



Exploring the Impact of Extroversion on the Selection of Learning Materials

Paper # 13

Authors: Manal Alhathli, Judith Masthoff and Advaith Siddharthan

➤ Overview

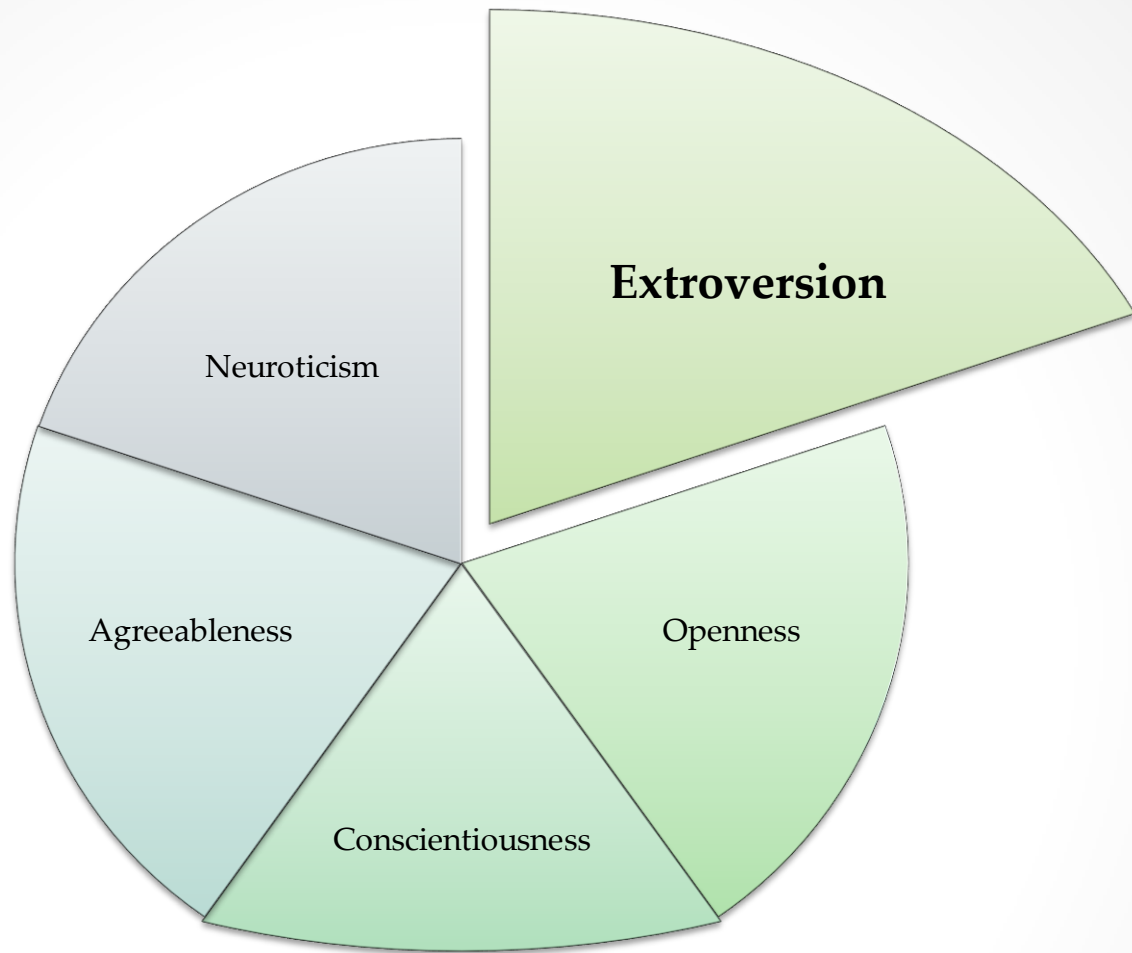
- Aim of work
- Study design
- Results
- Conclusion and future work

➤ Aim of work

- Explore the relation between the extroversion of learners and the extend to which learning materials are perceived to be enjoyable or to increase confidence and skills.
- Improve the effectiveness of recommender systems by using learners' psychological traits in it decision making.
- Find evidence of whether a learner's personality “ extroversion” has an impact on the selection of learning materials.



Which types of learning material are the best for John ?



Big Five personality traits

➤ Study design

1

- * Demographic information : age , gender.
- * Short personality test .

2

Rate each learning material for John.

3

Chose the best learning material .

