
Reflection	Deep, critical, contextual	Basic or surface-level	Lacking or absent
Engagement	Proactive and enthusiastic	Meets minimum effort	Passive or incomplete

How to Assess: Faculty can evaluate goal specificity, resource use, timeliness, and final reflection or deliverable.

Advantages:

- Sets clear expectations
- Encourages student-faculty partnership
- Formalizes the SDL process

1.3.3. SDL Rubrics

What It Is: A scoring guide with defined performance levels for SDL components-goal setting, engagement, resource use, reflection, and self-assessment.

Purpose: To evaluate the quality of SDL effort rather than just the quantity.

How to Use: Students can self-score, and faculty can provide feedback using the same rubric to identify growth areas.

Advantages:

- Promotes objectivity
- Provides transparent expectations
- Facilitates formative feedback (Table 2)

1.3.4. Mentor Feedback and Observation

What It Is:

Direct observation of students during SDL sessions, or clinical discussions, followed by giving formative feedback, is truly a method used to assess and intervene within the student performance area. Educators are in a position to observe how students interact, their problem-solving approaches, and reasoning clinically in real-time, which then allows for feedback in development in very specific and actionable terms.

Purpose: To evaluate real-time SDL behaviors: participation, inquiry, collaboration, and critical thinking.

MBBS Example: During a community medicine SDL on outbreak investigation, the mentor observes how students:

- Generate questions
- Consult data sources
- Delegate tasks in the group
- Draw conclusions

Mentors record observations on a checklist and provide verbal feedback.

How to Assess: Use structured feedback forms or mini-CEX-style tools focusing on inquiry, engagement, and resourcefulness.

Advantages:

- Immediate, personalized guidance
- Builds mentor-mentee rapport
- Encourages reflective dialogue

1.3.5. Peer Assessment

What It Is: Students evaluate each other's SDL presentations, portfolios, or group performance using structured tools.

Purpose: To develop evaluative judgment, critical thinking, and collaboration skills.

MBBS Example: In a pathology SDL on anemia types, students present their learning in small groups. Peers rate each other on:

- Clarity of concepts
- Depth of analysis
- Use of references
- Originality

How to Assess: Use simple rating scales or open-ended peer feedback templates.

Advantages:

- Encourages accountability
- Reinforces learning through peer teaching
- Trains students in constructive feedback

1.3.6. SDL Readiness Scales (e.g., SDLRS)

What It Is: Standardized questionnaires that assess a student's attitudes, motivation, and readiness for SDL.

Purpose: To diagnose students' preparedness and guide faculty support.

Example Tool: Guglielmino's Self-Directed Learning Readiness Scale (SDLRS) measures:

- Self-management
- Desire for learning
- Self-control

MBBS Example: A first-year batch completes the SDLRS in their Foundation Course. Results help identify students who need early support and mentorship in developing SDL skills.

Table 3: Tools to Assess SDL in MBBS

Tool/Method	Assesses	Used In	Key Benefit
Reflective Portfolio	Engagement, reflection, progression	SDL modules, clinical postings	Longitudinal view of learning
Learning Contract	Planning, goal-setting, accountability	Electives, mentorship programs	Personalized learning map
SDL Rubric	Quality of learning behaviors	Any SDL activity	Standardized feedback
Mentor Feedback	Real-time learning behaviors	Ward SDLs, OPD postings	Formative and contextual guidance
Peer Assessment	Communication, critical appraisal	Group SDLs, case presentations	Builds evaluative thinking
SDL Readiness Scale	Motivation and preparedness	Foundation Course, curriculum review	Targets early intervention strategies

