

A joint surveying main lesson

P. Jayesh Narasimhulu,
Hyderabad, India

With Class 10 students from Hyderabad, India and Samford Valley, Australia

Steiner pedagogy is based essentially on two basic movements in the teaching process: to bring willing into thinking and thinking into willing. These movements are to a great degree moderated and modulated by the feeling realm in a student. Adolescents around 16 years old in Class 10 are generally at a stage in life when they feel the need to think and move independently of adult supervision. Any pedagogic process which integrates thinking, movement, a feeling for one's peers, teachers and the environment, with an eventual outcome of learning a new meaningful skill, is always of great interest to the growing adolescent.

The surveying main lesson takes the teaching out of the classroom into intellectually and emotionally unfamiliar settings, demanding teamwork, in addition to synergising and integrating the two fundamental pedagogical processes above.

The teachers of Abhaya Waldorf School in Hyderabad decided to send their Class 10 to join the students of Samford Valley Steiner School to experience a surveying main lesson in Australia. In April, 2012 after 36 hours of travelling, we were met by Ted Muller and Mark Piper, two Samford

Valley Steiner School teachers, who drove us to Peter Glasby's home in Samford Valley.

The next day the students met their host families and were taken to their respective homes to spend a quiet week at home. The following week, the Indian students joined the Class 10 from Samford Valley in a three-week main lesson on Ancient Cultures with their teacher Sonia Jago, followed by the subject lessons each day. This helped them acclimatise to their new learning and living environments. It was wonderful to be able to work with students from different cultural backgrounds because the individuality of the students stands out in the larger multi-cultural social context.

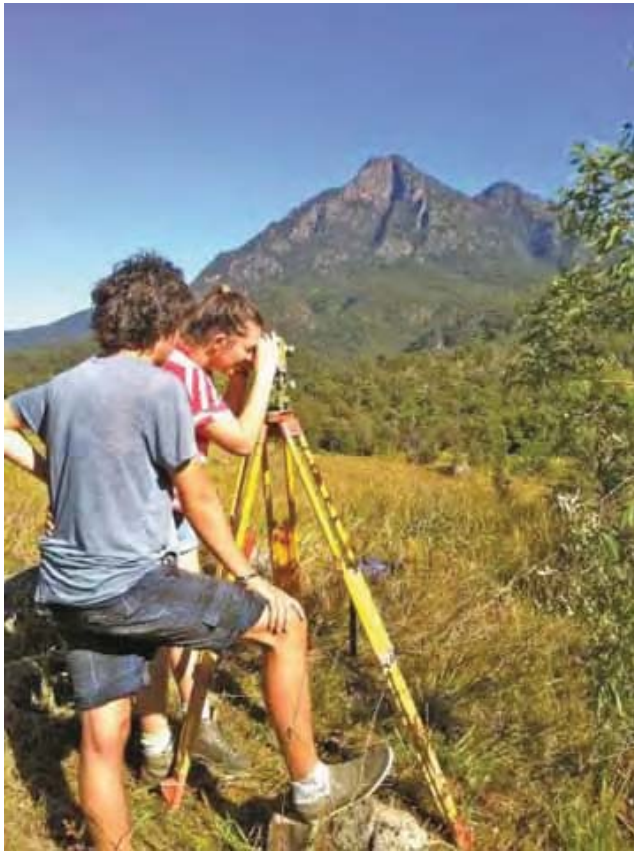
The days spent in Samford with study, visits to museums, beaches and an Indian film/ dinner night at school. The Indians with a quite a few Australian volunteers cooked an Indian meal for around 130 parents and students of the school. It was a fund raiser for the Class 10 boat building activity later in the year and raised almost \$ 1000 for the school community.

The Outdoor Surveying Main Lesson was based at Camp Lake Fire on the beautiful shores of Lake Maroon in Queensland, our campsite for a little more than a week. The task was to map a part of the Mount Barney Eco Lodge which was a 45-minute drive from the campsite. The outdoor learning was broadly divided into three parts as follows:-

a) *The practical work:* During this period the use of the instruments such as the theodolites, dumpy levels and the other related equipment was explained at various stages to the students during the week. This was done during the day in the field with short explanations and writing on makeshift whiteboards whenever necessary.



The Abhaya students with some of their Samford classmates and host families.



The students using the theodolite.

b) *The actual process:* Learning the various processes and the corresponding practical applications such as drawing the mud map, preparing triangulation grid, measuring the angle readings, tracking the sun to find true north, tacheometry, and vertical profiling were done during day. This was followed by the theory behind it during the sessions at night



Managing difficult river crossings

after dinner. It is important to note that the student first experiences the practical willing work (with a few basic explanations) before the theoretical concepts are explained to them at night or the next day.

The bushwalk: After completing all the activities in the field, basic calculations and rough drawings which were made for making the final map, the group set off for a four-day bushwalk through the Mount Barney National Park in Southwest Queensland. The students carried all their food / cooking equipment/ clothing/ sleeping bags with them – enough for 4 days in the field. On the first day, the students walked 10 kms as a group to a pre-determined point with maps and compasses, without adult supervision. Adequate care was taken to ensure that they had suitable mobile phones/ walkie-talkies and first aid kits in case of emergencies. During the bushwalk, the group covered about 5-10 kms a day depending on the terrain / weather and the average endurance of the group. This helped the students improve their physical endurance, social and emotional skills in generally unfamiliar surroundings, as well learning more about nature and one's relationship to the earth. The walk also built a bond between the teachers and students, which helped the learning process later in school. The bushwalk ended with a night around a bonfire with students and adults talking about various aspects of the camp and life in general,

with a bit of humour thrown in for good measure. Many of the students spoke about the great food cooked for us by Rosemarie Glasby, who worked tirelessly to feed 24 hungry individuals every day.

The Indoor Classroom Work and Mapping - The students and teachers returned to Samford Valley Steiner School a fortnight later and completed the classroom work, which took

six full school days. This part of the work included the following:

- Calculating the side-lengths, grid points, the plotting of the vertical profile and all other calculations required to draw the map.
- Drawing of the actual map on tracing paper with pens with all the legends, scale and north signs.
- The teachers presented the work of the students to the school community and gave a talk about surveying and its significance in the Steiner curriculum.

At the end of the main lesson the students experienced and understood the importance of accuracy and precision in cartography, learned the practical applications of co-ordinate geometry, trigonometry, the movement of sun around the earth, the implication of latitudes and longitudes and time, orientation using true north in maps and a host of other life skills such as physical and emotional /social endurance, as well as working with technological instruments such as theodolites/ GPS locating devices/ computers and scientific calculators.

The outer activity of locating the world and oneself in space and time was exquisitely transformed into an inner sureness within and the Class 10 students would hopefully find new pathways in life opening up, with all that they had

learnt with their head, heart and hands!

The farewell meal was organised by the Indian group for Peter Glasby at his home. The host families who accommodated the Indian students for seven weeks were also invited along with the Class 10 students of the school. The Indians were deeply grateful for the generosity and kindness of their hosts and returned home with wonderful memories of their learning and living in Australia, which they probably will never forget. ♦

