# Literacy Tradition of Sundanese Society - Indonesia: An annotation of the 16th Century Ancient Manuscript

## **Agus Suherman**

Universitas Pendidikan Indonesia

### **Abstract**

The literacy tradition of Sundanese society appeared around the 16th century AD. This was attested by the discovery of the ancient Sundanese Sanghyang Siksakandang Karesian (SSK) manuscript written in 1518 AD. The discovery of the manuscript was not only illustrated Sundanese literacy tradition at that time, but also the ability to explore and understand ideas both delivered in writing and in audio-visual. As a matter of fact, literacy activities at that time had achieved the level of understanding and solving social and statehood problems with referenced to behavior in forms of dogmas. Thus, literacy activities at that time had involved and devoted all potential and expertise to manage life or life skills. The manuscript of SSK also illustrates the realm of literacy that has been covered at that time, for example reading and writing literacy, numerical literacy, scientific literacy, financial literacy, and cultural and citizenship literacy. The description of the above facts will be explained descriptively.

**Keywords:** literacy, ancient manuscripts, Sundanese society

## 1. Introduction

Reading and writing tradition in Nusantara archipelago has been existed since the beginning of AD century. It is proven by the discovery of the 4th century AD Kutai inscription and the 8th century AD *Tjandra Karana* manuscript (Baried, 1994: 37). Likewise in West Java, the emergence of written traditions in that decade was indicated by the discovery of the inscriptions from the relics of Tarumanagara Kingdom, especially when it was ruled by Purnawarman in 395 - 434 AD (Danasasmita, 1984). In form of ancient manuscript, Sundanese literacy tradition is known to be from the 16th century AD i.e. through the discovery of Sanghyang Siksakandang Karesian (SSK) manuscript which was compiled in 1518 AD (Atja and Danasasmita, 1981). In addition, it was also strengthened by the discovery of three Sundanese manuscript originated from the Sundanese Kingdom of the 16th century AD i.e. *Carita Parahyangan*, *Pantun Ramayana*, and *Bujangga Manik* (Ekadjati, 1988: 25).

Compared to the inscriptions, the manuscript contains more information with a very diverse range of topics. The description is quite long because it could be consisted of tens or even hundreds of pages. Therefore, the community involvement in accessing literacy activities in the form of this manuscript is more open, because there are many ways to appreciate those writing works, for example for *wawacan* manuscript, the appreciation can be done not only by reading but also through *beluk* performances.

Therefore, in the old time, the manuscript was one of the most adequate tools of literacy, so that everything that was considered important and had to be perpetuated at that time, was written in the form of a manuscript, the contents of which could be thoughts, feelings or ideas. Therefore, the ancient manuscripts have become icons of progress from a literate society that has had a certain level of civilization and progress.

This review is more emphasized in the study of the SSK manuscript. This ancient manuscript originated in the 16th century AD based on information on the colophon (the end of the manuscript): *ini* babar ing pustakanipun nora catur sagara wulan (completed in: nora (0) catur (4) sagara (4) wulan (1) = 1440 Saka, which if converted to the year of AD becomes 1518. The contents of this ancient text are in the form of moral guidelines for social life that prevailed during Pajajaran Kingdom.

## 2. Method

This study was aimed at examining SSK manuscript which so far has been found two manuscripts i.e. kropak 630 which had been investigated by Atja and Danasasmita in 1981, followed by Danasasmita et al. In 1987, and kropak 624 studied by Nurwansah in 2012. The data and sources of the analysis in this paper were the results of research by Danasasmita et al. (1987), because the manuscript (kropak 630) is considered more complete and the research is an improvement from previous research. The results of this study are further described descriptively by library research on the intended manuscript.

# 3. Analysis and Discussion

## 3.1 The Materials, Scripts and Language

The writing material used on which Sundanese manuscripts were written consists of two kinds i.e. the materials made of leaves, for example *lontar*, palm, coconut, *gebang*, and *nipah*, and made of paper, both traditional paper (*saeh/daluang*) and modern paper (Rohaedi, 1995 : 1). It can be assumed that the manuscripts written on leaves originated from the older period (before the 18th century) while the manuscript written on paper came from modern time period (around the 19th century AD). The manuscripts that use leaf material were technically written by using a scraper called *peso pangot*, while the texts on paper materials were written by using a pen, ink, or pencil (Ekadjati, 1988: 10).