Table 4: Tools to Assess the Process of SDL in MBBS Students

Tool	Purpose	Assessment Focus	Example in MBBS Context	Advantages	Limitations
Self-Directed Learning Readiness Scale (SDLRS)	Assess readiness for SDL	Motivation, self-management, and self-control	Pre-test to assess MBBS students' readiness before SDL sessions	Validated, quantitative	May not reflect real-time learning behaviors
Learning Contract	Promote goal setting and accountability	Goal definition, resource identification, time management	Students commit to completing a pathology topic with milestones	Encourages ownership	Requires mentoring to be effective
Reflection Journals / Learning Logs	Assess metacognitive skills	Reflection, critical thinking, and planning	Students reflect on a pharmacology SDL session and revise strategies	Promotes deep learning	Time-consuming to assess
Rubric-Based Assessment	Provide structured formative feedback	Goal setting, resource use, time planning, and evaluation	Faculty uses rubric to assess SDL process in biochemistry topic	Standardized assessment	Requires trained faculty
Peer Feedback Tools	Foster collaborative SDL	Teamwork, communication, and peer evaluation	Group SDL on physiology topic – peers assess each other's contribution	Enhances accountability	Subjective bias possible
Facilitator Observation Checklist	Monitor SDL process in action	Engagement, autonomy, problem-solving	Faculty observes a group SDL session in skill lab	Direct observation of behavior	Observer effect; time-intensive
Concept Mapping	Visualize knowledge integration and gaps	Linking concepts, identifying gaps	Students map microbial pathogenesis post SDL	Encourages synthesis	Needs training to interpret
Portfolio Assessment	Track longitudinal SDL development	Collection of reflections, feedback, contracts	SDL portfolio on clinical case studies in medicine	Holistic overview	Needs structured guidance
Self-Assessment Questionnaire	Evaluate learners' perceived process	Confidence, barriers, satisfaction	End-of-module SDL feedback form on ENT module	Promotes self-awareness	Can be over- or under-estimated

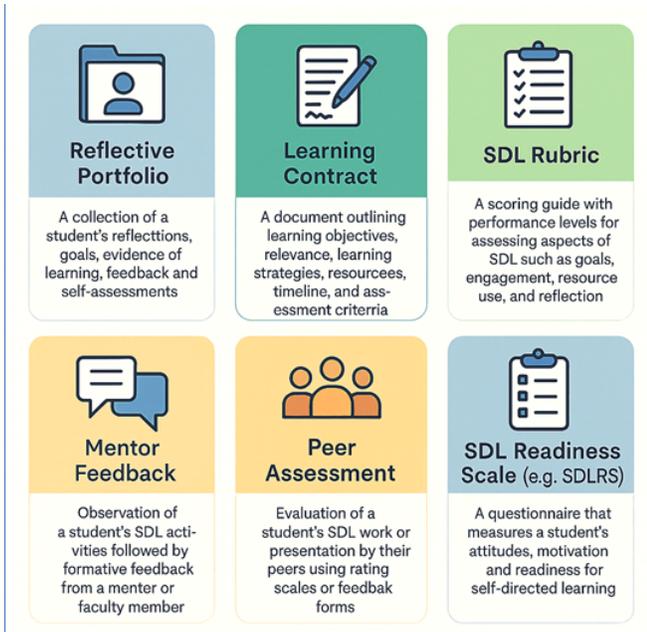


Figure 1: Tools and Techniques to Assess Self-Directed Learning (SDL) in MBBS

How to Use: Pre- and post-testing to monitor growth in SDL orientation over semesters.

Advantages:

- Quantifies SDL readiness
- Identifies at-risk students
- Provides baseline data for intervention (Table 3,4 & Fig. 1)

1.4. ROLE OF FACULTY IN SDL ASSESSMENT

Faculty plays a pivotal role in ensuring the effectiveness of Self-Directed Learning (SDL) within the MBBS curriculum. Unlike traditional lecture-based teaching, where faculties serve primarily as information providers, SDL demands a paradigm shift from being a teacher to becoming a facilitator, guide, coach, and assessor. Faculty are responsible not just for initiating SDL sessions but also for creating an enabling environment, supporting the learning process, and ensuring quality through thoughtful assessment and feedback.

1.4.1. Facilitator of the SDL Process

Faculty must help students:

- Identify meaningful learning objectives
- Choose suitable learning strategies
- Locate credible resources (e.g., guidelines, journal articles, case repositories)

Example: During an SDL session on acute kidney injury, the faculty encourages students to frame questions such as:

- What are the clinical stages of Acute Kidney Injury (AKI)?

- What is the current Kidney Disease: Improving Global Outcomes (KDIGO) guidelines?
- How would you differentiate pre-renal from intrinsic causes?

This shifts the responsibility from spoon-feeding to inquiry-based exploration.

