od, two or more shaded restorative materials might be used to match the real shade of a tooth in different regions (Fig. 1). Restorative materials with different chroma are used and blended together with overlapping surfaces to create the desired effect. The “double-effect layer” concept is not applied in this technique.4

Layered shading technique

This technique, also known as natural shading technique, is based upon the anatomic and optical characteristic of the natural teeth and emphasizes the importance of using materials specifically designed to emulate the dentin and enamel layer of the natural teeth. This technique involves the correct selection of a dentin and enamel group of materials with their layer-by-layer arrangement (Fig. 2). An opaque and effect group of materials are also used during the layering procedure to achieve the desired tooth characterization.

Various concepts of layered shading techniques, e.g. basic, classic, modern and trendy, are used in direct aesthetic restorations. Each of these concepts is based on the specific arrangement of the two or three layers of the restorative materials usually needed for large Class III and Class IV restorations or incisal build-ups.

None of the above concepts mention single- or mono-layering techniques, which are frequently used in aesthetic dentistry. These concepts are hard to understand, not comprehensive and also do not explain the clinical use of a special opaque group of materials. Hence, the layering techniques may be better classified as follows.4

Mono-layered shading technique

This is a very common and simple layering technique using only one group of materials, either dentin or enamel shade, to restore the defective natural tooth (Figs. 3a-e).

Bi-layered shading technique

This technique demands a higher level of clinical skill than in mono-layering, as it uses both the dentin and enamel group of the materials during restoration (Figs. 4a-e).

Tri-layered shading technique

This is the advanced level of layering technique where dentin, enamel and opaque materials are used in combination to mask the dark tooth discolouration or to block light transmission. As opaque materials are used, proper shade selection and thickness of the dentin and enamel layers are critical to achieve an aesthetically successful result (Figs. 5a-e).

Complex-layered shading technique

Any layered shading technique that requires special effect materials (tint, stain) during the restorative process, is classified under

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the complex category of that particular layered shading technique. In this category, the effect group of the materials is normally used in between dentin and enamel layers of the natural or restorative layers of the restoration (Figs. 6a-g).

Conclusion
We hardly use the blended shading technique in modern aesthetic dentistry as the layered shading techniques are more predictable in achieving successful aesthetic restorations. The new concept of classification of layered shading techniques is simple to understand and easy to remember as the name itself suggests the required number of the layers and various groups of restorative materials necessary to restore the tooth defects. This classification also helps clinicians to imagine and understand the aesthetic complexity of restorations.

Editorial note: A complete list of references is available from the publisher.

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Fig. 5a. Non-vital and discoloured teeth #11, 21 and 22.
Fig. 5b. Tri-layered shading technique.
Fig. 5c. Application of opaque (flowable) shade to mask discolouration.
Fig. 5d. Application of final enamel shade.
Fig. 5e. After finishing and polishing.
Fig. 6a. Fractured teeth #11 and 21.
Fig. 6b. Complex bi-layered shading technique.
Fig. 6c. Creating a flowable frame using translucent enamel.
Fig. 6d. Flowable frame after curing.
Fig. 6e. Application of white tint after dentin shade.
Fig. 6f. Application of final enamel shade.
Fig. 6g. After finishing and polishing.