

# [Treatment planning system software reflective essay](https://assignbuster.com/treatment-planning-system-software-reflective-essay/)

“ Improving one’s learning and performance could be considered to be a ‘ meta-skill’, that is the skill of learning how to learn.” (The Open University, 2012)

Clinical skills chosen

The clinical skill that was chosen is learning how to use Varian Medical Eclipse™ Treatment Planning System software and acquiring knowledge on how to plan a treatment for the different cancers. Eclipse™ is a comprehensive treatment planning system that simplifies modern radiation therapy planning for dosimetrists, physicists, and physicians to efficiently create, select, and verify the best treatment plans for their patients while ensuring high standard of care and effective protocols (Varian Medical Systems, 2014). This skill was chosen because it is treatment related and is able to give me a deeper understanding on patient’s treatment. Furthermore, the resources were readily available in the department for learning purposes.

Process of learning this skill

The process of learning this skill was broken down into two components; mastering the use of Eclipse™ software efficiently and gaining knowledge on treatment planning. The intention of breaking goals down (University of Kent Careers and Employability Service, n. d.) into two components is so that I can tackle them one step at a time. Each component was further evaluated based on a three-stage framework of developing a strategy, monitoring progress and evaluating performance (Figure A), which can be used to develop and improve skills and learning in general (The Open University, 2012).

Strategy & first component of learning process

Firstly, the strategy was to have an action plan and time checklist of what I should be doing each week and what I should achieve at the end of each week. An action plan is a review of one’s current capabilities and goals over an extended period of time (The Open University, 2012). It is useful as it provides a structured plan linking the objectives of the learning process together and setting targets for achieving goals. There is a time checklist/schedule plan created on a weekly basis at the end of every journal entry to keep me on track and ensure that the objectives for the week have been met. There was a change in the schedule plan in week 1 as compared to the schedule plan in the action plan because I realised in the first week that one week was insufficient and I needed more time to learn the software.

Another strategy was to split the learning process into two components. Getting to know the user interface and all the functions of Eclipse™ treatment planning system first would enhance my learning in treatment planning in the later part. Treatment planning requires both knowledge on treatment planning and skills on using the Eclipse™ treatment planning system. Thus, the first component of my learning journey was to get myself familiarise with Eclipse™ treatment planning software’s user interface and its functions. This took me a couple of weeks instead of one week that was originally planned in the action plan. I was able to learn a lot both on my own by referencing the user manual and also with the help of the senior radiation therapists during the 8-hour learning session per week. As I learn, I jotted down notes in the notebook. Note-taking was helpful as I was able to monitor my learning progress to keep me on track on the things that I have covered and have not.

In order to evaluate my performance so far, a written assessment was carried out with the help of the senior radiation therapists at the end of week 2. The results from the assessment would determine my next step, which was to either continue learning the software’s user interface or to move on to the second component of my learning journey to learn how to plan a treatment. I chose a written assessment to evaluate my performance because it allows me to see my results visually in terms of scores. Scoring 92% for the written assessment on the software’s user interface gave me confidence to move to on to the second component of the learning process.

Second component of learning process

I passed the assessment and moved to learning how to plan a treatment for rectal cancer. For this component, I required the senior radiation therapist to guide me and share her knowledge. It was an observational and verbal learning for the first few hours after which I was left on my own with the hospital’s protocol booklist to try treatment planning on my own. The overload of information and knowledge caused me to miss out on quite a number of things in treatment planning. As such, it occurred to me that I would need a checklist. In my notebook, there were 2 types of lists: one of which is a step-by-step list for a treatment plan based on what the senior radiation therapist taught me and the other, is a checklist that the senior radiation therapists check against after every completion of a treatment plan. The advantages of having a checklist are that it focuses my mind on important objectives, orders my thoughts, making me less likely to forget certain details, monitors my progress and prevents me from side-tracking from my objectives.

