Who should teach gifted students?

by Kirsi TIRRI
University of Helsinki (Finland)

1. Introduction
A classical question in education is «what kind of teacher is a good teacher»? Researchers with different guiding paradigms have tried to answer the question with empirical evidence. In the 1960’s to 1980’s the dominating paradigm was behavioristically driven effectiveness research that defined good teacher as a teacher with good student learning results (Tirri, 1993). In the 1980’s the trend moved into more qualitative research and a good teacher was the pedagogically thinking teacher who was aware of his/her values and goals underlying his/her teaching practice (Kansanen, Tirri, Meri, Krokfors, Husu & Jyrhämä, 2000). Empirical research showed expert teachers to be more student-oriented and more capable of reflecting their thinking than the novice teachers (Berliner, 1988). In the 1990’s good teachers were challenged to be mentors or facilitators for learning in the virtual environments (Mason, 1991). During all these decades the teachers and researchers in gifted education read the results of this research and made a more detailed question: «who is the best teacher for gifted students?» (Milgram, 1979; Dorhout, 1983; Vialle & Quigley, 2002).

In this paper, we present an overview of the discussion concerning research on the qualities of a good teacher in general and the best teacher for the gifted students in particular. We will present the qualities of a good teacher in the light of current research on effective teaching. The main ideas of teacher thinking research are presented with an emphasis on teachers’ pedagogical thinking. The qualities of a good online teacher in the light of current research on virtual teaching are reviewed. In addition to the desirable competencies and qualities of the teacher, we also discuss the teacher attitudes toward gifted students. Empirical research on teacher attitudes is presented with cross-cultural differences among teachers from different countries. Some practical recommendations are made for teacher educators on how to educate teachers for gifted learners. Furthermore, some suggestions for future research are presented.
2. The qualities of a good teacher in the light of current research on effective teaching

The research on effective teaching has identified certain teacher behaviors that have been shown to produce good learning results in students. According to these studies, an effective teacher is businesslike (Ryan, 1960; Harris, 1986). The businesslike teacher is organized, systematic, goal oriented, and prepared. Effective teaching includes advanced planning and preparation in accordance with selecting proper learning objectives, diagnosing individual needs, gathering materials and supplies, and choosing appropriate teaching strategies. According to the review on effective teaching, well-organized teachers are found to be the most effective teachers (Tirri, 1993).

An effective teacher is capable of creating a positive learning atmosphere by being friendly. A friendly teacher is warm, emphatic, outgoing, positive and personal (Ryan, 1960; Harris, 1986). Friendly teachers reflect their positive attitude in their tone of communication, their gestures and interpersonal relationships. Effective teachers are shown to minimize negative feedback to their students as it consistently correlates negatively with achievement (O'Neill, 1988, 176-177). Praise is positive feedback with verbal approval. Praise is shown to be more effective for particular types of students and in particular contexts. It is most effective when it is personalized, more important to girls than to boys and more important to students from low-income settings (Westbury, 1988, 145).

Good teachers are shown to be verbally interactive (Gage, 1978; Harris, 1986). Teaching effectiveness research has revealed a positive relationship between teacher clarity and pupil achievement. Teachers who present information clearly avoid vague terms, words or phrases that are unclear or lack assurance.

Effective teachers are described by the attributes stimulating, imaginative, exciting, provocative, interesting, and avoiding dull routine (Ryan, 1960; Harris, 1986). Stimulating teaching is usually described by the noun enthusiasm. The research indicates that enthusiasm frequently correlates with achievement among older students (Brophy & Good, 1986). Flexibility can be defined, for example, to refer to a teacher’s potential «to meet the demands of the moment» and «to move with the shifting tides» (Hamachek, 1975, 246) in (O'Neill, 1988, 175). Flexibility is not strongly supported by the effective teaching research, but it appears in discussions on effective teaching behavior (O'Neill, 1988).

The individually oriented teacher treats each individual as a unique learner. Differentiation in assignments, materials and learning tasks is provided according to the needs of the students. The issue of differentiation in teaching is much debated in the literature, especially in the area of specialization for gifted learners (Feldhusen et al., 1989). An effective teacher is multi-media
Who should teach gifted students?

integrative (Harris, 1986). This kind of a teacher provides multi-sensory experiences to the students through diverse media. Variability has appeared frequently in the literature as an indicator of effective teaching behavior (Tirri, 1993).