The letter used in writing the manuscript can be traced by referring to three important periods in the development of manuscript in Nusantara based on its surrounded cultural background i.e. the classical period, marked by the inclusion of Indian culture and Hindu-Buddhist influences; Islamic period, since the insertion of Arab influence into Nusantara archipelago; and the colonial period, since the Europeans came to Nusantara (Indonesia Indah, 9:28).

There are various characters used in Sundanese manuscript writing. Ekadjati (1988: 9) classifies them into: (1) Sundanese characters, (2) Javanese characters, (3) *Pegon*/Arabic characters, and (4) Latin characters. Ancient Sundanese characters were used for manuscripts made before the 17th century AD, Javanese characters were used for manuscripts made around the 17th century AD, *Pegon* (Arabic) characters for manuscripts made since around the 18th century AD, and Latin characters for the manuscripts made since the end of the 19<sup>th</sup> century AD.

Viewed from the language used, Ekadjati (1988: 11) suggests that Sundanese manuscripts are divided into three groups. First, Sundanese-language manuscripts consisting of ancient Sundanese language and modern Sundanese language. Old Sundanese manuscripts are generally written in the Sundanese Kingdom period, while modern Sundanese manuscripts were generally written in the 19<sup>th</sup> century AD and 20 AD. Second, Javanese language manuscript groups, which were generally written between the 17th century AD - 18 AD, and third, Malay-language manuscripts, which were generally written at the end of the 19<sup>th</sup> century AD.

# 3.2 Literacy Domain in SSK manuscript

The World Economic Forum (2015) recommends six types of basic literacy that must be adept by the citizens of the world i.e. reading and writing, numeracy literacy, scientific literacy, financial literacy, digital literacy, and cultural and citizenship literacy. Except for digital literacy, five other types of the literacy have actually been introduced and practiced in a simple and natural way in Indonesian society, including in Sundanese region, which is through the inheritance from one generation to further generation.

The discovery of a number of manuscripts, both collected by the institutions, individuals, or those which are still scattered in the community, including the SSK manuscript, is a strong indication of the ongoing literacy activities in Sundanese society. The manuscripts, in this case the written tradition products and as well as reading material, can be considered as the main pillars of the activity of reading and writing literacy at that time. Moreover, this activity is stated by Saryono et al (2017: 2) as the earliest literacy in the history of human civilization.

Besides reading was purposed to deepen its contents, the tradition of reading and writing the manuscript continues to repeat especially when the re-writing process occurs. This is common because manuscripts reproduction was done manually by handwriting, which according to Sedyawati (1997: 4) was carried out for several reasons, both on the basis of orders, fulfilling orders, and personal desire, including the SSK manuscript that Nurwansah believed (2017: 32) was not a single script since kropak 630 and kropak 624 have been found. Whatever the background was, the rewriting process was also enlivening and at the same time was the basic activity of reading and writing literacy. Even in SSK manuscript, the literacy activity was explicitly mentioned: /Lamun urang němu siksaan rampes ti nu maca ya kangken guru panggung ngara(n)na./ "If we find a good lesson from reading it is called guru tangtu".

The subsequent literacy is related to numbers or quantity that are useful in understanding quantitative information i.e. numeracy literacy. In everyday life, useful numeracy skills range from shopping, designing family budgets, to managing public policies related to statistical data, tables, and graphics. With adequate numeracy skills, the direction of development policy in a broader sense, will be clearer and easier to measure. From these skills, it is expected that numerical sensitivity will arise in terms of the accuracy in managing resources of the nature and human being, so that the goals of intended development for human welfare will come true. Given the importance of this literacy, Unesco in 2006 began to establish numeracy skills as one of the determinants of a country's progress. This is understandable as Weili (2017: 2) states that skill has an impact on economic, social and welfare growth.

The form of numerical literacy activities in SSK scripts is used to describe or elaborate various

behavioral rules or societal rules, including: *catur yatna* (four alertness) *catur utama* (four virtues)), *catur buta* (four terrible things), *catur yogya* (four kindness), *panca tatagata* (five realities), *panca byapara* (five protectors), *panca putera* (lima sons), *panca kusika* (five Resi), *panca gati* (five diseases), *panca parisuda* (five antidotes), *sad guna* (six utilities), *dasa kreta* (ten welfare), *dasa sila* (ten prohibitions), *dasa kalesa* (ten sins), and *dasa pasanta* (ten heart releiver).