Participants

- 50 participants.
 - 14 female
 - 35 male
 - 1 non-disclosed
 - 9 aged 18-25
 - 28 aged 26-40
 - 13 aged 41-65

Materials

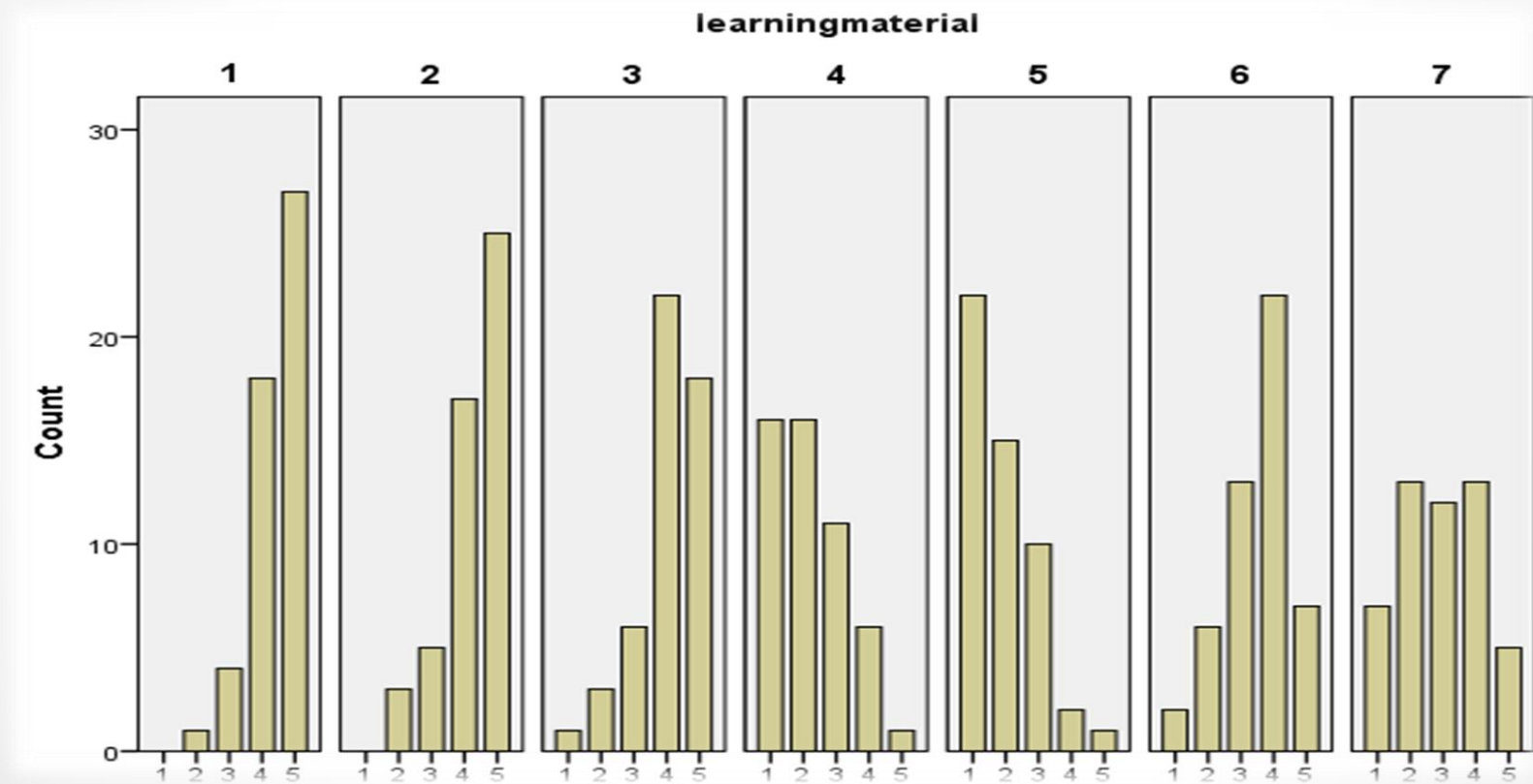
- Domain “Foreign language ”
food ordering in a restaurant
- 7 Learning material :
Passive or active
Individual or social

Table 1: Learning materials

ID	Learning Materials
1	In this learning material, John will participate in an on-line spoken dialogue with a fellow learner about ordering food. John will play the role of the customer and the fellow learner the role of the waiter.
2	In this learning material, John will participate in an on-line spoken dialogue with a native speaker about ordering food. John will play the role of the customer and the native speaker the role of the waiter.
3	In this learning material, John will participate in an on-line spoken dialogue with a virtual agent (computer) about ordering food. John will play the role of the customer and the virtual agent (computer) the role of the waiter.
4	In this learning material, John will view a video about two native speakers having a dialogue in a restaurant. Next, the dialogue will be translated into John's own language.
5	In this learning material, John will view a video about two other learners having a dialogue about ordering food in a restaurant.
6	In this learning material, John will view a video showing two other learners having a dialogue about ordering food in a restaurant. John can provide spoken feedback to the learners on their performance.
7	In this learning material, John will practice the food ordering vocabulary using multiple choice exercises.