1.4.2. Designer of SDL Activities and Contexts

Faculty design SDL experiences that are:

- Clinically relevant
- Integrated with real-life patient encounters
- Aligned with competencies and learning outcomes

Example: In a community medicine module on nutrition, the faculty doesn't just assign reading material. Instead, they send students to assess anthropometric data in anganwadi centers and reflect on the social determinants of malnutrition. The SDL is therefore anchored in authentic contexts.

1.4.3. Assessor of Learning Process and Growth

Faculty is instrumental in assessing not just what students learn, but also:

- How they learn
- Whether they reflect
- How they respond to feedback
- How they plan future learning

Assessment methods may include:

- Rubrics
- Review of learning contracts
- Observation checklists
- Portfolio evaluations
- Oral debriefs and reflections

In the internal medicine SDL session, faculty reviews the portfolio, noticing that the student has utilized a variety of resources and has gone on to reflect on why, in this particular case, they had missed a diagnosis. This, in turn, is appreciated, and formative feedback is given.

1.4.4. Feedback Giver and Mentor

One very important element of SDL is feedback. Faculty ought to:

- give constructive feedback timely to the students about their efforts.
- encourage students to evaluate themselves and receive the feedback from their peers.
- give moral support when the students are disabled.

Example: After reviewing the SDL portfolio, a mentor might say to the candidate:

"I like how you linked dengue pathophysiology with the patient you saw in the ward. In your next goal consider integrating lab markers like platelet count and hematocrit trends to refine your clinical reasoning."

This kind of feedback deepens the student's learning and provides direction.

1.4.5. Supporter of Reflective Practice:

Reflection is a cornerstone to SDL. Faculty should enable students to:

- Create the practice of asking 'why' and 'how';
- Analyze errors and successes; and
- Relate knowledge to personal and professional identity.

Example: During the pharmacology SDL, the student reflected thus:

"Though I read about beta blockers I could not confidently choose the right one for a hypertensive diabetic patient. I now realize I must compare cardioselectivity and contraindications more carefully."

The faculty encourages deeper exploration and guides toward clinical pharmacology texts and case-based tutorials.

1.4.6. Role Model and Culture-Builder

Faculty modeling lifelong learning and ethical inquiry sets the tone for SDL. When students observe faculty engaging in evidence-based practice, critical appraisal, and professional reflection, they internalize these behaviors.

Example: A faculty member begins the SDL session by sharing how they updated their knowledge using recent WHO guidelines for monkeypox, showing students that even experts continue to learn.

Faculty Development Reminder: "In SDL, students take responsibility for what, how, and why they learn and faculty takes responsibility for supporting, challenging, and assessing them ethically and empathetically."

1.5. CHALLENGES IN SDL ASSESSMENT AMONG MBBS STUDENTS

While Self-Directed Learning (SDL) is central to the CBME curriculum for MBBS students, its assessment presents a set of practical and pedagogical challenges. These challenges come at both the learner and the educator ends of the continuum and are the interplay of institutional culture, curriculum design, and maturity of the student. It is essential to comprehend these barriers for the very implementation and accreditation of SDL in undergraduate medical education.

1.5.1. Limited Student Readiness for Self-Directed Learning

Explanation: Many first-year MBBS students come from didactic college systems where learning is teacher-driven and examination-focused. They may lack the skills or mindset for goal-setting, independent inquiry, or reflection.

Example: A student doing an SDL on "Types of shock" would be content to submit a copied paragraph from the textbook; without setting any goals or consulting various sources, she thinks this is what is expected.

Effects:

- Superficial engagement with content
- Passive or dependent learning behaviors
- Underdeveloped metacognitive and critical thinking skills

Possible Solutions:

- Introduce SDL readiness assessments (e.g., SDLRS) during the Foundation Course
- Use structured scaffolds like learning contracts and SMART goal templates
- Provide early training on how to learn independently, not just what to learn

1.5.2. Poor Understanding of the SDL Assessment Process

Description: Students often associate SDL with traditional assignments or group work. They themselves seem to be less aware that it is the process (planning, use of resources, and reflection) that is equally important as the end product (presentation or write-up).

Example: In an SDL on diabetes, students divide the topics among themselves and simply present the slides—without any attempt at individual reflection or goal-setting, thereby missing the entire point of SDL.