In addition, there is also an appellation of the number in certain sentences such as: /sakěti wong kěna i rika/ "a hundred thousand people are affected there.", /Sariwu saratus tahun keuna ku sapa batara/ "a thousand and a hundred years being subjected to Batara's curse.", And /midwakeun, ngadar/ "divided by two, flatten". The numeracy literacy activity was simple, but it has called number or quantification covered in numeracy comprehension or proficiency.

The skill of acquiring knowledge and describing scientific phenomena is part of science literacy. This literacy combines with technology to create a quality of life that has implications for the environment, health, and even natural disasters. Fananta et al. (2017: 3) explains that the literacy of this field relates to water availability, disease control, and climate change.

The literacy of science in the SSK manuscript can be seen from the way the knowledge acquired.

Němu agama ti anak, ya kangkěn guru rare ngara(n)na. Němu darma ti aki ma ya kangkěn guru kaki ngara(n)na. Něme darma ti lanceuk ma ya kangkěn guru kakang ngara(n)na. Němu darma ti toa ma ya kangkěn guru ua ngara(n)na.

Němu darma ti geusan leumpang di lěmbur di geusan ngawěngi, di geusan eureun, di geusan majik ma ya kangkěn guru hewan ngara(n)na. Němu darma ti indung ti bapa ya kangkěn guru kamulan ngara(n)na. Maka nguni lamun hatur ka mahapandita ya kangkěn guru utama, ya kangkěn guru mulya, ya kangkěn guru prěmana, ya kangkěn guru kaupedesaan.

Getting the knowledge from a child, called guru rare. Getting lessons from grandfather, called *guru kaki*. Getting lessons from older brother is called *guru akang*. Getting lessons from *toa* is called *guru ua*.

Getting lessons on a place during a travel, in a village on a stay, on a stop, on a boarding place is called *guru binatang*. Obtaining lessons from parents is called *guru kamulan*. Likewise, when study from a pastor is called *guru utama*, *guru mulya*, *guru premana*, *guru kaupedesaan*.

In addition, other scientific literatures are illustrated from the clues on reliable sources of knowledge, as it comes from the experts. Therefore, choose the right person in making question or in learning. It is metaphorically described in the following quotation

Hayang nyaho di j(ĕ)ro ning laut ma, matsya tanya.

Hayang nyaho di lwir ning leuweung ma gajah tanya.

Hayang nyaho di ruum amis ning kembang ma, bangbara tanya.

Hayang nyaho di sekweh ning carita ma, .... memen tanya.

Hayang nyaho di sekweh ning kawih, ..... paraguna tanya.

Hayang nyaho di pamaceuh ma, .... hěmpul tanya.

Hayang nyaho di pantun ma, ..... prěpantun tanya.

Sa(r)wa lwir[a] ning tulis ma, ..... lukis tanya.

Sa(r)wa lwir[a] ning teuteupan ma, .... panday tanya.

Sa(r)wa lwir[a] ning ukir ma, .... marangguy tanya.

Sa(r)wa lwir[a] ning oolahan ma, .... hareup catra tanya.

Sa(r)wa lwir[a] ning boeh ma, ....pangeuyeuk tanya.

Lamun hayang nyaho di agama parigama ma, .... pratanda tanya.

Sugan hayang nyaho di tingkah prang ma, .... sang hulujurit tanya.

Hayang nyaho di sekweh ning aji mantra ma, ..... sang brahmana tanya.

Hayang nyaho di puja di sanggar ma, ....ja(ng)gan tanya.

Hayang nyaho di dawuh nalika ma, .... bujangga tanya.

Hayang nyaho di darmasiksa, ..... sang pandita tanya.

Hayang nyaho di patitis bumi ma, .... mangkbumi tanya.

Hayang nyaho di sekweh ning labuhan ma, .... puhawang tanya.

Hayang nyaho di sawatěk arěga ma, .... citrik byapari tanya.

Hayang nyaho di sandi, ..... wiku paraloka Tanya.

Lamun dek nyaho di carek para nusa ma, .... sang jurubasa darmamurcaya tanya.

If you know the sea, ask the fish.

