DIAGNOSTIC COMPETENCES OD MATHEMATICS TEACHERS

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Teachers' diagnostic activities consist of gathering and interpreting data, be it by formal testing, by observation, by evaluating students' writings or by interviewing students. In teaching, the goal of diagnosis is to yield valid knowledge on the achievement of individual students or of the whole class. The teachers' knowledge, skills and beliefs connected to these diagnostic activities can be summarized as diagnostic competences. Ball, Thames & Phelps (2008) introduce the category "knowledge on content and students" (KCS) which comprises the anticipation of students' thinking and motivation and of their specific difficulties as well as the interpretation of "the students' emerging and incomplete thinking". Diagnostic competence is often defined as the ability of teachers to accurately assess students' performance (Südkamp, Kaiser & Möller, 2012). Only very few efforts try to elucidate the cognitive processes activated. Nickerson (1999) presents a general model based on a huge body of research on people's understanding of the knowledge of others and on processes of imputing other people's knowledge. The discussion group focuses on mathematics teachers (pre-service / in-service) and their competences and practice in diagnostic situations. The topics addressed during the sessions elaborate on theoretical foundations, significant findings, different empirical approaches and on analysis or support of teachers' practice.

Tuesday, 16.30-18.00: Planned timeline	Topic	Material / Working format / presenter
16:30	Introduction of the topic	Presentation / Juliane, Kathleen, Vicki & Timo
16:40	„What are the dimensions/ facets of diagnostic competence?"	Short input (Kathleen) / Group discussion
17:20	„How do we assess / capture diagnostic competence?"	Short input (Timo) / Group discussion

Friday, 16.30-18.00: Planned timeline	Topic	Material / Working format / presenter
16:30 – 17:10	„How do we foster diagnostic competence?"	Short input (Vicki) / Group discussion
17:10 – 17:50	„What can diagnostic teaching look like?"	Short input (Juliane) / Group discussion
17:50 – 18:00	Closing reflection: What have we learned? What possible further work do we envisage?	Whole group discussion

References

Ball, D. L., Thames, M. H., & Phelbs, G. (2008). Content Knowledge for Teaching: What Makes It Special? *Journal of Teacher Education*, (59), 389–407.

Südkamp, A., Kaiser, J. & Möller, J. (2012). Accuracy of teachers' judgments of students' academic achievement: A Meta-Analysis. *Journal of Educational Psychology*, 104(3), 743–762.

Nickerson, R. S. (1999). How We Know-and Sometimes Misjudge-What Others Know: Imputing One´s Own Knowledge to Others. *Psychological Bulletin*, 125(6), 737–759.