➤ Results

1- Types of learning material :



The rate of each learning material

2- Extroversion and learning material:



“pearson correlation” between the level of extroversion of participant’s and their rating for active and passive learning materials.

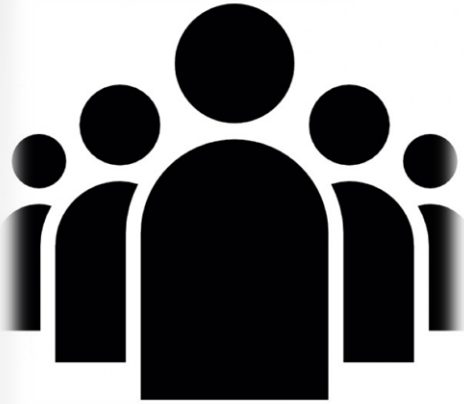
Passive

No significant correlations

Active

Significant and positive correlations

2- Extraversion and learning material:



The level of extroversion of participants and their rating for social and individual learning materials.

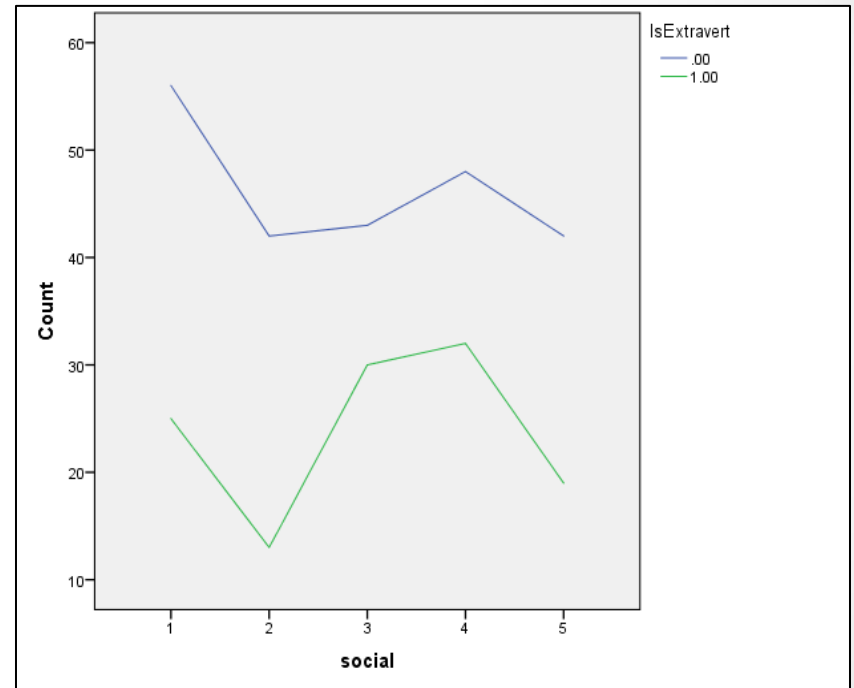
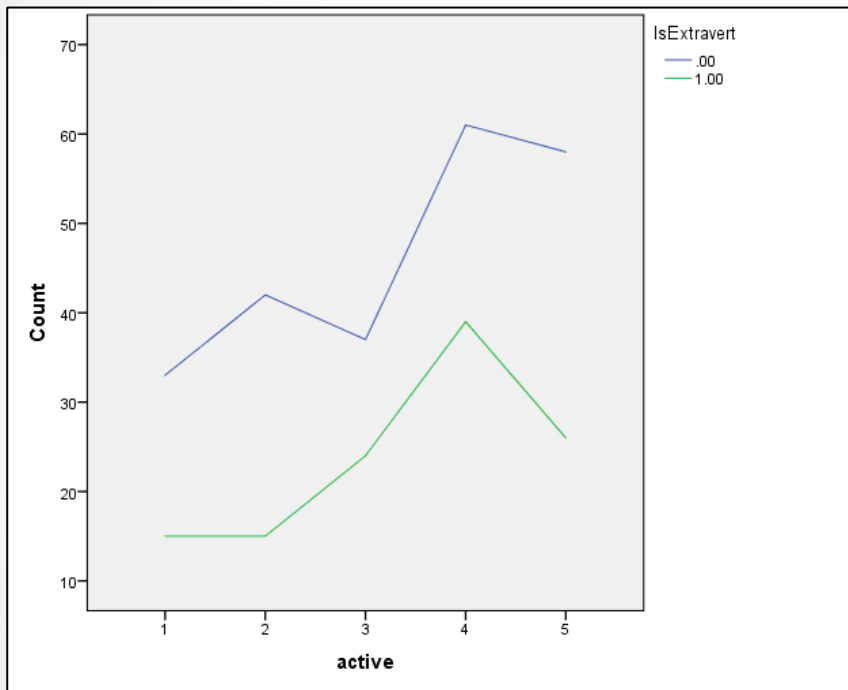
Social

