Learning Theory

With learning subjects like biology, history and geography it is important that the teacher is capable to bring matters near by the senses of the pupils: to bring the teaching fields ‘nearby’ the students. Experience learns that students & pupils learn more easy and (at least a short period of time) are more motivated, when they make a visual image or an emotional imprint of the environment.

How to trigger the students imagination, fantasy and involvement?

In general: the more senses are used, the better the new information will be absorbed because their will be a new connection of what the student already knows and the new images & information.

Five functions are responsible for bringing subjects close to his senses:

- **Visualization**: showing channel structure inside the palace students create an idea of the technical know how of the Amangkurat period.
- **Personalization**: a walk through the traditional compound of the alun quarter (historical buildings and small alleys) gives you the sensation to make a jump back in time.
- **Actualization**: to use actual information to make a link between actuality and the past. The earthquake of 27 may 2007 destroyed and damaged half of the historical houses of Kota Gede. Newspaper stories tell about reconstruction.
- **Quantification**: to make a statistic of the number of bricks needed to build a wall of 1000 square meters (pendopo of the former kraton of Plered).
- **Simulation**: making a small three dimensional model with paper and scissor of a hindoe-javanese-moslim-kraton-city.

When we bring a ‘real-live-visit’ to Kota Gede and the archeological excavations of Karto and Plered we will use (in a different intensity) these five functions.

Didactics in teaching-learning sequence

In short are their roughly two ways of practicing field teaching:

1. The teacher *begins* the learning process showing and explaining what is to be seen in the terrain, while *afterwards* he will reflect and makes an interpretation of the city-plan. The game of questioning-answering will make the student aware of important issues to be seen in the field.

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2. The teacher prepares his students in the classroom by telling stories of the historical background; showing satellite images of Google Earth and historical maps. In the field the teacher makes the connection of what is told and shown in the classroom and the new things in the terrain to a new mental construction.

In the first teaching-learning sequence there is more room for surprise, thrill and excitement while in the second process the teacher emphasizes the cognition.

HISTORICAL BACKGROUND: the roots of Senopati

All the four Kings of Central Java have one common ancestor PANEMBAHAN SENOPATI INGALOGO (reign: 1586 – 1601) who is the founder of the Islamic Realm of Mataram. A mythical prophecy of Allah as a falling star, while laying on the flat stone Selo Gelang, Senopati knew he became the ruler of Java. But also that his grand grandson should be the latest ruler of Mataram after which the Realm should disintegrate.

Pajang: 1578

Senopati’s father was Kyai Gede Pamanahan who had his roots in the House of Modjopahit. In the year 1570 he became the ruler of Mataram and he died in 1575 with the name of Ki Ageng Mataram. He had his court in Pajang, 10 kilometers south of Surakarta and he ordered to bring the holy signs Modjopahit from Demak to Pajang.

Nothing is left from this embryonic Mataram dynasty.

Kota Gede: 1588

His son Senopati became the ruler of Central Java and he built a new kraton in Kota Gede in 1588. The holy signs of Modjopahit moved from Pajang to the new kraton of Kota Gede. Also the son of Senopati, Penembahan Sedo ing Krapjak (reign: 1601 – 1613) held his court in Kota Gede. When he died in 1613 his son Pangeran Ingalogo or Panembahan (reign: 1614 – 1645) who became famous under the name of SULTAN AGOENG OF MATARAM.

Still to be seen in Kota Gede: city walls, sitiwinggil, mosque and on Google Earth the contours of the former kraton.

Kerto: 1618

Sultan Agoeng build in 1618 a new kraton in Karto five kilometers south of Kota Gede. Before he died he build 20 kilometers southeast of Yogyakarta the Mausoleum of Omogiri; still to be seen in the old glory but during the last earth quake of 2006 partly demolished. In Kerto only a few pillar bases from the huge pendopo (1000 m2) remains. A royal chronicle reports how fire destroyed the whole complex. Agoeng did not rebuild the palace on the same site but it was decided that the city was rebuild at Plered, about one kilometer east of Kerto.

Plered: 1648

Sultan Agoeng’s son Amangkurat I (reign 1646 – 1677) completed in 1648 his new kraton in Plered. The new capital functioned only 29 years. The kraton had waterworks including an irrigation system and a dam. The later collapsed in 1660 and the water destroyed part of the city. Internal family struggle ruined his realm and his son
Amangkurat II (reign 1677 – 1703) inherited a kingdom which was broken down. So the prophecy of Senopati became true: his grand grandson had near nothing left. And during his reign it went even worse.

Still to be seen in Plered: the ruins of the eastern gate and on Google Earth the contours of the old kraton city.

**Kartasuro: 1677**

Amangkurat II decides in 1680 to build a new kraton in Kartasura. Several times during the next 65 years Kartasura was a battlefield between rivaling groups and when at last Pakoe Boewono II inherited Mataram the city was abandoned and Surakarta was in 1745 chosen as the new capital.

Still to be seen in Kartasuro: the complete contours of a (at least) two meters thick wall.

**WHY THE LOCATION OF THE COURTS OF MATARAM CHANGED?**

**Three sources:**

1. Prof. Adrisijanti (1997): “Plered and Kartasura were abandoned because they were not suited anymore as a capital; the enemy conquered and occupied the siege several times.”

2. Prof. Dumarcay (1996): “There are very few traces left of old Indonesian palaces. This is due to two factors: first to the impermanence of the materials used and to the princes’ habit of shifting their capitals.”

3. Van Bruggen (1998): “Kartasura was destroyed by the enemy two times and was therefore not a sacrificed place any more.”