The context of the studies on teacher effectiveness has to be taken into consideration in the evaluation of the findings. Research has focused primarily on the learning of basic skills by low performing students in elementary grades (Doyle, 1985, 31). Consequently these research findings do not necessarily apply to students at the other grade levels in other content domains. However, some of the qualities of an effective teacher remain in the discussions on good teaching. The three major patterns of teaching behavior identified by Ryans (1960) are widely accepted and utilized in the current teacher effectiveness research. The three patterns identified were: Xo-warm, friendly, empathetic; Yo-organized, businesslike, systematic; and Zo-stimulating, creative, imaginative. These three patterns are worth exploring in various contexts and learning environments in the search of good teachers.

3. Pedagogical thinking as indicator of a good teacher

Teacher thinking research has shifted the discussion on the qualities of a good teacher toward more qualitative direction. The classical study by Jackson (1968) emphasized the many-sided nature of teachers’ work and the importance of planning in advance. Clark and Peterson (1986) published a meta-analysis on more than 100 studies on teacher thinking. They included studies on teacher planning, thoughts and decisions concerning interaction and teachers’ own theories and beliefs into their review. Teacher’s thinking is interacting with his/her actions and the observable consequences of teaching (Clark & Peterson, 1986, 257). The studies dealing with the differences of thinking between experienced and novice teachers have indicated that novice teachers are prone to more mechanistic thinking than their expert peers. Furthermore, the novice teachers concentrate more on the subject matter and the experts pay more attention to the needs of their students (Berliner, 1988).

Teachers’ thinking is pedagogical when it is intentional and aims at student learning (Kansanen, Tirri, Meri, Krokhors, Husu & Jyrhämä, 2000). Usually the goals of learning are expressed in the curriculum. In order to think pedagogically the teacher has to be aware of his/her values and beliefs, formulate the goals for his/her teaching and give justifications for his/her decision-making. Hence, reflection in- and on-action are important skills in becoming pedagogically thinking teacher.

4. The qualities of a good online teacher in the light of current research on virtual teaching

Teaching and learning in a virtual learning environment challenges teachers to consider their role in this teaching-
studying-learning process. Many claims have been made implying that teaching online is a completely different skill from face-to-face teaching (Kerr, 1986; Mason, 1991). Usually the teachers' role changes into the role of facilitator and mentor. Students become active participants and more independent in their learning process. Furthermore, education becomes learner centered and self-paced and the teacher-learner hierarchy is broken down (Harasim et al., 1995, 14-15).

Learning in a virtual environment provides students with multiple perspectives as they are guided to make sense of the world around them. Furthermore, students are no longer passive recipients of bodies of knowledge, but are actively involved in the knowledge-building process (Jonassen, Mayers & McAleese, 1993; Bonk & Cunningham, 1998). Teachers' role in moderating the learning process includes establishing guidelines within which students work and encouraging them during the learning process (Harasim et al., 1995). The moderator needs to make decisions and change his/her plans according to the needs of the students. Virtual teaching requires of both teachers and students flexibility and willingness to learn new things.

Mason (1991) has discussed moderators' roles in CC and identified three roles. These roles are organizational, social and intellectual. In organizational role, the instructor moderates discussion by «setting agenda» for the conference and giving instructions to the students about the timetable, procedural rules, the objectives of discussion, and decision-making norms. In social role, the moderator of CC creates a friendly, social environment for learning by sending welcome messages, encouraging participation, and providing feedback on students' inputs. The use of personal, friendly tone in messages is considered very important. The moderator should focus discussions on crucial points, ask questions and probe responses to encourage students to expand and build on comments. According to Mason, the most important role for a teacher is intellectual, in which s/he facilitates and stimulates students' learning (Mason, 1991). Paulsen (1995) has further developed the facilitation techniques for online teachers to be used in these three roles. In the organizational role, the teacher plans timetables, procedural rules, and decision-making norms. S/he organizes the structure of the web course. In the social role, the teacher creates a friendly and social environment for learning. S/he sends welcome messages and encourages students by giving personal feedback.

Berge (1995) has classified four roles for the instructor in a CC environment: pedagogical, social, managerial and technical. With pedagogical role she means educational facilitator who uses questions and helps students to focus on critical concepts and principles. The pedagogical role is similar to Mason's intellectual role with its' emphasis on learning contents. Furthermore, the pedagogical and intellectual roles involve many characteristics that are similar to the verbally interactive teacher as
identified by teaching effectiveness research. In social role a teacher creates social environment in which learning is promoted. Berge and Mason are in accord with each other on the importance of the social role for on-line teacher. The social role involves teacher characteristics that are indicators of a friendly teacher in teaching effectiveness research. The managerial role includes organizational, procedural, and administrative activities of a teacher. This managerial role can be compared with Mason’s organizational role. In the teaching effectiveness research, businesslike teachers show managerial and organizational skills by managing the classroom activities smoothly. In technical role a teacher should make participants comfortable with the system and software that the conference is using. Teacher’s goal is to make technology transparent, so that the learner can concentrate on the academic task at hand. According to Berge, one teacher does not have to adopt all these roles. A «virtual teacher» can be a team working together rather than a single person.

