

this design will facilitate students' independence in learning, thereby improving their metacognitive abilities through various learning experiences.

Conclusions

The development of this seamless learning component seeks to facilitate formal and informal learning, especially in schools with limited use of mobile phones or technology. This research produced instructional design and learning planning matrices, which show the activities of teachers and students in both formal and informal contexts. Based on the recommendations of some experts, the continual implementation of this informal-formal seamless learning design has the capacity to build the independence and awareness of students in learning. The importance of guidebooks for teachers and parents when implementing this instructional design was also mentioned by the experts. Based on this, students are able to build learning experience and independence and achieve in accordance with their respective abilities.

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