



Figure 4: Three types of RiA were reported by the teachers, echoing three reflective stages described in ALACT model.

FINDINGS AND DISCUSSION

The field evaluation confirmed that ClassBeacons did enhance teachers' RiA on their performance regarding teacher proximity. Rich examples of teachers' RiA relying on ClassBeacons have been reported. As Figure 4 shows, teachers reported three types of RiA, which echoes three stages of teachers' reflective process described by the ALACT model [6]. As experienced by teachers, the displayed information offered meaningful feedback on the spot, which helped them quickly deliberate on how they have been allocating time and attention to different individual pupils. This helped them (1) monitor and confirm their ongoing performance, (2) make new sense of their performance (e.g. discover and criticize *unwanted patterns* in their proximity distribution) and (3) modify upcoming moves (e.g. decide which students to help next and for how long).

Moreover, ClassBeacons was experienced as unobtrusive. Its slow and unremarkable display was not considered by teachers as a distraction to classroom activities. And teachers did not feel that its information overburdened their mind. As reported, the distributed display supported teachers' to seamlessly and effortlessly use the system in parallel with various primary teaching tasks in different locations of the classroom.

CONCLUSION

Reflection-in-action (RiA) is an important yet demanding competence for teachers. Little has been known on how HCI systems could ease teachers' RiA. To bridge this gap, we design and evaluate the ambient information system ClassBeacons. The field evaluation with eleven secondary school teachers proved that ClassBeacons unobtrusively enhanced teachers' RiA on how to divide time and attention over pupils throughout a lesson. We thereby contribute a case of as well as empirical insights in designing HCI system for supporting teachers' RiA.

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