5. A good teacher of the gifted

In the context of teaching gifted students the intellectual qualities of a teacher are often considered important. However, in empirical studies on the qualities of an effective teacher for the gifted students the personal/social qualities of the teachers have been more highly valued by the gifted students than their intellectual qualities (Krumbolz & Farquhr, 1957; Lewis, 1982; Dorhout, 1983; Abel & Karnes, 1994; Vialle & Quigley, 2002). In the Israeli study by Milgram (1979) the students demonstrated a strong preference for the intellectual qualities of the teacher above the personal/social and creative dimensions. In another study that used the same instrument than Milgram did, Maddux et. al. (1985), found a preference for personal/social characteristics of teachers over the intellectual and creative ones.

In a study by Shoshana (2007) Israeli elementary school students (N=304) rated the preferred characteristics of the teachers. The results of the study showed that students, gifted as well as non-gifted students preferred the social qualities of their teachers to their academic ones. This trend was shown to be even stronger among the religious students in Israel (Shoshana, 2007, 68).

5.1. Teacher attitudes toward gifted students

In prior studies few variables have consistently emerged as substantial explanatory factors for attitudes toward and perceptions of gifted children and services for the gifted. Begin and Gagné (1994), in their analysis and summary of results of 30 studies with almost 50 variables, concluded that only three potentially valid predictors emerged. These were contact with gifted children, sex of the respondents, and teachers vs. parents. However, methodological problems and much variation among studies prompted them to make several recommendations for future studies. Results from several other studies (e.g., Copenhaver & McIntyre, 1992; Jones &
Southern, 1992; Morris, 1987) demonstrated that those with more knowledge about gifted children hold more favorable attitudes toward them. Another factor that emerged from many studies is experience working with gifted children. In general, teachers who have worked with them have more positive attitudes toward them than teachers who have no experience teaching gifted children (Begin & Gagne, 1994; Copenhaver & McIntyre, 1992; Dettmer, 1985; Townsend & Patrick, 1993).

Some of the studies concerning attitude have been conducted in countries other than the United States (e.g., Awanbor, 1991; Busse, Dahme, Wagner & Wieczerkowski, 1986; Gagné & Nadeau, 1985; Tirri & Uusikylä, 1994; Ojanen & Freeman, 1994; Tallent-Runnels et al., 2000). Only three of these studies (Busse et al., 1986; Ojanen & Freeman, 1994; and Talent-Runnels et al., 2000) were cross-cultural. The first one (Busse et al., 1986) compared samples from Germany and from the United States. This study examined teacher perceptions of characteristics of highly gifted students. There were some differences, with German focusing more on creativity and Americans focusing on intelligence as indicative of giftedness.

The other cross-cultural study (Ojanen & Freeman, 1994) examined the attitudes and experiences of headteachers, classteachers, and highly able students toward the education of the highly able in Finland and Britain. According to this study the British headteachers were more concerned than the Finns about the potential problems of their highly able students. The Finnish teachers preferred to keep highly able students within normal classroom routine and with other children, in order to promote their social skills, and also to have them as good examples for the less talented students. They were afraid of the isolation, which might occur should talented children be placed in special schools something they all deplored. Instead, they preferred special arrangements within ordinary, mixed-ability classes and schools (Ojanen & Freeman, 1994).

In the most recent cross-cultural studies on teacher attitudes toward gifted education the Finnish teachers were shown to be more concerned about the negative side effects of special classes and other special arrangements for the gifted outside the regular classroom than their American colleagues (Tallent-Runnels et al., 2000). In another study using the same instrument the Bayesian predictive discriminant analysis demonstrated cultural differences with the scale used among Finnish, American and Hong Kong teachers (Tirri et al., 2002). According to the Bayesian analysis, the variable «There are no gifted children in our school» was shown to be the most discriminating item in our questionnaire. The USA teachers’ and Finnish teachers’ profiles were more in accord with each other in regard to this item than the Hong Kong teachers’ profile. The USA and Finnish teachers strongly disagreed with this item and the Hong Kong teachers disagreed less strongly. This
difference could be explained by the different criteria teachers use to define the concept of giftedness.

The Hong Kong teachers might use a stricter criterion than the western teachers in our sample. The second most discriminating variable «The gifted should spend their spare time helping those who progress less rapidly» was mostly supported by Hong Kong teachers. The USA teachers represented all kinds of attitudes regarding this item and the Finnish teachers’ had two opposing attitudes. This trend reflects the difference between the helpful oriented Asian culture and the more independent oriented western culture. The third most discriminating variable «All children are gifted» showed again that the Hong Kong teachers differed from the western teachers. Asian teachers disagreed the most regarding this item, Finnish teachers agreed the most and the USA teachers had the most varied responses (Tirri et al., 2002).