Impact:

- Reduced personal responsibility
- Poor presentation and report quality
- Lack of reflective or clinical integration

Possible Solutions:

- Orientation of students with clear rubrics and examples of process-based assessment
- Emphasizing the importance of reflection logs portfolio entries
- Include assessment not only for output on facts but also for learning behaviors

1.5.3. Resistance to Reflection and Self-Assessment

Description: Teachers may be viewed by students as subjective or unnecessary; many early-semester students have trouble assessing their own learning critically.

Example: A student reflection states, "I learned the topic well and enjoyed it," with no mention of what was challenging, how they managed to overcome it, or what could be done better to improve.

Impact:

- Missed opportunities for metacognition
- Faculty unable to gauge deeper learning or personal growth
- Difficulty in tailoring feedback

Possible Solutions:

- Teach reflective writing using models like Gibbs' or Kolb's cycles
- Provide exemplar reflections with annotations
- Use guided questions: What did I learn? What was difficult? What will I do differently?

1.5.4. Variability in Faculty Engagement and Assessment Approaches

Explanation: Some faculty members may neither be fully aware of SDL principles nor willing to depart from their roles of just teaching content to that of facilitating and assessing processes.

An instance of which is a faculty member who scores marks only for presentation slides whereas the other faculty member scores using rubrics, reflection, and goal setting—for the students conditions are surely varied.

Impact:

- With Feedback and grading being inconsistent
- Students confused about what is expected of them
- The GOOD WILL of the SDL assessment being in question

Possible Solutions:

- Faculty development programs in SDL facilitation and assessment
- Standardized rubrics to be used in all departments
- Formation of community practice whereby members share good practices and examples.

1.5.5. Time Constraints in an Overloaded MBBS Curriculum

Description: Both the students and the faculty face difficulties in squeezing SDL into packed schedules of clinical postings and exam preparations. SDL may be hurriedly conducted or treated as a box-ticking exercise; that will be, work skipped or done with little commitment and follow-up.

Impact:

- Shallow output from SDL
- Less interaction between faculty and students
- Missed opportunities for personalized learning

Possible Solutions:

- Integrate SDL into existing clinical and academic activities (e.g., case discussions, ward rounds)

- Use blended learning models (asynchronous resources, e-portfolios)
- Allocate protected time for feedback and reflection sessions

1.5.6. Difficulty in Assessing Qualitative Aspects Objectively

Description: Assessment of reflection, engagement, or motivation is inherently subjective. Faculty may find it hard to grade these consistently.

Example: Two students write very different reflections on the same topic, and the mentor is unsure how to compare them fairly.

Impact:

- Potential bias or grading errors
- Student dissatisfaction with assessment
- Limited utility of feedback

Possible Solutions:

- Use validated rubrics and train faculty on their use
- Encourage peer and self-assessment using the same criteria
- Focus on growth over time rather than fixed scores (Table 5,6)

1.5.7. Key Takeaways to Consider by Educators

- **Start Early:** While students can carry out SDL, focus should be on developing it within the Foundation Course with supporting structures in place.
- **Be Fair:** Shared rubrics and tools should be used within and across departments.
- **Train and Mentor:** Continuous training for faculty on how to observe, facilitate, and assess SDL meaningfully is a must.
- **Integrate, not add:** Find synergy between SDL and clinical postings and electives to give authenticity and relevance.
- **Reflect to grow:** Students should be taught that reflection is not an option; it is fundamental to professional identity.

CONCLUSION

Faculty plays the leading role in assessing Self-Determination Learning (SDL) of MBBS students, thereby taking them towards becoming aware, responsible, and ethical doctors. This aligns with the AETCOM philosophy of developing doctors who are not only knowledgeable but also ethical, communicative, and reflective. SDL is essential in medical education, and with the right support, it can transform from a timetable requirement into a transformative learning