**PATTERN OF SPACE OF THE MATARAM CAPITALS: topographic characteristics**

Source: Adrisijanti (1997):

1. **components:** street network, fortress, moats, markets, Grand Mosque, city square, parks. Game preserve, houses and graveyard

2. **pattern:** in the center palace, square and Grand Mosque; surrounded by the palace wall and inner moat; in the second circle market place, houses and baluwarti; and in the outer ring the cemetery and the game preserve

3. **characteristics:** elements have local, Islamic and pre-Islamic urban characteristics

4. **harmony:** elements and components are designed in an harmonious pattern

**PATTERN OF SPACE OF THE MATARAM CAPITALS: geographical position**

This subject needs still to be researched: north-south-orientation; hydrographic situation between two rivers and geomorphologic position.
POSITION IN TIME OF THE MATARAM CAPITALS: three phases of city development

Source: Adrisijanti (1997)

I First phase = Demak-phase: until 1570
II Middle phase = Mataram phase: 1588-1745: one city square
III End phase = Surakarta and Yogyakarta: 1745 and 1755: two city squares

Literature
4. Indonesian Heritage; volume 1 Ancient History: Palaces and Gardens; paragraph written by Jacques Dumarcay. 1996.
5. Indonesian Heritage; volume 2 The Human Environment: Concepts of Space: Settlement Patterns; paragraph written by Pinna Indorf. 1996.

Maps

Workshop 25th October part II: The field programm

Field teaching in Kero & Pleret

In Kerto and Pleret we will practice the method of field teaching: Rully Andriadi is the field coordinator of the research program of Dinas Kebudayaan Daerah Istimewa Yogyakarta and he will tell you about the excavations in Kerto and Pleret. The goal of this first part of the morning is to build an idea (mental map) of the design of these historical places and what is still left to be seen. It is the most elementary form of
environmental education.

**Field work in Kota Gede**

In Kota Gede we will divide the group in teams of three persons who will walk a trail. Tasks They be given to trigger and stimulate the observations. You will receive a map of the global contours of Kota Gede to help you in your orientation. The goal of this part of the morning is to experience guided field work to discover the urban design of Kota Gede as a model for all the other former capitals of Islamic Mataram. They were all built on the principle of CATUR GATRA TUNGGAL, four components in one: palace, mosque, pasar and alun-alun.

At the end of the trail **Marwi Kurniati** who wrote her UGM skripsi at Fakultas Ilmu Budaya on Kota Gede, will answer your questions.

a. You begin your walk at the Pasar (map. Nr 1). You walk to the south along the JALAN MASJID BESAR in the direction of the mosque. If the gate is open look inside the white house *Bong Supit Pak Darmo*. Make an estimation of the age of the house.

b. You walk to KOMPLEKS MASJID AGUNG. (Map nr 3). On the front of the mosque is written 1856 – 1926. What is the meaning?

c. Follow the street (JALAN CANTENG) south. Look inside pos CAKRUK 09 on the right side of the street. *Try to locate on the map PETA WILAYAH RW IX* inside the cabin where you are right now.

d. You walk until the shop BIRO JASA STNK. On the other (left hand) side of the street there is a gate with only one lampion. When you walk in the compound you are on the terrain of the former alun alun (see Map for location). The street is called BETWEEN THE TWO GATES. After 70 meters you pass at your left an old Javanese house with on the other side a pendopo. *Read the poster on the wall inside the veranda of HERITAGE CONSERVATION* about this part of Kota Gede.

e. You pass the second gate. In former times they were closed at night. Walk on the small path to south east. Look at the map. Find the eastern wall CAPURI of the kraton. Climb over the wall and find the JAGANG immediately behind the Wall. Find the house which is constructed of the bricks of the capuri.

f. You follow the capuri & jagang until you are at the south eastern bend of the palace complex. *Departemen Kebudayaan Dan Pariwisata Balai Pelestarian Peninggalan Purbakala* rebuild the wall at the height they found it. *Why?*

g. You follow the capuri to the west and you see rests of ruined houses. *Because of the earthquake 27 May 2006?*

h. You pass the school NEGERI DALEM. You pass the road and follow 5 meter south the GANG BINANGANG

i. Is the jagang at the south side of the Gang Binangang natural shaped terrain or artificially made?
j. At the south west bend you go north. You follow this is the west capuri and jagang of the kraton. You see the house on your left that is built with stones of the former wall?

k. When the path goes east you will follow until you reach the main road: JALAN WATU GILANG. You pass the MAKAM HASTORENGGO

l. You finish at SITUS SEJARAH KRATON MATARAM 1509.
Peta No. 1. Lokasi Penelitian
PETA LOKASI KERATON KERTO DAN KERATON PLERED
GLOBAL SKETCH OF KRATON PLERET
Repro By Rully ‘08

Notes:
1. Proboyekso
2. Bangsal Kencono
3. Tratag
4. Bangsal Kemuning
5. Griyaning Abdi Dalem
   Kedhongdhong
6. Bangsal
7. Gedhong Kuning
8. Masjid Suronoto
9. Los Pacaosan
10. ?
11. ?
12. Sitinggili
13. Kestalan
14. Kandhang Simo
15. Keputren
16. Redi Rosomuni
17. Redi Sentono, Pasareanipun
   Kadjeng Ratu Malang, Garwo
   Dalem Kanjeng Susuhan
   Mangkurat I, sarto poro sentono
dalem.
18. Masjid Kauman
19. Pasareanipun Kandjeng Ratu
   Pisowan, Garwo Dalem Kandjeng
   Susuhan Mangkurat I