The study added new knowledge on the cross-cultural differences in teachers’ attitudes toward gifted education. The new method used in analyzing the data predicts culture-dependent attitudes with 86.9 % accuracy. The findings of this study can be used in developing cross-culturally valid instruments in measuring teacher attitudes toward gifted education. Furthermore, the results of this study can guide teacher educators in different countries to provide information and knowledge on the contents of special classes and programs for the gifted (Tirri et al., 2002).

6. Concluding remarks

Concerning the current discussion on effective face-to-face teaching and online moderating, it seems apparent that excellence in online teaching is fundamentally no different from excellence in other forms of teaching. Furthermore, the qualities of a good teacher seem to be the same for both gifted and average learners. All kind of teaching involves interaction that requires subject matter knowledge, verbal ability and friendly involvement from the teacher.

In this paper we have discussed the current research on the qualities of a good teacher. We have compared the literature reviews on effective teaching in general and online teaching in particular and found many similar characteristics for excellence in teaching. Furthermore, the qualities of a teacher for the gifted learners have been explored in the light of current empirical research results. Concerning the current discussion on teaching we showed that all kind of teaching involves interaction that requires subject matter knowledge, verbal ability and friendly involvement from the teacher. Our review revealed that students consider the qualities of a friendly teacher very important aspect for the teacher of the gifted. Emphatic and encouraging teacher who creates a friendly atmosphere makes it easy for the students to approach him/her. This finding is again in accord with the Mason’s (1991) and Paulsen’s (1995) social role, in which the teacher creates a friendly and social environment for learning. In teaching effectiveness
research a friendly teacher is the one who can create a positive learning atmosphere, as well.

A good teacher needs pedagogical wisdom, teaching experience and subject matter knowledge. Knowledge of the gifted students and different ways to meet their needs is also important for the teacher of gifted students. Cross-cultural research has shown differences in teacher attitudes toward giftedness that might influence teachers from different cultures. This knowledge is also important to address in teacher education. Based on our review we claim that good teachers have great potential to be effective teachers for gifted students, as well.

Address of the author: Kirsi Tirri, Departament of Practical Theology, University of Helsinki, P.O. Box 33 (Aleksanterinkatu 7), FIN-00014 University of Helsinki, Finland. Int. +358 9 191 23710 (office). E-mail: kirsi.tirri@helsinki.fi

Received: 7.XI.2007

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Who should teach gifted students?

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Resumen:
¿Quién debe enseñar a los alumnos de altas capacidades?

En este trabajo se ofrece una visión de síntesis relativa a las características de un buen profesor en general y del mejor profesor de los alumnos más capaces en particular. Se analizan, a la luz de los resultados de la investigación, las características de un buen profesor. Se ofrecen los principales hallazgos de la investigación sobre el pensamiento de los profesores, poniendo énfasis en su pensamiento pedagógico. Se revisan a partir de la investigación las cualidades de los buenos profesores para la enseñanza en línea. Junto con el análisis de las competencias y cualidades de los buenos profesores, también se estudian las actitudes de éstos respecto a la enseñanza de los alumnos de alta capacidad. Los resultados sobre las actitudes proceden de estudios empíricos en los que se analizan estos aspectos en profesores de diversos países. Finalmente se ofrecen algunas recomendaciones prácticas para los encargados de la formación de profesores de niños de alta capacidad. Se ofrecen, para terminar, algunas sugerencias para futuras investigaciones en el tema.

Descriptores: profesores de alumnos de alta capacidad, profesores de enseñanza on-line, actitudes de los profesores hacia los alumnos más capaces.

Summary:
Who should teach gifted students?

In this chapter, an overview of the discussion concerning research on the qualities of a good teacher in general and the best teacher for the gifted students in particular were reviewed. The qualities of a good teacher in the light of current research on effective teaching were presented. The main ideas of teacher thinking research were introduced with an emphasis on teachers’ pedagogical thinking. The qualities of a good online teacher in the light of current research on virtual teaching were reviewed. In addition to the desirable competencies and qualities of the teacher, the teacher attitudes toward gifted students were discussed. Empirical research on teacher attitudes were presented with cross-cultural differences among teachers from different countries. Some practical recommendations were made for teacher educators on how to educate teachers for gifted learners. Furthermore, some suggestions for future research were presented.

Key Words: teacher of the gifted, effective teaching, online teacher, teacher attitudes toward gifted students.