I managed to complete learning the treatment planning for rectal cancer a week earlier than planned. This caused a change in my schedule plan where the remaining planned weeks were brought forward a week. During this process, I should have read up textbooks for information instead of relying solely on the protocol book and the knowledge provided by the senior radiation therapist. I could have also used the Miller’s pyramid (Figure B) to monitor my performance on a personal level. Based on the Miller’s pyramid, I am at the “ Shows” level as I am able to demonstrate the skill of planning a treatment plan for rectal tumours. I have yet to reach “ Does” because I am still not efficient in treatment planning as I do still make mistakes such as over-shielding in the treatment plan for brain tumour.

For each treatment plan, a competency-based assessment and verbal assessment were carried out to evaluate my performance. Firstly, I had to design a suitable treatment plan using Eclipse™ treatment planning software for a particular case that was selected by the senior radiation therapist. After which, I had to explain and convince her that my treatment plan has met the requirements and was suitable for the patient’s condition. She used a competency-based assessment checklist (Figure C) to evaluate my performance.

A competency-based assessment is a collection of evidence to demonstrate that a learner can perform a task according to specific standards (Singapore Workforce Development Agency – Quality Assurance Division, 2012). The assessment outcome will allow the assessor to make judgment with respect to the competence or incompetence (Singapore Workforce Development Agency – Quality Assurance Division, 2012). Such method of assessment has been used for many years by the planning department to assess training staff on treatment planning where they have to apply their knowledge in designing a treatment plan and explaining the rationale as well as suitability for the particular patient in accordance to the hospital’s protocol and patient’s benefit. This is good as it involves an assessment of a combination of treatment planning knowledge, process skills and transferable skills (Singapore Workforce Development Agency – Quality Assurance Division, 2012). Apart from competency-based assessment, I also chose verbal assessment for this component because it allowed me to gather feedback directly from my senior radiation therapist on ways that she thinks could have been better and on how to improve my treatment plans. Learning from my mistakes allows me to learn and grow as I will avoid making similar mistakes in the future.

Type of learner

I learned faster with the help of the senior radiation therapist. At the start of each session, the senior radiation therapist will show and explain to me regarding treatment planning. After which, I was given hands-on opportunities to enhance my learning. Among the learning styles (Figure D), I learned better through visual, verbal and logical styles where the senior radiation therapist showed and explained to me the different components of treatment planning. I feel that explanations make better sense to me rather than just verbal instructions. As such, I found myself asking more to get a deeper understanding of the interface and usage of the software as well as knowledge in treatment planning. After each discussion with the senior radiation therapist, I prefer to work alone to digest all the information and try out the treatment planning on my own. Therefore, solitary learning style (Figure D) was more suitable for me rather than social, also known as group discussion.

Self-reflection using Gibb’s Reflective Model (Figure E)

Description & feelings

I was able to learn new skills and knowledge from the seniors. Throughout this learning process, I learned how to develop my own learning goals, identify my own learning styles and be responsible for my own learning. At the start of the process, I struggled a little bit as the amount of knowledge and things to learn was too overwhelming especially since I am not IT-savvy. However, the hands-on practices helped me build up my confidence each week. I feel that this newly learnt skill and knowledge are useful as it can be applied when I carry out the daily treatments and also when I am doing the new treatment card check. The knowledge can also be shared with my juniors and students on attachment.

Evaluation & analysis

The main challenge during the learning process was time. I only had one day (8 hours) every week to go to the treatment planning department. There was no fixed schedule plan as certain skill or knowledge required more time to learn. The changes in my schedule plan were made as more time was needed than expected to learn the software at the start and also due to the lack of manpower in the department which denied me of learning opportunities. However, I did managed to complete learning the treatment plan for rectal cancer a week earlier. As such, the schedule plan will always be adjusted based on my needs and capabilities each week. Despite this, it is crucial for me to keep to a certain timeframe as delaying a learning objective for too long would mean that the whole learning process will be completed at a later period. Given more time, I would like to be given a chance to create my own checklist on treatment planning and refer to more references from the textbooks instead of relying on the hospital’s protocol and knowledge shared by the seniors.

Conclusion & action plan

If I was given another opportunity, I would repeat the same process with similar action plan but with a more realistic set of timeline based on my learning speed and capabilities. I would also like to develop my note-taking skills and the method of evidencing my skills.

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