If you want to know the contents of the forest, ask the Elephants.

If you want to know the scent and the sweetness of flowers, ask the bees.

When wanting to know all the stories, ... please ask the Puppeteer.

If you want to know all kinds of songs, ... ..ask the Musician.

When wanting to know the game, ... ..ask *Empul*.

When curious about poems, ....ask a Poet.

All kinds of paintings, ... .. ask the painters.

All kinds of forgings, ... ..ask the blacksmith.

All kinds of engravings, ... .. ask the sculptor.

All sorts of dishes, ... .. ask the cook.

All kinds of fabrics, ... .. ask textile expert

If you want to know religion and its values, ... ... ask *Pratanda* 

When curious about war of conduct, ... ask the Warlord.

If you want to know all mantra, ... ..ask the Brahmana.

When curious about puja and sanggar, ... .ask Janggan (monk).

If you want to know about time calculations, ... ..ask Bujangga.

If you want to know darmasiksa ... ..ask the Pastor.

If you want to know how to measure the land, ... ask *Mangkubumi*.

When curious about all the ports, ... ..ask *Puhawang* (master).

If you want to know all the price read, ... .. ask Citrik Byapati (smart person).

If you want to know the code, ... .. ask Wiku Paraloka.

When we want to know the languages of other countries ... ..ask *Darmamurcaya*.

The above description demonstrates the scope of knowledge covered in this manuscript ranging from the flora (flower), the ecology (sea, forest), the art (song, painting, carving), the literature (mantra, story / poem), clothing (cloth), food (cuisine), moral and societal (religion, glorification), time-counting, land surveying, ports, weapons, war acts, up to the appellation of the language of the nations. Even if it is against this and assume no need to know, then it will definitely be awaited by hell, because all of these are goddess provisions: / /Aya ma nu majar mo nya(h)o, ..... tan [n]awurung inanti dening kawah.... kena itu tangtu hyang tangtu dwata./

The discussions on livelihoods and descriptions of living welfare in SSK manuscript can be categorized as financial literacy. The success of this literacy will bring up skills in sorting among primary, secondary, and tertiary needs, and not exchanging them between one another. Furthermore Fianto (2017: 5) states that financial literacy provides skills in managing financial resources effectively to achieve prosperity, as well as skills in making the right decisions in the financial matters.

Mentioning variety of work related with welfare in this manuscript has been started since the second paragraph.

Ini sanghyang dasa kreta kundangeun urang reya. Asing nu dek na(n)jeurkeun saraa kreta pakeuneun heubeul hirup, heubeul nyewana, jadiyan kuras, jadiyan tahun, deugdeug ta(n)jeur jaya perang, nyewana na urang reya.

This is *Sanghyang Dasa Kreta* for peoples guidance. Anyone who wants to establish a means of well-being in order to live long, stay long (in the world), succeed in animal husbandry, succeed in agriculture, always excel in war, all of which lies in the mass of people.

The above quote implies a prerequisite for success in business, animal husbandry and agriculture i.e. the need for cooperation or collaboration with many parties to achieve prosperity. In the next section, it is explained about integrity in work.

Maka rasa puja nyanggraha ka hyang ka dewata. Anggeus majaga rang dipigunakeun ka gaga ka sawah ka serang ageung, ngikis, marigi, ngandang, ngaburang, marak, mu(n)day, ngadodoger, mangpayang, nyair bi(n)cang, sing sawatek guna tohaan, ulah sungut, ulah surah, ulah purik deung giringsing, pahi sukakeun sareyanana.

Take a prayer and be under the protection of hiyang and the gods. If we are told to work in the farm, in rice fields, in large rice fields, strengthening the river banks, digging the channel, take

the cattle to the cattle shed, putting the trap, dam up part of the river to catch fish, netting the fish, pulling the net, all of the works are for the king, do not get angry, do not be a hypocrite, do not fret and grumpy, work happily for all kinds of work.

There are also appellation of some enviable work or profession because of its good work ethic and always put respect and devotion to the king.

Deung maka ilik-ilik dina turutaneun; mantra gusti kaasa-asa, bayangkara nu marék, pangalasan, juru lukis, pande dang, pande mas, pande gélang, pande wési, guru wida(ng), medu wayang, kumbang géding, tapukan, banyolan, pahuma, panyadap, panyawah, panyapu, bela mati, juru moha, barat katiga, pajurit, pamanah, pam(a)ring, pangurang dasa calagara, rare angon, pacelengan, pakotokan, palika, preteuleum, sing sawaték guna. Aya ma satya di guna di kahulunan. Eta kena turutaneun kena eta ngawakan tapa di nagara.

