ABSTRACT. In line with a current global trend, junior secondary science education in Bangladesh aims to provide science education for all students to enable them to use their science learning in everyday life. This aim is consistent with the call for scientific literacy, which argues for engaging students with science in everyday life. This paper illustrates Bangladeshi science teachers’ perspectives of scientific literacy along with their views on teaching practices. Participating teachers held a range of perspectives of scientific literacy, including some naive perspectives. The paper also reports that whilst teachers’ verbalised practices in relation to their emphasis on engaging students with science in everyday life follows the emphases as required in teaching for promoting scientific literacy, their assessment practices may not be useful to promote it. The discussion explores the meaning of these findings and provides implications for school science educational practice in Bangladesh.

KEY WORDS: Bangladesh, developing countries, scientific literacy, school science, student engagement, teachers’ perspectives, teachers’ practices

INTRODUCTION

Preparing future scientists and science professionals as the primary purpose of school science education has been widely critiqued on democratic grounds (Millar & Osborne, 1998; Reiss, 2007) as this purpose generally focuses on meeting the needs of a minority of students who study further science or take science-related careers (Millar, 1996). The recent science education reform documents (e.g. Science for All Americans, National Science Education Standards, Beyond 2000) have reported that the content of school science and its related pedagogical approaches are not aligned to meet the needs of both the majority of the students and society (Hofstein, Eilks & Bybee, 2011). As a result, the school science education often fails to meet the needs for the majority of students, since it does not provide them with an interest in, and the knowledge and skills of science to be used in their everyday lives and, nor does it help them to appreciate the importance of science in society (Holbrook, 2009). As Holbrook has argued, a scientific literacy perspective acknowledges such needs for all students irrespective of their future study or career aspirations. As a result, many school science
curricula worldwide have advocated scientific literacy as the primary purpose of school science education, as for example in the USA (American Association for the Advancement of Science [AAAS], 1993), in the UK (Millar & Osborne, 1998) or in Australia (Goodrum, Hackling & Rennie, 2001).

In line with this global trend, junior secondary science education in Bangladesh (grade levels VI–VIII) aims to provide a science education for all students to enable them to use their science learning in everyday life (National Curriculum and Textbook Board [NCTB], 1995). This aim is consistent with the call for scientific literacy, which argues for engaging students with science in everyday life (Tytler, Osborne, Williams, Tytler & Clark, 2008). This research aims at exploring Bangladeshi science teachers’ perspectives of scientific literacy along with their views on their teaching practices. In the following sub-section, we present the research context.

**Context of the Research**

Bangladesh is a South-Asian country of over 160 million people (July 2013 estimated), of whom about 31 % live below the poverty line (Central Intelligence Agency [CIA], 2013). According to CIA, in Bangladesh, the literacy rate is 56.8 % (age 15 years and above can read and write) and education expenditure is 2.2 % of GDP. Whilst Bangladesh still has the issues that Knamiller (1984) described as the characteristics of developing countries, for example, overpopulation and lack of nutritious food, fuel, water and sanitation, health care, housing and jobs, it has made tremendous strides over the last decades to being a middle income country through focussing on education (The Asia Foundation, 2013).

In Bangladesh, the education system consists of three major levels: primary, secondary and higher education. The primary level is a 5-year cycle and starts at age 6 years. Secondary education comprises 7 years of schooling with three sub-stages: junior secondary (grades VI–VIII), secondary (grades IX and X) and higher secondary (grades XI and XII). From grade IX, students choose their future study direction from the streams of Science, Humanities and Business Studies. If students choose a non-science stream (i.e. Humanities or Business Studies) at the secondary level, they would not be allowed to pursue any formal science education later in life. The focus of this study is the junior secondary level, in which all students follow the same curriculum. About five million students (with 54 % girls) study at this level of which almost 75 % students choose the non-science groups at the secondary level (Bangladesh Bureau of Educational Information and Statistics [BANBEIS], 2006).