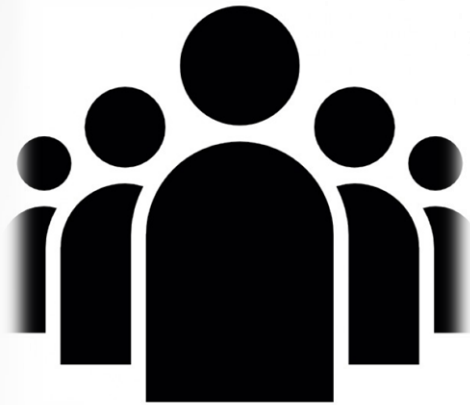
Significant and positive correlations

Individual

No significant correlations

2- Extroversion and learning materials:





Extroverts (17)



Introverts(33)



Enjoyment

Extravert group rated both active, passive, social and individual learning materials as more enjoyable than introvert group

Table 7: Mean (stdev) for social materials

	Enjoyable	Confidence	Skills
Extroverts	3.49 (.67)	3.86 (.83)	3.98 (.93)
Introverts	2.87 (1.12)	3.49 (1.02)	3.69 (.97)

Table 10: Mean (stdev) for active materials

	Enjoyable	Confidence	Skills
Extroverts	3.53 (.74)	3.84 (.86)	3.97 (.91)
Introverts	3.00 (1.11)	3.58 (1.02)	3.77 (.94)

Extravert group rated social learning materials more higher than individual ones.



Increasing confidence

Table 7: Mean (stdev) for social materials

	Enjoyable	Confidence	Skills
Extroverts	3.49 (.67)	3.86 (.83)	3.98 (.93)
Introverts	2.87 (1.12)	3.49 (1.02)	3.69 (.97)

Table 8: Mean (stdev) for individual materials

	Enjoyable	Confidence	Skills
Extroverts	3.04 (1.04)	3.04 (1.08)	3.16 (1.12)
Introverts	2.81 (1.24)	3.13 (1.20)	3.24 (1.12)

Table 10: Mean (stdev) for active materials

	Enjoyable	Confidence	Skills
Extroverts	3.53 (.74)	3.84 (.86)	3.97 (.91)
Introverts	3.00 (1.11)	3.58 (1.02)	3.77 (.94)

Table 9: Mean (stdev) for passive materials

	Enjoyable	Confidence	Skills
Extroverts	3.06 (.98)	3.06 (1.13)	3.03 (1.17)
Introverts	2.80 (1.27)	2.98 (1.25)	3.06 (1.15)



Language skills

Table 7: Mean (stdev) for social materials

	Enjoyable	Confidence	Skills
Extroverts	3.49 (.67)	3.86 (.83)	3.98 (.93)
Introverts	2.87 (1.12)	3.49 (1.02)	3.69 (.97)

Table 8: Mean (stdev) for individual materials

	Enjoyable	Confidence	Skills
Extroverts	3.04 (1.04)	3.04 (1.08)	3.16 (1.12)
Introverts	2.81 (1.24)	3.13 (1.20)	3.24 (1.12)