Table 5: Challenges in SDL Assessment among MBBS Students – With Solutions

Challenge	Impact	Proposed Solution	Example/Application
1. Low Student Readiness for SDL	Students may struggle with autonomy, goal-setting, and time management.	- Introduce SDL orientation in the Foundation Course - Use structured learning contracts and SMART goals	Conduct a workshop in the first semester on "How to set learning goals in SDL"
2. Confusion About What is Being Assessed	Students may treat SDL as a standard assignment or group task, not as a self-driven process.	- Explain that process (not just product) will be assessed - Share rubrics and exemplars early	Display rubric posters in SDL classrooms showing how goals, reflection, and resources are evaluated
3. Superficial or Forced Reflection	Students submit generic reflections ("I learned a lot") without deeper analysis.	- Train students in reflective writing using Gibbs' or Kolb's model - Use guided prompts	Provide a template with prompts: "What did I learn?"; "What challenged me?"; "What will I do differently?"
4. Inconsistent Faculty Engagement and Assessment Practices	Assessment quality varies by department or mentor, leading to confusion or dissatisfaction.	- Faculty development sessions on SDL facilitation and assessment - Use standardized rubrics across the course	All faculty use a shared rubric for SDL scoring; reflections are reviewed using common checklists
5. Time Constraints in Packed Schedules	SDL becomes rushed or perfunctory; students may not receive feedback.	- Integrate SDL into clinical discussions or electives - Use asynchronous tools like e-portfolios	Assign SDL reflections to be submitted after clinical postings; faculty give audio-recorded feedback on LMS
6. Difficulty in Assessing Qualitative Aspects (Reflection, Motivation)	Subjectivity may affect reliability and fairness of assessment.	- Use clear rubrics with descriptors for each level - Incorporate peer and self-assessment	Students rate their own SDL using the same rubric as faculty; mentor compares and discusses variances
7. Minimal Peer Interaction in SDL	Students work in isolation; lack of discussion hampers engagement and deeper learning.	- Introduce small-group SDL activities - Encourage peer feedback and shared reflection sessions	Students present SDL outcomes in peer groups; peers evaluate engagement using checklists
8. Focus on Completion Rather than Learning	Students may prioritize task submission over actual understanding or integration.	- Emphasize formative, feedback-based assessment rather than grading only - Recognize quality efforts	Faculty highlight thoughtful reflections during end-of-module discussions and give participation certificates

experience. Tools such as portfolios, learning contracts, and reflective rubrics could be used to track SDL so that students are developed into competent, self-aware, and reflective doctors. Through this, medical colleges focus on the "how" of learning, preparing students to independently scrutinize the world throughout life.

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ANNEXURE

Checklist: Effective Faculty Practices in SDL Assessment (MBBS)

Core Faculty Role	Best Practices	Check (✓)
🔍 Before the SDL Session		
Define clear, competency-based SDL objectives linked to curriculum outcomes		
Orient students to SDL expectations, process, and assessment methods		
Help students frame SMART learning goals		
Approve or co-create learning contracts with students		
Recommend a mix of quality resources (guidelines, articles, clinical cases, videos)		
Create a safe, non-judgmental space that encourages exploration and questions		
👁️ During the SDL Process		
Observe students during SDL sessions, group discussions, or clinical application		
Guide students in refining goals or strategies when needed		
Offer prompts or questions that stimulate critical thinking		
Encourage peer collaboration, group sharing, and self-assessment		
Keep track of engagement using observation checklists or field notes		
💬 Feedback and Reflection		
Review and provide feedback on learning contracts or SDL portfolios		
Use rubrics to assess process (goal clarity, engagement, reflection, resource use)		
Offer specific, constructive, and formative feedback verbally or in writing		
Encourage reflective journaling or group debriefs after SDL sessions		
Celebrate progress and recognize improvements in SDL behaviors		
🔄 Post-SDL Follow-Up		
Discuss challenges faced and adaptations needed in future SDL planning		
Suggest areas for deeper learning or clinical application		
Document feedback and integrate it into mentoring records or e-portfolios		
Review SDL readiness longitudinally across semesters (early vs final phase MBBS)		
Continuously improve SDL sessions based on student feedback and assessment data		

Additional Tips for Faculty

- ✓ Use rubrics and structured templates to minimize subjectivity
- ✓ Allocate protected time in the timetable for SDL review and feedback
- ✓ Attend faculty development workshops on SDL facilitation and assessment
- ✓ Model lifelong learning by sharing your own SDL practices
- ✓ Align SDL content with real patient care problems to maintain relevance

Orcid ID:

Surjeet Singh - <https://orcid.org/0000-0001-9475-4521>

Raksha - <https://orcid.org/0000-0002-0237-2794>