And bear in mind the following enviable profession: the lords, state guards, jungle man, painters, blacksmith, tanner, puppeteer, *gending*, performers, comedians, farmers, tappers, rice farmer, janitor, *bela mati*, *juru moha*, *barat katiga*, soldiers, archers, *pemarang* and fisherman, diver and all sorts of jobs. All loyal to their duties for the king. All of them are enviable because they do different duties for the country.

Other messages of work ethic associated with financial literacy is the suggestions to always be careful, orderly and meticulous in doing the job, always do double check: /Nya mana kitu, lamun a(ng)geus di karma ning akarma, di twah ning atwah, a(ng)geus pahi kaiilikan nu gopel nu rampes, nu hala nu hayu./ "If you have finished to fulfill all obligations and work, check back which one is bad and which one is good."

The last kind of literacy is cultural literacy and citizenship, which is very closely related to the rights and obligations as a citizen which contains the spirit of nationalism, identity preservation, national solidarity, and brotherhood among the nations. This is in line with what was stated by Hadiansyah et al (2017: 3) that literacy is the ability of the individuals to behave towards their social environment as part of a culture and a nation. In other words literacy can be interpreted as the ability to understand culture as national identity accompanied by the social awareness upon their rights and obligations.

The above capability should be accompanied by a competence in appreciating and implementing knowledge for a better life. Obviously, it must be accompanied by a high level of understanding and adequate interpretation, which Evelyn (2017: 15) refers to as complex, critical, and creative thinking techniques in solving problems.

The understanding of culture or cultural literacy activities contained in the SSK manuscripts covers a very broad range of seven cultural elements mentioned by Koentjaraningrat (1992: 2) i.e. carvings, paintings, songs, games, weapons, cloth, cuisine, agriculture, trade, trust, and the language used by the nations. Also the understanding of individual behavior as a member of society which is included in

citizenship literacy, is widespread in this manuscript, including manners, both in words and manner.

Ini karma ning hulun, saka jalan urang hulun, karma ma ngarannya pibudieun, ti(ng)kah paripolah saka jalan ngarannya. Maka takut maka jarot, maka atong maka teuang di tingkah di pitwaheun, di ulah di pisabdaan.

This is karma of *hulun*, for the way we serve. The work is called mind sense, the behavior is called the way. Be afraid, be careful, be respectful and be polite both in words and manner.

Furthermore, it is also explained about good character as commonly developed in character education or in the formation of national character building i.e. carefulness, thoroughness, diligence, attentive, wisdom, patriotism, willing to sacrifice, and generousness.

Ini pangimbuh ning twah pakeun mo tiwas kala manghurip, pakeun wastu di imah di maneh. Emet, imeut, rajeun, leukeun, paka prědana, morogol-rogol, purusa ning sa, widagda, hapitan, kara waleya, cangcingan, langsita.

These are the equipment of manner, in order not to fail in life and our homes will be full of blessings i.e. meticulous, thorough, hardworking, diligent, adequate clothing, passionate, heroic, wise, courageous, generous, deft, skill full.

The essence of the message conveyed from citizenship literacy in the SSK manuscript is in order to arise citizens sensitivity, including having a strong personality and being able to control themselves in words and manners:/Disuruh neguhkeun di sarira, matitiskeun bayu sabda hědap./

In addition to the description and illustration of the behavior, the messages of citizenship delivered have been also formulated in the form of a collection of moral guidance or dogmas, for example: dasa kreta, dara prebakti, dasa pasanta, panca tatagata, panca gati, panca parisada, catur yatna, catur buta, and catur yogya.

The cultural and citizenship literacy mentioned above, as stated by Suherman (2017: 559) is highly in line with national values preservation, which derived from the four national pillars i.e. Pancasila, the 1945 Constitution, NKRI and the motto of Unity in Diversity, also from the local wisdom spread in the community, both from spoken traditions and written documents in the form of ancient manuscripts. Thus, SSK manuscript has directly placed the inheritance tracks of the national values to the next generation through the tradition of literacy.