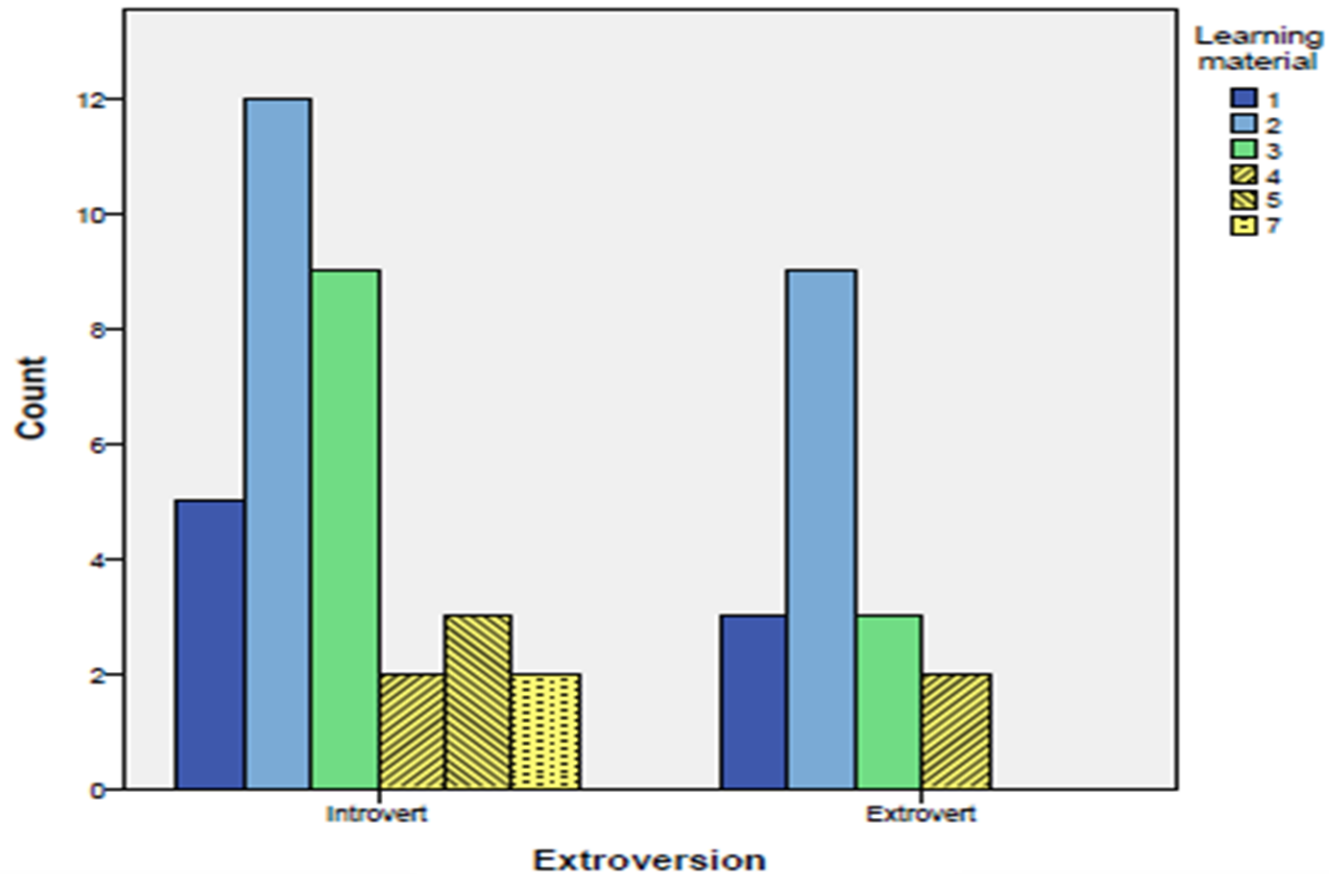
Table 9: Mean (stdev) for passive materials

	Enjoyable	Confidence	Skills
Extroverts	3.06 (.98)	3.06 (1.13)	3.03 (1.17)
Introverts	2.80 (1.27)	2.98 (1.25)	3.06 (1.15)

Table 10: Mean (stdev) for active materials

	Enjoyable	Confidence	Skills
Extroverts	3.53 (.74)	3.84 (.86)	3.97 (.91)
Introverts	3.00 (1.11)	3.58 (1.02)	3.77 (.94)

3- The selection of the best learning material:



➤ Conclusion and future work :

- Distinguished between active, passive, social and individual learning materials.
 - There was a weakly but positive correlation between extroversion and both active and social learning materials.
-
- Extend the analysis of the data.
 - Involve other personality traits.
 - Involve learner characteristics for example : goals, interest and knowledge.
 - Apply different domain.

Thank you

Manal Alhathli
University of Aberdeen
r01maea@abdn.ac.uk