## 4. Conclusion

Five of the six types of basic literacy recommended by the World Economic Forum (2015) have been recorded in the SSK manuscript i.e. reading and writing literacy, numeracy literacy, scientific literacy, financial literacy, and cultural and citizenship literacy. The above facts show that they have long been

introduced and practiced in Sundanese community, although in simple form pursuant to age progress. The 1518 AD, the time the SSK manuscript was written, shows that the literacy rate of Sundanese people has been starting since the 16th century AD or maybe even before. As a matter of fact, since the manuscript of SSK is not a single manuscript, the copying process could have been occurred repeatedly. The situation was also supported by the discovery of Sundanese kingdom contemporary manuscript, including *Carita Parahyangan*, *Pantun Ramayana*, and *Bujangga Manik*. This fact confirmed that literacy tradition occurred at that decade. The content of the five areas of literacy contained in SSK manuscript shows Sundanese people life skills at that time. It contains the appellation of quantity or numbers (numeration), the appellation of various knowledge (science), the discussion of livelihoods and welfare (financial), the description of the rights and obligations of citizens (citizenship), and explicitly mentioning that obtaining lessons can be taken by reading (reading and writing).

### 5. References

- [1] S.B. Baried dkk, Pengantar Teori Filologi, BPPF Fakultas Sastra UGM, Yogyakarta, 1994.
- [2] S. Danasasmita dkk., Sewaka Darma, Sanghyang Siksakandang Karesian, Amanat Galunggung, : Proyek Penelitian dan Pengkajian Kebudayaan Sunda (Sundanologi), Bandung, 1987.
- [3] Atja & S. Danasasmita, *Sanghyang Siksa Kanda Ng Karesian* (Naskah Sunda Kuno Tahun 1518 Masehi), Proyek Pengembangan Permuseuman, Jawa Barat, 1981.
- [4] E.S. Ekadjati, Naskah Sunda: Inventarisasi dan Pencatatan, Universitas Padjadjaran, Bandung, 1988.
- [5] Ayatrohaedi & S. Saadah, *Jatiniskala (Kehidupan Kerohanian Masyarakat Sunda Sebelum Islam)*, Depdikbud, Jakarta, 1995.
- [6] Tim, Indonesia Indah "Aksara" 9, Yayasan Harapan Kita, Jakarta, 1997.
- [7] Dj. Saryono, *Materi Pendukung Literasi Baca Tulis*, Kementerian Pendidikan dan Kebudayaan, Jakarta, 2017.
- [8] E. Sedyawati, "Naskah dan Pengkajiannya: Tipologi Pengguna", Dalam Karsono H. Saputra (Peny.) *Tradisi Tulis Nusantara*, Manassa, Jakarta, 1997 pp. 1-6.
- [9] I. Nurwansah, "Hukum dalam Naskah Sunda Kuna *Sanghyang Siksa Kandang Karesian*", *Manuskripta*, Manassa, Jakarta, 2017 pp 31-61.
- [10] H. Weilin, dkk, *Materi Pendukung Literasi Numerasi*, Kementerian Pendidikan dan Kebudayaan, Jakarta, 2017.
- [11] M.R. Fananta, dkk, *Materi Pendukung Literasi Sains*, Kementerian Pendidikan dan Kebudayaan, Jakarta, 2017.
- [12] F. Fianto, dkk, *Materi Pendukung Literasi Finansial*, Kementerian Pendidikan dan Kebudayaan, Jakarta, 2017.
- [13] F. Hadiansyah, dkk, *Materi Pendukung Literasi Budaya dan Kewargaan*, Kementerian Pendidikan dan Kebudayaan, Jakarta, 2017.
- [14] E.W. English, *Pendidikan Literasi* (terjemahan Fuad Ferdinan), Nuansa Cendekia, Bandung, 2017.
- [15] Koentjaraningrat, Kebudayaan, Mentalitas dan Pembangunan, Gramedia, akarta, 1992.

[16] A. Suherman, "Nationality Values of Words and Proverbs", Dalam Fuad Abdul Hamid dkk. (Peny.) Proceeding The Tenth Conference a Applied Linguistics and The Second English Language Teaching and Technology Conference in Collaboration with The First International Conference on Language, Literature, Culture, and Education, Scitepress, Setubal, 2017 pp. 559-562.